30<sup>th</sup> International Conference on Health Promoting Hospitals and Health Services



The contribution of Health Promoting Hospitals and Health Services to health equity

# Abstract book



November 6 to 8, 2024 International Conference Center, Hiroshima, Japan www.hphconferences.org/nc/hiroshima2024

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## **Scientific Committee**

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## Scope & Purpose

With the 30<sup>th</sup> International Conference on Health Promoting Hospitals and Health Services (HPH), 2024 marks an important milestone of the global HPH network. It is also the 2nd HPH conference in Asia, a region where HPH experienced stable growth over the years, currently with 6 national / regional networks and 37 organizational members. As we celebrate this milestone, it is time to look back on what HPH originally set out to do, what the network has achieved so far, and what future challenges and changes lie ahead.

Hosted by the Japan HPH Network, the conference will be held in Hiroshima, a city that has experienced nuclear devastation in the past. This serves as a reminder of the importance of peace as an indispensable precondition for health, and thus of our collective responsibility to maintain this fundamental prerequisite not only of health but of life, echoing the principles of Human Rights.

The local host and the Scientific Committee have decided to focus the conference in this historic venue on the contribution of hospitals and health services to equity for health, as one of the main principles of health promotion. This is in line with the World Health Organization's (WHO) Ottawa Charter, which emphasizes the importance of health equity as a precondition for enabling all people to achieve their fullest health potential.

In response to the United Nations Commission on Social Determinants of Health report in 2008, the International HPH Network discussed the theme of health inequalities at the 18th International Conference in 2010. In 2015, the United Nations adopted the Sustainable Development Goals (SDGs), which included numerous items related to health equity. Building upon these foundations, WHO launched the Geneva Charter for Well-Being in 2021, followed by the Health Inequality Data Repository in 2023.

Against this backdrop, the conference aims to explore health equity from diverse perspectives and by setting multiple focal points. Through plenary sessions, workshops, oral presentations, and poster sessions, fundamental questions about health equity will not only be raised but also thoroughly examined, drawing upon the insights and solutions that HPH can offer. Our objective is to equip participants with actionable take-home messages relevant to their professional work.

The conference will focus on five main themes:

# Setting the scene – the importance of equity for health and the role of healthcare and innovation for equity

Despite the scientific evidence for the importance of equity for health, there are many current threats to health equity, including climate change, loss of biodiversity, pandemics, environmental pollution, the threat of nuclear war, demographic change including the ageing of populations, displacements, wars and conflicts, rapid urbanization, infodemics, social exclusion, poverty, all contributing to extensive inequalities, increasingly putting more people at high risk of health inequity. Within the field of healthcare, the access to medical and technological innovation is a potential contribution of the health sector itself to foster or hinder equity in health. Natural disasters, as seen in the magnitude earthquake that hit the west coast of Japan on January 1st, 2024, are also a significant threat to health equity, as they tend to amplify existing health disparities.

These developments also impact healthcare - for example, by disrupting pathways of care, increasing needs for emergency care and mental health issues that require treatment, and overall placing high strain on the healthcare workforce, prompting many to guit. The conference will examine these issues in more detail, outline why health policy and health systems should have a genuine interest in promoting health equity, explore strategies on how they can contribute to leaving no one behind, and delve into the transformative potential of innovations in promoting health equity. WHO has long been advocating for the implementation of Universal Health Coverage (UHC) as a means to ensure people with access to the healthcare they need without incurring financial difficulties. A related approach is taken by the Japanese economist Hirofumi Uzawa, who advocates for the concept of "social common capital", as a fundamental premise for hospitals and health services (Uzawa, 2005).

#### Strategies for (HPH) organizations to address health equity

Worldwide, hospitals and health services offer highly important and often life-saving support to billions of patients annually. They are also relevant workplaces for considerable proportions of the global workforce. As training centers for future healthcare professionals, their policies and work culture are also formative to their professional attitude. Therefore, organizational routines and practices can contribute to promoting equity in health – or the opposite. This needs the backing of the organization and thus building up capacity. By implementing HPH standards and organizational health literacy, organizations can promote equity in healthcare and contribute to building a more just society.

In addition, associations and similar entities can play important roles in impacting cultural change and development in healthcare systems and can guide concrete actions in health care organizations. The exploration of options for equitysupportive organizational policies and the assessment of the role of HPH standards in this regard will be one of the main areas of focus of this conference.

## Approaches for HPHs to improve health equity for their patients

Hospitals and health services are seeing people of all ages, cultures, sexual orientations, with varying health needs and expectations to care. As another key issue, we will investigate how hospitals and other health services can facilitate quality care to all, for example, by implementing diversity management or social prescriptions, and by focusing on improving the health literacy of their patients. Special attention will be given to vulnerable groups, from children to the elderly, in the discussion of how HPH strategies should differentiate when it comes to equity for these groups.

#### How HPHs can contribute to health equity in communities

We will also shine a light on how community-level initiatives can address health equity. Innovative aspects of communitybased preventive services and healthcare delivery will be explored as well as contributions of hospitals, healthcare and social organizations to multi-sectorial action and collaboration with other sectors. Examples such as home treatment, providing accessible housing, transportation, and healthy food will be examined. Special emphasis will be given to support for vulnerable population groups, including displaced people and those affected by diverse crises. Within this scope, the role of HPHs in removing barriers and promoting both physical and digital infrastructure for health and well-being in communities will also be highlighted.

# The role of HPH networks in promoting equity beyond the health sector

While there are many opportunities to adapt health systems to better support health equity, they cannot achieve this goal alone. But, in the spirit of the Ottawa Charter and the Health in All Policies approach (Adelaide Declaration, 2010), they can mediate between differing interests in society for the pursuit of health and advocate for coordinated action by governments, other social, economic, and environmental sectors, nongovernmental and voluntary organizations, local authorities, industry, and the media.

Building up on 30 years of experience of international HPH conferences, we shall examine how HPH networks on regional, national, and international levels can support broader societal developments towards equity in health, including advocacy for universal healthcare coverage for both physical and mental healthcare, and the promotion of planetary health as an important aspect in intergenerational justice and equity.

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## Wednesday, November 6, 2024

## 09:00-16:00

Conference of the Global Network for Tobacco Free Healthcare Services (GNTH)

09:30-12:00 HPH Newcomers' Workshop

17:00-17:45 Formal Opening

**17:45-19:00** Plenary 1 Setting the scene – the importance of equity for health and the role of healthcare and innovation for equity

**19:00-22:00** Welcome Reception

## Friday, November 8, 2024

#### 09:00-10:15

Plenary 4 How Health Promoting Hospitals and Health Services can contribute to health equity in communities

**10:15-10:45** Coffee Break

10:45-12:15 Parallel Sessions 3

**10:45-12:15** Poster Sessions 3

12:15-13:15 Lunch Break

**13:15-14:00** Mini oral Sessions 2

14:10-15:30 Parallel Sessions 4

15:30-15:45 Coffee Break

**15:45-17:00** Plenary 5 The role of HPH networks in promoting equity beyond the health sector

17:00-17:15 Conference Closing

17:15-18:00 Farewell Refreshments

# Thursday, November 7, 2024

**09:00-10:30** Plenary 2 Strategies for (HPH) organizations to address health equity

10:30-11:00 Coffee Break

11:00-12:30 Parallel Sessions 1

**11:00-12:30** Poster Sessions 1

12:30-13:30 Lunch Break

**13:30-14:15** Mini oral Sessions 1

**14:25-15:45** Poster Sessions 2

14:25-15:45 Parallel Sessions 2

**15:45-16:15** Coffee Break

**16:15-17:45** Plenary 3 Approaches for Health Promoting Hospitals and Health Services to improve health equity for their patients

**19:30-22:00** Conference Dinner

# Plenary 1: Setting the scene - the importance of equity for health and the role of healthcare and innovation for equity

The role of hospital and health services in promoting health equity in a troubled world

## **BAUM Fran**

Globally, we are facing economic, social, and ecological polycrises. The rate of change is astounding and institutions and people need to adapt and determine ways to mitigate and adapt to the crises. Hospitals and health services typically don't control the source of the crisis but suffer the consequences. Economically, austerity budgets and unfair economic systems mean that health systems rarely have the resources they need to provide for demand. Demand for health care is increasing in face of tsunami of chronic disease fuelled by social and commercial determinants of health and health inequity yet resources are extremely inequitably distributed. In the increasing conflicts round the world, health services and health personnel have been attacked. Health services are also at the front line of responding to the increasing number of climate-change induced disasters. While health systems bear the consequences of the impact of interacting crises they can also become part of the solution. My paper will examine the actions that can be taken by health services to help mitigate the crisis. The discussion will include: the role of health systems in reducing the use of greenhouse gases: the characteristics of equitable health systems including considerations of global equity; effective forms of health system disease prevention and health promotion including championing of intersectoral approaches such as Health in All Policies which tackle the social and commercial determinants of health. I will also consider the role of advocacy by health systems personnel for a fairer and more equitable world through civil society groups using the People's Health Movement as an example. My paper will conclude with a message about the importance of maintaining hope in a world which often makes it challenging to remain hopeful.

## Contact:

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## **Equality in Health and Wellbeing**

## WILKINSON Richard G.

Richard Wilkinson will discuss the health and social effects of the large income differences between rich and poor in societies. Most people, including politicians, have a very naïve view of inequality and assume that it only matters if it creates absolute poverty or is regarded as extremely unfair. Closer to the truth however is that inequality acts as a general social stressor, adding to what psychologists have called "the social evaluative threat", increasing feelings of superiority and inferiority and making status and class divisions more powerful and more divisive. It has damaging consequences for a wide range of outcomes including physical and mental health, social cohesion, levels of violence, trust, drug abuse, social mobility and child wellbeing. Richard will illustrate some of these relationships using graphs comparing international differences in inequality and different outcomes. The differences in the prevalence of these problem between more and less equal societies are sometimes very large. That is because although the effects of inequality are greatest among the least well off, they are not confined to the poor: instead they extend to a large majority of the population. The key mechanisms through which inequality has its effects are primarily psychosocial and focus particularly on the way apparent differences in personal worth associated with social status affect social ease and social relations. Through its psychosocial effects, inequality is a major limitation on the quality of life in modern societies.

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# Plenary 2: Strategies for (HPH) organizations to address health equity

Using the MED-TF's Equity standards tool to improve quality of healthcare for vulnerable patients

## VERREPT Hans. GLOVER James: HÄKKINEN Eeva: NWOBO John; BRAEM Clémence

Increasing levels of population migration and diversity globally present a challenge to healthcare providers. Experience has shown that migrant patients and members of minority ethnic communities and other disadvantaged groups tend to receive lower levels of healthcare compared to host country nationals. As early as 2012, the HPH Task Force - Migration, Equity & Diversity (MED-TF) developed and tested a self-assessment tool (SAT) consisting of a set of standards aiming at monitoring and measuring equity in health care. This tool was based on an extensive critical literature review, supplemented by several expert workshops and consultations. An improved version was implemented in 2014 across 54 health care organisations in 16 countries. In 2023, the MED-TF was asked by the HPHgovernance board to update the Equity standards and to align them with the 2020 HPH standards. During our presentation, we will discuss the new SAT and invite health care organizations to utilize them as part of a co-ordinated campaign across participating nations. Completing the SAT to benchmark organizational performance against the standards is part of a wider process that also includes: identifying areas of improvement developing and implementing improvement strategies evaluating their effects on the equity performance. The MED-TF will provide online training and support to participant organizations. These will be invited to submit the results of their equity analysis online. During hybrid international conferences, results of the self-assessments, the identified areas of improvement, and most importantly, best practices will be shared and discussed. Contacts: Hans Verrept, Intercultural Mediation and Policy Support Unit, FPS Health, Belgium hans.verrept@health.fgov.be +32 2 524 86 07 James Glover (link to bio), National Human Resources, Health Service Executive, Irelandjames.glover@hse.ie +353 87400 4020

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# Strengthening health equity: **Protection strategies for vulnerable** workers in (HPH) organizations

## KANG Mo-Yeol

The pursuit of health equity within Health Promoting Hospitals and Health Services (HPH) organizations is a transformative mission. This presentation explores reality and strategies to protect vulnerable workers in HPH organization. Addressing these requires a multifaceted approach grounded in organizational commitment, policy development, and proactive health promotion. Vulnerable workers are defined within the HPH context, focusing on social determinants such as economic instability, limited access to preventive services, and socio-Workplace cultural barriers. hazards are often disproportionately shifted onto these workers. Lacking necessary measures and resources to mitigate risks, they find it difficult to avoid risks, making them more susceptible to health issues. For example, in some hospitals in South Korea, growing dissatisfaction and turnover among employees due to rotational night shift work led to the implementation of a policy selecting certain staff for fixed night shifts. When there are not enough volunteers, economic incentives are offered to low-income workers, and in some cases, first- or second-year employees are mandated to take on these shifts. Advocating for policies that protect vulnerable workers is challenging. Embedding health equity into the organizational philosophy of HPH start with recognizing disparities. First and foremost, this process requires decisive action from leadership, and integrating equity-focused goals into strategic planning are essential. Effective protective strategies include establishing robust workplace health and safety protocols for physical, chemical, and biological hazards, ensuring equitable access to healthcare services including mental health support, creating supportive work environments that promote mental well-being and social support, and offering training programs to empower workers with knowledge of their rights and health-promoting practices. Ensuring digital health solutions are accessible to all workers includes providing devices and reliable internet, offering training to improve digital literacy, and developing user-friendly, culturally sensitive tools. The incorporation of digital health solutions can enhance the protection of vulnerable workers, but digital health equity must be addressed to ensure these benefits are accessible to all. By implementing these protection strategies, addressing digital health equity, and mitigating shift work challenges, HPH organizations can foster a more equitable and inclusive healthcare environment, contributing to the broader goal of health equity for all.

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Keeping up the momentum -Promoting health equity through culturally sensitive innovation and health literacy

## **LEVIN-ZAMIR** Diane

Health Promoting Hospitals (HPH) play a pivotal role in addressing health disparities and advancing population health outcomes. Achieving equity among HPHs is essential to ensuring that all patients, regardless of socioeconomic status, culture, or geographic location, have equal access to comprehensive healthcare services focusing on promoting well-being, early detection and disease treatment. Equity is mentioned in a number of the HPH Standards and Sub-standards and aligns with the World Health Organization's (WHO) approach to health promotion, emphasizing the need for social justice in health systems. By fostering equity, HPH can better serve marginalized populations that often face barriers to healthcare access, such as immigrants/migrants, the elderly, and individuals living in lowincome or rural areas. Innovation is key to achieving and sustaining equity in HPH, allowing healthcare institutions - both hospitals and primary care - to develop novel solutions for overcoming barriers. Innovative approaches in healthcare delivery-such as the integration of digital health technologies, telemedicine, and data-driven decision-making-can ensure that vulnerable populations receive timely and appropriate care, even in resource-constrained environments. Digital health literacy needs to be taken into consideration; intervention programs can empower people to take control of their health by providing them with the tools and skills needed to manage their health effectively. Telehealth services can extend the reach of healthcare providers, enabling access to care in rural or underserved regions, reducing the need for hospital readmissions, and ultimately lowering healthcare costs. including in times of crisis. Moreover, innovation in health promotion fosters the creation of more tailored, patientcentered interventions. Examples of innovative initiatives will be presented that leverage cutting-edge technologies, such as AI and predictive analytics, to identify at-risk populations and design programs that address health behavior, targeting health promotion efforts where they are most needed. The benefits and challenges will be explored including the role of health professionals in implementation. In conclusion, achieving equity through the work of HPHs requires commitment and resources. By prioritizing equitable access to health-promoting services and incorporating innovative strategies, HPH can enhance public health, reduce disparities, and improve health outcomes for diverse populations, ensuring a healthier and more inclusive society.

## Contact:

LEVIN-ZAMIR Diane Clalit Health Services ISRAEL dianele@clalit.org.il

# Plenary 3: Approaches for HPHs to improve health equity for their patients

Social Interventions, Advocacy and Community Empowerment: Embedding Action on Social Risks to Health in Primary Care

## **BLOCH Gary**

Health providers, and especially primary care providers, are well positioned to act on social determinants of health and health inequities. Social interventions, however, are not traditionally seen as a core part of primary care practice, but the last few years have seen a dramatic increase in their development, evaluation and dissemination. The St. Michael's Hospital Academic Family Health Team (SMHAFHT), based in downtown Toronto, Canada, serves almost fifty thousand patients with an interdisciplinary team of over 300. Since its inception 50 years ago the SMHAFHT has explored ways to address the health needs of the most socially marginalized community members. Over the past 15 years it has placed an increasingly intense focus on directly understanding and addressing social needs and health inequities faced by its patients and its community. The shape of social interventions in front line care has evolved, from offering simple clinical tools to be used in office interactions to embedding social care specialists in health teams, to a more concerted engagement and empowerment of communities in the design, delivery and evaluation of programs. Throughout, health providers have advocated for and helped to shape the social policies that will reduce inequities on a large scale. This presentation offers a critical reflection on a large health team's evolution towards building social interventions into its core structure and practice. The incorporation of social interventions is fraught with conceptual and practical challenges. A shift in health team culture has been attempted through supportive innovation, education, conversation, and the building of an infrastructure that enables providers to understand, address and continuously improve approaches to health inequities. The most recent interventions seek to deepen this transformation with an explicit focus on community engagement and community empowerment. It is hoped this evidence- and experiencegrounded story will offer participants an opportunity to reflect on the potential for health providers to reduce social pressures on individual and community health, while aware that these efforts may reinforce hierarchies of privilege and power they purport to challenge.

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BLOCH Gary St. Michael's Hospital and Inner City Health Associates Toronto, Associate Professor at the University of Toronto CANADA gbloch1@gmail.com

# Good practice from Japan for improving health equity for patients

## FUNAKOSHI Mitsuhiko

The Japan HPH Network (J-HPH) was established in 2015 with the aim of improving health standards of all people in Japan and contributing to a fair society. In Japan, health disparities are widening and the isolation of the elderly in this super-aging society have become significant issues. Here, I introduce our experiences in addressing these challenges. J-HPH developed an "Economic Support Tool (Poverty Intervention Tool)" to assist economically distressed patients. This tool includes simple questions to understand their economic situation and indicates the available social resources. An online version is utilized in patient support at medical sites and in the education of medical students. Moreover, J-HPH holds seminars twice a year to promote equitable medical and nursing care through the exchange of good practices from member institutions, as outlined below. As an example of member activities, I introduce Chidoribashi General Hospital. Located in a low-income area, this hospital protects patients' rights to receive medical care by reducing the financial burden through the Free and Low-Cost Medical Care Project. Among elderly people living alone who have interrupted regular visits, there are more than a few cases of solitary death or worsening chronic diseases. To prevent such cases, staff regularly conduct outreach activities by visiting patients' homes. Additionally, the hospital quantitatively monitors the implementation of equitable medical care. All inpatients are interviewed about their economic situation and whether they are isolated, and for necessary cases, social workers provide consultations and promote the use of social resources. The hospital measures the evaluation and support rates of patients' economic status and living status to clarify their attainment of equitable medical care. Furthermore, efforts are being made to address health disparities among minorities such as foreign residents and LGBTQ individuals, as well as health damages caused by the climate crisis. Natural disasters significantly impact the health of vulnerable people, making them an important issue from the perspective of health disparities. For example, since the 2024 Noto Peninsula Earthquake, Jouhoku Hospital in Kanazawa City has been continuing its earnest support for disaster victims.

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# Social Prescribing: A Strategy for Health Promoting Hospitals

## **LEE Kheng Hock**

The implementation of social prescribing in Singapore can serve as an exemplar of the principles of health promoting hospitals. The SingHealth Community Hospitals (SCH) in Singapore adhere to the health promotion ethos by focusing on empowering patients, supporting staff well-being, and engaging the broader community. SCH offers educational programs, comprehensive care, and community outreach to address social determinants of health. SCH is the first hospital in the world to implement a structured social prescribing into its model of care. In this social prescribing program, patients are screened for the social determinants of health to co-develop and initiate a social prescription to complement the medical prescription during the hospital stay. On discharge, patients are connected to community partners to continue the social prescribing plan to tackle issues like social isolation and lack of access to support services. This patient-centric approach empowers individuals to take an active role in their health and well-being. Crucially, the success of social prescribing hinges on strong partnerships between healthcare providers and community organizations, ensuring culturally appropriate resource referrals. The implementation process itself mirrored the values of health promoting hospitals. The team prioritized understanding local needs, engaging diverse stakeholders, and committing to continuous program evaluation and improvement. This contextualized, collaborative, and iterative approach reflects the core principles of health promoting hospitals. Singapore's experience demonstrates how social prescribing can be a powerful tool for health promoting hospitals. By addressing social determinants, empowering patients, and fostering community partnerships, social prescribing embodies the ethos of this public health-oriented model of healthcare. As healthcare systems worldwide seek innovative ways to improve population health, Singapore's pioneering work offers valuable insights and inspiration.

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# Plenary 4: How HPHs can contribute to health equity in communities

A rural community-led intervention for health equity – Indigenous New Zealand experiences

## **RATIMA Mihi**

Māori are the indigenous peoples of New Zealand. British colonisation in the 1800s decimated Māori communities. Colonisation undermined Māori ways of seeing the world, robbed communities of their lands and resources, and eroded secure identity – the interlocking foundations of indigenous wellbeing. Ongoing colonialism drives the wide inequities in health outcomes today. There are pervasive inequities in access to and quality of hospital and health services for Māori.

Māori communities are outraged at health system inequities, exacerbated by the new National Party-led coalition government disestablishment of Te Aka Whaiora Māori Health Authority. The independent statutory government entity was set up in 2022 by the previous Labour-led government and charged with managing Māori health outcomes. Māori are protesting the undermining of rights enshrined in the 1840 constitutional document the Treaty of Waitangi, an agreement between Māori chiefs and the British Crown guaranteeing Māori rights to equity and the Government's right to govern. A 19 November nationwide protest will take their message to the steps of parliament.

For decades Māori have fought to take control of health service provision to our own communities. The view is that we know what works for our own people and should be resourced to provide solutions grounded in our own worldviews and leveraging the strengths of our communities. Recent decades have seen a proliferation of Māori community-based health promotion initiatives.

We have investigated case studies of Māori health promotion interventions, currently in education, language revitalisation, housing and health, and with a lifecourse orientation. This presentation focuses on a case study of the Te Kaha Medical Centre, a remote rural health service in a high deprivation Māori community. Using the Centre's experience during the Covid pandemic, in which 98% full course vaccination coverage was achieved months before other communities, we highlight success factors that the Centre continues to practice and that underpin their Māori health equity efforts. These success factors are consistent with health promotion principles and relevant to health promoting hospitals and health services that seek to contribute to health equity in their own communities.

## Contact:

RATIMA Mihi, PhD Taumata Associates NEW ZEALAND mihiratima@gmail.com Getting among farmers – reflecting on the roles of HPH from the perspective of rural healthcare in Japan

## YUI Kazuya

Saku Central Hospital (SCH) is renowned for its pioneering role in agricultural medicine and rural health in Japan under the exceptional leadership of Dr. Toshikazu Wakatsuki (1910-2006) with the slogan "Getting among farmers". Post-war rural Japan was impoverished, and many farmers could not access adequate medical care. SCH proactively engaged in outreach activities aimed at health equity in these rural areas from an early stage. These included unique health promotion activities such as educational drama performances by hospital staff and hospital festivals (opening the hospital to the general public to host exhibitions on hygine and health). The mobile health check-up activities in remote areas eventually developed into comprehensive village health screening programs, demonstrating the effectiveness of early detection in improving population health. SCH actively collaborated with public health nurses from local municipalities and community health volunteers on these community activities outside the hospital. Creating healthy communities through resident autonomy was a precursor to what is now known as Primary Health Care, and remains a significant approach today. While the migration from rural to urban areas enabled Japan's rapid economic growth post-war, it has now become a super-aged society with the longest life expectancy in the world. Urban areas have now become overpopulated, aged, with many deaths, some of whom are dying alone, which have become a social issue. On the other hand, in rural areas, the decline in the number of children and women of childbearing age is pronounced, and there are many regions where their future sustainability is at risk. Today in Japan, widening disparities and poverty, along with the significant increase in social security costs. have raised concerns about the sustainability of the medical and long-term care insurance systems. Given these various challenges to ensuring health equity, this presentation discusses how SCH has tried and will address these issues as an HPH.

Contact:

Dr YUI Kazuya Saku Central Hospital, Koumi Branch JAPAN vucchin1967@gmail.com Good Practice and evidences on innovative aspects of communitybased preventive services and healthcare delivery

## **OKADA Hiroshi**

Community pharmacies are easily accessible and are located between places where local residents live and medical facilities such as hospitals and clinics. People can consult with a pharmacist, a health care professional, at the pharmacy without an appointment when they have health concerns or worries. Japan's aging population has already exceeded 30%, making it a super-aging society. With health and care resources in short supply, pharmacists have become an important practice, not only in pharmacotherapy, but also in supporting people living with illness. In this presentation, I will present case reports of pharmacists' practices at home and support for people with cognitive disabilities in Japan, as well as results of a study on the impact of improvements on patient outcomes for people with diabetes and hypertension in the pharmacy.

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# Plenary 5: The role of HPH networks in promoting health equity beyond the health sector

Equity in health and the role of hospitals: Perspectives from Japan

## NAKAYAMA Takeo

Equity in Health and the Role of Hospitals: Perspectives from Japan NAKAYAMA, Takeo Deeply rooted in social justice, health equity means eliminating unnecessary disparities among various populations defined by social, economic, demographic, and geographic factors. In Japan, known for its universal health coverage system, achieving health equity remains a key challenge for policy makers and health care providers. This lecture will discuss the important role hospitals play in promoting health equity in Japan. As primary health care providers, hospitals are essential to ensuring equitable access to health care services and improving health outcomes. However, despite Japan's comprehensive healthcare system, disparities in health status and access to healthcare remain. We analyze these disparities and their origins, and consider how hospitals can address them. We will also discuss the unique challenges facing Japanese hospitals, such as an aging population, and their impact on health equity. Universal Health Coverage: As an active partner of the World Health Organization (WHO), Japan emphasizes its commitment to achieving universal health coverage worldwide. Japan's healthcare system guarantees universal access and contributes significantly to Japan's exemplary health outcomes. Achieving Health Equity: Japan has made significant progress over the past 50 years, achieving excellent national health at minimal cost while reducing disparities among different population groups. Role of Hospitals: Despite a strong healthcare system, disparities remain. Hospitals are critical to ensuring equitable access and improving health outcomes. Challenges: Japan's aging population presents unique health equity challenges. In addition, health crises from natural disasters and pandemics, as well as emerging conflicts in various parts of the world, pose a growing threat to the security of human existence. Future Directions: Japan is actively pursuing health reform to contain costs, improve quality, and promote equity; as a key WHO ally, Japan is critical to global health security efforts, especially in emergency situations such as the COVID-19 pandemic. I sincerely hope that this plenary session will contribute to a broader dialogue on health equity and guide future policy initiatives.

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# Fostering equity and wellbeing through HPH networks - What needs to be done?

## **CHIOU Shu-Ti**

Fostering equity and wellbeing through HPH networks - What needs to be done? CHIOU, Shu-Ti Health equity cannot be achieved without tackling the upstream social, environmental, commercial/economic, and political determinants of health. These involve broader societal development beyond the traditional territory of health sector. This closing keynote will discuss why HPH networks (HPH-Ns) should play a significant role to foster health equity in the community, and how. Determinants of health affect people at all stages of their health status, placing additional pressure on health systems and harming social productivity and cohesion. As pointed out by the World Health Organization (WHO), "advancing health and well-being is inextricably linked to advancing progress with respect to the related Sustainable Development Goals, health determinants and risk factors". In the 14th General Programme of Work (2025-2028), WHO listed "addressing health determinants and the root causes of ill health" and "responding to climate change" as the two key strategic objectives for health promotion, and put emphasis on both health sector and intersectoral actions that foster well-being and health equity as co-benefits across sectors and put health outcomes at the center of relevant policies and processes. Seen as leaders and experts in health promotion, HPH networks (HPH-Ns) can play a leading role to advocate for equity and wellbeing by harnessing the power of data to visualize the existence health inequalities and health determinants, and using their influence to call for collaborative changes towards a fairer society. Education and training should be provided to HPH leaders, staff, and future health professionals, to increase their literacy on determinants of health and broaden their perspective from the individuals to the system. HPH-Ns could also help increase literacy on determinants of health among political leaders and community partners through working with the community to identify priority health problems, their key determinants, and policy interventions involving other key sectors, such as education, transport, food and agricultural systems, social policy, workplaces, and housing, that improve health equity across the life course through better living and working conditions. HPH-Ns can support their members to lead by example, leveraging their roles as employers, managers and commissioners. They can also demonstrate how synergies might be created between different determinants of health to foster equity and wellbeing of people and planet. Progresses should then be monitored, celebrated and continuously improved. By fostering equity and wellbeing with and in the communities, HPH-Ns are supporting their members to demonstrate best practices in ESG.

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## **Oral session 1.1: SYMPOSIUM**

Contribution of Age-friendly Hospitals & Health Services to Health Equity - Experiences from East and West

## CHIOU Shu-Ti, CHOU Ming-Yueh, HSU Nin-Chieh, KONDO Naoki, METZLER Birgit

This symposium, organized by the Task Force on HPH & Agefriendly Health Care, aims to showcase how age-friendly health care can be developed and implemented to improve health equity for all older people, bringing in perspectives and practices from East and West of the world. The Task Force on HPH & Agefriendly Health Care developed, disseminated and applied the Framework for Age-friendly Health Care (the AFHC Framework) as a system-oriented and setting-based approach for improving healthcare management policies, environments, processes, collective actions and measurements towards healthy ageing for all. This has been in line with UN's plan for a Decade of Healthy Ageing 2021–2030 with four areas including combatting ageism, fostering enabling environments, delivering person-centred integrated care and primary health services, and providing equitable access to long-term care. The AFHC Framework addressed all these dimensions. This symposium will start with an introduction on how social determinants of health influenced older people's rights to healthy ageing and how age-friendly hospitals and health services might address these problems, followed by speakers from East and West presenting their experiences on how older people's access to quality healthpromoting health care can be improved through integration and innovation, regardless of their functional status, socioeconomic status and geographic location; how integration of health care at different levels and types of institutions, services and locations can be reached beyond the walls to support the functions of primary health services and the goal of ageing in place for people living with disabilities; how social prescribing can be delivered to address older people's social needs and improve health equity; and how the framework of age-friendly health care can be updated with a fifth dimension to develop and support health workforce with competence and resilience in a super-ageing era. Then the moderator will open the floor to all speakers and participants for a dynamic interactions on issues which the participants would like to explore further. Through dissemination of age-friendly health care experiences, the Task Force supported the International Network of Health Promoting Hospitals and Health Services to join the global efforts in accelerating the progresses of UN's action for a Decade of Healthy Ageing 2021–2030.

## Contact:

Professor CHIOU Shu-Ti, MD, PhD, MSc Health and Sustainable Development Foundation, HPH Task Force on HPH & Age-friendly Health Care, International Union for Health Promotion and Education, TAIWAN <u>stchiou@ym.edu.tw</u> Oral session 1.2: WORKSHOP

Health Promoting Built Environments: Designing for Equity and with Empathy

## MIEDEMA Elke, MÖHN Andrea, FORT Peyton

The workshop, organized by the International Network of Health Promoting Hospital's Built Environment Taskforce, emphasizes the importance of empathic design strategies in healthcare environments for wellbeing and health equity. It comprises of: 1. Theory and research on healthcare building design for Health Promoting Hospitals (HPH), encompassing criteria and design approaches for fostering healthy behaviors, participation, empathy, and equity. Emphasis on designing to address the diverse (health) needs of user groups such as patients, staff, visitors, and local communities. 2. Presentation of healthcare building design process as well as practical and inspirational examples for future HPH building design. 3. The interactive session encourages participants to adopt a designer's mindset and how building design influences our comfort, behavior, and experiences in various settings, particularly in healthcare environments. We will explore questions like: What is meant by the terms "spatial and atmospheric quality"? What is important to create an accessible and equitable healing environment? How can empathetic design enable architecture to act as part of the healthcare strategies and create harmony between built environments and medical processes? 4. Conclusion of the workshop with participants gaining new perspectives on their healthcare environments and identifying at least one potential change for improvement at their healthcare organization. Additional resources, including eLearning materials and infographic handouts, will be provided for further exploration. Attendees actively participate, connecting theory, examples, and personal experiences to gain a deeper understanding of healthcare design principles and practical insights into creating more equitable healthcare environments fit for all users. Relevance of session for health promoting hospitals and health services The session, organized by the Health Promoting Built Environment Taskforce, focuses on creating Equity through Empathic Design. It highlights the importance of integrating the built environment into Health Promoting Hospital (HPH) strategies. The aim is to help healthcare decision-makers, especially those involved in HPH initiatives, understand how the built environment can either impede or enhance HPH efforts. Failing to consider this aspect poses a risk of creating barriers to future health promotion processes during the design and construction phases.

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## **Oral session 1.3: ROUND TABLE**

**HPH×Planetary Health** 

## OHTA Tomoaki, SASAKI Takafumi, YOKOTA Kei, IWAGAMI, Mariko

In this roundtable session, we will brainstorm health promotion strategies while considering the Earth's environment. We hope this will also be a great opportunity to interact with other participants and make new friends.

Presenters will first share the concept of Planetary Health, which aims to preserve both the Earth's environment and people's health. Next, we will discuss the following two issues at each table: reducing the demand for health services in consideration of the Earth's environment through food choices, and determining the appropriate use of medical resources and strategies for reducing leftover medications.

The first topic is "Let's Make an Earth-friendly Menu for One Day!" Here, you will introduce environmentally friendly and "human-friendly" meal options from your country or regions around the globe using pictures from the web or your smartphone photo library. Each table will work together to create breakfast, lunch, and dinner menus. After that, we'll share our menus with other groups.

The second topic is "Let's Launch a Campaign to Reduce Leftover Medications!" Approximately one-fourth of greenhouse gas emissions in the healthcare sector can be attributed to pharmaceuticals. Leftover medications in pharmacies and patients' homes contribute to our growing carbon footprints. To reduce the surplus of medications, your table members will design strategies targeting healthcare providers or patients and share your ideas with other groups.

We look forward to seeing you in this session and discussing actionable health promotion strategies that take into account the Earth's environment..

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# Oral session 1.4: Contributions of Health Promoting Hospitals and Health Services to health equity

Co-creation of a Centre Dedicated to Population Health Promotion: A Collaborative Initiative Supported by Hall Santé of Nantes University Hospital and the Nantes Metropolis, France.

## MORET Leila, BARREAU Berangere, FERRE Noemie, JOLIVET Anne, BOELS David

## **Background and objective**

Nantes university hospital (NUH) joined the HPH network in 2019. Two years later, a dedicated structure called "Hall santé" was inaugurated. Based on a needs analysis carried out among professionals, the Hall santé defined its primary objectives: to strengthen the skills of professionals in the field of health promotion and to promote healthy lifestyle habits among staff. Three years on, numerous collaborative initiatives are in progress. The plan now is to extend the influence of the Hall santé beyond the walls of the hospital, to play a key role in improving the health of the metropolitan population. The aim is to create a primary prevention resource centre at the crossroads between the hospital and the urban community, accessible to all.

## Methods/intervention

Since mid-2023, a partnership with the Nantes metropolitan (NM) authority's public health department has enabled Hall Santé to be integrated into the city's public health policy. A working group convenes bi-monthly to outline the project's framework, governance and engagement strategies. Concurrently, as part of the NUH's redevelopment in the new university hospital district, Hall Santé collaborates with NUH's administration and architects to secure a space on the first floor of a new building dedicated to innovation and health promotion, slated to open in mid-2025.

## Results

A trustworthy partnership has been established with NM's affiliates, fostering productive dialogues. Discussions to determine the business model are ongoing. The Nantes School of Design is aiding in the spatial design, with project presentations scheduled for mid-2024 to the municipal leaders. Initial organizational outcomes are expected by fall.

## **Conclusions/lessons learned**

This pioneering initiative in France offers a unique opportunity to bring together the expertise of NUH and health promotion stakeholders in the metropolitan area to better the health of local residents.

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# Health Multipliers at the Vienna Healthcare Group

## LEEB Johanna

## Background and objective

The Vienna Healthcare Group successfully trains health multipliers in low-wage professions for years. Many employees in the low-wage-sector have migration backgrounds, which makes the teams quite diverse. The aim is to train easily accessible contact persons for employees in these professions who can provide support with health-related questions.

## Methods/intervention

Their tasks include passing on collected health information, conducting confidential conversations, as well as establishing contacts with support services. The health multipliers help anonymously and free of charge. The Vienna Healthcare Group provides the required multipliers training together with the health centre for Men and Women. In addition to the training, regular network meetings are held in the headquarters. The training lasts four days and covers topics such as health literacy, the compatibility of work and family, the labour law and corporate health promotion. In addition, participants explore the question of "what keeps me healthy" and engage in practical exercises related to communication and conflict management. Establishing contact with interested employees proves challenging because many of them do not have computer access, which complicates the registration process. The participants' supervisors support their employees in the process.

## Results

We have competent staff who provide easy access to health information for all employees in their professions. The health multipliers play a major role in health promotion, they contribute to increasing health awareness and help with the participation of these professions.

## **Conclusions/lessons learned**

The feedback from all clinics and nursing homes indicates that the training is successful, and the desire for even more health multipliers confirms our program.

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# Bridging the Gap: How Health Promoting Hospitals Advance Health Equity for Low-Income Families

## **SIU Yuk Lun**

## **Background and objective**

Medical costs pose a significant challenge for low-income families, underscoring the need for innovative approaches to address the root causes of chronic diseases. Lifestyle education is crucial for identifying and preventing these issues, but translating knowledge into sustained behavior change can be a challenge. Lifestyle Coaching emerges as a promising strategy to bridge this gap, providing personalized guidance and support to help individuals from vulnerable populations, such as lowincome families, overcome barriers and adopt healthier lifestyles.

## Methods/intervention

In collaboration with the Hong Kong Family Welfare organization, the Hong Kong Health Promoting Hospital launched a Lifestyle Coaching program targeted at low-income families. The study utilized a pre-post intervention design, involving comprehensive health assessments, personalized Lifestyle Coaching sessions, and access to online health education resources. The program focused on the adoption of the the six pillars of lifestyle medicine principles to promote sustainable lifestyle changes.

#### Results

The analysis of health assessments conducted before and after the intervention revealed mixed results across various health metrics. Approximately 50% of the participants experienced improvements in body weight, BMI, and blood pressure, while the remaining 50% showed declines in these measures. Glucose levels and uric acid levels also presented varied changes, with no clear trends. Total cholesterol levels increased in a significant portion of the subjects. Lifestyle scores, reflecting overall lifestyle changes, were equally divided between improvements and declines.

## **Conclusions/lessons learned**

The variability in health outcomes underscores the need for personalized health monitoring and interventions. Despite the mixed results, the Lifestyle Coaching program demonstrates the potential of Health Promoting Hospitals and Health Services to address health equity among low-income families. By providing tailored guidance, comprehensive education, and addressing social determinants of health, HPHs can empower vulnerable populations to make sustainable lifestyle changes and improve their overall well-being.

#### Contact:

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Implementing Guidelines for Interventions Concerning Behavioral Risk Factors in the Västra Götaland Region: A Pathway to Equitable Healthcare

## HARLID Ralph

## Background and objective

The Västra Götaland Region in Sweden has undertaken a pioneering initiative to implement National Guidelines aimed at addressing unhealthy lifestyle behaviors, with a primary goal of achieving equitable healthcare and mitigating health disparities.

## Methods/intervention

Initiated by a comprehensive GAP analysis, this project identified crucial areas of improvement, including the structured identification of unhealthy behaviors, the establishment of clear pathways for further interventions, and the need for a cohesive approach across healthcare services to ensure accessible and uniform interventions. The strategic framework developed in response encompasses standardized procedures for behavior recognition, comprehensive training for healthcare workers, and a unified documentation system, all designed with an emphasis on person-centered care. This paper delineates the methodology employed in the GAP analysis, elucidates the strategic blueprint formulated to bridge the identified gaps, and outlines the action plan aimed at enhancing healthcare quality through evidence-based interventions.

## Results

By focusing on equitable healthcare provision and reducing health disparities, this initiative exemplifies a committed and informed approach to implementing health guidelines within a regional healthcare setting, highlighting the challenges encountered and the innovative solutions applied to overcome them.

## **Conclusions/lessons learned**

This endeavor reflects the region's dedication to fostering a health system that prioritizes the well-being of all its inhabitants, especially those at greater risk of health inequities. Using a GAP analysis to show strengths and weaknesses is an excellent method to identify strategies and actions to improve the work with lifestyle behaviors, in order to achieve a more equitable healthcare and mitigating health disparities.

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# Promoting Health Equity—Case Studies on Localized Development of Elderly Health Promotion Programs

## CHIEN Sou-Hsin, CHEN Ching-Yuan, HSU Lin-Ying, LAI Yi-Ling

## **Background and objective**

Active aging in the local community is a common goal. The number of elderly households in Taiwan alone increased from 261,000 in 2012 to 499,000 in 2021. The selected region for this case study has an elderly population that accounts for 16.7% of the total population, the region faces rapid increases in population and social mobility due to industrialization and urbanization. Elderly people in this area are primarily involved in agriculture. The goal is to integrate local cultural elements into the design of these programs and assess whether such interventions can improve the health status of elderly individuals.

## Methods/intervention

This study involved 140 elderly individuals aged 65 and above who participated in community care centers. First, basic information about the participants was collected through surveys to understand their health needs and their relationship with local culture. Second, a 12-week intervention program incorporating local agricultural and cultural activities was implemented, with one session per week lasting two hours each. The participants' perceptions of post-intervention health needs and their association with local culture and physical function were also analyzed.

#### Results

A total of 140 elderly participants participated(M=16;F=124) in this study, , with an average age of 75.6 years. In this cohort, while 20.7% lived alone. There were 87 participants in the intervention group and 53 in the control group. Following an exercise intervention, significant improvements were observed in theSPPB scores of the intervention group, all with statistically significant differences. These findings underscore the positive impact of incorporating local agricultural cultureinto health exercises designed for elderly people. This study suggests that exercise interventions are an effective means of improving elderly health.

## **Conclusions/lessons learned**

In summary, this study provides an in-depth understanding of the relationship between local culture, agricultural characteristics, the local context of chronic diseases, and health needs. It underscores the positive impact of exercise interventions on elderly health.

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# Oral session 1.5: Communicating health information

Reducing ethnic healthcare disparities through the implementation of video-remote intercultural mediation (VRIM) services

## VERREPT Hans, BRAEM Clémence

## **Background and objective**

Studies have shown that refugees and migrants in the WHO European Region receive a lower quality of care compared with the host population. There is compelling international evidence on the negative impacts of unresolved linguistic and cultural barriers on health and health care for refugees and migrants. The increased diversity of the Belgian population makes it necessary to provide intercultural mediators or interpreters for many language groups. To meet this need efficiently with a limited budget, it was decided to implement a video-remote intercultural mediation program. Using a specific app, healthcare providers can book (and in many cases use the services of) a suitable intercultural mediator within seconds. During our presentation, we will discuss the results of a qualitative and quantitative evaluation of this initiative.

## Methods/intervention

We conducted in-depth interviews with caregivers and other relevant informants (N=46) who had made use of the VRIMservice. 12 focus groups with intercultural mediators involved in the program were organized. Both groups of informants were invited to report 'compliments and complaints' made by patients. In addition, we analyzed the number of requested interventions. Finally, the evaluation also took into account information obtained during meetings and informal contacts with care providers and intercultural mediators.

## Results

Health-care providers and patients alike considered VRIM an acceptable and valid strategy to resolve the effects of linguistic and socio-cultural barriers. The service improved the quality of communication and contributed to bridging cultural gaps (although to a lesser extent than on-site intercultural mediation). Health-care providers recounted instances in which mediators had provided information on the meaning of certain concepts or terms used by patients. However, the uptake of mediation services by health-care providers has been slow at first and it is difficult for intercultural mediators to perform much-needed roles beyond linguistic interpreting and cultural clarification.

### **Conclusions/lessons learned**

VRIM is an effective strategy to reduce ethnic healthcare inequities. It is important to provide support to healthcare organizations to implement VRIM and to overcome resistance in the work force.

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Empowering Indigenous Elderly in Taiwan through Digital Health Literacy: Exploring Behavior and Intention for Leveraging Digital Health Resources

## CHANG Mei-Chuan, LEE Yu-Shuang

## **Background and objective**

Digital healthcare communications have become the mainstream channels for disseminating health information and services. However, disparities in digital health literacy can create barriers, particularly for older adults. This study investigates the determinants influencing the intention and behavior of utilizing digital health resources among elderly indigenous individuals in Taiwan.

## Methods/intervention

The survey involved 170 elderly indigenous participants from cultural health stations in an eastern county of Taiwan, selected

through cluster sampling. The self-developed questionnaire was used to collect research data.

#### Results

The average age of participants was 74.21±8.62 years, with 72.4% being female and 62.9% having an elementary school education or below. Multiple regression analysis revealed that the variables, including attitude, subjective norms, perceived behavioral control, and digital health literacy, explained 55.7% of the variance in intention (R-squared=0.557) and 49.1% in behavior (R-squared=0.491). Subjective norms and digital health literacy were predictors of the intention and behavior of utilizing digital health resources.

## **Conclusions/lessons learned**

Subjective norms and digital health literacy emerge as crucial factors predicting the intention and utilization of digital health resources among older indigenous adults. Enhancing digital health literacy and creating a supportive environment conducive to subjective norms may facilitate improved access to digital health resources for this vulnerable group.

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# Why and how to teach Communication? Learnings from a national Programme in Austria using a Train the Trainer Model

## SCHLÖMER John, SATOR Marlene

## **Background and objective**

The European health literacy survey revealed that there are numerous patients who show difficulties in understanding and using the information that is given to them by healthcare professionals. These professionals themselves also report shortcomings in sharing information effectively. Failed communication can be a driving force of inequalities in the healthcare system whereas successful communication can have the opposite effect. Evidence-based communication skills trainings aimed at healthcare professionals address this issue and lead to improvements across a range of healthcare outcomes.

## Methods/intervention

Setting specific evidence-based curricula for communication skills trainings and a national strategy for implementation employing a train the trainer model were developed in Austria. Different modules addressing specific issues of communication have been conceived. Trainings were rolled out in hospitals next to other settings. Satisfaction and self-rated communication skills are evaluated along the way.

## Results

To date, we have trained 8388 healthcare professionals in 90 institutions using 61 communication skills trainers. Satisfaction with our communication skills training is very high. The majority of participants show improvements in all self-rated competencies and would recommend the training to colleagues.

## **Conclusions/lessons learned**

Our communication skills training is well accepted by hospital staff and helps to reduce inequalities in the healthcare system by putting the patient at the centre of communication and treatment. The ongoing programme has implications for a strategy to reach even more healthcare professionals, and therefore patients.

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AI Health Education Intervention Improves the Quality of Care for Children with Seizures

## CHEN Mei-Fang, YEH Mei-Ling, YANG Hsiao-Ling, LIN Chieh-Ju, WHU Yew-Wha

## Background and objective

Seizures are a frequent occurrence in childhood. The symptoms of seizures in children can have a significant impact on caregivers, which is why it is crucial to provide them with clear information. Comprehensive seizure education can help empower caregivers to respond appropriately to seizures in children and provide the necessary management. This is important for reducing the risk of injury to children and improving their disease prognosis.

#### Methods/intervention

The medical care team employed a range of AI-based health education interventions, including: (1) Generative AI health education videos: These videos used rich visual effects and animations to vividly demonstrate ways to prevent falls during seizures. (2) Podcast: A podcast titled "Seizure in Children" offered practical advice and case stories shared by nursing experts in a relaxed auditory format. It aimed to increase listeners' awareness of and ability to cope with seizure diseases. (3) QR Code educational leaflet on "Recognition and Management of Febrile Seizure in Children": This leaflet provided caregivers with access to relevant health education information and resources anytime, anywhere through scanning the QR code.

## Results

The intervention measures implemented for four months have been significantly effective in improving the quality of care for children with seizures. This has been achieved through diversified AI health education interventions. The generative AI health education videos were viewed 97 times, the " Seizure in Children" podcast was listened to online 137 times, and the download count for the "Recognition and Management of Febrile Seizure in Children QR Code educational leaflet" reached 120 times. Caregivers have shown a 96% understanding of the educational content with an 86% satisfaction rate. There were no adverse events observed during the process.

#### Conclusions/lessons learned

The use of generative AI technology for health education, including videos, podcasts, and QR code leaflets, has shown promising results in improving the quality of care for children with seizures. To further enhance the effect of these interventions, we will continue to refine the content and format of health education while expanding its reach to meet the needs of caregivers and families of children with seizures. Our ultimate goal is to continuously improve the quality of care

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Boosting Vaccination Among Vulnerable Women in Cilegon City: How Social Media at Rumah Vaksinasi Enhance Engagement and Equity

## PRATIWI Jasmine Ariesta Dwi, RIYANDANI Edo

## **Background and objective**

Background: Human papillomavirus (HPV) significantly affects Indonesian women, with about 4% carrying high-risk HPV types. Despite Indonesia's enhanced HPV vaccination efforts, disparities and limited public understanding remain, particularly in Cilegon City, Banten Province, Indonesia. Objective: To improve health equity among vulnerable women in Cilegon City by enhancing vaccination services, addressing barriers such as vaccine access, hesitancy, and logistical issues.

#### Methods/intervention

Rumah Vaksinasi Cilegon's ETAM (Education, Training, and Monitoring) strategy utilizes social media, particularly Instagram reels, to educate and engage the community. Training involves equipping selected ambassadors to act as online vaccination advocates, supplemented by online peer groups and collaborations with government bodies for broader reach and reinforcement.

## Results

Since the start of 2023, Rumah Vaksinasi Cilegon has developed a following of 2,000 on Instagram, with a notable 10% increase in vaccination uptake. A specific Instagram reel reached 542 accounts, significantly boosting engagement.

## **Conclusions/lessons learned**

Adopting an equity-focused approach in vaccination efforts has enhanced health outcomes and reduced disparities. Key lessons include the importance of cultural sensitivity, addressing social determinants of health, and involving the community in health interventions.

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# Oral session 1.6: Tobacco prevention and cessation

# Step by step towards smoking free hospital

## **GUTOVA Lenka, PETR Tomas**

## **Background and objective**

Military University Hospital has joined the Global Network for Tobacco Free Healthcare Service in 2018. Since this time the hospital management has taken many steps towards implementing non smoking policy. There have been many changes in hospital affecting staff members, patients and also the public. We would like to highlight the main steps on our journey towards non smoking environment, and also share an obstacles and problems we have faced.

#### Methods/intervention

It has been a long and difficult process to implement non smoking policy in University Military Hospital. The hospital is the only one in Czech Republic, who wants to achieve a gold standard GNTH. Our hospital wants to be an inspiration for other health care facilities in the Czech Republic. A multidisciplinary Tobacco-Free Military University Hospital Team has been established in the Hospital, which is an advisory body to the hospital director responsible for coordinating activities in the area of implementing tobacco-free hospital standards. This Team carries out internal audits – mapping where there are gaps in relation to the standards of a tobacco-free hospital and assessing how the changes are implemented in practice.

## Results

Our aim is to fulfill all GNTH standards. During the first audit in 2018 we reached 65 points, After a few years of hard and well coordinated work we have managed to get 128 points. At this point we decided to apply for GNTH golden medal.

## **Conclusions/lessons learned**

We want to share our experience with the process of implementing GNTH standards and also share some interesting data about current situation in our hospital. We have managed to implement smoking free policy even in closed acute psychiatric unit as a first and only one hospital in the Czech Republic. Contact: PETR Tomas Central Military Hospital - Military Teaching Hosp CZE tomas.petr@uvn.cz

Analysis of the Effectiveness of Smoking Cessation Growth Classes (Online and In-Person) in a Campus Setting: A Case Study of a Hospital in Taipei

## CHAO Fang-Yi, SHIH Hsiu-Chen, HUANG Lu-Chiu

#### **Background and objective**

Our hospital aided in organizing a 12-hour campus-based smoking cessation program for college students, encompassing various aspects like Western and Chinese medicine perspectives, nutrition, stress relief, physical exercise, support groups, and a reward system. Due to COVID-19 in 2021, classes were held online for safety, transitioning back to in-person sessions in 2022. This study analyzes teaching methods' effectiveness on youth tobacco awareness and cessation, informing future planning.

## Methods/intervention

This study used descriptive research with purposive sampling. It involved 16 to 20-year-old students from a university who smoked for over three months. In 2021, 41 students joined online classes, while 52 attended in-person sessions in 2022. A structured questionnaire from Taipei City Department of Health assessed "Cognitive Survey," "Control Attitudes," "Control Behaviors," and "Satisfaction." The aim was to gauge student engagement in the campus-based smoking cessation program, with 93% valid responses online and 72% in-person.

## Results

Among fully engaged students in both in-person and online courses, 38 were from online, 37 from in-person. In-person courses saw higher improvements in tobacco harm awareness and behavior, with average scores rising from 78.8 to 96, compared to online courses (74 to 88). Students favored the online format for convenience and accessibility. Smoking cessation effectiveness: 39.47% online, 64.86% in-person.

## **Conclusions/lessons learned**

The findings reveal the superiority of in-person courses over online ones in enhancing smoking cessation awareness, behavior, and attitudes. Future programs should blend online engagement with in-person group interactions to optimize learning. Online formats enhance engagement and health awareness, while in-person sessions facilitate group dynamics and motivation. Integrating both will boost knowledge, positivity, and behavior change towards tobacco avoidance, informing future program designs. CHAO FANG YI Taipei City Hospital Linsen Chinese Medicine &Kunming Branch TAIWAN bule13@gmail.com

Experience of Proactive Referral to Smoking Cessation Program at Outpatient department in a Southern Regional Hospital in Taiwan

## TSAI Chung-Hung, WANG Min-Fu

#### **Background and objective**

Tobacco smoking is the leading preventable cause of disease. Behavioral smoking cessation programs are an effective tool for quitting smoking, yet remain underused by smokers. Proactive referral may be a promising strategy for healthcare staff to connect smokers to such programs. Taiwan has made remarkable progress on decreasing the smoking rates in adults from 27.0% to 14.0% between 2002 and 2022. Pharmacological intervention and non-pharmacological behavioral health educational program are both effective. The aim of this study was to gain insight into the effectiveness and implementability of proactive referral of smokers to behavioral smoking cessation programs from other specialists at outpatient department in a Southern Regional Hospital in Taiwan.

#### Methods/intervention

We encourage the several healthcare staffs to implement the proactive referral programs, who from different specialty such as Nephrology, Cardiovascular, and Metabolism / Endocrine. Every new patient was asked about smoking history, and then proactively referred to smoking cessation service at the same time.

## Results

From January 2021 to December 2023, A total of 485 smokers from Nephrology, Cardiovascular, and Metabolism / Endocrine were referred to behavioral smoking cessation program. Compared with other participants joined the same program, the 3-month smoking cessation rate is significantly lower (10.1% V.S 23.2%). Among the 3 different specialties, the smokers from Nephrology had the lowest 3-month smoking cessation rate.

## **Conclusions/lessons learned**

Although literature provides evidence that the proactive referral of smokers to behavioral smoking cessation programs is effective and implementable across different settings, the result is not consistent with previous studies.

## Contact:

TSAI Chung-Hung Institute of Allied Health Sciences, College of Medicine, NCKU TAIWAN chunghong.kuanyin@gmail.com Experience of Using Share Decision Making Method to Enhance Smoking Cessation Services in a Southern Regional Hospital in Taiwan

## WANG Min-Fu

#### **Background and objective**

Tobacco smoking is the leading preventable cause of disease. Literature showed that compared with non-pharmacological intervention of smoking cessation, pharmacological treatment could achieve higher successful rate of smoking cessation. Share Decision Making (SDM) is an ethical mean of offering quit aids to all current smokers without constraining their autonomy. A systematic review suggests that smokers may get more smoking cessation knowledge, decision quality, and the number of quit attempts. Therefore, this study aimed to investigate the effects of using SDM method to enhance smoking cessation services in a Southern Regional Hospital in Taiwan.

#### Methods/intervention

We designed the SDM method included the introduction of the different mechanism, potentially adverse effect, and evidencebased efficacy of pharmacological treatment. Every new smoker received the standard quitting education by nursing staffs, and they will introduce the SDM program to the patient. Patients wished to join the SDM program could understand the knowledge of smoking cessation medications during 15-minute time period, and they also completed the satisfaction survey in the end.

#### Results

From January to December 2021, A total of 280 smokers attend the hospital smoking cessation program, but only 65 (23.2%) smokers participated in SDM program. Among SDM program participants, a total of 32 (49.2%) smokers received pharmacological treatment. At 12 week follow up, 25 smokers quit smoking successfully. Compared with the nonpharmacological intervention, participants of SDM program have higher 3-month and 6-month smoking cessation successful rate (36.4% VS 30.3%, 32.4% V.S 25.4%, respectively). On the another hand, the results also show that the model can achieve the goal of SDM and optimal informed decision making, based on the satisfaction survey of participants.

#### **Conclusions/lessons learned**

Although it is time consuming to apply SDM program, smokers could understand more information of cost, efficacy, and adverse effect of pharmacological treatment and have the higher successful rate at 3-month and 6-month follow up, but the long term cessation rate need to be investigated in the future.

## Contact:

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Preliminary outcome of the smoking cessation service reform on hospitals located in different urbanization level areas in Taiwan

## HUANG Yu-Ying, HUANG Pin-Hsuan, SU Yun-Hui, LO Shu-Ying, CHIA Shu-Li, WU Chao-Chun

## **Background and objective**

Taiwan Health Promotion Administration (THPA) have subsidized for smoking cessation services since 2002. Each eligible smoker could have two medication courses and health education courses every year and only have to pay a maximum of NT\$200 per visit.

#### Methods/intervention

To help smokers who are economically disadvantaged to continue their treatments and to encourage more medical professionals to provide the service. THPA has implemented several reforms toward the smokers and providers. For smokers, we have waived the copayment since May 15th, 2022. For providers, training program was transformed from by physical classes into by online courses mainly, and training hours required have been decreased since Nov 1st, 2022, and the payment have been increased from 2023. Besides, providers could have extended 1 more course based on their evaluation and qualification for subsidy applicants has been expanded.

#### Results

The number of contracted smoking cessation hospitals in 2023 have increased 0.31% compare with 2022. The number of hospitals in urban area have increased 1.97%, but the number in downtown and remote area have remained stable. Aside from unsignificant increase in the number of hospitals, medical professionals have significantly increased with a growth rate of 6.28%, and it grew by 5.86% in urban area, by 7.24% in downtown area and by 4.46% in remote area. Besides, the total utilization has also went up, the number of medication and health education visits have increased 36.76% and 26.38%, and the former grew most in downtown area, while the latter grew most in remote area. The 6-month smoking cessation rate rise from 30.10% in 2022 to 32.20% in 2023.

## **Conclusions/lessons learned**

With waiving economic burden and improving training efficiency and payment, the smoking cessation service reform showed a preliminary success. However, we should keep monitoring the utilization trend in different area and quality in the future.

## Contact:

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# Oral session 1.7: Interventions for health promotion in the local community and for the population served

The secular trend in the incidence rate of dialysis-requiring acute kidney injury in Taiwan – Contrast of effects from a pandemic and a community screening program

## CHEN Likwang, TENG Nai-Chi, WU Vin-Cent

## **Background and objective**

Acute kidney injury requiring dialysis (AKI-D) is associated with high mortality, inpatient expense and chronic health expenditures, and has become a public health issue worldwide. No publication has systematically examined the trend in the AKI-D incidence rate in Taiwan to shed light on effects from a pandemic and from expansion of community screening for individuals with high risk of chronic kidney disease (CKD).

#### Methods/intervention

This retrospective observational study investigated the secular trend in the AKI-D incidence rate in Taiwan from 1999 to 2015 using the time-series data analysis. It particularly explored the influences from two events: the outbreak of severe acute respiratory syndrome (SARS) in 2003 and initiation of a community screening program for preventing and identifying incidence of CKD in 2007. We used time-series data constructed by Taiwan's National Health Research Institutes and individual patients' data in the National Health Insurance databank to analyze the trend in AKI-D incidence. Furthermore, this study examined factors associated with mortality and the onset of endstage renal disease (ESRD) after AKI-D. An AKI-D event in the study was a hospitalization with double lumen catheter for hemodialysis for non-CKD patients.

## Results

In 2005, two years after the SARS outbreak, the AKI-D incidence rate had a sudden large increase, especially for the elderly aged 75 or older (p<0.001). The community screening program has decreased the AKI-D incidence trend (p<0.001). Patients older than 65 had significantly higher mortality and larger risk for ESRD onset after AKI-D (p<0.001), representing a group needing more attention.

## **Conclusions/lessons learned**

A pandemic event could signal a larger risk of AKI-D subsequently, and it calls for more health promoting programs to decrease such population health risk. On the other hand, expansion of community screening for CKD could reduce population risk of AKI-D.

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## **Breathing Together**

## BAUMGARTEN Adi, COHEN Limor, BADER Tarif, VANDER Tatiana

## **Background and objective**

Pulmonary Rehabilitation has been proven to improve the quality of life of patients living with a chronic lung disease. In Israel, chronic lung patients are eligible for 24 group treatment sessions per year in various hospitals across the country. These treatments are fully subsidized by the Israeli Ministry of Health, allowing equity of service to all patients. The main goal of pulmonary rehabilitation programs is to prevent the viscous cycle of inactivity and dyspnea.

## Methods/intervention

The pulmonary rehabilitation program at Herzfeld Geriatric Rehabilitation Medical Center is a unique combination of endurance and strength training via functional exercise. Functional exercises are meant to improve patient's community participation and to strengthen their sense of ability. Each session includes: 45 minutes of warm up, functional training interval exercises, cool down, breathing exercises and education on disease management. Followed by 45 minutes of gym exercises. All training sessions are led by physiotherapists highly experienced in treatment of lung patients. Patients are monitored frequently throughout training. Pulmonary physiotherapy assessment tests are conducted at the first intake and on the last session in order to measure the program efficacy.

#### Results

Participants are highly motivated and show improvement in exercise tolerance, measured by the 6 Minute Walk Test (6MWT). As well, the group became a social gathering and a source of emotional support. Group members keep in touch with one another via telephone even after completing their exercise sessions. They share knowledge and experience about their disease management with one another. Once subsided treatments are over patients continue to come, and currently we have an oversubscribed waiting list, and willing to pay patients.

## **Conclusions/lessons learned**

This type of group training provides not only an opportunity for exercise, but also for mutual support. We witness a unique experience of togetherness as participants improve not only their physical health but also their emotional state and wellbeing.

Contact: BAUMGARTEN Adi Tel Aviv University ISRAEL adi.baumgarten@gmail.com aDevelop and establish new cooperation models for community medical outreach services- Promote and protect the medical autonomy and hospice rights of people with disabilities and residents of community institutions

## **CHUNG Ching Hui**

## **Background and objective**

MacKay Memorial Hospital actively connects the community care network and community care bases, Community psychiatric rehabilitation institutions, long-term care institutions. With the concept of Compassionate City/Community,Death literacy and the Rights of Persons with Disabilities, we promote localization and communization of medical care, including Advance Care Decision and hospice care. We actively improve the accessibility of citizens to receive pre-established medical consultations and encourage disabilities, institutional care groups and their family to think about major medical decisions early.

## Methods/intervention

We provide "institutional ACP" and "residential (family) ACP" services. In the first phase, we arrange "publicity activities" in the form of videos, demonstrations and questions and answers to help people with disabilities, families and staff understand ACP Patient Autonomy Act, ACP and hospice care. We also use sign language and Braille translators to help the hearing-impaired people and visually impaired people understand medical autonomy. The second phase arranges "Advance Care Planning (ACP)" services to help people sign advance decisions (AD) and establish hospice care wishes in advance. We also offer educational courses on medical autonomy and palliative care for staff in community institutions.

#### Results

In 2022, we assisted 33 people with disabilities to sign AD, including people with physical disabilities and mental functions. The number of people with disabilities signing AD has increased to 218 including physical disabilities, hearing-impaired people, visually Impaired people and people with mental disorders in 2023. The rate of choosing hospice care has also increased significantly.

#### **Conclusions/lessons learned**

We provide outreach medical services in the community system, not only assisting people with disabilities and their families to sign AD, but also promoting cooperation between community care agencies and hospitals to provide palliative care. The place of death for people with disabilities can be in an institution or at home. "Institutional ACP" and "Residential (Home) ACP" are expanding community medical service networks to help people with disabilities think about the concept of medical autonomy and protect their medical autonomy, including hospice wishes, medical service preferences and advance decision-making. Contact: CHUNG Ching Hui MacKay Memorial Hospital TAIWAN nnhui1104@gmail.com

The Effects and Outcomes of the Occupational Rehabilitation Program for Occupational Injury Subjects – Pilot Results of the One-Stop to Help All-labors (OSHA) Program

## CHU Nain-Feng, CHU Chun-Man, YIN Yan-Ru, CHEN Hua-Chang, HUANG Guan-Chen

## Background and objective

Occupational injuries are associated with great work-ability loss and disability for workers. Occupational injuries decrease workability and are associated with reduced income, becoming one of social and health problems among laborers in Taiwan. This pilot program is to use one-stop services to help the occupational injured subjects with physical disability return to work earlier or adjust to new working condition.

## Methods/intervention

The One-Stop to Help All-labors (OSHA) occupational medicine and rehabilitation program was conducted in a medical center in southern Taiwan. The OSHA program includes an occupational medicine clinic, a referral system from physical injury to occupation-related injury, evaluation of return to work readiness, setting a rehabilitation therapy and vocational reconstruction schedule, recruiting an occupational rehabilitation program (CPET program) and a follow up post returning to work. In total, 372 subjects visited our occupational medicine clinic from Jan. 01 to Dec. 31, 2023. Among them, 197 subjects were recruited for services. 63 subjects were included in the vocational reconstruction program and 52 subjects were included in the CPET program with evaluation, training, and therapy. Among these 52 subjects, 50 subjects received physical work hardening, 8 subjects received psychological work hardening and 10 subjects received job accmmodation services.

## Results

Total 41 subjects completed the CPET program and the evaluation showed that more than 93.8% of the 41 subjects considered this OSHA program helpful for their return to work. Their competency to work was 3.9 points (total 10 points) at the beginning of rehabilitation program, about 8.0 points after completing the work hardening training program, and about 8.6 points 3 months after returning to work.

## **Conclusions/lessons learned**

This pilot OSHA program showed that the overall satisfaction rate is more than 94% and their competency to work increased twice for those with severe occupational injuries and disabilities. This program may be applied to workers with occupational injuries and disabilities; the participation of the program may also be promoted among workers with occupational injuries and disabilities as early as possible to reach health equity.

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Rehabilitation outcomes and health promotion implications of a homebased occupational therapy for lowincome people with chronic disabilities

## KIM Minjung

## **Background and objective**

This study focuses on low-income individuals with chronic disabilities within the community, particularly those who are either not receiving occupational therapy or those who seek to extend their therapy into a home setting. The objective is to evaluate the effectiveness of home-based training programs in rehabilitation and health promotion.

## Methods/intervention

Participants were recruited from Boramae Hospital and public health centers in Seoul for this study. The study sample comprised 35 individuals with chronic brain lesions and physical impairments from low-income backgrounds. Functional assessments evaluated cognitive function, upper limb and hand function. Based on the outcomes, participants received occupational therapy tools tailored to their needs and visual training materials featuring photographs, designed for clarity and ease of use. Therapists provided direct instruction on the exercises. Additionally, participants were encouraged exercise checklists and interim phone check-ins. Feedback was collected via post-exercise satisfaction surveys.

## Results

Thirty-five recipients with hand dysfunction, mild spasticity, and mild cognitive impairment were selected from over 60 applicants. Of the participants, 66% had undergone occupational therapy previously, while 56% were not presently undergoing such therapy. One-month post-project, all participants reported that exercise checklists and scheduled check-ins facilitated adherence, leading to the establishment of a regular exercise routine (44%), improved hand function (26%), enhanced perception of occupational therapy (12%), positive psychological changes (8%).

## Conclusions/lessons learned

The implementation of the home-based occupational therapy system revealed a significant demand for rehabilitating medically vulnerable individuals, underscoring the pressing necessity for innovative healthcare delivery and systems. It could offer a strategic guidance for developing an accessible communitybased rehabilitation system that promotes health equity by ensuring equal access to occupational therapy.

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## **Oral session 2.1: SYMPOSIUM**

The Potential of Community Pharmacy-Based Health Promotion in a Super-Aging Society

## OKADA Hiroshi, HIROTA Noritake,

## Background and objective

Japan currently has 30% of its population aged 65 and over, making it the most rapidly aging society among developed countries. The aging of society is causing various problems, such as increased social security costs, including medical costs, and a shortage of medical and care providers. To address these social problems, Japan is promoting the Integrated Community Care System policy, which links local medical and nursing care, and the use of community pharmacies is being promoted as part of this policy. In 2016, the Japanese government launched the "Family-Care Pharmacist and Pharmacy System" and the "Health Support Pharmacy System," under which community pharmacies are required to provide health promotion services to local residents. Currently, health promotion activities at pharmacies in Japan are not limited to the annual screening of blood pressure, blood sugar, and bone density, but pharmacies are increasingly being used as places where people gather on a daily basis. For example, pharmacies provide "home care," in which pharmacists visit the homes of aging local residents to help them live independently in their own homes for as long as possible, and pharmacies are also involved in various activities such as organizing events where local residents can go out and socialize. In this symposium, four examples of community pharmacy will be presented: 1. the establishment of a cafe serving healthy meals in a pharmacy to create a place for community interaction: 2, the provision of health education and home care for community residents in a pharmacy; 3. the implementation of a free web consultation salon by pharmacists for cancer patients; 4. the provision of lifestyle improvement support for people with diabetes and hypertension in pharmacies; 5. the provision of lifestyle improvement support and theater-based dementia support for people with diabetes and hypertension in pharmacies. We hope that the various attempts in Japanese community pharmacies presented in this symposium will serve as a reference for health promotion in other countries.

#### Contact:

OKADA Hiroshi Wakayama Medical University JAPAN okada h@wakayama-med.ac.jp

## **Oral session 2.2: SYMPOSIUM**

Health destroyed by War, the best subscription is Peace

## OKABE Toshihiko, OHNO Giichiro

## **Background and objective**

Why do we plan this symposium? War takes away human life and dignity, especially from women and children. Medical facilities are destroyed and the right to receive medical care are robbed. All health promoting efforts and achievements are reduced to ashes. Now, it is shown us as a reality in the world. What is the purpose of the symposium? War is the worst social determinant of health (SDH) and destroys human life and health. If saving lives is a responsibility of medicine, preventing wars is one of essential works for medical profession in the world including countries at wars. What can a doctor and a hospital do for peace? This is the issue to discuss here.

## Methods/intervention

What can we learn in the symposium? First, reports on the difficulties of medical care during wars are presented from Ukraine by Dr O. Riabets and Gaza by Dr Y Nekozuka. Second, practical experiences are reported. Each presentation shows what and how a doctor and a hospital work on for peace, and what they have been changing. These are as follows: endless medical care for HIBAKUSHA in Hiroshima (Dr I. Minamoto), Korean doctors continuing medical care support for health damage that Korean army had caused in Vietnam War (Dr Hong SY), Peace school of a hospital in Nagasaki (Dr Y. Nakazato), antiwar and antinuclear bomb association of young doctors (Dr E. Kono), a nursing school that has peace education as its curriculum (Ms C. Ikuta), Kenpo Pride Project -- we love the constitution renouncing wars (Ms K.Takahata).

## **Conclusions/lessons learned**

What is outcome of discussion? We learn how start action for banning war from tomorrow. It is also important outcome to develop this problem as one of scientific field of health promotion by continuing discussion and practical researches.

Contact: OHNO Giichiro Hokkaido Teuri Clinic JAPAN oonog@nifty.com A challenge of a hospital in Hiroshima to prevent war - Lessons learned from Hibakushas

## **MINAMOTO** Isamu

## **Background and objective**

Under the Atomic bomb Survivors Medical Care Law established in 1957, certified survivors receive coverage for their health expenses as well as free medical checkups up to four times per year. Hiroshima Kyoritsu Hospital actively supports atomic bomb survivors (Hibakushas) by providing medical health checkups and helping survivors receive certification.

#### Methods/intervention

We report the current state Hibakushas and the support available to them. We also describe the various health promoting activities undertaken by our hospital.

## Results

The are currently about 110,000 certified survivors. The different types of support provided by our hospital include: 1. Providing medical health checkups to local Hibakushas 2. Providing medical health checkups to Hibakushas residing abroad (South Korea, Brazil, U.S.A, Canada, Australia, Taiwan etc.) 3. Providing medical health checkups to 2nd generation Hibakushas (22% of total in Hiroshima) 4. Helping survivors obtain GENBAKUSHO (Abomb disease) certification

#### **Conclusions/lessons learned**

As the first health promoting hospital in Hiroshima city, we have been actively supporting the Hibakusha community. The number of Hibakushas are declining rapidly due to old age and some are still not designated as A-bomb disease despite being diagnosed with cancer. The long-lasting effects of war should never be forgotten as we reaffirm the crucial role of peace in health promotion.

The actual situation of health under conflict in Gaza and international medical support action from Japan

## NEKOZUKA Yoshio, NISHIOKA Toshiyasu, ONAI Yui

#### **Background and objective**

Gaza has already continued under conflict since 7 October, 2023. Health crisis: During this one year, more than 40,000 residents have died, 70% of them women and children, and over 10,000 bodies have been left under the rubble, about 500 medical workers have also died. The poor sanitary conditions in Gaza have also taken away the health and lives. The water contamination by excrement has permeated the refugee camps, causing diarrhea and infections. Food and water shortages have become even more serious because of humanitarian supplies blocked. Northern Gaza is already in the threat of starvation. Once they become dehydrated, there is no intravenous drip to replenish fluids, and they may have to wait for death. Under the blockade that has continued for 16 years, Gaza's economy is exhausted with an average unemployment rate of 70% among young people. They have no prospects for the future, and suicides among pessimistic young people has been increasing. Gaza needs international support saving lives and health promotions.

## Methods/intervention

Medical support at war zone: In 2013, we launched Japanese medical team supporting Gaza with UNRWA collaboration and have sent a party 9 times, each for 2 weeks. A party consists of orthopedic doctors, nurses and physical therapists, and 45 members in total have been involved. Members visit Gaza European Hospital to support mainly in orthopedics treatments, including operations. Patients were war -wounded civilian and disable people. Physical therapists engaged rehabilitation of patients and lectured to local therapists. The team holds on children school where children play with staff volleyball, painting, origami, Japanese paper craft for the purpose of supporting socio-mentally children under large stress. It is sure the international support is effective, but limited locally and temporally. It is essential to achieve a ceasefire and peace to resolve the health in Gaza.

## Fight for life, health and future: Ukrainian medical system in Russian-Ukrainian war

## **RIABETS Oleksandra**

## **Background and objective**

War is a disaster that lasts long and requires a lot of resources. The medical system in Ukraine was forced to change gradually during the past 10 years of the Russian-Ukrainian war. This allowed it to adapt quickly in February 2022 and manage massive admissions and restricted mobility. By now Ministry of Health of Ukraine declared 1642 medical facilities damaged, and 214 completely destroyed. This resulted in the limited access and delay in medical care for many citizens. Regular attacks on energy infrastructure lead to long blackouts in all regions of Ukraine. Blackouts are deathly dangerous for patients, so now there is a need to supply healthcare facilities with power generators to ensure uninterrupted saving of lives. Their terrorism leads to a huge number of people with mine-explosive wounds and amputated limbs. With each explosion, more and more patients need prosthetics and long-term rehabilitation. Sustainability and efficiency of each component of the medical system reduces workload and financial burden on critical parts of the medical system, such as emergency care, trauma assessment, frontline healthcare and allows more reasonable allocation of resources and provision of timely and necessary medical assistance. The interchangeability of medical professionals and constant learning of multidisciplinary skills of every doctor can become the chance for someone's survival. Ukrainian medical system faces many problems caused by constant shelling, the intended destruction of critical infrastructure and a shortage of resources as well as the

# Connecting History and Everyday Life - 25 years of Vietnam Peace Medical Solidarity

## **HONG Suyeon**

## **Background and objective**

In Binh Hoa sa, Binh Son District, Quang Ngai Province, central region of Vietnam, where 430 people were killed by South Korean troops from December 3-6 1966, there is an abhorrent monument that says, "I will remember the ten thousand sins that will reach to the heavens! In 1999, the fact that civilians were victimized by South Korean military during the Vietnam War with no reason was revealed and spread in the South Korean society: Approximately 9,000 victims in central Vietnam where South Korean troops were stationed. As a proof of this victimization, it is not difficult to meet survivors for the war and also discover many abhorrent monument and cenotaph monument.

## Methods/intervention

In an effort to heal the wounds of war victims and ultimately bring peace into everyday life, Medics with Vietnam and Peace (Pyeongyeon) started to provide medical activities and implement initiatives in 2000. Pyeongyeon primarily includes dentists, oriental medicine doctors, dental hygienists, nursing assistants, and members of the public. From 2000 to 2024, Pyeongyeon visited Vietnam 21 times in March every year(one trip for 8 nights and 9 days) so far, and carried out their mission as a medical team by providing medical service and supports in communities in need.

## **Conclusions/lessons learned**

"Those who cannot remember the past are condemned to repeat it" The words from Auschwitz, which show the horrors of the Holocaust, remind us to remember the civilian casualties cased by the South Korean military during the Vietnam War. These unchanging historical facts remind us of the meaning of peace in the present. Pyeongyeon is not a benevolent medical volunteer activity, but rather a practice of medical professionals who remember history properly and move forward for peace and reconciliation, and we hope that this spirit will spread.

Peace school of a hospital in Nagasaki

## **NAKAZATO** Yuka

## Background and objective

We are an organization consisting of one hospital, four clinics, six care facilities, and three dispensing pharmacies that provide medical and nursing care in the southern region of Nagasaki Prefecture. Since our founding in 1972, we have been treating Hibakusha, or atomic bomb survivors. We believe that "war is the greatest and worst obstacle to health," and we emphasize activities to preserve peace. The purpose of this presentation is to introduce the efforts of our peace school, which began in 2021 to train the next generation interested in peace preservation activities.

## Methods/intervention

Peace school students are recruited from facilities within the organization at their own request. They take six courses over a period of approximately eight months. The course content includes listening to the testimonies of Hibakusha, issues related to the U.S. military bases and environmental problems in Okinawa Prefecture, and training guides to visit the A-bombed remains in Nagasaki.

## Results

Since 2021, three terms of courses have been held, attended by a total of 17 members. Graduates serve as guides for A-bombed remains tours at the request of our staff training programs and other prefectures. One of them was interested in the base issue and toured the site of the U.S. military base construction being forced off the coast of Henoko, Okinawa.

## **Conclusions/lessons learned**

With the average age of Hibakusha now over 85, next year will mark the 80th anniversary of the atomic bombing. We believe that efforts to abolish nuclear weapons and to preserve peace and the environment are important roles for us involved in medical and nursing care. We would like to continue and develop the efforts of the peace school in the future.

# Physicians Against Nuclear War, ABC for Peace

## **KONO Eriko**

## **Background and objective**

It has been 79 years since the atomic bombings, the aging of the survivors raises concerns about succession of medical care for survivors and anti-nuclear peace activities. Meanwhile, young medical professionals struggle to find time to reflect on the history of war and world peace issues due to their demanding work schedules. In September 2023, "ABC for Peace (Action and Bridge by health care workers for Peace)" was launched by young medical and care workers from across Japan. It was initiated by young doctors involved in the Physicians Against Nuclear War since they were medical students. Our goal is to expand the circle of medical professionals who stand up for peace.

## Methods/intervention

In October and November 2023, we created a video calling for the Japanese government to participate in the Second Meeting of the States Parties to the Treaty on the Prohibition of Nuclear Weapons and distributed it on social media. In November and December, two doctors and one medical student from the group participated in the treaty meeting at the United Nations Headquarters.

#### Results

Although the Japanese government did not participate in the treaty meeting, we witnessed a forum where governments and civil society groups engaged in equitable discussions towards the common goal of nuclear disarmament. Working with Japanese atomic bomb survivors, we appealed for nuclear disarmament. At the "Nuclear Victims Forum" side event, the experiences of nuclear victims worldwide were shared, underscoring our vital role in attending to the physical and mental health of nuclear victims. After returning to Japan, we held report sessions at the medical institutions and communities, and emphasized the crucial mission in the fight against nuclear weapons.

#### **Conclusions/lessons learned**

By starting this project, we were able to take action together, regardless of generation, or occupation. This experience has become the driving force behind our next actions.

# Wishing for a peaceful society, nursing students participated in the Peace Seminar

## **IKUTA Chiho**

#### **Background and objective**

Tokatsu Nursing School deeply regret the loss of many lives in the war and our educational declaration states that we will strive to provide medical care, nursing, and education. We show our practical experiences for you to recognize the human right to life.

## Methods/intervention

We have a curriculum named "community exchange exercise". Students interviewed local residents on how they think about life and health. In this exercise, learning wartime experiences changed students' perception of "war and peace". A resident was exposed to Atomic bomb 20 km away from the hypocenter in Hiroshima. A resident told a story of his classmate in Manchuria from where many Japanese civilian evacuated in groups at the end of the war without any military support. An infant brother died and mother was forced to throw the dead body to escape and survive. A resident told about his student days. He was forced to work endlessly in munition factories, and cultivated the schoolyard to get something to eat by themselves. Every time a bombing hit the ground they fled to an underground shelter in fear. All letters were checked by military officers. Such environment making his life hard.

#### Results

After leaning at the seminar, students who didn't know war came to understand that war not only destroys cities but also robs human dignity Students participated the world conference against A&H Bombs and encourage new students to participate in the seminar. They visited Hiroshima and Nagasaki continuously. In 2024, students were invited to a roundtable discussion on peace with professors and emphasized to hand over next generation a society where people can live in peace and freedom without nuclear weapons.

## **Conclusions/lessons learned**

The curriculum helps growing students and teachers together as democratic nursing professionals with humanity. We will continue learning peace in the future.

The KENPO(Constitution) Pride Project - Learning anti-war and peace in the hospital

## TAKAHATA Kanae

## **Background and objective**

Constitution of Japan is enacted after Japan's defeat in the Pacific War in which Japan invaded Asia. It is a rare peace constitution in the world that Article 9 clearly stating the renunciation of war. Japan has never started or been involved in wars under the constitution. However, there is a movement to amend this constitution to become Japan wage war. The KENPO, or "constitution" in Japanese, Pride Project (KPP) was started by our hospital doctors and young staff who have not experienced war and believe peace the basic premise of medical care and nursing.

## Methods/intervention

KPP holds KENPO Café (K-café) within the hospital. The aim is to learn the value of peace constitution and to keep Japan not waging war. Participants listen to lectures according health destruction and disparities such as medial collapse by war and nuclear bomb, nuclear deterrence verification, proposed constitutional amendments for war and LGBTQs and discuss over tea with various generations and positions. It has been held 22 times so far, three times a year, with about 20 participants each time, and 170 in total in 2023. In addition to K-café, KPP holds the welcoming peace constitution seminar for hospital newcomers every year.

## Results

A questionnaire survey to estimate KPP was conducted to 532 people. It showed that 38% of hospital staff have participated in KPP events, 70% of those surveyed have read the Constitution, and proportion of those who holdfast the peace constitution without revise was 59%, higher than a media survey (29%).

## **Conclusions/lessons learned**

K-café deepened understanding of the Peace Constitution to raise the anti-war and peace consciousness of hospital staff. In the future, we will work on ways to attend easily and to publicize broadly, and to nurture young people to carry on the peace that is essential to medical care.

# Oral session 2.3: Promoting health of children and young people

A Case Study of a 14-Year-Old Boy with Obesity and Gaming Disorder: Overcoming Daily Life Challenges

## II Sakiko, OHTANI Hiroshi, FUKUHARA Akira, IKEGAMI Azusa

## **Background and objective**

Children who are frequently absent from school may have problems that are not noticed. Gaming disorder disrupts daily routines and can lead to lifestyle diseases such as obesity. Addressing these issues generally requires targeted external intervention. The aim of this practice is to identify the problems and intervene to improve their health.

## Methods/intervention

Target: A 14-year-old boy who has been playing night games for 6 years and is suffering from obesity, muscle weakness, and declining academic ability. For Gaming Disorder: The boy was admitted without internet access and participated in the CAP-G program (Comprehensive Treatment Program for Gaming Disorder) developed by KURIHAMA hospital. For Academic Delays: He engaged daily in specifically assigned educational tasks. For Societal Reintegration: Coordination with hospital staff, school social workers, and home health agencies was crucial, followed by the implementation of home rehabilitation and nursing services post-discharge.

## Results

The 5-week program led to lifestyle and sleep pattern improvements, decreased internet use, and the adoption of a structured routine. His motivation to change gaming habits improved from a 2 to a 7 and his confidence from a 1 to a 3 on a scale of 10. Academically, progress was made from a third-grade to a fourth-grade level. Home rehabilitation and nursing care resulted in a 26 kg weight loss and increased school activity participation.

## **Conclusions/lessons learned**

This case illustrates the effectiveness of a collaborative approach between healthcare providers and community services in tackling the complex issues faced by young individuals, demonstrating significant improvements in both health and educational outcomes.

Contact: II Sakiko Kuwamizu hospital JAPAN sacusacuko@yahoo.co.jp Multidisciplinary Collaboration for Equitable Adolescent Health Promotion in Tribal Communities

## CHANG Yung-Chieh, CHOU Wei-Chih, CHANG Ching-Yu, SONG Wen-Fang, TIEN Hui-Wen, CHEN Hsing-Chu

## **Background and objective**

Hualien Tzu Chi Hospital launched "Circuit Pediatric Growth Special Clinics" in Xiulin Township. This health service model aims to establish an "outreach adolescent health platform" to connect communities and tribal areas with hospital health services through multidisciplinary pediatric medical teams, especially the services of endocrinology, gastroenterology and adolescent medicine subspecialties.

## Methods/intervention

Nurses from local health stations and schools collaborate to refer students with abnormal BMI to specialized growth clinics. -The health center evaluates the development history, nutritional, and physical examination, and refers the patient to hospital for further examination, such as abdominal ultrasound, bone age Xray, etc. -Conduct regular follow-up visits and closely contact the students' caregivers, teachers and nurses to develop treatment plans and personalized healthy lifestyle modification. -Involvement of the healthcare management team in collaboration with family caregivers promotes better compliance.

## Results

A 10-year-old girl, with longstanding poor weight gain and underweight BMI, was referred to our growth clinic. She was active physical activity but poor nutrition consumption due to picky eating habit and late sleep at night. Initial weight and heigh measurement at 14.2 kg (<3rd percentile,19.2 kg) and 118 cm (<3rd percentile, 123 cm). Her workup data revealed: bone age, compatible with 7.5 years of age; endocrine and nutrition markers below normal range. Nutrition, diet and regular exercise plans are developed after discussion with family. At regular follow-up at 17 months, signs of catch-up growth were observed, such as pubertal development and breast budding, height gain of 11 cm, and weight gain of 4.8 kg, which were within reasonable rates for the age and sex.

#### **Conclusions/lessons learned**

Nurse practitioners of health station collaborate with school nurse to make effective referral and minimize the timeconsuming transportation. Triable health station plays as the active hub within this "Community-School-Family" framework to offer complementary medical services, facilitate referrals, and enhance healthcare accessibility for adolescents.

Contact: SONG Wum-Fang TAIWAN song0626@tzuchi.com.tw

# Good family support helps young people achieving healthier living

## **JAN Chyi-Feng**

## **Background and objective**

We aimed to investigate the relation between family function and mental health to delineate the effort we can make to promote adolescent health.

## Methods/intervention

We used a structured psychosocial health self-assessment questionnaire containing the depression score (Brief Symptom Rating Scale, BSRS-5), family function (family APGAR score), as well as personal experience regarding peer relationship and life events. The youth patients and students filled out anonymously. Chi-square test and logistic regression analysis were performed to disclose the influencing factors of developing depression or suicidal tendencies.

## Results

A total of 338 young people from the general health education course at the University and 139 patients from youth friendly clinics were enrolled for data analysis. Overall, female have the higher mean score for BSRS-5 than male  $(7.2 \pm 0.3 \text{ v.s. } 6.1 \pm 0.3,$ p=0.0012), but there is no gender difference for mean family APGAR score. The moderate to severe depression was 32.9% for adolescent clinics visitors and 26.3% for university students. (p=0.178) The moderate to severe family dysfunction was 39.0% for adolescent clinics visitors and 26.7% for university students. (p=0.0057) Regarding logistic regression analysis, the severity of depression score or suicidal idea was inversely associated with the sum of Family APGAR score. (odds ratio: 0.46(95% C.I. 0.34-0.63) It was also positively correlated with big quarrels with family (4.03X), school adjustment problems (3.39X), bullying experience (3.41X), poor peer relationship (4.33X), as well as major life event in the family within recent years (2.33X). For multiple logistic regression analysis, family members' emotional expressions and reactions to personal affect are the major key factors to help lower impact on depression or suicidal idea for family APGAR score. (adjusted odds ratio: 0.46(95% C.I. 0.32-0.65))

#### Conclusions/lessons learned

Family members' emotional expressions and reactions to personal affect are the key family supportive factors that could help prevent young peole from depression or suicide.

Contact: JAN CHYI FENG National Taiwan University Hospital TAIWAN jcf036@ntu.edu.tw

# The Taiwan Stool Card Program Has Saved Lives and Improved Children's Healthcare Use and Spending

## CHEN Likwang, YANG Wei-Chih, CHEN Chi-Liang

## **Background and objective**

Taiwan started a universal infant stool color card program in 2004 to advance early diagnosis of biliary atresia (BA). This study investigated how this program affected long-term healthcare use and spending.

## Methods/intervention

This study used Taiwan's National Health Insurance (NHI) database. We enrolled all BA children born in 2000-2001 (before intervention) and those born in 2004-2006 (after intervention). We compared the life expectancy over the first ten years of life, the healthcare use pattern, and the NHI spending between the two cohorts.

## Results

With complete observation over the first ten years of life, we found that the life expectancy for the before-intervention cohort (n=121) was 7.7 years, and that for the after-intervention cohort (n=118) was 8.9. The difference was 1.2 years (p<0.05), and the amount of NHI expense for one more year of life was 91,372 New Taiwan Dollars of 2023 (about 2950 USD). Compared to the before-intervention cohort, the after-intervention cohort used more inpatient care in the first two years of life, but had less demand for hospitalization afterwards. The after-intervention cohort had less demand for outpatient care over the childhood. Furthermore, the after-intervention cohort had a lower chance of receiving unclear diagnosis, and started to get attention for their mental problems and the nervous system at an earlier age.

#### **Conclusions/lessons learned**

The data show that the stool color card program has increased the life expectancy. It has also advanced children's healthcare use pattern in the early life stage. Our data on the BA children's long-term NHI healthcare expenditures further suggest that this program is cost-effective.

#### Contact:

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# Oral session 2.4: Digitalization and patient involvement in health care and health promotion

Involving patients and informal carers into the hospital management

## GUTOVA Lenka, VANHOVA Monika, KNOBLOCHOVA Mirka

## Background and objective

Military University Hospital Prague is a 472-bed hospital built in 1938. The hospital provides a range of medical services on 10 clinics and 20 specialized departments. High quality healthcare should be a person-centered care focused on the needs of individuals, guided by peoples' preferences and values, and includes supporting structures, policies, and practices that create a culture of quality, compassion, and partnership across the continuum of care. We strive for our hospital to be a place of physical, mental and spiritual healing. Our staff strives to care for patients with compassion, dignity and respect, where patients and their families are our partners in care. To provide good quality healthcare we look for different ways how to involve patients, informal carers and other stakeholders into strategic planning. Hospital management has decided to establish the Patient Council as an advisory body for making important decisions. The Patient Council is an independent, permanent advisory body to the hospital's management. The Patient Council has 15 members, includes the Coordinator of the Patient Council, the Hospital Ombudsman and further consists of patients, doctors, non-medical staff and representatives of patient organizations. In the presentation we will share our first experience with the patients council and its input on everyday hospital practice.

## Methods/intervention

establisment of the Patient Council involving staff, patients, informal carers, other stakeholders into strategic planning

## Results

Main aims:

- to increase the protection of patients' rights
- to improve sharing information in relation to the hospital and vice versa within HPH Programe
- to ensure regular contact of patient representatives and patient organizations with hospital management.
- to propose initiatives to improve the quality of health care, solves problems related to health care, participates in the preparation and control of the comprehensibility of materials for certain patients, educates patients and the public.

## **Conclusions/lessons learned**

To provide good quality healthcare we look for different ways how to involve patients, informal carers and other stakeholders into strategic planning through the Patient Council. Contact: VANHOVA Monika Military University Hospital in Prague CZECH REPUBLIC monika.vanhova@uvn.cz

Lifestyle Intervention using mHealth for Patients with Nonalcoholic Fatty Liver Disease in Korea: Randomized Controlled Trial

## KWON Eunjoo, CHO Seon, OH Joo Hyun, YOON Eileen L, JUN Daewon, LEE Yun-Hui, KIM Young-Sung, LEE Eun-Hee, KIM In-One

## Background and objective

Nonalcoholic fatty liver disease (NAFLD) is the most common cause of chronic liver disease worldwide. The prevalence of NAFLD has been reported from 20% to 30% in Korea. Lifestyle modification is the most important method for managing NAFLD. Mobile health technology has enabled the achievement of successful interventions. This study aimed to evaluate the effects of mHealth-based lifestyle intervention on reducing hepatic fat content and improving clinical factors for patients with NAFLD in primary health center as HPHs.

## Methods/intervention

This randomized controlled trial included 230 participants with NAFLD confirmed by abdominal sonography and body mass index≥23kg/m2, at 2 primary healthcare centers in Seoul, Korea. The participants were randomly allocated to the Intervention group (mHealth group, MHG=115) or control group (standard care group, SCG=115). The primary outcome was a change from baseline to 4 months in hepatic fat content by MRI-PDFF. The secondary outcomes were ≥5% weight reduction, and changes in clinical variables. Intention-to-treat analysis was used for statistical comparison.

## Results

The mean age of the participants was  $44.9\pm10.16$  years, 37.8% were female. There were no differences in baseline all variables between MCG and SCG. The proportion of fatty liver content normalization and 5%≥weight loss in MHG was 14.2% and 44.3%, respectively, which is higher than in SCG (p=0.006, p<0.001). MHG showed greater improvement in anthropometric(p<0.001), liver enzymes(p<0.05), and biochemical outcomes (p<0.05) at 4 months. The differences of changes between 2 groups were significant hepatic fat content (p=0.001) at 4 months.

## **Conclusions/lessons learned**

Lifestyle modification intervention using mHealth was effective in improving weight loss, anthropometric and clinical outcomes, and reducing the hepatic fat content measured by MRI-PDFF for patients with NAFLD in primary healthcare settings. Contact: KWON Eunjoo Medicheck Research Institution 4ever35@hanmail.net

# Experience in using artificial intelligence technology to promote hand hygiene

## YANG Ming Chih, LIN Po-Te, LU An-Chi, LIN Chih Ming

## **Background and objective**

Handwashing is an important measure to prevent infection. In the past, it is only taught by conventional videos or photos, lacking of proper guidance in terms of handwashing process and effectiveness after handwashing. We therefore resolve the above mentioned issue through the virtual handwashing assistant system.

#### Methods/intervention

The system is made up of two devices. The first is the handwashing action recognition via artificial intelligence (AI) device. During the handwashing process, the built-in AI model will identify whether the six handwashing actions made by the trainee are correct or not, as well as suffice time required. The last one is the fluorophotographic device. Before washing their hands, trainees will have their hands coated with fluorescent dye. We used the device to take pictures of palms and backs of their hands after washing stage. By check the films taken by the device, it will verify hands are not washed cleanly if there still contains residual fluorescence on the hands.

## Results

A total of 39 staff members has participated in the project and subsequently completed the questionnaires. The statistical results are as follows. 1) 92% of the participants will pay more attention to the steps and time of handwashing required in the future encounters. 2) 100% of the participants feel convinced that the residual fluorescent photos help to know if their hands are washed cleanly or not. 3) The system received 95% satisfactory rating from the project participants.

#### Conclusions/lessons learned

The results show that the system is very trustworthy. It is also because the adequacy of the handwashing action is scored by the AI recognition device, and the effectiveness after handwashing is confirmed by fluorescent residual images. The above data and images are stored in the cloud for easy use by the trainees. With the current development, trainees will have more motivation to improve their skill and prevent the spread of infectious diseases.

#### Contact:

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# Oral session 2.5: Salutogenic, safe and healthy workplace

Healthcare Utilisation among Post-COVID Syndrome in a Malaysian Public Hospital

SHA'ARI Nur Insyirah, ISMAIL Aniza, SK ABD RAZAK Ruhana, ABDUL AZIZ Aznida Firzah, SUDDIN Leny Suzana, AZZERI Amirah, HAFIZAH ZAMLI Akmal, MOHD HANAFFI Raiha Hasni, SHOOK YEN Pamela Chia

## **Background and objective**

COVID-19 has had an unprecedented impact, and long-term symptoms could be even more catastrophic. While most COVID-19 patients recover and return to normal health, some patients may experience symptoms that continue for more than 12 weeks following recovery, and this condition is known as post-COVID syndrome (PCS). PCS has been unnoticed in Malaysia, with little emphasis on the issue and limited initial reports to access. This study aimed to study the factors influencing healthcare utilisation (HCU) among patients with PCS in Malaysia.

## Methods/intervention

We conducted a cross-sectional study. Patients who have been followed up due to persistent COVID-19 symptoms between 1st August 2023 and 31st December 2023 were invited to join this study. The questionnaire collected data on sociodemographic, health information, PCS clinical presentation, and healthcare utilisation.

#### Results

A total of 220 patients were included; 129 (58.6%) were male, the mean (SD) age was 53 (12.87) years, and 142 (64.5%) were Malays. The minimum health care utilisation was one visit and the maximum visit was 8 times. The mean of HCU was 3.3 visit. In the multivariable model, this study showed statistically significant effects of the history of hospitalisation (p=0.007), history of ICU admission (p<0.001), hyperlipidaemia (p=0.049), chest pain (p=0.023) and fever (p=0.046) on the increasing number of visits to the healthcare facilities.

## **Conclusions/lessons learned**

This study highlighted those patients with a history of hospitalisation and ICU admission during acute infection, patients with hyperlipidaemia and patients who developed chest pain and fever were found to be associated with healthcare utilisation. These findings could be used as a model for implementing future healthcare management and programs related to the PCS in Malaysia. Moreover, identifying the factors contributing to healthcare utilisation among PCS patients might help identify those who are more liable to require additional healthcare management and provide them with proper support. Strengthening the holistic approach should be emphasised.

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# The nursing manpower in the postpandemic era of Taiwan

## **HSIEH Ming-Hsin**

## **Background and objective**

The global pandemic led to changes in school internship courses for epidemic prevention, potentially affecting their future employment. Clinically, a significant manpower loss peaked almost a year after the pandemic began. This study shares experiences from nursing graduates across universities in the post-pandemic era, aiming to improve related policies to similar near events.

## Methods/intervention

Qualitative research was conducted by snowballing sampling and semi-structured interviews. The final stage of the interview included 16 graduating students and 10 clinical nurses within two years of graduation.

## Results

The content analysis found that graduating students and clinical nurses had each four main themes determining their decision to join or leave clinic jobs. The epidemic influenced students' experiences and technical skills before beginning their clinical work. While most clinical nursing staff (80%) expressed that the pandemic did not make them attempt to leave their jobs, some were concerned about the risk of infection due to having young children at home, despite having family support for their healthcare roles.

## **Conclusions/lessons learned**

Following epidemic prevention measures although has an impact on students before they begin clinical work, leading to an increase in anxiety, but expectations of actual clinical situations also increase. However, the difficulty and instability during the pandemic are not the main reasons why clinical nursing staffs attempt to leave. Rather, the cooperative atmosphere in the unit is the primary factor.

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How the lack of sleep affects emotional and professional life of healthcare workers

## FERNANDEZ-AGUILERA Monica, VICENTE GARCIA Mireia, CARBONELL PALAU Sílvia, IBÁÑEZ ÁVILA Rocío, BOSCH FÁBREGAS Mireia, SIMÓN PÉREZ Rosa, JOVER MORENO Anna, NAVARRO RUBIO Maria Dolors, FERNÁNDEZ BENAGES Neida, PUJIULA MASÓ Jordi, BRIANSÓ FLORENCIO Maria

## Background and objective

Sleeping problems are often related to both physical and mental health consequences. Healthcare professionals have many different shifts that can affect the quality of their sleep. To commemorate the World Sleep Day (March 15th), we designed a survey to find out more about sleeping habits and conditions at HPH Catalunya centres. Our objectives were:

- To learn about the sleep quality of health professionals
- To detect risk groups within professionals
- To identify how the lack of sleep affects their emotional state and their work activity

## Methods/intervention

We designed a 10 questions survey with Google Forms to learn about sleeping habits among the professionals of the 26 centres of HPH Catalunya Network. In total, 930 people answered the survey. We gathered information with Excel. It's a descriptive study. The survey was also supported by a presentation of the project and distributed to all the centres. It was held between March 15th and April 15th. Finally, 17 centres participated.

#### Results

The big groups we studied were between 36 and 55 years old (55.2%), and between 26 and 35 years old (17.2%). 86.2% of healthcare professionals do not have a restful sleep: 35.2% sleep 7 hours; 34.4% sleep 6 hours; 16.6% sleep 5 or less hours. Although 59.2% think that they need 8 hours. 67% believe that the lack of sleep affects quite enough or very much their emotional state. 32.8 thinks that lack of sleep affects quite enough its work activity, and 12.9% thinks it affects it very much. 55.5% of people working at night (187) they sleep 6 or less hours. In fact, 13% sleep only 5 hours and 10.6% sleep less than 5. While the global 930, only 3.5% sleep less than 5 hours. People working at night take more medication (19.2%) than people that do not work at night (only 9.2%). Plus, the lack of sleep impacts their workplace. 32.7% believe it impacts very much, 12.9% quite a lot.

## **Conclusions/lessons learned**

Healthcare professionals sleep less than they consider ideal and lack of sleep affects their emotional state and their jobs. We are designing specifics for treating lack of sleep and its impact specially on people working at night, because they are the ones that sleep less and has more affectation on their activity and health.

## Contact:

FERNANDEZ-AGUILERA Monica Catalan Network HPH- Spain, SPAIN monica.fernandez@csi.cat Challenges and opportunities in the health promotion of healthcare workers

## SZÖRÉNYINÉ VÁNYI Gabriella, AGUZZOLI Cristina, LEE Jaekyung

## **Background and objective**

The global health sector is facing severe labor shortages, and the global shortage is exacerbated during and post-pandemic. Health inequalities are just as visible among health workers as they are in society at large. A significant proportion of health workers are underpaid, have lower skills, and therefore lower incomes. Lowwage health workers are exposed to many risks in addition to poverty: biological agents, toxic chemicals, heavy lifting of patients, physical and verbal assaults, and high-stress conditions including long working hours and night shifts. There are many chronically ill healthcare workers.

## Methods/intervention

Many HPH members feel that there is an urgent need for practical, useful help based on the standard and policy guidance. But what works in one place may not work in another. Despite common problems, cultural, economic, and social circumstances may be different. This is why practitioners have sought a method to evaluate and systematize different approaches. The best way to do this seems to be to collect and organize best practices.

#### Results

The aim of the team, as a first step in this work, is to set up an international task force. The team members come from Italy, Hungary, South Korea, and Sweden, and they hope that more countries will join in. The objective of the team is to collect recent articles on the subject. An important step is to define criteria for best practices and databases. The work will include the development of an appropriate online questionnaire to collect best practices and the development of a database where examples will be quickly and easily accessible.

#### **Conclusions/lessons learned**

It is not easy to find equally effective solutions to global, sectorwide difficulties, and there are many circumstances beyond our control. Many aspects and specificities need to be taken into account when trying to find practical solutions to the decadeslong health workplace crisis to support health workers in staying healthy. It is an advantage if we try to collect good practices from as many countries and as many professionals as possible.

## Contact:

SZÖRÉNYINÉ VÁNYI Gabriella Moritz Kaposi General Hospital HUNGARY szorenyine@kmmk.hu Healthcare workers problems with sleeping

FERNANDEZ-AGUILERA Monica, RIPOLL REDORTRA Ruth, NAVARRO OLLER Anna, SANCHO CALVACHE Maria, SERRANO MUÑIZ Belén, MADRID VIAMONTE Núria, CAÑETE RAMOS Concepción, SÁNCHEZ ALGILAGA Cristina, SÁNCHEZ LÓPEZ Eugenia, SABRIA MESTRAS Josefina, DELGADO GÓMEZ Isabel, PICO CRESPO Maria, PRAT GALVANY Mònica, PERAL PELLICER Evelio

#### **Background and objective**

A Multidisciplinary Task Force from different specialities: Pneumology, Rheumatology, Psychiatry, Psychology, Nurses, Work Medicine, and a Communication specialist, have been working for two years now to improve quality of sleep of their organization's professionals: Consorci Sanitari Integral, a public healthcare and social services consortium in Catalunya. The objectives of their study are:

- To learn about the sleep habits of health professionals
- To detect risk groups within professionals
- To design specific programmes to help improve sleeping

#### Methods/intervention

To commemorate World Sleep Day (March) we have been running a 10 questions survey on sleep habits and perceptions during 2022, 2023 and 2024. Our first survey (2022) was filled in by 426; 451 answered the second one (2023), and the last one (2024) was shared with the HPH Catalunya Network and we had 930 answers. We used Google Forms to gathered the information about: age, number of hours of sleep, number of ideal hours for you, if you think you have a sleep problem, if you work at night, if you think the lack of sleep affects your work or your emotional state, and if you have asked for help or even if you are under medication.

## Results

Most of interviewed sleep 6-7 hours (70%) but they consider ideal 7 h or more (95%). Half of them think have some sleep problems and few claim to have asked for help from a professional and take medication to sleep (20%). Two out of three consider that lack of sleep affects their emotional state and half consider that it affects their work activity. All the data increase in the night shift, despite being underrepresented (15%): 70% think that they have some sleep problem and between 20 and 30% refer to having asked for help from a professional and taking medication to sleep. Half of those are oncall doctors (24 hours), 15% think they have some sleep problem, although few have asked for help and take medication (less than 15%), even though they consider the lack of sleep it has a big impact on their emotional state (75%) an in their work activity (around 50%).

#### **Conclusions/lessons learned**

Through the years we have seen the same pattern, so that is why we have integrated in our annual health check from Occupation Health Department a specific test to detect problems and to help them to find a solution.

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# Oral session 2.6: Advancing health equity through innovative hospital and health service initiatives

The Preliminary Achievement of Establishing a Green Hospital Based on the Example of a Hospital in Central Taiwan

# WU Yi-Chen, CHEN Ming-Jyh, HUANG Wen-Ming, YANG Li-Hui

#### **Background and objective**

Social responsibility is the key to sustainable organizational development. Under the ground Green Health Hospital Declaration signed by our superintendent, we have launched comprehensive energy conservation management in medical services, the community, and the staff's life. To execute environment-friendly promotion with robust strategies, we build up a low-carbon medical system and community with smart green public construction promotion as well as intensifying energy conservation education and communication

#### Methods/intervention

With the support of the board and the superintendent, we construct an energy management team, commencing with an environment-friendly system, management, education, and ISO 50001 energy management system; ISO 14064 Greenhouse Gas Emission Verification; ISO 46001 Water Efficiency Management System; we have ameliorated energy performance and energy efficiency and continuing.

#### Results

The energy management system efficiently controls diesel, natural gas, and electricity usage. About 5% of consumption is saved when compared to the numbers from 2018 and 2023. For example, the total annual electricity saving from 2018 to 2022 is 3,227,205 kWh; based on the total electricity consumption of 4,432,400 kWh in 2018, the electricity saving effect is 7.3%.Our company develops intelligent services and promotes various paperless electronic operations to provide people with a vibrant

and environmentally friendly lifestyle. The goal is to save 68.6% on printing and photocopying by reducing 35.15 million sheets of paper yearly. We strengthen the concept of environmental protection classification among colleagues. In the past two years, the amount of resource recycling has reached more than 650 tons, and the resource recycling rate has reached 70%. The annual growth rate of waste recycling is about 28 metric tons.

#### **Conclusions/lessons learned**

To build a green medical system with "high efficacy, high value, low carbon, low reliance," energy stewardship, economic prosperity, and social responsibility are our principles when it comes to formulation of energy conservation management strategies, converting limited sources to efficient usage, developing clean energy, and continuing with sustainable energy.

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Improvement on TG, GLU and BMI in individuals participating the 21-Day Plant-Based Diet Intervention

## CHEN Ching-Yuan, CHIEN Sou-Hsin, LAI Yi-Ling, HSU Lin-Ying, GAN Cai-Ru

#### Background and objective

In response to climate change and food crisis, the 2021 United Nations Report onHealthier Diets for a Healthier Planet suggests transitioning to a diet rich in plant-based foods.Despite the mounting amount of evidence on the benefits of plant-based diet on heart and gut health, little empirical evidence on the effects of plant-based diet as intervention formanaging the risk factors of chronic diseases including BMI and cholesterol.

#### Methods/intervention

The purpose of this study is to evaluate the health outcomes of a 21-day plant-based diet intervention program. A total of 387 participants were recruited on a voluntary basis; all were adults over the age of 18.Data were using a single group pretest-posttest design to examine the changes before and after the 21-day diet intervention. Statistical analysis was conducted to examine the changes in basic data, blood tests and weight of the participants.

#### Results

This study involved 387 participants (M:95; F: 292). Their age ranged between 40 to 80 years, with a small percentage of over 80 years old. Before and after the intervention, changes in TG, GLU, CRE, UA, BUN, GPT and BMI revealed that 32% of the participants had abnormal TG before the intervention, which decreased to 25% after the intervention. Similarly, 33% of them had abnormal GLU before the intervention, and the abnormality rate decreased to 25% after the intervention. A total of 284 participants had lower BMI after the intervention compared to

before the intervention, although there was no significant difference in the other items before and after the intervention.

#### **Conclusions/lessons learned**

The project's results indicate that promoting a healthy diet for 21 days can be helpful in improving TG and GLU, reducing weight, and providing different dietary experiences to support the formation of healthy behaviors. It is suggested that future studies continue to promote and evaluate the impact of diet on health and the effectiveness of interventions, as well as further study changes in dietary behaviors. This will provide a reference for future health promotion work and allow us to work together towards addressing climate change.

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Analysis of help seekers in the first five months of the initial establishment of the Taiwan Alcohol Abstinence and Addiction Prevention Center.

### FANG Chun-Kai

#### **Background and objective**

The Taiwan Alcohol Abstinence and Addiction Prevention Center (TAIWAN AAAPC) was officially established on November 24, 2023. On the afternoon of that day, it began to provide people across Taiwan with a variety of ways to consult on alcohol treatment resources and make referrals to medical institutions for treatment. This abstract reports on an analysis of the center's help-seeking status in the first five months of its existence.

#### Methods/intervention

The TAIWAN AAAPC provides 6 different consultation channels, including: (1) on-site, (2) toll-free hotline, (3) general telephone line, (4) line@, (5) FACEBOOK, and (6) e-mail. The service hours are from 9:00-12:00 and 13:00-17:00 every Monday to Saturday, excluding national holidays. For alcoholics who need medical treatment, we have a total of 138 medical institutions across Taiwan that can provide referrals.

#### Results

From November 24, 2023 to April 30, 2024, a total of 457 help seekers contacted the TAIWAN AAAPC, of which 200 people (43.8%) used the toll-free hotline as the most, and the least were 3 people each (0.7%) via e-mail and FACEBOOK. Among the 457 seekers, 219 (47.9%) were family members, 137 (30.0%) were drinkers themselves, 36 (7.9%) were personal counselors for alcoholics, 32 (7.0%) were friends of drinkers, and 33 (7.2%) were unwilling to leave basic information. 122 seekers (26.7%) were referred to medical institutions across Taiwan for further alcohol addiction treatment.

#### Conclusions/lessons learned

Statistics from the first five months of the initial establishment of the TAIWAN AAAPC show that the largest number of seekers are family members of drinkers, followed by the drinkers themselves. Toll-free hotlines are the most popular ways to seek help. About a quarter are referred to medical institutions. This result will provide an important reference for future national alcohol abstinence policies and service networks.

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# Health Equity Project: Offering Complimentary Health Screenings to Underprivileged and/or Marginalized Communities in Penang, Malaysia

# LEW Ya Hui, CHEONG Yok Yee, LIM Zhi Hooi, DGEE Vennessa, TAN Kah Ee, YEE Pei Ni, OOI Shu Ting, OOI Yong Xuan

#### **Background and objective**

Adults with disabilities or those with a lower educational or socio-economic background may have an increased risk of developing non-communicable diseases (NCDs) than adults who are abled or adults with a higher academic and socio-economic background. As such, the Health Equity Project aims to foster health awareness regarding NCDs and reduce their prevalence among the relevant communities through complimentary health screenings and health education activities.

#### Methods/intervention

The Health Equity Project is a three-month-long initiative from March 2024 to May 2024 aiming to provide complimentary health screenings to a target of at least 500 adults (aged 18 years old and above) from five different communities in Penang, Malaysia. The communities involved are the homeless, the elderly, the physically handicapped, the visually handicapped, and refugees. Participants are screened for their body mass index, body fat percentage, blood pressure, and blood glucose and given nutrition counseling. Additionally, health education activities are provided to those below 18 years of age to foster a basic knowledge of health and preventive health measures among the younger generation.

#### Results

At the time of writing, two out of the seven health screenings have been conducted, which have involved the homeless (n = 78; male = 55, female = 23; Mage = 64.40 years old) and the elderly (n = 48, male = 27, female = 21; Mage = 66.17 years old) respectively, screening a total of 126 individuals.

#### **Conclusions/lessons learned**

This project contributes to understanding the prevalence of health issues among the relevant communities. Moreover, the project directly benefits its participants, who, through the health screening, can garner more understanding about their health and learn about how to have a healthier lifestyle.

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### **Oral session 3.1: ROUND TABLE**

Quality of Care at the System Level: Towards Equitable Outcomes

# BREDA João, FONSECA Valter, VASILEIOU Constantina, GROENE Oliver, BARBER Sarah Louise, SCHLOEMER John

#### **Background and objective**

"Reducing health inequities is an ethical imperative" The imperative to reduce health inequities has been a cornerstone of global health policy agenda since the commitments set at the 1st International Conference on Health Promotion in Ottawa, 19. As the world progresses towards the Sustainable Development Goals (SDGs) era, particularly focusing on Universal Health Coverage (SDG 3.8), measuring and advancing health equity remains a critical challenge. This workshop aims to address the multifaceted dimensions of health equity measurement through a quality of care lens, drawing from both historical commitments and contemporary data strategies. Global health organizations, including the World Health Organization (WHO), alongside partners like OECD, World Bank, Eurostat, and UNICEF, have played pivotal roles in enhancing equity measurement through initiatives such as the Health Inequality Data Repository. These efforts underscore the importance of disaggregated data in understanding disparities in health access and outcomes across various demographic profiles. Despite these advancements, challenges remain in capturing the full spectrum of inequalities, particularly those faced by the most vulnerable populations. The incorporation of equity dimensions in current Health Systems Performance Assessment (HSPA) frameworks is a crucial step toward addressing these challenges. The session will delve into the shortcomings of current health equity measurement tools and propose innovative solutions that have either been underutilized or require further development to realize their full potential. A key focus will be on qualitative method with quantitative elements, aimed at understanding patient characteristics and healthcare usage, thereby informing targeted interventions (patient vignette approaches). This is of utmost importance under the WHO concept of health promoting hospitals.

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# **Oral session 3.2: SYMPOSIUM**

Climate Change and Health Inequality: Addressing the Dual Crisis

#### LIN Ming-Nan

**Background and objective** 

1. The Intersection between Healthcare and Climate Change The healthcare sector plays a pivotal role in the overall welfare and

development of societies but also significantly contributes to global warming. Key concerns include energy-intensive buildings and services, the generation of toxic medical waste, and the extensive use of disposable equipment. These aspects present both challenges and opportunities for the sector to align with climate objectives. 2. Climate Change and Health Inequality Climate change exacerbates health inequalities worldwide, particularly affecting poor countries and communities. Despite contributing minimally to global carbon emissions, these regions face severe consequences from climate-induced natural disasters, infectious diseases, and other health challenges. The disparity in resilience and capacity to cope with these impacts highlights a pressing need for focused action. 3. Trust in the Healthcare Sector: A Foundation for Action Healthcare professionals are among the most trustworthy individuals in our societies. This trust endows them with a unique capacity to advocate for climate-aware policies and practices within their industry and beyond. It serves as a cornerstone for building collaboration between different stakeholders. 4. Growing Awareness: The Need for Acceleration While awareness of the nexus between healthcare and climate change is gradually growing, it still requires robust attention and concerted efforts. Greater engagement is necessary to leverage the sector's potential in mitigating its impacts and contributing positively to global climate goals. 5. The Role of International Collaboration Addressing health inequalities caused by climate change requires robust international cooperation and innovative solutions. Initiatives led by international healthcare NGOs and collaborations between governments, the private sector, and civil society are crucial for mitigating these impacts. 6. Proposed Session at the 30th HPH International Conference We hereby propose a session at the 30th HPH International Conference to highlight these vital issues and bring together global leaders and practitioners. The session will include leaders from the aforementioned organizations. The primary objectives of the session would be: To share experiences, best practices, and innovative solutions in addressing the dual crises of climate change and health inequality. To foster collaboration between various stakeholders, including governments, NGOs, and the private sector. To catalyze action and policy changes that reflect the intersection between healthcare and climate change, aiming to reduce health inequality related to climate change. We look forward to the opportunity to contribute to the meaningful dialogues and actions at the 30th HPH International Conference in Hiroshima, Japan.

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# Oral session 3.3: Approaches for Health Promoting Hospitals and Health Services to address equity in health

Organizing a HPH Network to achieve Health Promoting Healthcare at All Levels of Care

# NORDIN-JOHANSSON Annika, HARLID Ralph

#### **Background and objective**

The Swedish HPH Network, has been part of the international network since 1996. Today, 19 out of 21 regions are members, encompassing 66 hospitals and primary health care centers. The regions are represented by presidium members, process leaders, co-workers who collaborate nationally and locally to promote the development of equal and health-promoting healthcare.

#### Methods/intervention

The Swedish HPH Network vision is "Health oriented healthcare for good and equal health". The mission is to drive development with and for patients, employees, and the population by spreading knowledge, inspiring, and influencing stakeholders. The network sets focus on the four perspectives: governance and management, patients, population and co-workers, and organizes 12 task forces. A national secretariat, led by a national coordinator, supports the members by coordinating and facilitating activities e.g. arranging conferences, training sessions, and producing supportive materials. Process leaders are local coordinators within their respective regions.

#### Results

The Swedish HPH Network contributes to increased knowledge about health promoting measures and inspires development across all regions. Notable examples include the national implementation of targeted health dialogues, digital tobacco prevention, and enhanced patient participation and influence.

#### **Conclusions/lessons learned**

Organization health promoting work at a national level, involving the majority of hospitals and health care organizations, facilitates transition to a sustainable and health oriented healthcare system. Opportunities in the national context are focus on equal health, joint health promoting policy documents, access to health data, and enhanced collaboration. Challenges arise from unequal access to healthcare, inadequate needs based governance, shortcomings in follow-up of health promoting measures, and issues with competence provision.

#### Contact:

NORDIN-JOHANSSON Annika Center for Occupational and Behavioural Medicine SWEDEN annika.nordin.johansson@regionvasterbotten.se Reflection and Direction for the 24-Year Medical Volunteer Program for Regional Health Promotion at S Hospital

# SONG Ji Young, KIM Kue Sook, BACK Seung Ho, LEE Ji Hong

#### **Background and objective**

Large hospitals traditionally conducted one-time medical volunteer activities, diminishing with improved healthcare access. However, S Hospital persisted, serving vulnerable groups like the homeless and immigrants. Regular overseas missions were also conducted. These efforts aimed to bridge healthcare gaps and promote community health.

#### Methods/intervention

From 2000 to 2023, S Hospital's volunteer teams provided monthly medical services at underserved locations. Volunteers signed up voluntarily and facilitated registration, examinations, consultations, prescriptions, and medication dispensation. Personalized support ensured smooth access to services, significantly benefiting vulnerable populations.

#### Results

S Hospital's volunteer team conducted 1,152 domestic missions, serving 43,490 individuals. Additionally, 4,549 received direct hospital services, including surgeries and cancer treatments. The total cost incurred was  $\frac{1}{2}201,440,230$ , mainly funded through medication expenses. Volunteer participation remained high at 78.5%.

#### **Conclusions/lessons learned**

This report highlights the role of equitable medical volunteer activities in enhancing regional healthcare and promoting the health of vulnerable populations. Over 24 years, S Hospital's consistent efforts have facilitated societal change by providing medical services to those in need, often excluded from formal healthcare systems. The genuine sacrifice and unconditional love of the medical volunteers made this possible. While government policies aim to assist vulnerable groups, direct benefits and medical services often fall short.

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KIM KUE SOOK SOON CHUN HYANG. UNIV. HOSPITAL (Seoul). Health Promotion Center/ KIHIP REPUBLIC OF KOREA mdkimks00@gmail.com Implementation of an ethic committee in a public hospital in the city of Vienna – Austria: Benefits for patients, relatives and employees

#### HINTERHOLZER Georg

#### **Background and objective**

Work in hospitals is getting more challenging every day: New scientific studies are produced every minute, therapeutic options are boundless, patients are getting older, multimorbidity and fraility are increasing topics, patients expect more information and a better outcome than before, financing public hospitals in times of economic recession is difficult, increasing cultural diversity does not make care and communication easier. Due to the growing complexity and workload in hospitals, every year it is getting more difficult to find nurses and doctors to work fulltime in public hospitals: shortage in employees makes work even harder, a vicious circle has started. For those still working in hospitals, physical und psychological health is endangered. Hospital ethics committees help clinicians deal with the ethical challenges, finding good solutions in various difficult situations.

#### Methods/intervention

In 2023 we started a clinical ethics committee including ethic consultations in our hospital, to find the best answers in the treatment of our patients – and to give the staff safety and wellbeing. Every clinician can use the ethics telephone in case of bad feelings about planned treatment, unclear treatment goals, finding ethical dilemmas or problems with patients and relatives: the case will be discussed on interdisciplinary and interprofessional round tables. Moderating the session by a trained employee, getting all the essential information about the circumstances and seeing the patient in different aspects, leads to good solutions for patients.

#### Results

Besides the primary intention of finding the best treatment for our patients, over- and undertreatment can be avoided, clear strategies can be made, stress and moral distress in clinicians can be reduced.

#### **Conclusions/lessons learned**

In this way ethics committees can not only fulfill the primary aim (finding best treatments for the patients), but also support clinicians in their daily routine: making the hospital a healthier place for all of us.

Contact: HINTERHOLZER Georg Klinik Favoriten AUSTRIA georg.hinterholzer@gmail.com Identifying patient partners at the Nantes' University Hospital: a coconstructed project

# JOLIVET Anne, BRISSEAU Alexandre, BURGAUD Baptiste, GABEREL Roxane, PALLIER Annaick, PEREIRA Marjorie, SAMJEE Karim, MORET Leila

#### **Background and objective**

Partnership, defined as collaborative and equal relationship between partners such as patients and clinicians, is based on the mutual recognition of the complementarity of knowledge. At the Nantes University Hospital, the Hall santé (the unit dedicated to health promotion) has contributed to the emergence of a patient partnership dynamic for many years, driven in particular by therapeutic patient education projects, and by a universitary cursus dedicated to patient partnership. More recently, its hospital management, aims to promote and facilitate the involvement of patient partners working within its walls, and to support clinical teams wishing to invest in this type of collaboration.

#### Methods/intervention

A working group made up of professionals from the Hall santé and patient partners led to the co-construction of 2 surveys: 1) a flash e-mail survey conducted in April 2024 among health professionals, aimed at identifying partnership initiatives, obstacles and levers to partnerships 2) qualitative interviews with partner patient, questioning their experiential knowledge, skills, training, partnership experiences, wishes, limits and availability (in process, to July 2024).

#### Results

In May 2024, 104 professionals responded to the survey, 98 patient partners were identified and 19 have already been interviewed. Among the professionals, the main obstacles to partnerships were lack of recognition by the institution and funding for patient partners. The expected benefits of the partnership, the dynamism of the care teams and the commitment of the patients themselves, were the most frequently cited levers.

#### Conclusions/lessons learned

This report should help to design an institutional roadmap tailored to the expectations of its professionals and committed patients. Patient partnership may play a crucial role to advance health equity at multiple levels, from individual care interactions to broader healthcare service delivery.

Contact: JOLIVET Anne CHU Nantes FRANCE anne\_iolivet@yahoo.fr Development, implementation and process-evaluation of a program for screening and prevention of cardiovascular risk factors: Romanian experience of the Young 50 project

# LOTREAN Lucia Maria, CHIRALES Cristina, TRIFESCU Ioana, MIHALTAN Florin, EREMIA Marius, FLOREA Mira

#### **Background and objective**

The aim of the YOUNG50 project was to transfer the CARDIO50 screening programme, which represents an Italian best practice to Lithuania, Romania, and Luxembourg. The objectives of Young 50 was to estimate cardiovascular risk among the 50-year-old population, identify persons with unhealthy lifestyles, new cases of hypertension, hyperglycaemia and hypercholesterolemia, activate an integrated model of assistance to help modify or reduce risk factors among healthy subjects, promote interventions to change unhealthy lifestyles.

#### Methods/intervention

This study presents the adaptation, implementation and processevaluation in Romania of the European project Young 50. Highlights will include the following: objectives, basic principles, target population, structure, programme activities, programme indicators, resources, lessons learned and implications for research and health promotion practice.

#### Results

In Romania the project was implemented by Association Aer Pur Romania in partnership with Iuliu Hatieganu University of Medicine and Pharmacy from Cluj-Napoca, Romania, several general practitioners and Public Health Directorate of Cluj county. The project was implemented between September 2021-May 2023 with several impediments because of Covid-19 pandemic. It included several phases:1. Development of the action plan, training of the health care professionals for its implementation, development of instruments for data collection, including an online platform as well as educational materials. 2. Recruitment and invitation of participants from the general population with the help of general practitioners 3. Screening for behavioral and medical cardio-vascular risk factors among the participants 3. Offering of advice and educational materials using different channels for healthy lifestyle promotion as well as recommendation for supplementary medical check and advice from their GPs for those with medical risk factors.4. Monitoring and evaluation. The project included 304 participants from Romania and process evaluation proved a positive feedback from them.

#### **Conclusions/lessons learned**

It made possible data collection, development and implementation of screening and educational activities for cardio-vascular risk factors prevention in Romania. It presents examples of adaptation and dissemination of good practices in

Europe, showing how interdisciplinary and interinstitutional cooperation could help at local level

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# Oral session 3.4: Promoting health of patients and population served

Implementation of the model targeted health dialogues in selected age groups of Swedish adults in the Skane Region in Sweden, a metropolitan area - an intervention promoting equal and sustainable health in the population

# SKOGSTROM Malin, STENEVI LUNDGREN Susanna

#### **Background and objective**

90% of all myocardial infarctions are caused by known risk factors and they are all addressed within the model of targeted health dialogue. This model has been developed over the last four decades in other regions in Sweden and the overall purpose is to prevent cardiocvascular desease and diabetes type 2. The evidence show that this method can saves lives, that it can achieve equal health in the population and that the health promotion included in the model works as a vaccination programme for healthy behaviour.

#### Methods/intervention

Characteristics that distinguish this evidence-based model is that it is integrated in primary health care, population-based, combines health-promoting and disease-preventing low-risk and high-risk strategies, focuses on the health dialogue, taking the individual's preferences, life situation and cardiovascular risk factors into consideration, uses person-centred care and a visual educational tool called the healthcurve. The quality is ensured through structured training and support. Preparations are made with bloodtests, measurement values and a questionnaire is filled out. If risk factors are identified during the health dialogue, interventions are offered in line with national guidelines. The Center for Primary Health Care Researh follows the process of implementation as well as the medical outcome.

#### Results

The implementation in Region Skane started with inviting inhabitants at the age of 40 in 2021 and inhabitants at the age of

50 in 2022. Structured training and support have been invaluable. Two co-workers at each primary health care center have been trained in the method and motivational interviewing to perform the targeted health dialogue. In 2021 almost 900 targeted health dialogues took place, in 2022 the numbers where 5400 and in 2023 the number is 9000, which corresponds to 50 % of the target level and the numbers are still increasing.

#### Conclusions/lessons learned

Structured training and support have made implementation a success. Lessons learned is that it takes a lot of work to establish the model in primary health care and challenge the perception that health care should only deal with patients that are already ill.

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# Management antenatal care quality in midwifery clinic

### LIN Yuching, LU Yuying

#### **Background and objective**

From 13,050 citations initially retrieved we identified 17 RCTs of midwifery-led antenatal care models , most models reporting fewer than half the characteristics associated with quality maternity care. Organization of care was the best-described component. Underlying values and philosophy of care were poorly reported.

#### Methods/intervention

The project includes 7 phases of activity between August 14, 2023 and December 31, 2023. The project has seven phases including: identification of practice area, engagement of change agents, assessment of context and readiness to change, review practice using evidence-based audit criteria, implement changes to practice using GRiP, re-assessment of practice through a follow-up audit, and consider sustainability of the project.

#### Results

2 months after the implementation of the improvement strategy, outcome index effectiveness evaluation: Analyse the completeness rate of prenatal check-up data, the incidence of complications during pregnancy (gestational hypertension, gestational diabetes) and the incidence of depression during pregnancy (the Edinburgh Postpartum Depression Scale was measured in the third trimester). The two indicators of the posttest audit results did not reach the threshold of 100%, but both indicators were >90%.

#### **Conclusions/lessons learned**

During the implementation of the plan, many discussions and corrections occurred during the execution of the plan. , the care plan has achieved good improvement results after the team implemented it: the completeness rate of prenatal check-up data

has been increased from 60% to 100%, and the incidence of complications during pregnancy (gestational hypertension, gestational diabetes) has been reduced from 40% 20%. And the incidence of depression during pregnancy was reduced from 20% to 0%.

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Advancement of national policy on alcohol addiction prevention and control to the establishment of Taiwan Alcohol Abstinence and Addiction Prevention Center

# FANG Chun-Kai, HSU Chien-Chi, LIN Chen-Ju

#### **Background and objective**

Taiwan's central government began promoting a subsidy program for alcohol addiction treatment in 2006. The central government transferred the funds to local governments for use, and then to various medical institutions to help alcoholics quit drinking. Since 2015, the central government, namely the Ministry of Health and Welfare, has directly entrusted several key hospitals to build a network for alcohol addiction treatment. Starting from 4 hospitals in 2015, it has gradually increased to a total of 15 hospitals in Taiwan in 2023. In order to make Taiwan's alcohol addiction treatment model more complete and promote people's health, it was necessary to build a nationwide alcohol addiction treatment unit. This article introduces this process.

#### Methods/intervention

In March 2021, the Department of Mental Health of the Ministry of Health and Welfare began to evaluate the feasibility of establishing a national alcohol addiction treatment facility. After two years of planning, in early 2023, the government seek units that can implement this project through an open bidding model.

#### Results

Through an open bidding process, Mackay Memorial Hospital was awarded this government project on April 25, 2023. After half a year of planning, Taiwan Alcohol Abstinence and Addiction Prevention Center (TAIWAN AAAPC) was officially established on November 24, 2023. There are 5 major goals of the TAIWAN AAAPC, including: (1) publicity and promotion of alcohol abstinence and alcohol harm knowledge, (2) improving the quality of alcohol addiction treatment, (3) training manpower for alcohol addiction professionals, (4) research on prevention and treatment of alcohol harm and alcohol addiction, and (5) domestic and international cooperation. It is expected that TAIWAN AAAPC can operate stably before the end of 2024.

#### **Conclusions/lessons learned**

It is not easy to promote national policies for alcohol addiction treatment and implement health promotion services and care. The establishment of TAIWAN AAAPC is a milestone in Taiwan's anti-alcohol policy and promotion, hoping to win back health and life for more people.

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# Interdisciplinary team for decreasing incidence of inpatients falls

#### LIN Mei-Hsiang

#### Background and objective

Statistically there were 17 fall incidents from January 2022 to June 2022, the fall incidence rate was 0.08%, and the injury rate was 66.6%, including 3 moderate falls (10%) and 2 major falls (6.66%). It might not only affect the safety of patients, but also affect the morale of colleagues. So, this motivation made us write this project to thoroughly explore the causes of falls, and prevent patients from falling and reduce the severity of injury. Also, we'd like to encourage patients and their caregivers to participate in patients' safety work through teamwork and developing feasible strategies, hoping to reduce the incidence of falls, increasing patients' safety, and improving the quality of medical care.

#### Methods/intervention

(1)Establishing "Interdisciplinary team for inpatient falls";(2) Designing the three-step guide for falls prevention bedside calendar package; (3) Carrying out a patient cognitive test on the third day of admission and strengthening education; (4) Establishing a fall prevention checklist; (5) Establishing a fall prevention standard operational process; (6) Setting and recording "Broadcast of the fall-prevention call twice a day".

#### Results

According to the project, the incidence of falls decreased from 0.08% to 0.04%. In addition, through interdisciplinary team cooperation, the correct rate of patients and family members' cognition of falls prevention has increased from 80% to 96%. The correct rate of personnel's implementation of falls prevention also increased from 60.9% to 96%.

#### **Conclusions/lessons learned**

With team resource administration as mainstay, admission evaluation and screening for patients with high risk of falls could prevent the falls, respond immediately to the team for any problems, find out and analyze the causes, and solve them after discussion with the team to improve medical treatment. Furthermore, it might gain teamwork spirit, show the effectiveness of the project, and apply the method of this project to other units for falls prevention. Using the interdisciplinary team cooperation, the medical teams could work together to improve the quality of care.

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Leveraging a Province-wide Clinical Information System to Integrate Health Promotion into Routine Hospital-based Care in Alberta, Canada

## ADHIKARI DAHAL Kamala, WHITWORTH James, CHRISTIE Jawad, CHRISTIE Gary

#### **Background and objective**

The Integrating Prevention into Connect Care for Health initiative embeds Screening, Brief Intervention, and Referral (SBIR) approach to health promotion in a province-wide clinical information system ("Connect Care") for acute and ambulatory care in Alberta. The SBIR intervention supports patients for behaviour change on tobacco use, alcohol misuse, and physical inactivity. The initiative improves health equity as certain subpopulations with inadequate access to primary care are overrepresented in acute and ambulatory care settings. This abstract focuses on the research plan to evaluate its implementation and effectiveness and the progress to date.

#### Methods/intervention

We employ mixed research methods. This involves quasiexperimental quantitative assessment of SBIR implementation (using data from Connect Care system) and effectiveness on behaviour change and health service use (surveys and administrative health data; n= 2000 control and intervention patients). Each site recruits control patients for 6 months, while intervention is planned for 15 months. Barriers/facilitators to integrating SBIR into providers' workflows and behaviour change challenges among diverse patient sub-populations will be assessed using qualitative methods.

#### Results

Currently, 6 diverse healthcare sites are participating in the initiative, with more sites expected to join in the coming months. Three sites have completed control group recruitment and started implementing the SBIR intervention. As of April 15, 2024, 1,500 control and intervention patients were recruited. The number of patients who received SBIR for at least one risk factor is 200, 65, and 16, respectively. Survey data collection on behaviour change, demographics, and socioeconomic status has been completed for 650 patients. The remaining participant recruitment and data collection will be continued. Available data will be analyzed and shared at the conference.

#### **Conclusions/lessons learned**

Our understanding of SBIR implementation and effectiveness and the engagement of health system partners facilitate the integration of equity-focused health promotion practice, promoting the spread and scale-up of the practice across Alberta's hospital system.

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# Oral session 3.5: Socially disadvantaged groups and minorities health

Advocate for LGBTQ People at the Japan Federation of Democratic Medical Institutions for Non-Discriminatory and Equal Medical Care

# YOSHIDA Eriko, KONDO Ayumi, SUGIYAMA Motoki, KONO Eriko, SOTOMATSU Emiko, HIGA Ken

#### **Background and objective**

The Japan Federation of Democratic Medical Institutions (MIN-IREN) is a non-profit organization that aims to realize nondiscriminatory and equal healthcare and welfare. More than 1,800 institutions throughout Japan are members, with 80,000 employees. In Japan, there is a lack of legislation to protect the rights of LGBTQ people, and LGBTQ people are exposed to health disparities, although there were few efforts by the MIN-IREN.

#### Methods/intervention

Staff interested in providing appropriate care to LGBTQ people lobbied the MIN-IREN to create a Sexual Orientation, Gender Identity, and Gender Expression (SOGIE) community within the MIN-IREN's Human Rights and Ethics Center in 2023.

#### Results

The SOGIE community consists of about 15 staff of various professions and ages from all over Japan who meet monthly online for a lively exchange of ideas. As a result, the following actions were taken within a year. (i) Holding monthly online closed meetings for LGBTQ employees (ii) Provided lectures, workshops, etc. for medical students and staff of medical institutions in various regions (iii) Conducted online meetings for staff in neighboring communities to engage in dialogue on LGBTQ issues (iv) Held a booth at the largest pride parade in Japan (Tokyo Rainbow Pride) (v) Established a social networking service for employees to provide a place for dialogue (vi)

Distributed QR codes for employees to share their concerns about SOGI diversity in the workplace with the SOGIE community (vii) Survey on employee attitudes towards LGBTQ+ issues.

#### **Conclusions/lessons learned**

The activities of the SOGIE community create a process by which LGBTQ-interested employees throughout Japan collaborate, share the progress of LGBTQ-related initiatives, and take them back to their workplaces for implementation in a customized form.

#### Contact:

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Implementing "Plain Japanese" to promote health among people from overseas in Japan

# TAKEDA Yuko, THINZAR KHIN Ei, NII Midori, ISHIKAWA Hirono, IWATA Kazunari

#### **Background and objective**

There are 3.2 million registered foreign nationals in Japan as of June 2023. More than 90% of foreign residents came from countries where English was not their native language, such as Asia and Latin America. At the same time, a survey conducted by the Immigration Agency revealed that nearly 90% of foreign residents communicate in Japanese. Due to linguistic, cultural, and institutional barriers, these residents from overseas and their families often face difficulties in daily life. Among many challenges, the language barrier at hospitals is one of the biggest concerns. Healthcare providers must overcome language barriers to promote health among foreign residents. Our objective is to disseminate the concept of "plain Japanese" among healthcare professionals and help implement it in clinical settings.

#### Methods/intervention

Since 2018, we have provided training sessions for medical professionals and students to utilize plain Japanese in healthcare settings for patients with difficulty understanding and hearing. Our program includes role-playing clinical encounters in cooperation with international residents as simulated patients. During the session, they share their first-hand experiences living in Japan as foreigners.

#### Results

Participants get motivated by learning about the difficulties foreign residents face. Watching their efforts makes foreign residents feel less nervous about going to the hospital. We held over a hundred training sessions, including at Health-Promoting Hospitals, and frequently received media coverage. Participants recognized the importance of "plain Japanese" and realized that it was also effective in communicating with older Japanese patients.

#### **Conclusions/lessons learned**

Since many medical staff believe they must speak fluent English to communicate with foreign patients, it is eye-opening for them to learn how to communicate with foreign patients in "plain Japanese." During the training session, healthcare staff and foreign residents learned from each other and felt more comfortable for future encounters.

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Equity in health care and health promotion<sup>~</sup> Breaking Barriers, Improving Healthcare access for Migrants in Japan<sup>~</sup>

#### **SHRESTHA Santosh**

#### **Background and objective**

Equity is defined as the state of being fair in case of quality and not just the equality of quantity. The medical system in Japan is one of the best in the world, and it assures the same level of health care to all the citizens. But still there exists inequity in the health care in Japan and is more prevalent in a marginalized community like migrants. Therefore, I decided to conduct a health check-up for the migrants in Japan.

#### Methods/intervention

A free health check-up requires a lot of resources (time, money and people). An NPO, Kitakanto, that has been conducting similar programs in the northern Japan since 1997, was happy working together with me. The management board of my hospital also assured the use of the hardware of the hospital along with many volunteers (doctors, nurses, translators etc.) The program was advertised through social networks and pamphlets. The health check-up was held on 29th Sept 2019, in my hospital.

#### Results

There were 47 participants from 11 different countries. 23 (49%) did not have Japanese visa, 9 (19%) were under the provisional release of the Japanese immigration. 15 (32%) were already suffering from diseases and 4 (8%) suffered when they were in the custody. 3 (6%) were graded A, 5 (10%) B, 13 (27%) C, and 26 (55%) D. Therefore, 39 (C+D=83%) had certain health problems and therefore, were recommended to visit hospital for further investigations and treatments.

#### **Conclusions/lessons learned**

The medical system in Japan assures the same level of health care to all the citizens. Unfortunately, migrants constitute a large percentage of people who are deprived of this high-quality medical service. In our study, more than 80% of the participants

had some sort of health problems. Although our study included the migrants only, and the number of the participants was small, this, no doubt, reflects the inequity in health care that underlies in Japanese community.

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Exploring the Disease Management Experience among Elderly Individuals Living Alone with Diabetes in Taiwan

### WANG Szu-Yi, LIN Mei-Hsiang, SUNG Chien-Mei

#### **Background and objective**

With Taiwan's population aging and the emigration of workingage individuals, the proportion of elderly individuals living alone has increased. Among those aged 65 and above, chronic diseases contribute to a mortality rate of 76.6%, with diabetes ranking as the fifth leading cause of death. Diabetes significantly impacts the health of older adults, leading to the need for long-term care and exacerbating healthcare cost burdens. Moreover, elderly individuals with diabetes who live alone have limited experience in disease management. The aim of this study was to investigate the disease management experience within elderly individuals living alone with diabetes.

#### Methods/intervention

A qualitative approach using a phenomenological perspective was carried out in a teaching hospital in northern Taiwan. Purposive sampling and semi-structured interview guidelines were employed to interview participants who were aged 65 and above, living alone, and diagnosed with diabetes for more than one year. The interviews were recorded and transcribed verbatim, and the resulting data were analyzed and summarized using content analysis by constant comparative methods.

#### Results

Data analysis revealed three shared meanings: enhanced motivations for disease control, negative emotions experienced during disease management, and the utilization of diverse methods for disease control.

#### **Conclusions/lessons learned**

This study highlights the multiple layers of the disease management experience among elderly individuals living alone with diabetes. These results will assist healthcare providers by offering references for clinical healthcare based on the elderly individuals' subjectively different disease management approaches.

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# An Initiative to Apply for Physical **Disability Certificates for All Physically Challenged Persons**

#### MON Yusuke, IWATA Kanji

#### **Background and objective**

A physical disability certificate certifies that a person has a disability above a certain level, and obtaining the certificate provides assistance such as employment, taxes, discounts, and medical expenses. In Japan, patients with newly developed physical disabilities often return to their homes after passing through acute wards and recovery-phase rehabilitation wards. Since a physical disability certificate cannot be obtained until a certain period (4 to 6 months) has passed, patients discharged before that time often remain unable to obtain the certificates. Our study is about finding new ways to help patients with physical disabilities receive the certificates without fail after discharge from our recovery-phase rehabilitation wards.

#### Methods/intervention

For the patients admitted to our recovery-phase rehabilitation wards, we decided to apply for physical disability certificates not only during hospitalization but also in outpatient and home-visit situations after discharge from our hospital after August of 2023. For the patients whom other medical institutions will manage, we encouraged them to ask their institutions to apply for physical disability certificates. We compared the number of applications for physical disability certificates after the start of this initiative with the number of applications from January of 2019 to July of 2023.

#### Results

The number of applications for physical disability certificates increased 2.5-fold from 4.0 to 10.4 on average per month after the start of this initiative.

#### **Conclusions/lessons learned**

Conscious efforts ensure that those physically challenged recently have their physical disability certificates. This initiative provides them with various supports and makes it easier for them to gain access to medical care as their medical cost burdens are reduced.

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# **Oral session 3.6: Promoting** health of the elderly

A Study on the Effectiveness of **Gentry and Ladies' Groups'** Intervention on the Well-being of the Elderly in the Community

### CHANG Chiu-Jung, LIU Wen-I

#### Background and objective

The purpose of this paper is to investigate the effectiveness of the intervention of ladies' and gentlemen's groups on the satisfaction level of the elderly in terms of well-being, so as to enhance the opportunities for the elderly to interact with other people in order to improve their sense of well-being.

#### Methods/intervention

The program targets the mentally ill elderly in the community. Admission criteria: elders over 65 years of age, those whose mental symptoms do not interfere with their daily lives and whose speech is relevant, those who understand Mandarin and are willing to share their life experiences, and those who have no obstacles to interacting with others verbally. Exclusion criteria: people with poor emotional control. The program is held once a week for 1 hour each time, with a total of 8 group sessions. Through the group activities, the elderly learn to dress up and socialize in a natural and relaxing atmosphere. They learn to dress up, make hats, have an outdoor piCHINAic, maintain their nails, and display on the catwalk.

#### Results

The total attendance rate of the participating elders in this program was 100%. The well-being index increased from a low score of 47 before the intervention to a middle score of 75. Using the Paired-Sample t test, it was found that the pre and post-test performance of all the participating elders in the areas of "perception of things, getting along with others, achievement of oneself, status comparison, meaning of life, what they have given up, psychodynamic part, and mood" showed that the posttest scores were significantly better than the pre-test scores (p<.000). This means that after joining the group, the seniors had improved their thoughts before joining the group and were more satisfied with their feelings of well-being.

#### Conclusions/lessons learned

Through the implementation of this project, the Gentry and Ladies Group will help to enhance the well-being of the elderly and provide reference for other organizations to provide group activities for the elderly in the future.

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# Establishing "Blue Community": Health Promoting 'Activity Workshops' For Senior Citizens

# RAM Yohanna, LEVY Michal, PELEG Tal, VANDER Tatiana, BADER Tarif

#### **Background and objective**

"People create health and live it within the framework of their daily lives. Where they study, work, play and love" (World Health Organization - WHO 1986) From studies on "blue areas" - whose residents manage to reach the age of 100 in good health, main denominators were found: close community life and engagement in moderate physical activity WHO defines health as "a state of perfect physical, mental, and social well-being, and not just the absence of disease. Goals:To establish a "blue community" for the third age that promotes healthy lifestyles, as well as physical, mental, and social well-being. In addition, creating a therapeutic continuum for hospital former inpatients

#### Methods/intervention

Participants from the community aged 65 and over including discharged paitents and community members, participated in an activiy workshop once a weak guided by physiotherapists. The work shop included ten sessions. Each session lasted 90 minutes. Participants took part of a lecture, musle strenghening and balance trainning. In order to monitor changes in fitness components, three tests were conducted in the first and last sessions: 1. Grip strength, 2. Sit to stand test (Stst) 3. Six minutes walk test (6mwt). To assess the participant's satisfaction and health habits, each filled out a brief quality of life questionnaire. In addition, a virtual group was established to encourage and foster connections between all members.

#### Results

The physical tests showed that the STST and grip strength tests increased significantly. No change was found in the 6MWT results. In the questionnaires, improvements were found in the indicators of satisfaction with general health, a decrease in the level of pain, and improvements in daily functions and leisure.

#### **Conclusions/lessons learned**

Group participants showed improvement in performing physical tasks, increased awareness of maintaining an active and healthy lifestyle, and performing physical activity, maintaining and improving social relationships.

#### Contact:

LEVY michal Harzfeld Geriatric Rehabilitation Medical Center ISRAEL michalle12@clalit.org.il The prediction of adverse health effects for dynapenia: A systematic review and meta-analysis of 19,632 middle to older adults

### LIN Shih-Chun, CHANG Shu-Fang

#### **Background and objective**

Dynapenia has been shown to be health effects for disability and death. However, health effects of dynapeina are rare to be explored. The main objective of this study was investigated the correlation between health effects with dynapenic in middle to older adults.

#### Methods/intervention

A systematic literature search was conducted to review and analyze relevant studies. Dynapenia was measured by handgrip strength was measured. The search keywords included "older people" OR "elderly" OR "middle age" AND "dynapenia". The search was not limited by time and included articles published up until May 2023. The literature search process followed the PRISMA (preferred Reporting Items for Systematic Reviews and Meta- Analysis) guidelines, involving extraction and examination of the retrieved relevant articles. Systematic literature searches were performed in databases such as PubMed, ESCSO, Cochrane Library, and CINAHL. A total of 544 articles were identified. After excluding duplicates and irrelevant articles, twelve articles were included in the review.

#### Results

This study collected a total of twelve articles with a combined sample size of 19,632 participants. The findings revealed that the average follow- up period for health effects was 3.8 years. All articles were from Europe, Asia, Australia, and South America. The results of the meta- analysis showed that middle to older adults with dynapenia was associated with cognitive impairment (RR= 0.57, 95% CI 0.45-0.73, p<0.001), diabetes (RR= 0.2, 95% CI 0.09-0.23, p<0.001).

#### **Conclusions/lessons learned**

Empirical studies have demonstrated that individuals with dynapenia have health effects. Therefore, healthcare professionals should conduct early risk factors assessments and develop effective prevention strategies specifically targeted at individuals with dynapenia.

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Development of a check sheet for assessing the social and living conditions of older people with minor diseases in the emergency room

# UENO Keiko, TERAMOTO Chie, NISHIOKA Daisuke, KONDO Naoki

#### **Background and objective**

Supporting individual needs is essential in community-based comprehensive care, and even in clinical settings, patients' social needs may become apparent and require a response. However, patients with such needs who use an ambulance to visit an emergency department and return home without being hospitalized are rarely provided support to meet their needs. Therefore, we developed a check sheet to easily identify the social and living conditions of older patients who need more care and support among ambulance users with minor diseases and to share the information gathered with multidisciplinary professionals.

#### Methods/intervention

A three-round questionnaire survey using the modified Delphi method was conducted. The participants were paramedics, physicians, nurses, medical social workers, staff of community comprehensive support centers, and public health nurses.

#### Results

Twenty-eight participants responded to the first survey (response rate: 100%), and 25 to the second and third surveys (response rate: 89.3%). A check sheet was prepared to gather data on 28 items, including living conditions, household composition, presence of a key person or caregiver, and financial condition.

#### **Conclusions/lessons learned**

We will verify the reliability and prediction validity of the items on the check sheet and develop an operational protocol and confirm its effectiveness for practical use.

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Factors associated with falls among Community-dwelling Older Women: Structural Equation Modeling

# NUR'AMALIA Riskah, KATO Mayumi, YOKOGAWA Masami, TANIGUCHI Yoshimi

#### **Background and objective**

Falls among community-dwelling older women are a significant concern. Women are more likely to experience injurious falls than men, with around 40% of falls resulting in injury and 30% requiring medical attention. Aging is associated with increased inactivity, and the prolonged COVID-19 pandemic has contributed to reduced physical activity and social isolation in older women, leading to a decline in their physical and psychological functioning and falls. This study explored the factors associated with falls among community-dwelling older women.

#### Methods/intervention

We collected data from 90 participants using questionnaires and physical measurements. We developed a hypothetical model based on literatures. The variables in that model were fear of falls, gait efficacy, amount of physical activity, physical function, and falls. The amount of physical activity was the average number of steps/day over 5 days, and the physical function was timed up and go test, 5m walking speed, and Zigzag walking test. Structural Equation Modelling was used to verify the hypothesized model.

#### Results

The number of fallers was 19 (21%). Starting from self-efficacy, it indirectly influenced falls through/intermediated gait efficacy and the amount of activity. Gait efficacy and physical function directly influenced fall. Furthermore, physical function indirectly influenced falls through gait efficacy and amount of activity. The goodness of fit of the model was Chi-Square = 6.187, probability= 0.861, GFI= 0.981, RMSEA= 0.000, CFI= 1.000, NFI= 0.982, TLI=1.028.

#### **Conclusions/lessons learned**

Since self-efficacy and physical function influenced falls through walking efficacy and activity level, it is necessary to begin interventions to maintain and improve self-efficacy and physical function which may lead to promoting good health for the elderly especially females older in communities. It was considered that the fit of the model was good. This study is supported by a Grantin-Aid for Scientific Research from the Japan Society for the Promotion of Science (20K11015)

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# **Oral session 4.1: SYMPOSIUM**

Community-Based Voluntary Health Promotion Activities by Local Residents Striving for Healthy Communities. Where No One is Left Behind.

### **FUNAKOSHI Mitsuhiko**

#### **Background and objective**

A distinctive aspect of health promotion activities in Japan's healthcare services is the active engagement of local residents in voluntary community-based health promotion activities, often in collaboration with medical institutions. For instance, community resident organizations (referred to as "Kyodo soshiki") engaged in health promotion activities alongside hospitals affiliated with the Japan Federation of Democratic Medical Institutions (Miniren) reach a significant number, up to 4 million individuals, and implement various local initiatives. These initiatives include addressing the needs of Japan's super-aging society, such as activities aimed at preventing the isolation of elderly individuals living alone and providing food support to those in need, contributing greatly to the establishment of a fair society. To facilitate the exchange of outcomes from local community health promotion activities among residents participating in the International HPH Conference, J-HPH has proposed a session in Japanese. Simultaneous interpretation will be provided, enabling participation in English as well.

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# **Oral session 4.2: SYMPOSIUM**

Advancing Health Equity: From Policy to Practice

# WU Chao-Chun, WANG Ying-Wen, LIN Ming-Nan

#### **Background and objective**

The session titled focuses on exploring strategies to promote health equity, particularly among vulnerable groups such as rural residents, minority ethnicities, and the elderly. It aims to discuss and share insights on overcoming health disparities and ensuring equal access to healthcare services. Key components of the session include: Introduction: Emphasizes the significance of advancing health equity. Cross-Cultural Challenges: Discusses the unique health equity issues faced by aboriginal populations and other cultural groups, particularly in rural settings. Case Studies from Different Perspectives: The inclusion of practical examples is pivotal. These case studies serve as a cornerstone for the session, offering tangible examples of strategies and programs that have been implemented to enhance health equity. By examining both the successes and challenges encountered, participants gain a nuanced understanding of the complexities involved in health policy implementation. This realworld perspective is crucial for illustrating actionable steps and lessons that can be adapted to different contexts. Interactive Panel and Q&A: This component of the session allows for dynamic interaction among the participants, fostering a collaborative learning environment. Through the Q&A, attendees can delve deeper into the specifics of the case studies, ask clarifying questions, and share their own experiences and insights. This exchange is invaluable as it not only broadens the understanding of the discussed topics but also enhances the applicability of the strategies across various healthcare systems. Participants can discuss theoretical knowledge in the light of practical challenges and successes, leading to a richer comprehension and a more informed approach to health equity. Conclusion: Summarizes the key points discussed and calls for action among participants to implement the strategies learned in their respective regions.

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# **Oral session 4.3: ROUND TABLE**

Examining barriers and enablers in the implementation of healthpromoting principles in the physical environment of European healthcare facilities

# MORHAYIM Lusi, KEVDZIJA Maja, SAL MOSLEHIAN Anahita, KATSAROS Keriin, MIEDEMA Elke

#### Background and objective

The literature has highlighted a lack of knowledge within the HPH network regarding the role of the built environment in stimulating, supporting, or mobilizing the introduction of health promotion in hospitals and healthcare organizations. There is a pressing need to incorporate the built environment into organizational strategies and to engage health promotion professionals in the planning and design of healthcare facilities. However, research conducted in Sweden has suggested that this integration is rarely practised. Those involved in developing HPH strategies and actions often lack awareness of available knowledge on healthcare building design, let alone research specifically focused on the built environment for HPH. While architects may be increasingly familiar with healthcare building design research indicating how building design can support health and organizational outcomes, they are typically not familiar with the specific goals of HPH and how building design can support them. This lack of collaboration and research may contribute to the slow pace of change and result in many buildings currently being planned and constructed that do not effectively support health promotion and may even hinder future ambitions. Yet, existing research has only focused on organizational issues, exploring challenges in implementing HPH principles and explaining why these concepts have not fully encompassed the entire structure and culture of hospitals, thereby overlooking barriers to health-promoting building design. "Examining barriers and enablers in the implementation of health-promoting principles in the physical environment of European healthcare facilities" is a research project developed as part of the HPBE Task Force. Accessing relevant stakeholders in Europe to be part of this research has been a challenging process. We are hoping to use the roundtable session primarily to develop a better understanding of diverse set of constraints that may discourage participation of variety of stakeholders involved in the decision-making (e.g. time constraints, reputation, budget, leadership, the research ethics processes, etc.), so we can develop a better strategy to involve them in the research.

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# Oral session 4.4: Promoting mental health

A Mixed Methods Study on the Occurrence of Intraoperative Adverse Events Among Surgeons in Singapore: Perceived Impact and Support

# NG Qin Xiang, YAOW Clyve Yu Leon, CHONG Ryan Ian Houe, ONG Clarence, TAN Hiang Khoon

#### Background and objective

Many surgeons encounter intraoperative adverse events (IAEs) in the course of their practice, which can lead to clinical depression, self-doubt and detrimental work-related outcomes. Given the limited research within Asian contexts, this multicentre study aimed to investigate the occurrence of IAEs among surgeons in Singapore, their emotional and professional ramifications, the existing support systems, and potential mitigation strategies.

#### Methods/intervention

A sequential explanatory mixed methods approach was utilized. A 42-item web-based survey was disseminated to all practicing

surgeons at four tertiary and academic hospitals in Singapore, soliciting anonymous responses over a secure platform. The questionnaire targeted five areas: demographic, experience with IAEs, emotional and psychological repercussions, physical effects, and support mechanisms. Subsequently, in-depth interviews were conducted with a purposively selected subset of participants to further understand their experiences and perspectives.

#### Results

The survey response rate was 57.5% (n=196); most respondents were male (54.8%) and between 35-44 years old. In the past 12 months alone, 56.2% recalled an adverse event. The emotional impact was significant, including depression (63.1%), guilt (53.1%) and anxiety (45.4%). Speaking to colleagues was ranked the most helpful support source (66.7%). Almost all surgeons did not receive counselling (93.3%) post-incident. Both gender and surgeon experience did not affect the likelihood of errors and emotional impact. Qualitative insights from 11 interviewees reflected a desire for a more empathetic institutional approach to IAEs.

#### **Conclusions/lessons learned**

IAEs are exceedingly common and its emotional impact is significant, regardless of the surgeon's experience or gender. Healthcare institutions should do more to address the impact and ensuing consequences.

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The preliminary findings of brief telephone counseling of main caregivers of dementia in daycare center in northern Taiwan

# CHEN Sung-Yun, HUANG Shu-Ping, CHEN Shu-Nuen, CHANG Shu-Fang

#### **Background and objective**

Our unit is a day care center for people with dementia. A total of 30 older adults with mild to severe dementia were admitted in 2024, and 80% of main caregivers were family members. The KCSS is a 10-item self-report scale that measures dementia caregiver stress on a 5-point Likert scale from 1 (no stress) to 5 (extreme stress). The content of KCSS includes care giving, family and finance issues. We found that the average total score of 32point was moderate stress in our center. Main caregivers do not have much time for face-to-face consultations. This study arms to investigate effectiveness of care stress for main caregivers of dementia by brief telephone consultation.

#### Methods/intervention

The study period is from March 2023 to March 2024. We focus on 10 main caregivers who had a total score KCSS greater than 30-point (moderate stress). The case manager needs to take telephone counseling-related training courses which take a total of 8 hours. The full-time case manager in the center conducted a brief telephone consultation 30 minutes every 2 weeks to maintain 24 weeks, and then the caregiver stress assessment will be conducted. The telephone consultation contexts, including empowerment caregivers and teach them how to care dementia patient and give them some resources to looking for help. After 6 months, brief telephone consultation from the study were stopped. We use KCSS scale to measure main caregiver stress at 6 months (with consultation) and 12 months (without consultation).

#### Results

The average age of caregivers receiving telephone counseling is 63.4 years old. The main caregivers 40.0% are spouses and 60.0% are sons and daughters; 30.0% are male and 70.0% are female. After 24 weeks of brief telephone counseling, the KCSS total score was decrease to 16-point (p=0.001). And main caregivers conscious care ability can be strengthened (95% CI 1.23 to 2.18). Without telephone counseling after 24 weeks the KCSS score measure was total 18-point (p = 0.01), it was still maintain in mild stress.

#### **Conclusions/lessons learned**

Therefore, it is suggested that day care center may allow brief telephone counseling by trained case managers and provide empowerment skills for caregivers to help them how to take care with dementia patients.

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Modeling the psychological resilience, sleep quality, depression and quality of life for patients with traumatic brain injury.

### HSIAO Ya-Wen

#### **Background and objective**

Traumatic brain injury has a negative impact on the physical and mental health of patients with traumatic brain injury. Although there are some related studies in the past, the previous studies only examined the relationship between resilience, sleep quality, or depression and quality of life. There are few studies explored the correlation among these four variables, and there is no theoretical verification. Therefore, the purposes of this study were to investigate the relationship between resilience, depression, sleep quality and quality of life in patients with traumatic brain injury, and to construct a theoretical model.

#### Methods/intervention

A cross-sectional and descriptive correlational research design was performed. The convenience sampling was conducted in the neurosurgery clinic of a northern medical center. A structured questionnaire was adopted.

#### Results

A structural equation modeling, correlation, and multiple regression were applied to analysis study results by using AMOS version 26 statistical software and SPSS version 26 statistical software. There were 130 patients recruited in the study. The average age of patients was 53.30 years (SD=21.54), and most of them (58.50%) were male. There was a significant negative correlation among resilience, sleep quality and depression, and a significant positive correlation between resilience and quality of life. The results showed that sleep disturbance and depression were significantly positively correlated, but sleep disturbance was significantly negatively correlated with quality of life. In addition, quality of life was significantly negatively correlated with depression.

#### **Conclusions/lessons learned**

The results indicated that resilience, depression, and sleep quality were significantly predictive variables for quality of life when using the general linear regression analysis. After revising the structural model, it could be matched with the actual data.

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# A Study of the Job Stressors and Job Satisfaction in Nursing Assistants

### SHEN Shu-Hua, CHIANG Wen-Jen

#### **Background and objective**

Nursing assistants play an important role in the health care industry, and in assisting medical workers together providing a wide range of services for patients. Purpose: To explore the job stressors and job satisfaction of nursing assistants, and to investigate the correlation between the job stressors and job satisfaction of nursing assistants.

#### Methods/intervention

This study adopted a cross-sectional research design, and used the job stressor scale and job satisfaction scale as the research instruments. Selected participants were the nursing assistants from a branch of a medical center in the central Taiwan. A total of 172 valid questionnaires received out of 195 sent out, with an effective rate of 89.1%, and the data was statistically analyzed by the SPSS For Window 20.0.

#### Results

The average score of job stressors was 2.88, which was at the low level, and the score of job satisfaction of nursing assistants was 3.98, which was above average. The job satisfaction was

estimated by the job stressors using the regression analysis, and the results were "skill discretion" ( $\beta$ =0.37, p <0.001), "management support" ( $\beta$ =0.27, p <0.001) and "colleague support" ( $\beta$ =0.248, p <0.001), indicating a positively significant correlation with the intrinsic job satisfaction. Moreover, "skill discretion" ( $\beta$ =0.25, p <0.001), "management support" ( $\beta$ =0.34, p <0.001) and "colleague support" ( $\beta$ =0.26, p <0.001), indicating positively significant correlation to the extrinsic job satisfaction.

#### **Conclusions/lessons learned**

The medical institution operators should consider the demands of the nursing assistants at work, and reduce the job stressors, hence, their job satisfaction would be improved, to create better medical care services. To create a positive workplace and reinforce the concept of humanistic care. We offer health promotion in and by health services and contribute to promoting equity in health.

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Healing architecture - how a specific design approach can have a positive impact on the lives of people with mental or intellectual problems. Five examples of best practice in longterm care facilities

### **MÖHN Andrea**

#### **Background and objective**

People with mental and intellectual problems are often particularly sensitive to their physical environment. The built environment has a major impact on their wellbeing and can create a sense of emotional safety and wellbeing, or lead to more agitated and misunderstood behaviour. In the five best practice examples, a positive change in behaviour was observed as a result of human-centred design.

#### Methods/intervention

The basis for determining the design tools of the Five Buildings was firstly the close observation of the patients' behaviour, secondly biographical research and the users' health profile and thirdly an intensive participatory process with carers, therapists and family members to define the patients' needs. This resulted in a specific approach focussing on the identity of the users.

#### Results

The five best practice examples showed that the behaviour and well-being of patients changed for the better. The influence of the built environment seemed to lead to more calmness and less misunderstood behaviour among patients, as well as a reduction in sick leave among nursing staff and often a reduction in costs.

#### **Conclusions/lessons learned**

Atmosphere, materials, colour, light and acoustics all play an important role. In order to achieve a space that really "touches" the user and is subtle, it is important to recognise the actual needs of the user. However, simply adding these factors together is not enough, and both physical needs and psychological needs play an important role.

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# Oral session 4.5: Access to services and information

Promoting access to migrant-friendly care in Japan: community-based digital transformation

# MILLER Russell, HARPER IGARASHI Niaya, LI Chunyan

#### **Background and objective**

In response to demographic shifts, Japan and other Asian nations are revising immigration policies to better integrate healthcare services for immigrants. Efforts to connect foreign residents with healthcare have largely been managed by individual municipalities, often using outdated formats like paper listings and PDFs. These approaches lack accessibility and communitydriven insights. Our project focuses on health equity and improving healthcare accessibility by developing a communitybased, multilingual platform that maps out migrant-friendly healthcare facilities.

#### Methods/intervention

This project employs a community health practice approach, using an open-source model to co-create a multilingual healthcare information platform. It is based on a living map of migrant-friendly healthcare services. The map is populated with user submissions which are all verified by moderators. The tenants of our project: 1) Co-creation with end-users, healthcare providers, and experienced immigrant programmers acting as mentors to novice programmers; 2) Crowdsourcing to integrate comprehensive community feedback; 3) Continuously refine and enhance the platform; 4) Sustainability through active community engagement.

#### Results

Feedback from partnerships reveals the platform markedly enhances healthcare information access and social support for foreign residents. Our programming community continues to improve the usability and design of the platform so as to efficiently aggregate local health resources in an accessible format for non-native speakers. We have also recorded multiple cases where immigrant programmers used their platform experience to secure ITALY careers in Japan.

#### **Conclusions/lessons learned**

Incorporating as a non-profit and engaging end users, leveraging open-source contributions, and utilizing data-driven improvements significantly enhances healthcare access for immigrants and offers opportunities for up-skilling in Japanese industry.

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Altruism and Faith: Enhancing Organ Donation through Value-Based Education

# SHIH Ming-Hui, LEE Minf-Che, TSAI Chuan-Hsiu

#### **Background and objective**

The gap between the need for organ donations and the number of registered donors persists, partly due to misinformation and religious misconceptions. This campaign addresses these issues by integrating altruism and religious beliefs into organ donation education for students and community members. The aim of this project is to examine the effects of value-based public awareness education on enhancing understanding and willingness to register.

#### Methods/intervention

A mixed-methods approach was utilized, starting with focus groups and interviews with students, community members, and religious leaders to adapt educational content. This was followed by workshops and seminars across various settings, with effectiveness measured through pre- and post-intervention surveys focusing on attitude shifts, knowledge enhancement, and registration changes.

#### Results

The intervention led to a notable increase in organ donation registrations and a positive shift in attitudes.Between 2004 and 2023, 265 organ donation advocacy events were held in schools, targeting college, high school, and one elementary school. These events utilized life stories of altruistic donors to teach students the value and meaning of life, encouraging them to appreciate their health and cherish life. The advocacy covered global and local organ donation rates and policies, and end-of-life care options, culminating in 1,877 students signing organ donor cards, significantly raising awareness of the importance and meaning of organ donation.

#### **Conclusions/lessons learned**

Tailoring organ donation education to include altruistic and religious perspectives addresses critical barriers to registration.

This strategy has shown potential in improving perceptions and increasing donor registrations. Future efforts should focus on expanding these educational campaigns and exploring their longterm impact on donation rates.

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A Novel Collaboration of Specialists towards Proactive Stroke Health Equity and Literacy during Covid 19 Pandemic in Rural South Eastern Greece.

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#### **Background and objective**

It is important to know the risk factors of stroke in order to prevent it as early as possible .WHO estimated stroke as the second cause of death in Greece. The incidence is approx 140 /100,000 per year ( in EU is 534/100,000). Hypertension, smoking, diabetes, obesity, hyperlipidemia, lack of physical activity are the most frequent modifiable stroke risk factors identified . The most frequent irreversible risk factors identified are age, gender, and level of education.

#### Methods/intervention

This cross-sectional study included outpatients from our NHS Hospital,aged 60 and over with prior stroke. In cooperation with private practice Internists, Neurologists and public Cardiologists, Internists, Diabetologists, we examined modifiable and irreversible stroke risk factors in patients' history. Our objective was to inform patients about the risk of recurrent stroke, to educate them on the importance of regular follow-up and risk factor management. We advised on healthy lifestyle diet, physical activity and prompt stroke symptom recognition.

#### Results

Subjects diagnosed with stroke were prescribed treatment and follow-up were scheduled despite the setbacks from COVID 19 pandemic in our remote responsibility area of 21.840 persons. Totally, 235 consecutive patients were examined during the last 3 years. Mean age was 77,8 years, mean incidence of stroke was 110/100,000 per year. The most frequent modifiable stroke risk

factors were : Hypertension (37,04%), Diabetes (12,79%), Atrial fibrillation (10,77%), Coronary stenosis (10,77%), Coronary Disease (10,77%), Hyperlipidemia (8,08%), Smoking (7,07%), Cardiac Failure (6,06%), Carotid stenosis (5,39%), Alcoholism (2,02%).

#### **Conclusions/lessons learned**

There are no studies addressing the link between Health Literacy and health outcomes in hypertension or other risk factors of stroke that were conducted in Southern Europe till today. This study provides evidence for the need of future studies, the delivery of structured education and multi-level interventions across society. A transdisciplinary health team can support patient-centered health literacy efforts for better stroke secondary prevention. We always need integration of Hospitals and primary care with community-based health and social services.

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# Enhancement of Prenatal Breastfeeding Nursing Guidance Completion Rate

### **CHEN Ya-Chin**

#### **Background and objective**

The World Health Organization's Comprehensive Implementation Plan for Nutrition of Pregnant and Lactating Women and Infants sets a target rate of exclusive breastfeeding for infants under six months of age to reach 50% by 2025. Prenatal breastfeeding nursing guidance will impact the success of breastfeeding, and appropriate assistance and guidance can extend the willingness and duration of maternal breastfeeding. The project team executed prenatal breastfeeding nursing guidance with a completion rate of 50% in May and June 2023, and the effectiveness evaluation showed that the correct breastfeeding rate among pregnant women was 73.8%.

#### Methods/intervention

Quality control identified a low rate of educational implementation: lack of innovation among nursing staff, low motivation for learning among pregnant women, disorganized teaching materials, and non-uniform procedures. Key improvements: innovate educational methods, enhance learning motivation, streamline teaching materials, and standardize procedures. Improvement strategies:design a learning map for breastfeeding, create guidance manuals, utilize teaching tools, and streamline processes.

#### Results

After implementing the project improvement measures, it was found that the execution rate of prenatal breastfeeding nursing guidance in the gynecology outpatient clinic increased from 50% before the improvement to 90% afterward, and the correct rate of knowledge assessment for breastfeeding among pregnant women increased from 73.8% to 95%, effectively enhancing the quality of prenatal breastfeeding education.

#### **Conclusions/lessons learned**

The project enhanced the implementation rate of prenatal breastfeeding guidance, with success rates increasing from 50% to 90%, and the correct knowledge rate among pregnant women increased from 73.8% to 95%. After improvements, nursing staff used standard manuals for complete education, interactive maps sparked learning interest in pregnant women, the use of teaching tools improved their knowledge and skills, and streamlined processes increased efficiency. Despite facing rebound challenges, the project received professional recognition, and cooperation among colleagues improved.

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# Oral session 4.6: Promoting health and well-being of staff

21-Day Challenge to Improve the Health of Staff in Dalin Tzu Chi Hospital

# YANG Yu-Wen, SU Yi-Chieh, CHANG Hung-Wei, LIN Ming-Nan

#### **Background and objective**

Diet control and exercise are two key approaches for good health. During COVID pandemic, people could not go outside for exercise and stay inside for long time, then got poor health. Vegetarian diet is beneficial to health and earth. The 21-day challenge is a way to build habits. We applied the 21-day challenge project to our staff to help them build a healthy eating habit and then improve their health.

#### Methods/intervention

In 2021 and 2022, 4 batches of "21-Day Health Challenge" project were held at Dalin Tzu Chi Hospital. For each batch, we provided the participants with vegan lunch and dinner meal for continuous 21 days. The meal included whole grain, plant protein, vegetable and fruit cooked with less oil, salt and sugar. We also used social media (e.g. LINE) for information sharing and offered online lectures to enhance the motivation, knowledge and skill of participants. Before and after the project, physiological indices were measured to evaluate the effect of the interventions.

#### Results

For total 4 batches, there were 163 person-time joined the project. Most of the participants were female (n=142, 87.1%). The average age was 43.3 years. 153 (93.87%) participants got

weight reduction after the project. The average reduced weight was 2.20 Kg. Male reduced more weight compared with female (2.97 vs. 2.09 Kg). In terms of individual lipid profile, 145 (88.96%) staff had lower cholesterol level, 99 (60.74%) had lower TG level and 138 (84.66%) had lower LDL level after the project. Almost half the participant (49.08%) benefited from lower all lipid profile. The effect of individual lipid lowering was different by gender. More male (80.95%) got the benefit of TG lowering than female (57.75%), but more female (85.92%) got the benefit of LDL lowering than male (76.19%).

#### **Conclusions/lessons learned**

The short-term effect of 21-Day Health Challenge was significant. Most participants got the benefits of weight reduction and lipid lowering. Some staff attended 2 or 3 batches. It meant the project had positive impact. From the project, we found some obstacles for healthy diet. Vegan meals usually cost more than regular meals, and might not be achieved easily. One of our goals is to teach staff preparing the healthy and tasty vegan meal easily. Vegan diet is favorable to well-being and planet. We hope to promote vegan diet to our staff through the project.

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Can a Health Promotion Multidisciplinary Program be Implemented Within the Busy Hospital Setting?

### SCHWARTZ Liron, NEMET Dan, ELIAKIM Alon, LAPID Pazit

#### Background and objective

The work of hospital staff involves high workloads, stress, disturbed sleep, and an environment that doesn't support a healthy lifestyle. These harm the ability and motivation of the staff to maintain a healthy lifestyle and leads to enormous burnout. The result is adverse effects on health. Our goal is to examine whether a health promoting intervention supporting lifestyle changes, in physical activity, nutrition, and mental wellbeing, tailored to the limitations of the hospital setting is feasible, and to examine whether it will lead to health improvement.

#### Methods/intervention

We performed a Prospective Comparative Intervention study. The research group included hospital staff of the pediatric department at the Meir Medical Center who were interested in participating in a multidisciplinary health promoting intervention. Participants were evaluated in the beginning and end using questionnaires to assess physical activity, nutrition, and mental well-being. In addition, vital signs, Body Mass Index, body composition, bone strength, blood HbA1C, glucose and lipid profile were tested, as well as a physical fitness evaluation.

#### Results

45 participants completed the study. There was a significant improvement in all measures of physical fitness, resting heart rate, and a significant decrease in HbA1C. Most program participants reported a change in their physical fitness habits, especially intense physical activity. Changes in dietary habits were also observed, with a decrease in fried food consumption and an increase in whole grain consumption. The program led to increased sense of belonging at work and higher motivation. A positive effect on habits within the family was also reported.

#### **Conclusions/lessons learned**

A workplace health promotion program, if tailored to the hospital setting, can be implemented, and leads to improvement in health indicators, as well as enhancement the sense of belonging and reduced burnout. Hospital staff is interested in a health promotion program.

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# Coffee Break - Reducing Stress at Times of War

# ELIMELECH Lea, COHEN Dorit, VANDER Tatiana, BADER Tarif

#### **Background and objective**

We were all shocked by the outbreak of war. The healthcare professionals of Herzfeld Geriatric Rehabilitation Medical Center had to continue caring for patients during this difficult time, especially as some staff members were drafted for military service, or dealt with the absence of family that was called to serve. Schooling facilities closed, social gatherings stopped existing: All social gatherings and leisure activities stopped existing: only markets and pharmacies were allowed to be open. People did not leave their homes because of the constant threat of missiles fire or attack but healthcare workers had to drive to work and back every day regardless of the danger. Staff were injured by missiles attack on their way to work. Enduring all of this we continued to deliver care to our patients and community.

#### Methods/intervention

Coffee Break was created to reduce staff stress, and to give an experience of social and leisure time. We created a local cafe serving free hot drinks and pastries bought or baked by staff. Name tags were placed on the pastries to empower whoever brought them. The café was opened for 2 hours a day, 5 days a week, allowing everyone on shift to take a few minutes to improve their wellbeing.

#### Results

The experience brought everyone together! We employ healthcare professionals from all corners of Israeli society: Jews, Muslims and Christians. Everyone was welcome, politics was left at the door. The amount of staff that wanted to take part and contribute to this project was outstanding. We constantly received more baked goods day after day, emphasizing the importance of the café for everyone. Staff reported an improvement in their emotional state.

#### **Conclusions/lessons learned**

Coffee Break served close to 75% of staff shift every day. It became a significant wellbeing project bringing people together. The talk of the day was medical teams asking each other when they could meet up in the cafe.

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Programs to promote the health and well-being of healthcare workers. Example from Hungary.

### SZÖRÉNYINÉ VÁNYI Gabriella

#### **Background and objective**

Working in the health sector is no guarantee of access to the right level of health care. Health inequalities are just as visible among health workers as they are in society at large. The health of health workers is key to health care. Good physical and mental health is necessary for doctors, nurses, and other professionals to be able to care for patients. They do this under difficult circumstances, because health care in itself carries many risks. from biological and physical risk factors to mental stress. In 2022, a new Workplace Health Improvement Program was developed and implemented in our Hospital, covering all hospital staff. In 2023, the program focused on health assessment and screening, with the first year's goal being to get employees to learn about and accept the program and participate in the screenings offered to them. In 2024, the program was expanded to include a workplace lifestyle program and a greater emphasis on community building alongside screenings.

#### Methods/intervention

The follow-up of the program examined how the willingness of employees to participate in screening had changed over a year. The newly launched lifestyle program is currently underway and the results are being evaluated. In looking at the effectiveness of the program, we are looking at whether hospital staff has achieved the goals they set themselves, how their time spent exercising has changed, whether their weight has changed, whether their mental health has changed, and how determined they feel to continue the program.

#### Results

In the second cycle of the Program, the willingness to participate in screening tests doubled. Many cancers were detected and treated in early stage. Thanks to community building, the hospital running team has been formed, achieving good results race after race and inspiring the hospital community. The lifestyle program has enrolled 44 employees who participate in education, fitness assessments, and 2-3 exercise sessions per week. Detailed results are ongoing.

#### Conclusions/lessons learned

The health and well-being of health workers is of strategic importance in the life of a hospital. Changes and results can be achieved through persistence and consistency.

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Investigating the Effectiveness of Individualized Weight Management Program for Hospital Staff

# CHEN Yih-Han, CHUANG Fei-Chi, HUNG Ling-Yu, CHAO Chia-Lun, LEE Kuan-Hui, SHIH Ru-Liang

#### **Background and objective**

Obesity is not only a chronic disease but also contributes to eight out of the top ten leading causes of death in Taiwan. Thus, obesity prevention and management have become critical contemporary issues. Hospital staff have their own responsibilities during the work time and it is difficult for them to gather together for classes or exercise. This study aimed to provide an Individualized Weight Management Program for Hospital Staff and evaluate the effectiveness of weight reduction.

#### Methods/intervention

We recruited our hospital staff with BMI greater than 24 from September 2021 to April 2023. A 12-week Individualized Weight Management Program, including one-on-one nutritional guidance and personalized exercise prescriptions, was conducted. We assessed the participants' achievements in the first, fifth, ninth, and thirteenth weeks, along with satisfaction surveys, which consist of 5 questions rated on a scale of 1 to 5, with higher scores indicating greater satisfaction.

#### Results

There were 38 participants with 31 (23 females and 8 males, 82%) completing the program. The average age was 37.2 years old. Thirty-one participants lost 55.9 kilograms (kg) in total, with an average weight reduction of 1.8 kg (p < 0.05). Among them, 28 participants lost 0.1-7.2 kg individually. Satisfaction analysis, including the privacy of the venue, provision of Inbody test, exercise prescription and overall program, showed high satisfaction scores above 4.9 points.

#### Conclusions/lessons learned

This program provides personal guidance based on the individual circumstances, which could not be provided by group weight control classes, and demonstrates significant weight reduction. The participation and satisfaction rates are also high, showing

that the Individualized Weight Management Program is effective for hospital staff.

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# Oral session 4.7: Contributions of Health Promoting Hospitals and Health Services to health equity in communities

Establishing an institutional hospice care model for people with disabilities - protecting the health rights of people with disabilities to receive hospice care

### **CHUNG Ching Hui**

#### **Background and objective**

MacKay Memorial Hospital actively promotes the concept of hospice at home and at institutions. For some people with disabilities, institutions are their second home. When people with disabilities suffer from terminal illnesses, they have to travel to and from the hospital more and more frequently. This is a very difficult journey for family members, institutional staff, and patients. It is important to ensure that they receive good quality hospice care and that it is accessible.

#### Methods/intervention

In the first phase, we provide hospice education and training for institutional staff, including hospice professional knowledge, nursing skills, case discussions, etc. At the same time, we establish a care transfer mechanism between institutions and hospitals, including a green channel for emergency medical treatment. In the second stage, we arrange hospice care promotion lectures to enhance the understanding of palliative care for people with disabilities and their families. Assist people with disabilities to understand death and express their preferences for important medical decisions in multiple ways. The third stage assists the institution in setting up a hospice environment, including an independent dying site and a space for family members to accompany them.Phase 4: Helping agency staff and families cope with grief.

#### Results

In 2023, we held 60 hospice awareness lectures, with a total of 4,672 people attending. 3,196 people signed The Letter of Intent for the Choice of Hospice Palliative Care and Life-Sustaining. In 2023, we assisted 10 institutional residents to die in institutions,

including those with severe physical and mental disabilities and the elderly.

#### **Conclusions/lessons learned**

We provide innovative "Six Whole Cares" (whole person, whole family, whole process, whole team, whole community and whole psychology) and "Five Principles of Life" (Gratitude, Forgiveness, Love, Saying Goodbye and Living). We continue to expand our community hospice care network and help agency staff have the knowledge and ability to provide hospice care.

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Enhancing Child Health and Safety via Home Visits: A Four-Year Journey from Hospital-Based Initiatives to Community-Wide Health Promotion

# CHIU Ting-Fang, DU Jung-Chieh, FANG Li-Jung, YANG Winnie, LIU Chih-Kuang

#### **Background and objective**

Facing a low birth rate and the importance of each child's wellbeing, Taipei City Hospital embarked on a outreach home visiting program aimed at early detection of health and developmental issues in children aged 0-3 years. The program sought to mitigate accidental injuries and improve parent-child interactions through structured home assessments and interventions.

#### Methods/intervention

Utilizing a structured questionnaire, the program recruited young children up to 3 years from hospitals or referrals by Taipei City Government. The visiting teams, comprising pediatricians, nurses, and assistants, conducted health and development assessments, evaluated safety measures in the home environment, and provided guidance on parent-child reading and interaction.

#### Results

The initiative reached 803 families, with a significant focus on early detection of developmental delays, which were identified at higher rates during visits compared to hospital settings (4.0% in the first and 8.1% in the second visit). Home safety improvements were noted in 76% of households, with advancements in securing kitchen and bathroom areas, using child safety seats, and implementing anti-slip measures.

#### **Conclusions/lessons learned**

The outreach program effectively identified at-risk children and implemented preventive measures to enhance their safety and development. However, challenges in improving parent-child interaction, especially in organization and stimulation aspects, underscore the need for continuous parental education and support.

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# Targeting Medical Challenges for Demented Older Residents in Nursing Home

# HSU Chia-Hui, TAI Wei-Ting, PAN Yu-Ling, KAO Tung-Wei

#### **Background and objective**

Demented older people encounter various medical challenges as their condition advances. Sleep disturbances affect 60-80%, aggressive behaviours impact 30-50%, mood disorders are prevalent in 24%-42%, and sundown syndrome manifests in 2.4%-25% of older adults with dementia. Prior research addressing nursing interventions encompassing multiple facets for this cohort have been notably scarce. Our objective is to conceive a multifaceted nursing program, encompassing Cognition enhancement, Able Functional improvement, and Emotional stabilization (CAFÉ), tailored for the amelioration of medical afflictions in demented residents within a nursing facility in Taiwan.

#### Methods/intervention

Upon admission, a comprehensive evaluation of residents' medical conditions was conducted employing the mini-mental status examination (MMSE), activities of daily living (ADL), instrumental activities of daily living (IADL), and mini-nutritional assessment (MNA). Subsequently, we implemented a range of interventions for residents, targeting specific domains: Cognition enhancement through activities such as drawing pictures and nostalgic therapy. Able function improvement utilizing oral and limb exercises, occupational therapy, and life skills training. Emotional stabilization through sensory stimulation and engagement in leisure activities. Furthermore, we diligently monitored sleep patterns, aggressive behaviours, and emotional states both prior to and following the initiation of this program.

#### Results

In this programme, 30 residents with dementia were enrolled, with a mean age of 86.1 years, and 66.7% were classified as having severe dementia. Initial assessments using the MMSE, ADL, IADL, and MNA yielded mean scores of 6, 18, 2, and 21, respectively. Following two months of participation in the CAFÉ programme, notable improvements were observed. The mean MMSE score increased to 7, while the MNA score rose to 25. Scores for ADL and IADL were remained over this period. Additionally, there was a 20% improvement in sleep disturbances, a 16.7% reduction in aggressive behaviours, and a 16.7% enhancement in emotional status.

#### Conclusions/lessons learned

The CAFÉ program represents a comprehensive nursing intervention designed to address multiple facets of care for individuals with dementia residing in nursing homes. This structured approach aims to yield several benefits for dementia patients, including improvements in cognition, sleep quality, and nutritional status, while also supporting the maintenance of functional abilities and reducing occurrences of aggressive behaviours.

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Community Support Plays an Important Role in Health Promotion and Quality Healthcare Services for Adolescents

# CHIANG Chien-Dai, WU Chao-Chun, CHANG Hui-An

#### **Background and objective**

By following WHO guidelines (2003), the Project of Youthfriendly Clinics (YFC) started in 2004 and became the model of Adolescent-friendly Healthcare Services Initiative (AFHSI) in Taiwan. One of the strategies of this service model was to outreach healthcare service of the hospital and integrate community resources as part of health promotion. And gatekeepers in the community would recognize the value of providing health services to adolescents and support such provision and the utilization.

#### Methods/intervention

The tasks of community support include: 1. Establishing adolescent-friendly healthcare network models in communities. 2. Facilitating the partnership between hospitals, schools, and social resources in the community to establish the referral system. 3. Assisting hospitals to gain community support by enhancing their accessibilities with different strategies. 4. Encouraging hospitals to develop adolescent participation mechanisms.

#### Results

Due to the policy of Health Promotion Administration, Ministry of Health and Welfare, the project of YFC had been transformed into promoting Adolescent-friendly Healthcare Institution Initiative (AFHII) since 2018, and the concept of health promotion became a central issue in the framework. Community support tasks were compiled into standards for the initiative, such as standard 1.2 (continuity and coordination in adolescentfriendly healthcare), standard 3.2 (promotion strategies for adolescent health literacy), and so on.

#### **Conclusions/lessons learned**

With the experience of promoting AFHII, there are some suggestions pertaining to community support: 1. The importance of adolescent health promotion and adolescent-friendly healthcare should be recognized by both central and local governments. 2. Adolescent-friendly healthcare institutions should facilitate their community support mechanism to improve the accessibility and availability for adolescents. 3. When conducting community activities for the youth, the hospital should involve adolescents in the planning, monitoring and evaluation.

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# Life Support Campaign through Health Checkups 2022-2023

#### **SUZUKI Hisashi**

#### **Background and objective**

Nishiyodo Hospital, 218 beds, is located in Osaka City where public health checkup rate is only 20 percent or half of national average and lowered after the pandemic. From equitable health perspective, health checkups is the first step to access healthcare. To improve entire community health, no checked population is advocated to take annual health exam for early detection and treatment of disease or healthier behavior and diet in daily life.

#### Methods/intervention

Life is getting harder with global price hike or impact from Covid. So, gift certificate for local supermarket is given when taking public health checkups and three cancer screenings at the same time. It was publicized at local supermarkets and we made phone calls and sent messages to those who have not received the checkups in the past few years.

#### Results

152 persons used the campaign, including 7 first time comer, 20 persons in 5 years or more, and 30 persons after 3 to 5 years. Total participants of public health checkup was back almost to pre Covid time. Compared to FY2020, it was 612 persons more or 114.6 percent, and to FY2021 was 221 persons more or 107.8 percent.

#### **Conclusions/lessons learned**

It is important especially for young people who may think they are healthy and skip health checkups to undergo annually and know health level to allow early detection and treatment before symptoms appear as the disease progresses rapidly.

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# Mini oral session 1.1: SYMPOSIUM: The Future of Person-Centred Integrated Care: Current Enablers and Future Directions

The future of Person-Centred integrated Care: Current Enablers and Future Directions

#### WOLF Axel, HARLID Ralph

#### **Background and objective**

This session will delve into the critical aspects of person-centred integrated care, highlighting its importance, current enablers, and future directions. The focus will be on the integration of Person-Centred Care (PCC) and Health Promotion (HP) within health systems to enhance care quality, ensure cost containment, and improve accessibility. Our vision is to improve healthcare quality, ensure cost containment, and enhance accessibility and affordability.

#### Methods/intervention

Critical Enablers for PCC and HP Information Technology (ITALY): Digital health records and patient decision aids. Quality Measures: Metrics for aligning health services with individual preferences. Infrastructure: Community-based care systems promoting continuity and responsiveness. Incentive Systems: Reward systems supporting PCC processes and outcomes. Contracting Strategies: Agreements to align organizational goals with PCC and HP. Cultural Change: Promoting an organizational culture supportive of PCC and HP. Future Directions Scalability and Sustainability: Discuss strategies for large-scale testing and policy labs, continuous improvement, and feedback mechanisms. Economic Evaluation: Importance of demonstrating cost-effectiveness to policymakers for sustainable healthcare solutions.

#### **Conclusions/lessons learned**

Conclusion Call to Action: Emphasize the necessity of collaborative efforts across sectors to achieve PCC and HP goals. Vision: Envision a future with widespread adoption of innovative, person-centred approaches in health systems, ensuring better health outcomes and financial sustainability.

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# Mini oral session 1.2: WORKSHOP: Health and Culture

**Health and Culture** 

# COSOLA Alda, VIOLA Giuseppina, FORNERO Giulio

#### **Background and objective**

The relevance of culture and the arts in the care relationship, for health promotion so widely supported today by a more and more consistent corpus of evidence both in science and in the humanities, is now the most important element in policies in order to guarantee greater equity of care. The Piedmont regional HPH Network has taken up this challenge to innovate and strengthen the link between culture and care management. The heart of this challenge is the well-being of health workers, who are the most important driver of the quality of care with patients and citizens. The Piedmont HPH Network can confirm the relevance of the arts in building empowerment and patients engaging with caregivers and staff in different care settings.

#### Methods/intervention

HPH Piedmont network is organizing a two-days Congress: CULTURE AS A RESOURCE FOR HEALTH- Health and Culture - the other side of care. The Congress will take place in Turin the next June 4th and 5th. The partners are: University of Turin; ISS-Istituto Superiore di Sanità, Rome; DoRS - Documentation Center for Health Promotion of the Piedmont Region, CCW - Cultural Welfare Centre, Fondazione Medicina a Misura di Donna and Fondazione Compagnia di San Paolo. In June 5th Congress is organized on three panels: • From scientific evidence to policies • Culture as a resource in the Health Promotion Plan • Health & Culture, international project of the Piedmont HPH Network The detailed program of the event is available on the HPH Italia website page News ed Eventi – Le reti HPH italiane che promuovono la salute link: https://www.hphitalia.net/news-edeventi/

#### Results

The start of an Internationale Practice Community on Health and Culture.

#### **Conclusions/lessons learned**

A strong relationship between Health promotion and the Arts.

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# Mini oral session 1.3: Governance models, culture, policy and leadership for HPH

Using Healthcare Complaints Analysis Tool to Evaluate Patient Complaints during the COVID-19 Pandemic at a Medical Center in Taiwan

# CHU Nain-Feng, WANG Shu-Chuan, PAN Li-Fei

#### Background and objective

To evaluate patient complaints using Healthcare Complaints Analysis Tool (HCAT) during the COVID-19 pandemic in 2021 in Taiwan. Further examines the distribution and type of patient complaints before and during the COVID-19 pandemic to provide a better clinical procedure, hospital management and patient relationship.

#### Methods/intervention

We collected patient complaints from Jan. 2021 to Dec. 2021 at a medical center in Southern Taiwan. Using the Healthcare Complaints Analysis Tool (HCAT), the patient complaints are classified and coded into three major domains (clinical, management and relationship), and seven problem categories (such as quality, safety, environment, institutional process, respect and patient right, listening and communication. We further compared and categorized the complaints based on whether they are COVID-19 related or not and whether it was before or duringCOVID-19 pandemic to understand the difference of patient complaints.

#### Results

Based on the HCAT domains, the complaints about management were the highest, with 52.9%, followed by complaints about relationship, about 37.7%. According to the types of problem, the complaints on the environment were the highest about 32.5% (190/584), followed by communication about 29.6% (173/584), and institutional process about 20.4% (119/584). There were 178 COVID-19 related complaints and more frequently during Q3 and Q4 (from mid-June to Dec.) at 2021 in Taiwan. Among the COVID-19 related complaints, the most frequent were environment domain with 114 cases (about 65.7% of COVID-19 related complaints). The domains of patient complaints was statistically different between COVID-19 related and non-related (p<0.001). During the COVID-19 pandemic, the proportion of COVID-19 related complaints increased 1.67 times (117/312 vs. 61/272, p< 0.001).

#### Conclusions/lessons learned

These characteristics (complaints) are more prominent and it requires immediately, timely and patient-first consideration to build-up better clinical procedures, healthcare environment and comprehensive communication. Using HCAT can allow health centers or health practitioners to understand the needs and demands of patient through complaints, provide friendly medical and health services, avoid unequal information transmission, build trust doctor-patient relationship, and improve patients' safety.

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Cross-domain Collaboration: Innovative Practices in Remote Areas of Taiwan from the Perspective of the Five-Comprehensive Health Care Model

# TIEN Hui-Wen, CHANG Ching-Yu, SONG Wen-Fang, TSA Chuan-Hsiu

#### Background and objective

In resource-strapped rural areas, we address challenges like mountain healthcare and community well-being through the "Five-Comprehensive Health Care Model." This model combines hospital and health center expertise, enhancing team cultural sensitivity and transforming healthcare delivery. By involving the community, we aim to achieve health equity for rural residents.

#### Methods/intervention

Constructing the "Five-Comprehensive Health Care Model": Developing holistic care for the body, mind, and spirit, establishing household registries for "whole household" health management via information technology platforms, integrating diverse professional teams around medical care to address unmet needs, constructing a continuum of care through the three-stage, five-level public health service process, and devising health management models tailored to different ages and risk levels to achieve holistic well-being.

#### Results

Since 2022, our integrated model has linked hospital and physician association care, with social welfare supporting vulnerable groups and industry-academic partnerships nurturing talent. Enhanced health risk management encourages local healthcare usage, leading to a 2.5% reduction in total medical expenses in 2022 compared to 2021. This demonstrates that health center-led health management, alongside diverse team involvement, indeed improves healthcare accessibility for rural residents and promotes health.

#### Conclusions/lessons learned

"The Five-Comprehensive Health Care Model" has shown initial effectiveness in improving rural residents' physical health. Our main goal is to achieve the World Health Organization's 1946 definition of overall well-being, encompassing physical, mental,

and social aspects. We've fostered team consensus and persist in efforts to promote health equity among rural indigenous populations.

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Workplace health promotion initiatives for healthcare workers in Italy: an investment for workers, the organization and the society in the perspective of Total Worker Health

# DI PRINZIO Reparata Rosa, DOSI Alessia, MELCORE Giuseppe, VACCA Maria Eugenia, VINCI Maria Rosaria, CAMISA Vincenzo, SANTORO Annapaola, RAPONI Massimiliano, ZAFFINA Salvatore

#### **Background and objective**

The aging workforce must deal with work-related changes, including new organizational options (e.g., agile work), psychological difficulties (e.g., COVID-19-related distress), and new technology. Workplace Health Promotion Initiatives (WHPIs) can successfully assist in addressing these labor-market difficulties. An Italian hospital has implemented a workplace strategy to improve the professional performance of healthcare workers (HCWs). A multidisciplinary team directs the three-lined WHPI strategy which includes: i) "Disability Management" (DM) addressing emerging impairments (e.g., chronic degenerative illnesses, oncological diseases); "Help Point" (HP) providing psychological support to overburdened HCWs; iii) "Stop Smoking" (SS) striking smoking habits

#### Methods/intervention

131 HCWs were enrolled in DM (July 2017-December 2019), 35 HCWs participated to HP (September 2016-June 2019), and 40 HCWs (May 2018-July 2019). We provide findings about the economic impact of the three-lined WHPIs. Sickness absence days (SADs) were calculated in the 12-month period preceding and after the three WHPIs. Return on Investment (ROI) was calculated as the ratio of net profit to investment cost for the WHPIs management using SAD reduction (for DM and HP) and the total recovered time from smoking (for SS) accounting for profit

#### Results

SADs significantly dropped by 67%, 60% and 85% for DM, HP and SS, respectively (p values= 0.001, 0.05 and 0.04). The best ROI was outlined for the DM program (27.66), which covers the most part of occupational issues of workers, followed by the psychological support (2.73), and the stop smoking initiative (1.90).

#### Conclusions/lessons learned

Providing objective indicators of the economic impact of WHPI is the keystone to raise awareness of the essential role of enhancing HCWs' health to the wide perspective of Total Worker Health®. Because of their educational value, WHPIs constitute a "win-win" strategy for employees, businesses, and society. Public health policies should raise worldwide knowledge of the economic benefits of investing in improving employee's wellbeing for the benefit of society toward the global horizon of occupational salutogenesis

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HPH Catalunya General Board's replacement based upon mentoring as a good management practice

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#### **Background and objective**

HPH Catalunya Network was born in 2007. Since then it has developed an intense role in Health promotion on its 26 centres, mostly public healthcare centres, as well as educational and social ones. In November 2022, we were facing the retirement of 3 significant positions at the General Board: Presidency, Vice Presidency and Treasurer. That is why we decided to work on a mentoring model of replacement that could value their important roles and wisdom, because they 3 had been at the Catalan network from the beginning.

#### Methods/intervention

Once the 3 retiring people: Presidency, Vice presidency and Treasurer accepted to dedicate and extra time to support the new team we planned different steps:

- To create a Managing Commission of 4 people, 3 new ones and the old Secretary who would supervise the shift.
- To meet monthly both teams, the new and the old one, in order to get support and orientation
- 3) To lead the General Board monthly meetings
- To present for general elections and to end the mentoring process.

#### Results

The new team validated their positions in the General Elections (November 2023), which demonstrates the good job they have been developing. The new team organized the most popular Health promotion Congress in Barcelona, with more than 140 attendees, and even a waiting list for the event. We did a short survey on satisfaction and 44% rated as with 10/10; 24% with 9/10; 24% with 8/10 and the rest with less than 8%.

#### **Conclusions/lessons learned**

This model has allowed to increase our influence in new centres: we have incremented the number of members, form 22 to 26 in the last year. We have reshaped the working groups, aligned with the new Strategic Plan. We have ran a survey to all General Board members and they score with 8.33 (over 10) the process.

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# Cross-Team Collaboration Reduces Fall Incidence in Internal Medicine Wards

# LEE Yu San, CHOU Yi Tsen, LIN Mei Jun, LIEN Chi Hsuan, TSENG Shih Ju

#### **Background and objective**

From September 2022 to March 2023, the incidence rate of fall events in the internal medicine wards of our hospital was 0.08%. Analysis identified several contributing factors, including incomplete health education content, insufficient educational tools, inadequate lower limb strength in patients, difficulty in using assistive devices, and failure to use handrails while toileting. Consequently, we aim to reduce the fall event incidence rate from 0.08% to 0.07% and to increase the patients' fall prevention awareness scores from 59.8 to 80.0.

#### Methods/intervention

From October 1 to November 15, 2023, the content for fall prevention education was revised and diversified educational tools were added, including integrating QR code-linked educational videos for assistive devices. Simultaneously, a crossteam exercise program was introduced, providing patients with video tutorials for lower limb strength training exercises and consultations with the rehabilitation department. Additionally, floors at the entrances of each restroom were covered with carborundum to increase friction and prevent anti-slip mats from shifting; improvements were also made to the usability of walkers, and reminders for the use of multi-directional, portable toilet handrails were installed.

#### Results

After implementing these measures, the rate of fall incidents decreased to 0.06%, and the awareness scores of patients and their primary caregivers increased from 59.8 to 80.0.

#### **Conclusions/lessons learned**

Although most of the hospitalized high-risk fall patients are elderly, using multiple health education tools containing pictures and videos, coupled with the medical team implementing rehabilitation exercise programs, and providing a safe environment and improved assistive devices in the hospital, not only improves the awareness of patients and their families on preventing falls and effectively reduce the incidence of falls.

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# Do hospitalization limitations impact mortality after the COVID-19 pandemic? A time series analysis

# LIN Chih-Ming, LIAO Chen-Mao, KAO Yi-Wei

#### **Background and objective**

There is limited information regarding non-COVID-19 mortality related to control measures in Taiwan amidst the pandemic. This present study, utilizing a comprehensive observation and tracking timeline of epidemic prevalence and administrative control measures, aims to examine whether hospitalization decline due to corresponding measures will heighten the likelihood of death from specific causes.

#### Methods/intervention

Data on mortality and hospitalization from 2011 to 2022 were extracted from Taiwan's Death Registry and National Health Insurance Research database. We recorded monthly deaths and hospitalizations due to Taiwan's non-COVID-19 leading causes. The world standard population numbers were used to calculate the age-standardized mortality and hospitalization rates. We adopted a time series analysis to examine the strength of the immediate and latent effects of monthly incidence of hospitalization on specific mortality during the pandemic. The autocorrelation function, partial autocorrelation function, and Dicky-Fuller test were used to check the stationarity for the estimated noise series. Box-Ljung Q statistics based on the residuals were used to diagnose whether the model was adequate.

#### Results

The annual average standardized mortality rate due to non-COVID-19 main causes two years before the pandemic (2018-2019) was 297/100000, reduced by 3.5% from 2020-2021. As opposed to the other causes, the mortality of diabetes and hypertensive diseases increased by 11.5% and 4.6%, respectively, after the pandemic. Inversely, compared to the prepandemic rate, the post-pandemic annual hospitalization rate due to the two diseases was reduced by 9.1% and 7.1%. The results of the time series analysis showed that a reduction in hospital services during a pandemic may raise mortality, especially in hypertensive diseases.

#### **Conclusions/lessons learned**

The findings support recommendations to avoid reducing healthcare services whenever possible, especially if there is room to increase hospital capacity. Planning should adapt to rapidly evolving pandemic needs while providing safe and timely access to care for specific needy individuals.

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The Impact of COVID-19 Pandemic on Patient Safety Culture in Taiwan: A Three-year Longitudinal Study in a Medical Center

# LIN Chia-Kuei, CHOU Chia-Yu, HUANG Szu-Fen, JERNG Jih-Shuin, CHEN Shey-Ying, GAU Shur-Fen

#### **Background and objective**

Safety culture may influence patient safety and patient outcomes. During the COVID-19 pandemic, healthcare professionals' daily operations and safety climate were affected. This study aimed to examine the impact of COVID-19 on the hospital's patient safety culture of employees.

#### Methods/intervention

This cross-sectional study involved 2,312 hospital employees over three years (2019-2021). We categorized 2019 as pre-COVID-19, noting the pandemic's escalating severity from 2020 to 2021 in Taiwan. Participants completed the Safety Attitudes Questionnaire (SAQ) and the Brief Symptom Rating Scale (BSRS). Repeated measure one-way ANOVA assessed SAQ score changes over the three years. Emotional distress changes were also analyzed. Demographic and job characteristics such as gender, age, tenure, managerial position, and job role were examined for differences in SAQ scores.

#### Results

The findings revealed significant changes in various dimensions over time. In 2019, stress recognition and emotional exhaustion were highest (p <0.001), while teamwork climate was lowest (p <0.001). However, in 2021, most SAQ dimensions and overall satisfaction showed gradual improvement. Factors such as gender, age, tenure, and job role influenced these results, with differences observed between genders, age groups, and roles. Specifically, males, managers, and doctors tended to report higher SAQ scores and overall satisfaction. Younger employees scored higher on SAQ but lower on overall satisfaction. Female gender and age under 40 were associated with higher emotional exhaustion before COVID-19, but lower during the pandemic. Nurses experienced higher emotional exhaustion before COVID-19 but lower during the pandemic. In 2021, staff with frequent patient contact exhibited higher stress recognition but lower emotional exhaustion. Conversely, those with less frequent patient contact reported higher teamwork climate scores.

#### **Conclusions/lessons learned**

COVID-19 had a significant impact on healthcare systems. These findings can help decision-makers in hospital policy by different healthcare professional groups. High-quality support may be needed to enhance the safety culture and allow staff to fight future pandemics.

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# Mini oral session 1.4: Innovative health promotion and safety strategies in diverse settings

High-Speed Rail Medical Center Ensures the Health and Safety of Travelers

#### HUANG Hsiao Ping, SU Yi Hsin

#### **Background and objective**

The Landseed International Hospital HSR Medical Center, known as the "Taiwan High-Speed Rail Health and Safety Guardians," ensures the safety and well-being of all stakeholders. The center delivers consistent, high-quality nursing and health guidance, embodying a hospital without walls through its professional staff and emergency expertise. Additionally, it adopts the Team Resources Management (TRM) approach to enhance nurse resilience, spreading TRM knowledge and practices across stations, thus fortifying health and safety with integrated support and operational coordination.

#### Methods/intervention

From May 2022 to August 2023, the program engaged 152 personnel across the High-Speed Rail Medical Center, including 9 stations, airport medical centers, emergency rooms, and intensive care units. We conducted six educational training sessions and workshops that introduced Team Resources Management (TRM) and resilience concepts. These initiatives were aimed at enhancing nurses' resilience, fostering team cooperation, and improving overall resource utilization.

#### Results

The project resulted in the training of 10 seed instructors and the development of 9 TRM lesson plans. Awareness of TRM tools, as measured by tests, increased from 3% pre-intervention to 85% post-intervention. Subsequently, we established "Cross-Station Support Operation Procedures for Nurses" and a "Training Schedule for Adjunct Nursing Staff," achieving a 100%

effectiveness in personnel scheduling and resilience utilization among nurses.

#### **Conclusions/lessons learned**

Implementing Team Resources Management (TRM) education on Taiwan's High-Speed Rail significantly enhanced nursing efficiency and team awareness of TRM tools. This led to improved operational procedures and scheduling, boosting team collaboration and passenger safety, and setting a new benchmark for performance across various domains.

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Exploring Medical Service Providers' Awareness and Attitudes Towards Genitourinary Syndrome of Menopause (GSM) in Women

#### TSAI Chuan-Hsiu, CHEN Yi-Shin

#### **Background and objective**

Genitourinary Syndrome of Menopause (GSM), characterized by urinary incontinence, vaginal dryness, and sexual dysfunction, becomes increasingly prevalent with age, significantly impacting quality of life. Despite the pervasive nature of GSM, medical professionals in Taiwan lack specific training in caring for this condition, which may hinder patients from seeking treatment. This study aims to understand the awareness and attitudes of hospital medical staff towards the assessment and treatment of GSM, to propose effective strategies for timely intervention.

#### Methods/intervention

A cross-sectional survey was conducted among medical staff and patients at a hospital in Southern Taiwan, including obstetrics and gynecology physicians, residents, medical students, specialist nurses, ward nurses, nursing students, technicians, and outpatient clinic nurses. The survey assessed their knowledge, willingness to screen, and attitudes towards GSM evaluation.

#### Results

Conducted between September and October 2023, approximately 80% of the surveyed gynecological staff and 90% of patients demonstrated a lack of knowledge about GSM. According to the survey, 62% of medical staff had a basic understanding of GSM, yet only 20% had attended related educational activities and were familiar with treatment methods. No participants used professional scales for symptom evaluation, follow-up visits, or home care education. Additionally, the majority of medical staff rated their confidence in educating patients about GSM lower than 4 out of 10, with only 15% having practical experience in observing and educating about symptoms.

#### Conclusions/lessons learned

Specialized education focused on the symptoms, assessment, and management of Genitourinary Syndrome of Menopause is critical for improving self-efficacy, clinical practice skills, and practical application among medical staff. Enhancing education and practice in this area is crucial to improving women's awareness and quality of life, ultimately leading to better overall well-being and enhanced care quality for women experiencing GSM.

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KEBUMI: Promoting Health Sustainability and Climate Change through The Empowerment of Health Professionals

# NAMIRA Danisa, BUDHY PRABOWO Raynaldy, SUHERMAN H.

#### **Background and objective**

Climate change is not just an environmental issue; it is a health crisis that impacts individuals and communities worldwide. In the context of Indonesia, the effects of climate change on health are already evident. Sea-level rise, extreme heat, and increased air pollution pose significant challenges to the population's wellbeing. These environmental stressors result in a range of health issues, from malnutrition and respiratory ailments to displacement and heightened vulnerability to sexual abuse. The reliance on coal power plants, industrial activities, biomass burning, and fossil fuel use exacerbates air pollution, which further burdens public health, particularly in urban areas. These interconnected environmental and health challenges place immense pressure on Indonesia's healthcare system, amplifying the need for urgent action.

#### Methods/intervention

The method used in the project is symposium by inviting several speakers from health and environmental background.

#### Results

This Project aims to build an empowered alliance of health professionals effectively advocating and championing issues of climate justice, health equity, resilience, and healthy recovery in Indonesia.

#### Conclusions/lessons learned

We believe by empowering health professionals, we can also empower patients, colleagues, the media, and policymakers at all levels to lead the way toward a just, healthier, and equitable world.

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The effectiveness of fire response capabilities of new staffs in residential long-term care institution through the integrated fire response plan

# CHEN Hsiao-Ting, HUANG Shu-Ping, CHEN Sung-Yun, CHEN Shu-Nuen

#### Background and objective

The most basic element of residential long-term care institutions for older adult is to provide a safe and secure living environment. The study institution is a nursing home attached to a regional hospital in Taipei City, Taiwan, with a total of 49 beds. The staffs include 6 nurses and 22 nurse aids. Most of the residents in the institution are elderly people with limited mobility and 91.5% are completely dependent. Fire safety relies on the cooperation of all staff of the institution to assist in evacuation. This study arm to improve the fire response capabilities of new staff in residential long-term care institution through " Integrated Fire Response Plan."

#### Methods/intervention

The integrated fire response plan includes the following. Design the content of the fire response cognition and skills and conduct pre-test and post-test. Fire education training is held every quarter, including fire awareness and escape and evacuation principles. Improve hardware equipment and design and improve escape route planning and calculate escape time. Regularly conduct more than one public security protection drill every year, conduct one onsite emergency response fire drill every six months, and conduct at least one tabletop exercise every year. New employees are required to complete education training and pass the assessment within one month of joining the job. The measurement tools included an audit checklist and feedback.

#### Results

From September 2023 to May 2024, a total of 14 new staffs were counted. The fire response cognitive knowledge audit score increased from 28.6% to 92.8% and the fire response skills ability increased from 14.3% to 85.7%. The staff's satisfaction with training can reach 100%, and feedback indicates that onsite emergency response fire drill can best improve their fire prevention skills.

#### **Conclusions/lessons learned**

According to our study data shows that integration of integrated fire response plan can indeed improve the fire response awareness and skills of new staffs, thereby improving the fire response capabilities of staff, ensuring and maintaining the public safety of residents' accommodation environments and long-term care institution.

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Utilizing smart devices to evaluate the effectiveness of the "8000 steps a day, enhancing health" campaign.

# YEH Mei-Hua, TSAI Ming-Tsu, CHEN Chun-Che, HUANG Fen-Fen

#### **Background and objective**

The working patterns in hospitals are predominantly mentally and physically demanding and often neglect personal health. Therefore, planning comprehensive and diversified health activities, along with utilizing smart device applications for foster a healthy workplace culture, and cultivates a consistent exercise habit to timely alleviate colleagues' stress.

#### Methods/intervention

Using The Ottawa Charter, the superintendent leads staff in pledging and practicing health promotion to create a comprehensive and diversified health environment. The hardware includes a hand-drawn health slogan wall, 21 fitness pieces, stress-relieving spaces, and other supportive environments. Implementing a mobile app for a 120-day walking program, with a daily goal of 8,000 steps, encourages interaction. Programs include 4 nutrition courses, 10 exercise sessions, 2 campus-wide walks, and 1 stress-relief session. Health passports enhance compliance for weight management. Regular monitoring of body metrics provides effective preventive health services.

#### Results

In the "8000 steps a day" campaign in 2023, 223 participants lost 268 kilograms. Furthermore , abnormal blood pressure improved by 21%, waist circumference by 17%, visceral fat level by 15%, BMI by 14%, and body fat percentage by 21%. The cumulative steps of participants reached an impressive 191,355,019 steps (burning 8,720,000 calories). Additionally, during the daily walks, 48% received perfect attendance awards for 108 days, while 18% received effort awards for 60 days. Furthermore, 23 watches were distributed as prizes in the lottery. These health promotion activities effectively improved BMI and waist circumference, maintaining a healthy physique and enhancing overall physical and mental well-being.

#### **Conclusions/lessons learned**

Despite hospital employees having extensive medical knowledge, the prevalence rates of Metabolic Syndrome are often challenging. The study confirms that promoting the health program can improve BMI. Combined with these smart technologies on health promotion program can empower individuals. It is hoped that more employees will engage in regular exercise to promote a high-quality, healthy work environment within the hospital.

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The effectiveness of the Camp Activity (Junior Doctor Experience Camp) in promoting employee health and enhancing adolescent health literacy

#### **CHUNG Min Yuan**

#### **Background and objective**

The NTU hospital held the Junior Doctor Experience Camp Activity (JDECA) every year. By inviting employees' children to visit the actual operation of the hospital and to experience medical technology, it would like to enhance the health literacy and health care knowledge of participating adolescents. They can deliver right health information to their parents so as to enhance the effectiveness of promoting employee' health.

#### Methods/intervention

JDECAs were held from 2017 to 2020 (before the COVID-19 pandemic) and started again from 2022 to 2023 (after the pandemic). The activities include education of hand hygiene for infection control (held by Center for Infection Control), and minimally invasive surgery experience (held by Department of Medical Education), etc. Satisfaction surveys were conducted to evaluate participants' satisfaction, recommendation, and content preference. Satisfaction was measured using the Likert five-point scale, including "Very Satisfied," "Satisfied," "Fair," "Dissatisfied," and "Poor."

#### Results

The NTU hospital conduct a total of 8 sessions of JDECA before and after the COVID-19 pandemic. Total of 254 adolescents participating. Regarding the preferred challenge content, the highest proportions before the pandemic were for fetal ultrasound at 21% and clinical skill experience at 17%, and after the pandemic were for minimally invasive skill experience at 28% and clinical skill experience at 27%. With regard to the practical experiential parts of the challenges before and after the pandemic, participants expressed that experiences such as UV testing emphasized the importance of proper handwashing, and CPR practice left a lasting impression on the participants.

#### **Conclusions/lessons learned**

Both before and after the COVID-19 pandemic, the overall satisfaction and recommendation rates among adolescents who participated in the JDECA were nearly 100%. Through these activities, children understood more on the contents of their

parents' work at the hospital and shared their experiences with their families at home. We sincerely hope that it would further promote the health of the entire family of the employees.

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# Mini oral session 1.5: Innovative approaches to mental health and staff well-being in healthcare

Aligning Expectations with Reality: The Influence of Transparent Recruitment Practices on Nurse Retention in Health Promoting Hospitals

#### LIU Chia-En, SHIH Pao-Fen, LO Chia-Lun

#### Background and objective

In today's healthcare environment, new nursing staff face significant pressures and high turnover rates. Previous research has scarcely examined their perspectives on recruitment transparency and authenticity. This study explores how complete and credible information affects job fit and retention intentions among new nurses, aligning with Health Promoting Hospitals' (HPH) focus on transparent and supportive work environments.

#### Methods/intervention

This study used a questionnaire to survey 338 nursing staff in Taiwan, assessing how information disclosure during recruitment influences job fit and retention intentions. It compared recruitment information against job seekers' expectations, evaluated the information's credibility, and measured how well job content matched new nurses' expectations. The study then explored how these factors impacted their intention to stay.

#### Results

The results indicated that the completeness and credibility of information significantly affected job fit. Additionally, selfefficacy significantly influenced retention intentions, and the level of job fit further affected the impact of self-efficacy on retention intentions. However, the impact of expectation discrepancies on retention intentions was not significant, suggesting that such discrepancies can be mitigated through improvement measures.

#### **Conclusions/lessons learned**

The study underscores the importance of transparent recruitment information in setting clear expectations for nursing

staff, aligning with HPH values to enhance retention. Hospital administrators should adopt humanized management and increase recruitment transparency to minimize expectation discrepancies, thus improving job satisfaction and retention. Open communication during training at HPH is crucial for reducing psychological dissatisfaction and stress, bolstering effective nursing recruitment and retention.

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# Perception, Burden of Duty, Self-Care, Time Poverty in Medical Staff in Hospital

# LEE Jaekyung, SONG Kyoung Jun, OH So Won, JANG Juyoung

#### **Background and objective**

For medical professionals caring for others, it is natural and essential to take good care of one's health and life. However, until modern times, the medical system, treatment, care, and benefits have always focused on the recipient, family, and community.

#### Methods/intervention

In particular, the social responsibility of medical professionals to respond has increased whenever there is a health care crisis, but the importance of the fundamental rights of these medical staff to take care of themselves, maintain their health, get adequate rest, and lead a family life has not received much attention. This presentation reviewed a recent case from a general hospital in South Korea.

#### Results

We reviewed changes in work schedules and personnel within the hospital, changes in overtime work, on-call work, etc., and especially the work situation of doctors. We also looked crosssectionally at the changes in personal working hours, stress or pressure, and perceptions of quality of life among employed doctors during a similar period.

#### **Conclusions/lessons learned**

Even in the 'modern society of gaps,' 'time' was given equally to everyone and seemed to have nothing to do with the gap or inequality of wealth. However, in this case, even in medical professions, despite that they are not expected to have significant economic difficulties, mental and physical difficulties, internal and external stress were frequently reported due to significant time poverty, burnout, and overload.

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LEE Jaekyung

Seoul Metropolitan Government-Seoul National University Boramae Medical Center, REPUBLIC OF KOREA jaekyjaeky@naver.com The Parametric, (h)Olistic, Profitable (POP) tree model of the occupational medicine in the Bambino Gesù Children's Hospital IRCCS: a Total Worker Health® approach

DI PRINZIO Reparata Rosa, DOSI Alessia, VINCI Maria Rosaria, CAMISA Vincenzo, SANTORO Annapaola, DALMASSO Guendalina, RAPONI Massimiliano, VACCA Maria Eugenia, MELCORE Giuseppe, ZAFFINA Salvatore

#### Background and objective

Nowadays the occupational physician (OP) is a global counsellor of the employer called upon workers' health.

#### Methods/intervention

Beyond the assessment of occupational risks, the OP has been enriched in recent decades with innovative skills and responsibilities, which span in the field of prevention and promotion of worker's wellbeing.

#### Results

The occupational health service is depicted as a tree named "POP tree" for its three main characteristics: Parametric, (h)Olistic, Profitable. The method is based on a parametric approach, through a regular monitoring of wellbeing indicators (e.g., absenteeism, limitations in the suitability) over time. It is addressed to physical and psychological health of the employees by the involvement in a wide range of activities (e.g., yoga classes, football teams, individual psychological support, food education). The method has been showed to be effective, also in terms of econometric profitability.

#### **Conclusions/lessons learned**

As mediator between the stakeholders (employer and workforce), the OP has become a true pillar of the corporate organizational structure, becoming the disability manager and the workplace health promotion (WHP) manager. Personalized prevention and WHP initiatives have a positive impact on workers' wellbeing and on the organizational climate and corporate wellbeing, helping to increase workers' loyalty to top management, with evident positive repercussions on productivity. The collaboration of the OP with important corporate professional figures (e.g., HR managers and psychologists) empowered the workforce health and the organization profit as well. The team led by the OP enhanced the real effectiveness of WHP programs as shown by econometric analyses. The Return on Investment (ROI) registered after one year established a profit ranged from double to 27-times. Strengthening the worker's all-round wellness rises positive engagement vibes, which leads to better organizational wellbeing and increasing productivity.

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A Preliminary Study of the Needs, Stresses and Health of Family Members of Psychiatric Nursing Home Residents

### CHIANG Wen-Jen, SHEN Shu-Hua

#### Background and objective

According to the statistics of the Statistics Department of the Ministry of Health and Welfare, the number of people with mental disabilities has increased by about 8.7% in the past 11 years. Chronic psychiatric cases are prone to detached thinking patterns due to long-term illness and detached thinking, resulting in cognitive and life dysfunction and deterioration, family burden, and social problems. The number of cases that need to be served far exceeds the number of available beds. Chronic mental illness often affects the quality of life and wellbeing due to illness, functional deterioration, and care problems, and family members are often deeply troubled by resident resettlement problems. To explore the needs, stresses, and health of residents of psychiatric care homes' family members, and to further reflect on the care of psychiatric care homes.

#### Methods/intervention

From Sept. 1, 112 to March 16, 113, a qualitative study method was adopted, and the family members of 12 newly admitted residents of psychiatric care homes were invited to collect research data through interviews and qualitative research.

#### Results

The main needs of family members are high-quality resettlement facilities, resident care, and financial costs. Stress mainly includes inner disorders caused by the burden of caregiving, deterioration, and disability of the patient's health, heavy burden of long-term economy, decline in family function, and great changes in the quality of life. All the families want the residents to be placed in institutions where they can be properly cared for. In addition, the institution provides professional care to fully meet the needs of residents' families.

#### **Conclusions/lessons learned**

Residents and their families can achieve health by providing highquality institutional care for mental illness cases, and highquality institutions can reduce the burden and pressure on family members. The care services and quality of care provided by the institutions meet the needs of the residents' family members.

#### Contact:

CHIANG Wen-Jen Hsin-Ann Medical Corporation Aggregate Jin-Ann Psychiatric Nursing Home, TAIWAN wenjen008@gmail.com To explore the value of forensic occupational therapy for mental health: a systematic review

# CHANG Chun-Hua, LIN Guei-Jing, WANG Yu-Yuan, HSU Wen-Tze

#### Background and objective

In recent years, major social incidents have raised public awareness about individuals with schizophrenia. However, studies have shown that the crime and recidivism rates among those receiving treatment for mental disorders decrease. Current evidence supporting the role of occupational therapy in forensic psychiatry is still limited. Therefore, this study aims to explore the services that occupational therapy can provide to individuals with mental disorders in a judicial treatment setting and the strategies for assisting their reintegration into the community through a systematic review and meta-analysis. This serves as a reference for enhancing the credibility and efficacy of occupational therapy in clinical forensic practice.

#### Methods/intervention

We conducted searches in international electronic databases such as PubMed, Medline, Cochrane Library, Airiti Library, and Scopus, using keywords like "Forensic mental health," "Occupational therapy," and "Schizophrenia" to find relevant journal articles, focusing primarily on literature from the past 20 years.

#### Results

The study identified 8 articles that met the criteria. Upon metaanalysis, it was found that both group and individual occupational therapy strategies benefit life skills, leisure interests, and self-worth. They can reduce the risk of reoffending and violence, and providing meaningful activity participation, social interaction, and a safe environment can enhance quality of life and satisfaction, reduce occupational deprivation, and maintain occupational justice.

#### **Conclusions/lessons learned**

This study illustrates the role and value of occupational therapy within forensic psychiatric teams. In forensic settings, occupational therapy helps individuals with mental disorders to choose and engage in meaningful activities, which indeed promotes health and well-being. It can also alleviate social isolation and antisocial behavior, enhancing self-identity and self-esteem. It is hoped that this research will serve as a reference for the consideration of diverse services in clinical occupational therapy in the future.

Contact: CHENG Chun-Hua Kaohsiung Municipal Kai-Syuan Psychiatric Hospital TAIWAN kiwin8070@gmail.com Social Functioning Experiences of Head and Neck Cancer Patients After Treatment

# LIN Hung-Ru, WANG Chen-Chi, TSAI Li-Yun

#### **Background and objective**

Social functioning of an individual is defined as the capacity of effectively engaging in social interactions, maintaining interpersonal relationships, independently performing work, and carrying out daily activities. Post-treatment functional impairments in HNC patients, could challenges related to eating, speaking, oral hygiene, intimate contact, and daily life, thus impairing their social functioning. The purpose of our study is to conduct qualitative research to understand experiences of HNC patients regarding their feelings and needs in social functioning.

#### Methods/intervention

A qualitative research method was used in this study. It involved in-depth interviews to collect data, through qualitative analysis of collected data, contents relevant to the concepts of interest were summarized and categorized, resulting in the identification of multiple themes. The study was approved by the Institutional Review Board (IRB) at a medical center in Central Taiwan. The eligible participants were those patients diagnosed with squamous cell carcinoma of the head and neck, and who had completed treatment for a minimum of 6 months and had no distant metastasis.

#### Results

Data saturation was achieved after interviewing a total of 20 head and neck cancer patients. The study revealed 5 main themes, as described below: interpersonal relationships and interaction, impact on the willingness to engage socially, contributing to society and to showcase life's value, adjusting and taking care of oneself, exercising workplace roles.

#### **Conclusions/lessons learned**

Our study served as a means to gain a deeper understanding of social functioning issues related to these patients, supporting how post-treatment patients can maintain their pre-existing social roles and social functioning.

#### Contact:

LAI YI-HUNG School of Nursing, National Taipei University of Nursing and Health Sciences; De TAIWAN

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# Exploring the Implementation Model of Spiritual Care through Purpose-Buillt Art in Hospital

### CHAN Chik Yi, LIN Keng Chen, YEH Yu Shih

#### **Background and objective**

Cancer patients have uncertainty about the disease progress and feel anxiety during chemotherapy and other cancer treatments. The purpose of this Implementation model is to enable patients to have spiritual care and better awareness of their spiritual needs. Through the exhibition of purpose-built art combined with prayer QR codes in hospital space and cancer wards, we provide a platform for patients to take care of spiritual needs by the guidance pf spiritual care counsellor and listen to the prayer in QR code printed on the artwork.

#### Methods/intervention

The Purpose-Built Art in hospital enhances cancer patients to take care of their spiritual need. Through exhibition of the artworks from the resilience activities organized by the Pastoral Care Department, eight hospital colleagues' artworks are chosen according to the four spiritual aspects (God, others, environment and self). Every artwork also provides a prayer QR code which is recorded by the Chaplain. Spiritual Care counsellor uses spiritualbased intervention and religious-based intervention.

#### Results

10 cancer patients investigated with mixed interventions (e.g. active listening, presence, and connectedness with the sacred, God, and art). We use the Patient's Spiritual Well-Being Assessment Scale (score range 15-60) designed by the MacKay Memorial Hospital to access the spiritual well-being of the 10 cancer patients. Score below 41 shows that patient needs spiritual intervention. The lowest score of the spiritual well-being of the patient before spiritual intervention is 37 which is lower than 41. The total mean score of the spiritual well-being of the 10 cancer patients after spiritual interventions was 49.5. It showed that spiritual interventions are associated with improved psychological and spiritual outcomes.

#### **Conclusions/lessons learned**

Different methodological approaches and the lack of detail made it challenging to compare, replicate, and validate the applicability and circumstances under which the interventions are effective. Further studies utilizing rigorous methods with operationalized definitions of spiritual care are recommended.

Contact: CHAN Chik Yi MacKay Memorial Hospital CHINA chikyichan2004@gmail.com

# Mini oral session 1.6: Improving care of people with multiple health problems and comorbidity

Exploring effect of acupressure at the Sanyinjiao point on primary dysmenorrhea

# **HSIEH Yi-Chen**

# **Background and objective**

Dysmenorrhea is currently the most common gynecological disease. In addition to uterine cramping pain,dysmenorrhea is often accompanied by cold limbs, fatigue, dizziness, nausea, vomiting, diarrhea, headache, etc. "Sanyinjiao" is located on the inside of the calf, 3 inches above the tip of the medial malleolus, and behind the medial edge of the tibia. It's an acupoint where the three meridians of spleen, liver and kidney intersect. Therefore, this study is to explore the effectiveness of pressing Sanyinjiao acupoints in relieving primary dysmenorrhea

# Methods/intervention

This study established keywords and were combined synonyms with PICO and Medical Subject Headings term, with Boolean logic principles to systematically search for the research evidence. We searched the Airiti Library (Chinese Electronic Periodical Service), PubMed, medline, and Cochrane Library for systematic review and meta-analysis investigating. Finally, there was 2 systematic review and meta-analysis article included in this study.

# Results

This is a systematic review of 2 articles. first article,570 subjects used compression once a day for 4-6 weeks, 2 days before menstruation, and even deep compression once a day for 3 months. Second systematic review included 397 subjects, they performed compression twice within 6 hours, once a day for 2 menstrual cycles, for 4-6 weeks or even the day before menstruation, and once every two days for 3 months. Statistics showed that all can relieve dysmenorrhea.

# **Conclusions/lessons learned**

Sanyinjiao acupoint massage can relieve dysmenorrhea, but it is limited to women aged 18 to 30 years old, with regular cycles, no gynecological diseases, non-secondary dysmenorrhea, and a history of moderate to severe pain.

Contact: CHIA WEN Lai Show Chwan Memorial Hospital chd7203270@hotmail.com Multiple teaching methods improve the effectiveness of selfmanagement of immune-related adverse events in cancer patients

# KU Hsin-Yi, LIANG Shu-Yuan

# **Background and objective**

When cancer immunotherapy triggers an excessive immune response, patients may encounter immune-related adverse effects. Managing these differs from conventional treatments, and severe cases can result in irreversible damage. Therefore, improving the self-management of cancer immunotherapy patients and enhancing their coping skills are crucial priorities.

## Methods/intervention

Combining evidence-based literature with multimedia theory, we've crafted a comprehensive care education package, an interactive tool for side effect assessment, and a mobile Line learning platform. Nurses adopt a personalized, one-on-one approach, customizing the educational method to each patient's preferences. Patients are encouraged to monitor their symptoms and respond to side effects accordingly. For inquiries, patients can access an expert consultation section to leave messages. The system will prompt patients to seek immediate medical attention if moderate or severe side effects occur, connecting them to our hospital's appointment system. During follow-up appointments, physicians will offer further explanations.

# Results

We enrolled 30 patients with an average age of 62.7 years, and observed an increase in patients' knowledge from 50.7% to 86.7%, self-assessment execution rates rose from 53.3% to 90%, and the ability to correctly manage side effects improved from 34.7% to 84.5%. Secondary analysis of the data showed the second-level severity rate dropped from 11.1% to 6%, and patient self-management satisfaction increased from 54.3% to 84.3%.

# **Conclusions/lessons learned**

Utilizing technology and designing diverse teaching strategies to enhance patient motivation, deepen memory retention, and sustain effective learning, thereby fostering increased awareness and observation of one's own bodily changes. This approach effectively enhances the ability for self-management.

# Contact:

KU Hsin-Yi National Taipei University of Nursing and Health Sciences TAIWAN <u>shinyi.6178@mmh.org.tw</u> Effects of warm water footbath on sleep quality, fatigue and heart rate variability in patients with heart failure: A randomized controlled trial

# HSU Suh-Meei, YANG Hsing-Yu, LIANG Shu-Yuan, LIU Chieh-Yu, HUNG Chung-Lieh, WANG Tsae-Jyy

# **Background and objective**

Poor sleep quality and fatigue have become one of the main problems for patients with heart failure(HF). Warm water footbath is a local heat therapy, which can induce comfort, relieve fatigue and improve insomnia through heat conduction. The purpose of this study is to explore the effect of warm water footbath on sleep quality, fatigue and heart rate variability in patients with HF.

## Methods/intervention

This study adopted an experimental research design and selected 76 patients aged 35 to 84 (59.8±11.4) from the outpatient of two medical centers in Taiwan. They were randomly assigned into the experimental (n=38) and control group (n=38).The experimental group wore an Actigraphy and soaked in hot water at 42°C for 20 minutes every night for four weeks; the control group wore an Actigraphy. The evaluation tools are the Pittsburgh Sleep Quality Index (PSQI) and the Piper Fatigue Scale. The data collection is before the intervention and four weeks. Physiological measurements: sleep quality(sleep time, sleep latency, sleep efficiency) and heart rate variability after four weeks. The research data was analyzed using the SPSS, including percentage, mean, standard deviation, chi-square test, independent sample t test.

#### Results

The results showed that the PSQI score in the experimental group was significantly improved in sleep quality compared to before the intervention, proving that the intervention has a significant effect on the sleep quality of HF patients. Some objective indicators of total sleep hours showed significant improvements, while sleep latency and sleep efficiency showed no significant differences. The fatigue level of the experimental group in the post-test was significant difference in the control group. In the heart rate variability, there was a significant difference within the group and showed a downward trend, showing that warm water footbath intervention can significantly reduce the ratio of sympathetic to parasympathetic nerves.

## **Conclusions/lessons learned**

The warm water footbath is a non-invasive, side-effect-free and simple method, this study found that warm water footbath will change the regulation of heart rate variability sympathetic and parasympathetic nerves, relieve fatigue, and improve sleep quality. The suggestions can be generalized in home or clinical care practice for HF patients. Contact: HSU Suh-Meei Mackay Memorial Hospital TAIWAN melissa@mmh.org.tw

# An Exploration of the Effectiveness of Aromatherapy in Terminal Cancer Patients

# CHIU Ching Wen, HU Chia Jung

# **Background and objective**

Pain and sleep disturbance are common symptoms and problems of terminal cancer patients. The efficacy of aromatherapy has been well documented over the years, with numerous studies confirming that massage can relieve stress, reduce pain, relax muscles, improve blood flow, and improve sleep quality. The purpose of this study was to investigate the effect of the aromatherapy on pain and sleep in patients on a hospice ward.

# Methods/intervention

The selection criteria of the subjects were cancer patients in the hospice ward, over 18 years old, and the pain index was 1. Score (inclusive) or above. The group is expected to receive 30 cases. This study adopts the one-group pretest-posttest design. The subjects received aromatherapy in the form of massage, and was evaluated by the nurse, and then the caregiver performed massage once for 5 consecutive days. The subjects filled out the basic personal information questionnaire, pain visual analog scale, and Richards-Campbell sleep scale at the beginning and end of the experiment. During the experimental intervention period, the pain visual analogy scales of the subjects were recorded on the first and third days.

#### Results

After receiving aromatherapy, the patient's pain score decreased from an average of 3.01 to 1.72. The RCSQ is a simple scale used to measure the quality of sleep in patients. The average score for sleep depth increased from 56.39 mm to 68.06 mm, sleep latency from 65.56 mm to 65.83 mm, frequency of awakenings from 55.28 mm to 59.72 mm, sleep efficiency from 55.28 mm to 67.50 mm, and overall sleep quality from 53.61 mm to 68.61 mm. The average total score across the five aspects of the RCSQ increased from 57.22 mm to 65.94 mm.

#### Conclusions/lessons learned

Applying aromatherapy in palliative care patients can effectively reduce pain and improve sleep conditions. Additionally, caregivers can enhance their emotional connection with patients by massaging them, thereby promoting physical, psychological, and spiritual health.

Contact: CHIU Ching Wen Taipei Medical University Hospital TAIWAN irenechiu0723@gmail.com The effect of aerobic exercise on physical outcomes among adults with multimorbidity: A systematic Review

# TSOU Yin-Yin, LOU Meei-Fang

# **Background and objective**

Background: Multimorbidity occurs in the majority of patients with long term conditions, and contributes substantially poor health-related quality of life. Aim: to examine exercise and designed to improve the physical activity of adults with multimorbidity.

# Methods/intervention

Methods: This study was a systematic review of randomized controlled trials. Randomized controlled trials involving exercise interventions among adults with multimorbidity were included. Interventions involving complex interventions with components in addition to other fields or interventions, participants diagnosed as psychiatric disease or cognitive disorders, pilot studies and not published in English were excluded. All available dates of publication from inception to May 2023 conducted in Cochrane Library, PubMed, CINAHL Embase and Web of Science were searched. Methodological quality was evaluated using Review Manager 5.4.1 'Risk of Bias' tool [computer version].

## Results

Results: Search identified 80 studies with 3 included in review (N=217). Exercise intervention in all studies was aerobic type. Participants' age was from 43 to 95 years and females were more than males. The most common pattern of multimorbidity covered metabolic disorder. Methodological quality was moderate.

## **Conclusions/lessons learned**

Current studies give insights into the effectiveness of aerobic exercise on physical outcomes among adults with multimorbidity. This includes physical activity, physical function, fatigue and frail.

Contact: TSOU YIN YIN Nursing school TAIWAN yytsou36@gmail.com

How to use cross-team care to solve the medical and health care problems of disadvantaged people: taking a regional hospital in Yunlin County as an example

# CHOU Chia Ni

# **Background and objective**

As the population ages, body functions deteriorate and chronic diseases increase, resulting in a continued increase in disability and dementia cases. As an institution that protects people's health, hospitals actively promote the concept of age-friendly and patient-safe development, provide relevant services to vulnerable people, and reduce restrictions on medical treatment. and injustice. The relationship between low income and poor health has been confirmed, and people's health status shows persistent gaps with the degree of regional deprivation (National Health Service of the Ministry of Health and Welfare-Taiwan Health Inequality Report, 2017) This study uses hospitals as a basis to analyze and explore how to solve the problem of unequal medical treatment for vulnerable people through cross-team services.

## Methods/intervention

This study adopts empirical research methods, through secondary data analysis, to analyze the cases of social work services used by our hospital in 111-112 years, and through cross-team feedback, to understand the needs and characteristics of people's medical treatment.

# Results

Statistics on the case service data of social workers in a regional hospital in Taiwan from 2021 to 2023 show that a total of 2,363 cases have been served in the past three years. Among them, hospitalization cases accounted for 49.76%, and the average age was 49 years old. The top three problems were care problems accounting for 39.86%, Economic problems accounted for 11.56%, and psychosocial problems accounted for 10.96%; the main source was referrals from nursing staff for 71.51%; referrals from doctors accounted for 15.05%, and self-help accounted for 8.33%. Outpatient cases account for 30%, with an average age of 53. The top three problems are welfare consultation problems accounting for 77.6%, economic problems accounting for 18.9%, and psychosocial problems accounting for 3.5%; the main source is self-help accounting for 85.5%; referrals from nursing staff Accounting for 10.53%; physician referral station 1.97%. Emergency cases accounted for 20.24%, with an average age of 47. The top three problems were protection cases 60.2%, psychosocial problems 26.38%, and care problems 6.51%; nursing staff referrals accounted for 74.68%; physician referrals accounted for 18.93%, and out-of-hospital referrals Media accounted for 3.19%. The difference lies in the different needs of each case. Hospitalization cases have more care problems caused by acute medical treatment. During the period, they need to be discussed with the medical team. The medical team needs to discover the problem in the early stage of hospitalization and report it to the relevant medical department immediately. If For care or financial and psychological problems, social workers need to provide services and make timely referrals to resources. If necessary, they will cooperate with discharge preparations to help patients return home smoothly.

#### Conclusions/lessons learned

In Taiwan, when vulnerable people have medical needs, they often need cross-team services to solve problems and obstacles to medical treatment. How to build continuity of services to reduce immediate medical consultations, team intervention, and

linking to relevant resources after discharge can keep vulnerable people healthy. The problem is improved.

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The Effectiveness and Satisfaction of Multidisciplinary Care among Outpatients with Pre-End Stage Renal Disease

# YU Chih-Yao, HSU Hsuan-Chu, CHEN Shu-Chan, YANG Yu-Ying, WU Ling-Yi, HSIEH Jyh-Tong, TAI Chi-I

# **Background and objective**

Due to the complexity of chronic kidney disease (CKD) management, a holistic, patient-centered, collaborative care provided by a multidisciplinary team is needed. This study aims to analyze the effectiveness and satisfaction among outpatients with pre-end stage renal disease (pre-ESRD) following multidisciplinary intervention.

# Methods/intervention

This is a single-center retrospective study, including pre-ESRD patients referred to the multidisciplinary team by nephrologists between December 2021 and December 2023, with at least two visits and CKD stages 3b, 4, or 5. In addition to physicians, the healthcare team comprised nurses, dieticians, and pharmacists, who offered personalized assessments and guidance on daily living, diet, and medication. Furthermore, an annual group education is conducted. We collected patients' CKD stages, urine protein-to-creatinine ratio (UPCR), cognitive assessments after healthcare counseling, and satisfaction scores related to group education.

## Results

A total of 57 patients were enrolled, with 33 males (57.9%) and 24 females (42.1%). The average age was 70.8±16.4 years, with 84.2% having  $\geq$ 2 comorbidities beyond CKD. CKD stages were distributed as follows: 47.3% at stage 3b, 40.4% at stage 4, and 12.3% at stage 5. Significant proteinuria (UPCR >500 mg/g) was observed in 52.6%. Eight patients (14%) demonstrated improvement in the CKD stage during the care period (p=0.03). Among 30 patients with UPCR >500 mg/g, the UPCR significantly decreased from 2477.4 to 2031.1 mg/g (p<0.01). After receiving healthcare counseling, 88.9% of patients showed favorable cognitive assessment. Satisfaction scores for group education content were 92±6 for suitability, 90±8 for practicality, and 94±6 for importance.

# **Conclusions/lessons learned**

Pre-ESRD patients presented notable clinical improvement with multidisciplinary care. The collaborative efforts of the healthcare

team, along with patients' comprehension gained from counseling sessions, led to positive outcomes. Besides, group education effectively incorporated essential knowledge on disease management and self-care. Overall, this multidisciplinary approach demonstrated significant impact and garnered high satisfaction.

# Contact: YU Charicy TAIWAN charicy.yu@gmail.com

# Mini oral session 1.7: Promoting health and well-being of the elderly

Effect of an Exercise Training Program on Sarcopenia in the Elderly in the Community

# LIN I-Ching, HSU Wei-Chien, LU Chi-Yao, YANG Pei-Yu, CHEN Chien-Chih

# Background and objective

Regular exercise can improve physiological functions and delay aging. The aim of this study is to investigate the effect of the intervention of Bone Strengthening program on sarcopenia in the elderly in the community.

# Methods/intervention

This a prospective interventional study. The interventional group introduced a fitness exercise "Bone Strengthening Gymnastics Program ". Firstly, there was an instructor leading and asking the elderly to follow the video demonstrating "Bone Strengthening Gymnastics". Then, the elderly in the community were demanded to do the bone strengthening gymnastics at least once a week. At the same time, taking photos is required to record as evidence. Whereas the control group did not participate in bone strengthening gymnastics. During the intervention period, a lecturer was invited to teach the knowledge about sarcopenia diet in interventional group and control group.

#### Results

A total of 55 elderly participated this study including 29 in interventional group (7/21 for male/female) and 26 in the control group (4/22 for male/female). There were no significant differences in age, sex, BMI, and the number of sarcopenia between the two groups. Before intervention, the distribution of sarcopenia in the interventional group was 1 participant with probable sarcopenia, 4 participants with sarcopenia, and 10 participants with severe sarcopenia. In the control group, 2 participants with probable sarcopenia, 4 participants with sarcopenia. After the intervention of healthy materials, the number of elderly with sarcopenia (including severe sarcopenia) in the interventional

group was reduced from 14 to 10, while the number of elderly with sarcopenia in the control group (including severe sarcopenia) remained unchanged at 7.

# **Conclusions/lessons learned**

According to the results of this study, the bone strengthening program has a positive impact on the sarcopenia of the elderly in the community. Therefore, it might be suggested and encouraged to perform the bone strengthening gymnastics in order to improve the prevalence of sarcopenia in the elderly in the community.

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# Concert and conversation for healthy ageing in Kawasaki, Japan

# IKEDA Shiori, AUNG Myo Nyein, SHIMANOUCHI Norio

# **Background and objective**

Health promotion in the community is important to be inclusive for the older people. We organized a Christmas concert in 2014 as part of our volunteer work with fellow musicians. The concert was enjoyed not only by the young and middle-aged who played music, but also by the older people who attended. We decided to make this a sustainable volunteer activity. We aimed to "provide a place where every generation can create fun and positivity in their daily lives" and consequently "create Ikigai (a purpose in life) for the older people so that they can live without nursing care.

## Methods/intervention

In 2015, Kawasaki, Kanagawa Prefecture, granted to organize a volunteer activity for older people for the group practices singing and playing musical instrument once a month and holds a Christmas concert at the end of the year. It is known as chorus and ensemble. The team consisted of a conductor, a pianist, violinist, ocarinist, and invited musicians. Participants use musical score for popular collective songs. Chorus and ensemble is held at community centers or studio, each session lasting for 2 hours.

## Results

Participants sing together with orchestral music in harmony. They could chat to each other during the breaks. At the beginning, only 10 older volunteered. The challenges to sustain the activities were to attract more participants and publicize the event. Monthly event and integrating with local events such as Matsuri summer festival attracted more people. Furthermore, to perform in Christmas concert and in the festivals, was set as the goal for participants. Regular participation enhanced their musicality, and hobby while social bonding is strengthened. As a result, the number of participating older people reached more than 35, the number of staff reached more than 10 every time. The 2023 Christmas concert event was aired in the Zoom internationally.

#### Conclusions/lessons learned

Participation in regular concerts created a sense of mutual purpose among participants and staff, and led to the creation of Ikigai in everyone's lives. Singing together as chorus and ensemble as health promoting activity strengthened social tie, happiness toward healthy ageing.

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# Professional dental care education improves dental problems in home care cases

# SIE Ting-Chun, HUNG Yi-Pin

# Background and objective

Taiwan has entered an "aging society" in 2018. The oral health of the elderly will be a major challenge, especially for disabled longterm care patients, whose poor chewing ability affects food nutrition intake. Poor oral hygiene will increase the risk of respiratory diseases. , digestive system diseases, and even the risk of diabetes and cardiovascular disease, use health education and technical guidance to increase the knowledge of dental care in home care cases.

## Methods/intervention

The Oral Health Assessment Tool (OHAT) is used to evaluate the oral status of home care cases in our hospital, and we provide (1) making picture cards for selecting commonly used dental cleaning tools (2) preparing dental cleaning kits (3) making foreign-language health education leaflets on dental care Zhang (4) filmed a dental cleaning demonstration video (5) revised the content of the home care manual on the steps of intraoral massage and tooth brushing. During the first visit, health education was given, and during the second visit teach Back.

## Results

The average score of the OHAT Scale was reduced from 5.68 (n=88) to 2.83 (n=77) after improvement. Among them, the scores for various items showing poor or pathological caries and broken teeth were reduced from 87.5% to 54.5%. Cleaning problems decreased from 80.7% to 36.4%, indicating a reduction in oral health problems in home care cases, and the pneumonia-related unplanned readmission rate decreased from 2.04% to 1.55%.

## **Conclusions/lessons learned**

Professional oral care education can improve the oral health problems of home care patients and reduce the rate of unplanned readmissions. Contact: SEI TING-CHUN Cathay General Hospital TAIWAN a04250516@gmail.com

Survival time disparities after palliative care use among lowincome patients on social welfare programs

# NISHIOKA Daisuke, KANZAKI Iku, KIHARA Ayumi

# **Background and objective**

Relieving the total pain of patients and supporting their wellbeing throughout their lives are important roles of health promotion hospitals. Poverty may inhibit patients from receiving dignified end-of-life care; however, using social welfare services may reduce its impact on patients' end-of-life. Nevertheless, no study has investigated which social welfare service could lead to favorable end-of-life experiences for patients living in poverty. This study aimed to describe the characteristics of users of palliative care among low-income patients and to examine the difference in survival time among cancer patients on social welfare services in a single center in Kyoto, Japan.

## Methods/intervention

We conducted a retrospective cohort study. We used 220 patients' data on Public Assistance (PA: aid minimum income and medical/long-term care), Free/Low-Cost Medical Care (FLCMC: aid only medical care), and non-welfare-users who newly received palliative care in 2021. We first calculated patients' survival time from the first use of palliative care to death. Second, we identified patients who experienced home death.

# Results

FLCMC beneficiaries had a lower survival rates (adjusted hazard ratio [aHR] 2.05, 95% confidence interval [CI] 0.80–5.22) than non-users. No difference was observed among PA beneficiaries (aHR 1.19, 95%CI 0.49–2.87) and non-users. No home death was observed among both welfare service recipients.

# **Conclusions/lessons learned**

Social welfare benefits only for medical expenses may not be sufficient to support end-of-life care among low-income patients. Further studies are required to examine the robustness of this study including broader bio-psycho-social factors which can bias the findings, to support low-income cancer patients on social welfare services.

# Contact:

NISHIOKA Daisuke Osaka Medical and Pharmaceutical University JAPAN daisuke.nishioka@ompu.ac.jp A preliminary study on the elderly taking care of the elderly, and social work early intervention assistance model: taking emergency medical treatment as an example

# CHOU Chia-Yi

# **Background and objective**

The emergence of "elderly caring for the elderly" in Taiwan's aging society has been overlooked within the emergency care system. To bridge the gap, starting from 2023, Mackay Memorial Hospital proactiveing provides early intervention to the target population by social workers to establish individualized goals and treatments. We aim to address challenges regarding the physical, psychological, and social dimensions of the target population and explore social work intervention plans.

# Methods/intervention

We analyzed the admission records in the emergency department from January 2023 to December 2023, totaling 10 cases. Upon intake, we use the Social Support Scale to assess their level of social support. This scale is administered both as a pre-test during the initial meeting and as a post-test assessment upon discharge, with higher scores indicating greater levels of support.

# Results

Utilizing the Social Support Scale allows social workers to efficiently identify cases requiring assistance, and understand case-specific needs. Research findings indicate a significant 21% increase in scores on the Social Support Scale following social worker intervention, as determined by statistical analysis of preand post-test scores. Statistical analysis indicates a significant increase in Social Support Scale scores following social worker intervention, emphasizing the effectiveness of early intervention.

# **Conclusions/lessons learned**

With early intervention from social workers, assessments of social support can be conducted. This not only streamlines the medical process for these cases but also enhances family functioning and aids in accessing community resources. Furthermore, it tackles the emotional challenges linked to seeking medical care. Preliminary research underscores the significance of early intervention by social workers in the population in the community.

Contact: CHOU CHIA YI MacKay Memorial Hospital TAIWAN yiyi123.b982@mmh.org.tw The Effectiveness of Promoting Care for the Frail Elderly in a Medical Ward of a Regional Hospital in Taiwan

# HUANG Hsiu-Yen, CHANG Ya-Chu, HSU Tzu-Chuan

#### **Background and objective**

Frailty is a common risk indicator in advanced age, increasing the risk of injury, loss of autonomy, and death. In August 2022, the prevalence rate of frailty among inpatients over 65 years old in our unit was 67.1%. The incidence rate of falls from June to August 2022 was 0.06%. The number was higher than the hospital's target value of 0.05%, of which 80% fell in the elderly.

# Methods/intervention

In the internal medicine ward of a regional teaching hospital in the north of Taiwan, from September to December 2022, the elderly care team promoted the establishment of a frailty prevention referral process using the Clinical Frailty Scale (CFS) as an assessment tool. The team also produced a multimedia health education APP and held relevant education training. The CFS was built in the 4Ms assessment information system and 4Ms care model is infused into the decision support system. Thus, when patients over 65 years old were admitted, they were evaluated with CFS AND 4Ms assessment. For high-risk patients, the team discussed with the patient and their companions upon admission and drew up a fall prevention care plan on a bedside whiteboard to remind the patient, their companions, and the medical team to implement it together. Based on the evaluation results, the team proposed an effective inter-professional 4Ms care model and tracked the implementation status monthly.

#### Results

The incidence of falls dropped from 0.06% to 0.02% (January to March 2023). Before the intervention, a total of 5 falls occurred, 4 of which caused injuries to the patient, and one was seriously injured, extending the hospitalization for five days. After the intervention, a total of 2 falls occurred, one of which was a minor injury. The patient only needed ice application, and the hospitalization time was not prolonged. The average implementation rate of frailty assessment for elderly patients is 97.8%, and the referral rate to the elderly care team that meets the requirements for referral is 100%.

# **Conclusions/lessons learned**

Interventional measures through inter-professional teamwork can indeed reduce the incidence of falls and reduce the risk of the elderly being injured or even becoming severely debilitated.

Contact: HUANG HSIU-YEN Taiwan Adventist Hospital TAIWAN dodo112408@hotmail.com Differences between hospital physicians' and nurse practitioners' perceptions of patient hospice assessment: a case study of a regional hospital in Taiwan.

# CHEN Mei-Ju, JENG Yu-Mei

# **Background and objective**

Since the establishment of the first hospice unit in Taiwan in 1990, the concept of hospice care has been promoted for nearly 25 years, during which time the concept of hospice has been updated and promoted with legal provisions and benefits, as well as the promotion of the Taipei City Declaration on Hospice Care.The consistency in the perceptions of physicians and caregivers on hospice assessment deserves further investigation.

# Methods/intervention

The study instrument used the Taiwan version of the Hospice Screening Tool (TAIWAN-PCST), on the day of admission to the hospital to assess the content of the screening contains four major items: the current hospitalization and hospice palliative primary related conditions, secondary co-morbidities, the current functional status and other status and general comments, the nurse practitioner assessed the score is greater than equal to four, then the system will send a short message to the attending physician. The collection period was from November 2019 to April 2021, and the total number of people who had a TAIWAN-PCST score greater than or equal to four was 1,538 people.

# Results

There was a significant difference between nurse practitioner and physician responses to summary opinion surprise questions: 54.6% of physicians and nurse practitioners answered no to the question of whether death within 6-12 months was surprising; 31.9% answered yes to the question of whether the patient was terminally ill; and 41.3% answered yes to the question of whether the patient was in need of hospice care, all of which met the criteria for the study. For the question of whether the patient needed hospice care, the agreement between physicians and nurse practitioners was yes (41.3%), all of which were statistically significant differences.

# **Conclusions/lessons learned**

Hospice care in non-cancer cases needs to be promoted more, physicians need further hospice continuing education, and physicians and caregivers need to agree on patient hospice evaluations, with interdisciplinary and inter-unit teamwork to provide the best quality of care for end-of-life patients.

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# Mini oral session 1.8: Community-based health promotion and equity interventions

8-week Community Health -Led Weight Management Intervention Program for Type 2 Diabetes

# OOI Yong Xuan, SANDAH Vanneycsa Dgee, LEW Ya Hui

# **Background and objective**

Obesity and diabetes are critical health issues in Malaysia. Weight loss is a key strategy for improving glycemic control in Type 2 Diabetes (T2D) patients. This study evaluates the efficacy of an 8-week structured intervention program on body weight and HbA1c reduction in T2D patients.

## Methods/intervention

Fourteen T2D patients (7 males, 7 females; mean age 49 ± 9.03 years) participated in an 8-week physical intervention program. Initial assessments included HbA1c, lipid profiles, weight, BMI, and blood pressure. Self-monitoring of blood glucose (SMBG) was mandatory. The program covered four educational topics, one support group session, and one group exercise session. A multidisciplinary team provided comprehensive support, including a lifestyle medicine doctor, dietitian, diabetes educator, physiotherapist, and pharmacist. WhatsApp messaging supported patient engagement throughout the program by the community health diabetes educator. Post-intervention assessments and blood test were conducted in week 8.

# Results

Significant reductions were observed in mean weight (from 71.8 kg to 66.6 kg, p<0.001) and HbA1c levels (from 7% to 6.71%, p=0.018). Diabetes knowledge scores improved by 16% (p<0.001), and LDL levels decreased from 2.96 mmol/L to 2.6 mmol/L. Strong correlations were found between pre-and post-intervention weight (r=0.998, p<0.01) and HbA1c levels (r=0.968, p<0.01).

# **Conclusions/lessons learned**

The 8-week intervention program significantly reduced body weight, HbA1c, and LDL levels, while enhancing diabetes knowledge, demonstrating its efficacy in improving glycemic control and overall health in T2D patients.

Contact: OOI Yong Xuan Penang Adventist Hospital MALAYSIA yongxuan0507@gmail.com Enhancing postoperative exercise adherence for Elderly Patients with peripheral arterial occlusion surgery in Rural Areas: An Evidence-Based Knowledge Translation Program

# TSAI Chuan-Hsiu, WU Fang-Ju

# **Background and objective**

Intermittent claudication, a common symptom of peripheral arterial disease (PAD), significantly impairs mobility and quality of life. Elderly patients in rural areas, especially those at our institution, often encounter challenges in receiving complete postoperative care and education. This study investigates the application of evidence-based knowledge translation to tailored postoperative education and its effects on exercise adherence and mobility.

# Methods/intervention

This study utilized a evidence-based knowledge translation steps to develop a structured Supervised Exercise Therapy (SET) program for postoperative patients with intermittent claudication at a regional teaching hospital in southern Taiwan. The program involved professionally supervised regular physical training aimed to improving physical function and alleviating symptoms of lower limb discomfort.

# Results

In 2023, 121 patients aged 55-85 years undergoing percutaneous transluminal angioplasty and 103 (85%) patients were aged 65 and older were included.48 patients were underwent regular renal dialysis, and about 90% had leg wounds. After implementation, walking capabilities were improved in distance (p<0.01) and overall functional status (P,0.05).

# **Conclusions/lessons learned**

Supervised exercise therapy is an effective method for improving walking and overall function in PAD patients. The results of this EBP implementation emphasize the importance of regular and structured exercise. Continued promotion of exercise therapy and strengthening of public education and healthcare system support are recommended.

# Contact:

FANG-JU WU Buddhist Tzu Chi Medical Foundation Dalin Tzu Chi Hospital TAIWAN lufong2002@gmail.com Sharing Jen-Ai Foundation's Experience - 35 Years of Community Health & Social Services in Taichung, Taiwan

# CHAN LIAO Ming-I, CHEN Sarah, CHIU Yi-Xuan, CHIU Sara, HSU Chi-Hsiang, CHEN Sirena

# **Background and objective**

Jen-Ai Foundation (JAF), a not-for-profit organization (NPO) was founded by Dr. Chuan-shen Liao in January 1988 to help the poor patients in Taichung. Over the past 35 years, JAF has expanded its services to provide financial assistance & various health promotion services to the elderly, children, physically / mentally challenged, low-income members of the community. This report will share the 35 years' experience of Jen-Ai Foundation in how they cared for these disadvantaged communities and how they were able to maintain its sustainable strategy.

## Methods/intervention

Working closely with Jen-Ai Hospital – Dali (the biggest hospital in the area) from the beginning, JAF helped the poor patients who couldn't pay for medical treatments at the hospital. However, over 35 years, the scope of its services has evolved to include providing financial assistance & other emergency services to those in need, the elderly, children, physically / mentally challenged, low-income members of the community. In recent years in focusing on niche projects, JAF has emphasized the importance of patient safety issues in Taiwan, as well.

## Results

With the founder's donation, JAF managed to help individual patients, but with hundreds of donors, JAF was able to implement 12 projects over the years, focused on the different disadvantaged groups of the community. Compared with other foundations in Taiwan, the annual budget of NT\$11.6 million (~US\$368,500) is considered quite small, but with a focus on various niche projects over the years, JAF was able to sustain itself for 35 years & even won a prestigious award in Taiwan called the "Symbol of National Quality" (SNQ), last year.

# **Conclusions/lessons learned**

Even with limited resources, JAF has proven that with a focus on niche health-promoting projects to meet the needs of the various disadvantaged groups of the community, NPO can still fulfill the founder, Dr. Chuan-shen Liao's dream of helping the poor patients in Taichung, after 35 years. JAF hopes that it will maintain its sustainable strategy in the future to continue his great legacy.

#### Contact:

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# Empowering Communities: Applying DPP Principles in Taiwan's Mountainous Regions

# TIEN Hui-Wen, CHANG Ching-Yu, SONG Wen-Fang

# Background and objective

Pre DM presents a global public health challenge. The U.S. Diabetes Prevention Program (DPP) has demonstrated that lifestyle interventions can reduce DM incidence by 58%. Conversely, Taiwan's healthcare system lacks support for Pre DM. This project aims to adapt the DPP model for implementation in Taiwan's mountainous regions, evaluating the effectiveness of lifestyle interventions for Pre DM and DM management to inform future healthcare reimbursement policies.

# Methods/intervention

We propose implementing the DPP Lifestyle Change Program: Hospital, school, and health center collaboration to create a certified diabetes care model and materials for Xhulin Township. Village-based intervention with a health coach and guardian angel partnering to set lifestyle goals and provide ongoing support. Conduct risk assessments, case management, and lifestyle training for village residents. Utilize integrated clinics and ICT tools for diabetes management.

# Results

We followed 196 cases: 104 with DM and 92 with Pre DM. Follow-ups occurred every 70-90 days after the January 2023 baseline, with two checks until July. Key findings: No significant weight/BMI changes at third follow-up, but 20.4% achieved 5% weight reduction, meeting DPP goals. Glucose AC significantly decreased at third follow-up compared to baseline (p<0.05). HbA1c significantly decreased at third follow-up (p<0.05), with Pre DM group outperforming DM group.

## Conclusions/lessons learned

The project, after six months, has shown that lifestyle interventions effectively improve fasting glucose and glycated hemoglobin levels in both DM and Pre DM groups. While there were no significant improvements in weight and BMI, a notable 20% of cases achieved a 5% weight reduction, aiding in disease prevention. Hence, the implementation model and outcomes serve as valuable references for healthcare reimbursement policies.

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# National crisis as a trigger for reducing inequity in healthcare

# LANCMAN Natalie, RAM Dina, KAMOSHVIZH Yelena, HARNOF Sagi

## **Background and objective**

Eilat is a small, isolated town on Israels southern border, about 240 km from nearest city. With a population of 60,000, most residents are of low socio-economic background. The availability of medical specialists is the lowest in Israel, for both community and hospital care. Compared to Israels central region, Eilat has about half the rate of ophthalmologists, dermatologists, and orthopedics per capita. On October 7th, 2023 Israel suffered the biggest terrorist attack in its history sparking the Iron Swords war. 127,000 citizens were forced out of their homes, 65,000 of them evacuated to Eilat, including vulnerable populations - elderly, children and victims of severe psychological trauma. Prior to the war, the area had a 4.5-fold difference in accessibility to medical care compared to core districts, worsening as the population doubled overnight.

# Methods/intervention

As part of its emergency response, Rabin Medical Center, located in central Israel, reached out to Eilat authorities and established two specialty clinics operated by senior nurses, administrators and specialists in orthopedics, women&obstetrics, cardiology, neurology, ENT, ophthalmology and more.

# Results

The following specialties in Eilat had the longest wait times prior to war: ENT (27 days), orthopedics (30), women&obstetrics (13), dermatology (39), ophthalmology (44). The typical wait time at Rabin clinics in Eilat was 2-4 days. A total of 2164 people were treated within 2.5 months.

# **Conclusions/lessons learned**

Shortage of medical and nursing staff, resulting in inequities in health care, was among long overdue issues in this periphery region. The crisis onset made the task more challenging, but it also served as a tipping point for corrective action. We are grateful for the opportunity to narrow the gap during this difficult period, also enhancing care for Eilats citizens. The infrastructure has been left in place and is still operational.

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# The Effect of Providing Medical Services in Outlying Area in Taiwan.

# WU Yin-Huan, LIN Chien-Huei, CHANG Shy-Shin

# Background and objective

The Shiding and the Pingxi District are two outlying areas in Taipei county, Taiwan; the aging population is 3,196 and aging rate are 25.5% and 31.7% in 2023. These areas are facing a seriously medical services shortage because there are only two local health centers and one clinic. When the residents need medical service, either go to the health centers or spend 2 hours traffic for the hospital. Taipei Medical University Hospital in order to achieve the health for ALL and equal the right of health offers the medical services in these outlying areas.

# Methods/intervention

TMUH offers the medical services at the 10 stations in the outlying areas. Those are provided by the owners for free, including the local temples, discard classrooms, activity centers, etc. TMUH invited 18 different specialist doctors to offer the services by turns and saved the residents' time to hospital for the forward medical therapy. By the emergency case, every stations has been set up the equipment of telemedicine, once the patient needs to the second opinion, the doctors are able to discuss on line and give the correct order immediately. Some patients are not good for walking outside, then the doctors will do the home medical care. The residents have lower health promotion education level, therefore the doctors go to kindergartens read the books with the kids and teach the correct health promotion.

# Results

The total patients who receive the medical services by TMUH are 6,270 visitors from 2017 to 2023, average is 11 visitors per clinic. There are 386 visitors who need the forward examination and refer to TMUH immediately, such as CT/MRI. During the period of the COVID-19, the doctors helped the residents testing, we found 8 people who were positive and refer to the local health center to follow up the quarantine policies.

## **Conclusions/lessons learned**

TMUH offer the most outlying areas for medical services in the north of Taiwan. Using the mobile medical services to save the patients time and provide the medical therapy in time. It saves the carbon emission 8,112 KG a year. TMUH work for the social responsibility and try to equal the right of health in every communities.

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# Mini oral session 2.1: WORKSHOP

The Big Picture: HPH standards as a compass to navigate complexity and reduce inequalities

# AGUZZOLI Cristina, CONTE Alessandro, COSOLA Alda, FORNERO Giulio, MELCORE Giuseppe, VIOLA Giuseppina

# **Background and objective**

Leaders in healthcare contexts are immersed in a high complexity that moves between various macro and micro dimensions, all connected to each other, but difficult to see. The tendency of organizations is to protect themselves and not change and so they suffer and insist on the processes in use, they further tighten them to control them and avoid errors, despite the increase in complexity. In this scenario, managers often see health promoters as further sources of stress if they do not provide immediate results, or relegate them to managing singleissue campaigns to combat something (anti-smoking or antiobesity, etc.) with specific results. Unfortunately, resources are not inexhaustible and the forcing of traditional paths that are no longer functional is wearing out and breaking agreements, first of all that between professionals and the profession (who escape from the systems) as well as between professionals and patients (disappointed or angry because the systems are no longer capable of meeting their needs). The key theme is first of all an epistemological challenge. How do you make visible the complexity of a healthcare system that is constantly changing, in search of new balances? How is the fairness of the allocation of transversal resources guaranteed when they are assigned vertically?The workshop will focus on the contribution of the substandards and related improvement plans produced within the system as a contribution to the strategic directions on the urgent issues of this era in which patients are increasing, healthcare workers are decreasing and technology, despite its evident usefulness, risks mechanizing and depersonalizing the care relationship. The goal is to have a global vision of the investment in the 5 HPH standards and at the same time the ability to zoom in on what is generated when they are met. A sort of rendering capable of giving greater control and facilitating communication. Key Message: strategic vision, indicators, self assessment, self regulation, communication

# Contact:

AGUZZOLI Cristina Azienda Regionale di Coordinamento per la Salute ARCS-Regional Company for Coor ITALY cristina.aguzzoli@arcs.sanita.fvg.it Standard 1: Platform for disseminating multimedia content aimed at improving the physical and mental health of workers, caregivers and patients

# **CONTE Alessandro, BRUNELLI Laura**

# **Background and objective**

The issue of workplace wellness, particularly in environments that are predominantly sedentary, presents a significant public health challenge.Communication tools are important for promoting healthy lifestyles and reducing the risks of long periods without activity.The "Missionesalute.it" project by HPH aims to address this issue through the development of a dedicated website that serves as a platform for disseminating multimedia content aimed at improving the psychophysical health of healthcare workers, caregivers and patients.

# Methods/intervention

The "Missionesalute.it" website features interactive sections that provide tips for balanced nutrition, specific exercises to improve posture and reduce risks associated with prolonged use of video display terminals, and other resources for a healthy lifestyle (non alcohol based cocktails and healthy apetizers). The effectiveness of the website was evaluated through a questionnaire distributed to users before and after the website's launch. The questionnaire included questions about the frequency of non-specific symptoms such as back pain, eye fatigue, and stress. This preliminary experience was conducted in collaboration with the company's occupational physician, who administered an evaluation questionnaire to patients with recurring musculoskeletal issues. The results showed a 18% reduction in symptoms related to the underlying issue and a 8% reduction in sickness absences.

# Results

Data analysis from the questionnaires revealed a significant decrease in non-specific symptoms among users after the introduction of the site. Additionally, user feedback indicated an increased awareness and adoption of healthy lifestyle practices, confirming the site's effectiveness as a health education tool.

# **Conclusions/lessons learned**

The "Missionesalute.it" project demonstrated how an integrated and multimedia approach to health communication can positively influence the health and well-being of sedentary workers. The experience of "Missionesalute.it" offers significant insights for future initiatives in the field of occupational health and prevention.

#### Contact:

AGUZZOLI Cristina Azienda Regionale di Coordinamento per la Salute ARCS-Regional Company for Coor ITALY cristina.aguzzoli@arcs.sanita.fvg.it Standard 3. Testing HPH 2020 Standards in Piedmont, Italy: Building a Community of Practice for Healthcare Excellence

# COSOLA Alda, COSTA Giuseppe, FORNERO Giulio, LEMMA Patrizia, SCAIOLI Giacomo, VIOLA Giuseppina

# **Background and objective**

This project aims to test the 2020 HPH Standards in Local Health Services of a region in the north of Italy to build a community of practice that shares benchmarks and good experiences, including the active engagement of the community, through an excellent accreditation process.

#### Methods/intervention

This project focused on the HPH 2020 Standard 3, whose items were partially reformulated to make them more relevant to the principles of the accreditation for excellence. A self-assessment checklist built by measurable elements was implemented and validated by the community of practice composed of seven hospitals in Piedmont, a region of the north of Italy.

# Results

The experiences of the participating hospitals were collected through shared electronic folds between March and May 2024. Subsequent in-depth interviews, systematized through a SWOT analysis, will be transcribed into conceptual maps, and presented to the community of practice during a training day to develop best practices for patient engagement. The checklists will also be validated by a citizens' jury in October 2024.

## **Conclusions/lessons learned**

The shared best practices are expected to become tools for actively promoting cooperation and communication between healthcare professionals, facilities, and services, fostering hospital-territory integration, and enhancing the coordination of healthcare needs and the quality of care.

## Contact:

AGUZZOLI Cristina Azienda Regionale di Coordinamento per la Salute ARCS-Regional Company for Coor ITALY cristina.aguzzoli@arcs.sanita.fvg.it Standard 4: How can the salutogenetic approach be utilized to enhance health awareness?

# AGUZZOLI Cristina, DEL GIUDICE Pietro, ANNUNZIATA Antonietta, LARDIERI Gerardina, PORTOLAN Patrizia, RONCHESE Federico, RUSSIAN Stefano, GERMANY FILIPPO Roberto,

## **Background and objective**

The HPH standards provides substandard 4.1.3 for developing and maintaining staff awareness of health issues. Our organization is working to provide an objective dimension to health awareness and to assign a role to the presence and absence of Medically Unexplained Symptoms (MUS) in the perception of stress by healthcare personnel. The HPH network has defined a program for the implementation of an objective health promotion service aimed at healthcare personnel alongside the health safety and surveillance system.

# Methods/intervention

To achieve this, we have formed multi-professional teams capable of interpreting the MUS and giving health promotion advice and activated a dedicated service. To measure the impact of the activation of the stress system and its influence on the prevalence of MUS, we used non-invasive diagnostic tools to perform analyzes on the functional parameters of the autonomic nervous system and body composition. The staff involved were also provided with a set of advice for psychophysical recovery and circadian rhythms to make them responsible for their lifestyles and self-efficacy in managing stress.

#### Results

During the pilot study 2021-2023, we observed a decreasing trend regarding the presence of MUS in the three-step program offered to our sample of voluntary employees. One of the main goals of this project was to demonstrate the impact of the stress system on the body's energy reserves in a non-invasive and rapid way, in order to motivate a change in lifestyle aimed at recovering psychophysical well-being.

# **Conclusions/lessons learned**

The project demonstrated a positive result in increasing conscious perception regarding self management of the stress system and recovery tools. This shift in the paradigm of self-care will serve as a means of transferring a salutogenic approach to patients as well. There is an enormous need for sizable studies with high-quality qualitative and quantitative designs in order to establish better evidence-based recommendations to enhance the awareness of the self-regulation capacity of human beings.

# Contact:

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# Mini oral session 2.2: ROUND TABLE

Strategies implemented in France to screen risky behaviors and support positive changes for physical and mental health

# HOCHET Marianne, MICHEL Philippe, FARES Asma, BONNET Nicolas

# **Background and objective**

This session main objective is to present two strategies to screen risky behaviors and to support positive changes for physical and mental health. The two strategies, supported and implemented in France, are Making Every Contact Count (MECC) and Screening Brief Intervention and Referral to Treatment (SBIRT). This session will enable to know more about both strategies but also to learn about their implementation, results and perspectives.

## Methods/intervention

Making Every Contact Count (MECC) is an approach to behaviour change that uses the millions of day-to-day interactions that organisations and people have to support them in making positive changes to their physical and mental health and wellbeing. French hospitals are strongly incitated by the government to implement a systematic approach to behavioral changes. An experience review of UK hospitals was performed, targeted on patients, to synthetize the lessons learnt and to describe how patients and professionals of the second largest hospital federation in France consider an acceptable and feasible way to adapt the approach. SBIRT is a less than 10 minutes intervention aiming at screening risky behaviors like tobacco use in order to engage people in changing their behaviors for more healthy one. In the context of Tobacco-free hospitals, SBIRT is supported as an important strategy to help people quitting. Thus, 13 training sessions have been set up between 2018 and 2022 in France, reaching 252 participants whom then became trainers themselves. Questionnaires were send to evaluate the training impact on nicotine substitute prescription, use of SBIRT and training sessions conducted by new trainers.

#### Results

Expected impact: This session aims at offering opportunity for other countries to develop similar strategies, having feedback on it. It also aims at allowing discussions on what is already done on this topic abroad. Results of both research will be presented.

Contact: HOCHET Marianne RESPADD FRANCE marianne.hochet@respadd.org Implementing a MECC strategy in a French Hospital: lessons learnt from the UK hospital initiatives

# JURUS Mathilde, FARES Asma, MICHEL Philippe

# **Background and objective**

Making Every Contact Count (MECC) is an approach to behaviour change that uses the millions of day-to-day interactions that organisations and people have with other people to support them in making positive changes to their physical and mental health and wellbeing. French hospitals are strongly incitated by the government to implement a systematic approach to behavioral changes in hospitals for their patients and professionals. As this approach is quite new in France, we performed an experience review of UK hospitals, targeted on patients. The aim of this presentation is to synthetize the lessons learnt from the UK experiences and to describe how patients and professionals of the second largest hospital federation in France consider an acceptable and feasible way to adapt the approach.

# Methods/intervention

A webography of the NHS hospital sites and non-systematic literature review followed by two consensus meetings.

# Results

Three evaluation reports, a document describing the experience of 15 hospitals in the UK, and six scientific articles were found to relevantly meet the abstract's goal. The main aims were to imbed health promotion into routine and to enable people to make healthy lifestyle changes through the provision of brief advice. The actions were mainly coordinators and MECC champions identification, MECC training delivery to staff, resources to convey MECC messages development and, clear referrals and signposting development. The main barriers were a culture focusing on treatment rather than prevention, the lack of time, lack of confidence, the perception of it being additional workload and the perception of it being someone else's responsibility. The main enablers were a favorable environment, relevant resources and signposting, and a good professional-patient relationship. Key learnings were most frequently essential corporate support, key leaders' engagement, flexible training, and simple referral pathways. The main outcomes were staff's well-being, staff's confidence to raising health issues increase, and referral increase.

# **Conclusions/lessons learned**

MECC implementation is a long process and is still ongoing in the UK. Nevertheless, we already started having some hindsight on the situation and have identified key steps for an implementation in a French hospital.

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# Mini oral session 2.3: Outcome Measurement and Health Equity

Symptoms of abnormal uterine bleeding after COVID-19 vaccination in South Korea: A survey

# KIM Jiye, KIM Hyekyeong, LEE Jiyoung

# Background and objective

According to the Korea Centers for Disease Control and Prevention, between 2021 and 2023, 6,314 cases of abnormal uterine bleeding (AUB) were recorded among 483,059 reported COVID-19 vaccination cases. Although global reports suggest a link between vaccination and AUB, causal evidence is lacking. This study aimed to identify the patterns of AUB after COVID-19 vaccination in South Korea and the health-related characteristics and recovery status associated with post-vaccination adverse events.

# Methods/intervention

An online survey targeted 853 individuals who experienced AUB after COVID-19 vaccination. Survey covered sociodemographic characteristics, experiences of AUB symptoms, COVID-19-related characteristics, and health-related characteristics such as underlying diseases, health status, lifestyle, and mental health. Logistic regression analyses assessed the recovery and symptom experience controlled by sociodemographic factors.

## Results

A higher likelihood of recovery from AUB symptoms post-COVID-19 vaccination was observed for menstrual period changes among those who maintained sufficient physical activity (OR=2.16, 95% CI: 1.09-4.28). Similarly, individuals who experienced a decrease in depression from high to lower levels had a higher likelihood of recovery from menstrual cycle changes (OR=12.32, 95% CI: 1.31-116.0). Recovery from menstrual bleeding changes was more likely among those with reduced depression levels, either from moderate to lower (OR=6.11, 95% CI: 1.22-30.57) or with low depression levels both pre- and postvaccination (OR=2.65, 95% CI: 1.20-5.88). Increased alcohol consumption was associated with a lower likelihood of recovery from other symptoms such as ovulation pain, inflammation, and endometriosis (OR=0.21, 95% CI: 0.05-0.87).

#### Conclusions/lessons learned

Healthy lifestyle and mental health management initiatives should be part of programs that assist recovery from the adverse effects of the COVID-19 vaccination. Priority should also be given to vulnerable populations, those with poorer lifestyles and mental health.

# Contact:

KIM JIYE Department of Health Convergence, Ewha Womans University REPUBLIC OF KOREA ydgkgk@naver.com A survey of knowledge and awareness towards sarcopenia among registered nurses

# LIN Yu-Ru, CHI Chia-Ming, CHENG I-Chen, CHUANG Shu-Ting, CHIEN Ju-Huei

# **Background and objective**

Sarcopenia is a type of geriatric condition with a high prevalence in nursing homes, healthcare professionals and nurses play a crucial role in identifying and evaluating patient health conditions. The objective of this survey is to evaluate the awareness and knowledge about sarcopenia of the medical care team, which might help promote the well-being of the elderly in nursing homes.

# Methods/intervention

Questionnaires were developed by the authors. Surveys about dietary intake, physical activity, and other aspects of sarcopenia are included. A total of 82 nurses participated in this survey. A training series of courses on how to take care and awareness of sarcopenia were provided for medical care professionals and nurses.

# Results

Only 63.3% of the respondents correctly answered the pre-test survey. Only 22% and 24.4% of participants correctly answered the questions, "Loss of muscle mass is a sign of sarcopenia," and "Nutritional assessment can be used to diagnose sarcopenia." On the other hand, 96.3% and 95.1% of respondents correctly answered the statements: "People with sarcopenia are more likely to fall," and "Exercise at least three times a week can improve sarcopenia." The accuracy rate of the sarcopenia proficiency exam increased to 94.8% after education courses that included a periodic sarcopenia course.

### **Conclusions/lessons learned**

The prevalence of sarcopenia was at a ranging from 6.7% to 10% in Taiwan. However, there are few studies indicating the knowledge and recognition level of healthcare professionals. In this study, we revealed that knowledge and management of sarcopenia patients among healthcare professionals was incomplete and limited. With the increasing prevalence of sarcopenia in the elderly, it is very important to provide training programs and education curricula to increase awareness and knowledge of sarcopenia and improve care skills for sarcopenia.

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Examining the benefits of solar energy and heat pump systems from an empirical point of view: A Case Study of a Hospital

# TIEN Chih-Jung, CHEN Ming-Jyh, HUANG Wen-Ming, LIU Yi-Chu, YANG Li-Hui

# **Background and objective**

Hospital buildings require considerable energy, including air conditioning, lighting, elevators, heating, and medical equipment. Energy consumption in hospitals is expected to increase significantly due to innovative equipment and continuous development plans. Consequently, the environment and climate will be adversely affected. Hospitals should therefore consider transforming from their traditional role of saving lives to being at the forefront of global efforts to reduce carbon dioxide emissions. As healthcare providers, it is our responsibility to provide a high-quality environment while using as little energy as possible.

# Methods/intervention

To comprehensively assess the potential benefits of utilizing solar energy for both photovoltaic (PV) and solar thermal applications in hospitals, a solar PV system was installed covering a total area of 28.95 square meters in 2021. Approval was obtained from the Taiwan Power Company to integrate the system into the hospital's electrical infrastructure for self-use. To measure the performance of the system, a dedicated meter was installed to track monthly power generation, which was then converted into area output using an electric energy conversion factor. This research aims to compare the energy efficiency of solar PV systems and solar thermal systems.

## Results

Using the conversion formula between electrical and thermal energy, we can compare the energy output of solar heating systems and solar photovoltaic systems. The comparative study draws upon data from February 2021 to February 2024, wherein the solar heating system generated an average of 2.54 kWh of energy per panel per day, while the solar photovoltaic system produced 1.17 kWh of energy per panel per day, resulting in a difference of approximately 2.17 times between the two systems.

# **Conclusions/lessons learned**

Through monitoring and empirical research in this study, it has been concluded that a heat pump-assisted solar thermal water system represents a relatively superior energy-saving and carbon-reducing solution for medical institutions. Not only can this system help reduce overall electricity consumption and the use of fossil fuels, but it can also provide more effective heating solutions.

Contact: CHEN Ming-Jyh TAIWAN sas32067@gmail.com Analysis of Factors Affecting Medical Resource Utilization and Expenditures of Cardiac Catheterization Intervention Therapy under Taiwan's National Health Insurance Diagnosis Related Groups (Tw-DRGs) System

# HUANG Su-Ling, LU Ye-Hsu, CHANG Pi-Yu

# Background and objective

To understand the overall trend of changes in the total medical costs of inpatients undergoing cardiac catheterization intervention surgery (DRG 125, circulatory diseases except acute MI, with cardiac catheterization without complex diagnoses) in Taiwan's National Health Insurance Diagnosis Related Groups (Tw-DRGs) system, and to explore the impact of detailed medical expenditures on the utilization of medical resources and the overall medical costs.

# Methods/intervention

In this cross-sectional study we retrospectively examined the distribution of medical expenditures of inpatient cases undergoing cardiac catheterization intervention surgery from 2019 to 2023. It conducted an analysis of characteristic variables and medical expenditures and used multiple linear regression analysis to clarify the impact of characteristic variables on the overall medical expenditures.

# Results

During the period from 2019 to 2023, there were 520 inpatients undergoing cardiac catheterization intervention surgery. Analysis of trends between years, the result showed that compared with other years, the average length of stay were significantly shortened in 2023, DRG-related weights were with annual decline, and the disparity and ratio of profit and loss exhibited a significant increase (all P<0.001). Regression analysis showed that the ward fees, examination fees, and special medical supply fees had the most significant impact on the overall medical expenditures (P<0.001).

## **Conclusions/lessons learned**

The study demonstrate the case hospital have achieved some effectiveness in controlling treatment process and length of stay for inpatient cases undergoing cardiac catheterization intervention surgery. The overall medical expenditures have decreased annually, indicating the effective integration of medical resource utilization. It is suggested that in the future, for inpatient cases under the Tw-DRGs system, continuous optimization of patient treatment and hospitalization processes, strengthening the completeness of medical records, proactive involvement of disease classification, will further enhance the reasonable reimbursement of NHI for inpatients undergoing cardiac catheterization intervention surgery.

HUANG Su-Ling Secretary General of Kaohsiung Medical University TAIWAN nancyhuang1013@gmail.com

# ASST Pavia workers' data analysis COVID-19 cases in 2020 and 2021

# SCARPINI Gian Carlo, COTTA RAMUSINO Enrico

# **Background and objective**

During SARS-CoV-2 pandemic period, ASST Pavia analyzed weekly data of new COVID-19 infections among workers.

#### Methods/intervention

On a weekly basis, incidence rates were calculated (workers positive every 1.000 workers) for all interest variables: sex, age, professional profile, ward, hospital and vaccination status (during 2021) in order to limit the spreading of the Virus and implement prevention and personal protection actions in the most critical areas. This methodology was applied until Omicron Variant's arrival (December 2021), when, higher number of cases and different contact tracing/monitoring methods (compared with the past) no longer allowed precise application of this methodology.

# Results

Analyzing the professional profiles of different workers, in 2020, there was a higher incidence of Nurses (165 of incidence) and Doctors (147), personnel more frequently in contact with patients; instead, evaluating different hospital units, higher values were registered for workers of E.R. (245) followed by Medicine and Surgery (227 for both wards). Analyzing differences in age data, the highest incidence was observed in the youngest age group (157 among 20-29 y.o.). In 2021 monitoring continued, revealing lower values compared to the previous year.

#### Conclusions/lessons learned

ASST Pavia took actions in the most critical wards with the following prevention and personal protection actions: 1) additional training courses on PPE's use; 2) specific studies regarding the contamination of air on different surfaces; 3) analyzing the correlation on cases registered among personnel and patients in the hospitals.

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# Mini oral session 2.4: Digitalization and new technology in health care and health promotion

Satisfaction Survey of a Chinese Medicine Electric Barcode Check System in a Hospital Setting: Improving Patient Care and Staff Wellbeing

# LEI Tsai-Hsuan

# **Background and objective**

The hospital pharmacy department has implemented an Electric Barcode Check System (EBCS), recognizing the importance of accurate and efficient dispensing of Chinese medicines. The study aims to assess the satisfaction and effectiveness of this system among pharmacy staff.

# Methods/intervention

A satisfaction survey was conducted among pharmacists six months after implementing the EBCS. The survey consisted of 16 Likert scale questions covering 7 dimensions: system usability, staff training, interface design, AI voice and light prompts, workflow efficiency, dispensing safety, and work pressure reduction. Responses were collected anonymously to gauge satisfaction and identify areas for improvement.

# Results

Out of 20 respondents, 60% were male with varying experience. Most gave positive feedback on usability, training, and safety. The system accelerated learning for new staff, aided independent dispensing, and improved medication storage identification (95% strongly agreed or agreed). Al voice prompts and light indications were highly praised. 90% of respondents believed that these features effectively alerted staff to critical tasks, and 100% agreed that they expedited medication retrieval. There was a 70% improvement in workflow speed and a perceived 90% reduction in dispensing errors, creating a safer and less stressful work environment.

# **Conclusions/lessons learned**

The Chinese Medicine EBCS has clear benefits in improving patient care and staff well-being by streamlining processes, enhancing medication safety, and reducing work pressure. However, continuous efforts to improve interface design and optimize system functionality are crucial to maximize user satisfaction and fully realize the system's potential.

Contact: LEI Tsai-Hsuan TAIWAN lei0204@gmail.com Using New Technology to Promote Community Health: A Case Study of PowerBI

# LU Chang Huan, HUANG Hsiao Ping

# **Background and objective**

Landseed International Hospital, with its mission centered around community healthcare, initiated a cohort study project in the hospital's nearby areas twenty years ago. This initiative has effectively tracked 6,370 individuals to date, providing a wealth of high-quality research material. In 2023, the hospital has integrated Power BI across departments, enabling various departments to visualize disease trends and the interaction between diseases and residential areas on maps. Additionally, lifestyle habits and other cohort data were incorporated to present a more comprehensive epidemiological map. This served as the basis for establishing primary and mid-stage prevention measures in public health to safeguard the residents.

# Methods/intervention

After a series of Power BI workshops, we mapped out 46 neighborhoods around the hospital, and integrated the primary diagnosis ICD codes from emergency and outpatient visits of project participants over the past 20 years. By connecting them with questionnaire data collected from community screenings, we developed a Disease Map to serves medical staff, residents, researchers, and policymakers.

# Results

Our hospital holds nearly 40 community screenings annually, a vital aspect of promoting community health. Prior to these screenings, medical staffs can utilize the Disease Map to grasp the epidemiological landscape of the community. Residents can know the disease risks of their own community. Researchers can intuitively compare data from various communities and offer health policy recommendations.

# **Conclusions/lessons learned**

Integrating new technologies is crucial for healthcare improvement. Beyond hospital equipment innovation, communities outside hospitals can also benefit. With the aid of maps, we can analyze community disease risks more accurately, thus effectively promoting community health.

Contact: LU Chang Huan Landseed International Hospital TAIWAN s804211@gmail.com Implementing diverse medical systems for fair medication access and reduced drug risk in G6PDdeficient patients.

# YANG Kai-Hsiang, CHEN Pei-Chun

# **Background and objective**

Glucose-6-phosphate dehydrogenase (G6PD) deficiency affects around 400 million globally, leading to at least 13,000 annual deaths. While G6PD trait individuals are typically asymptomatic, deficiency can cause severe hemolytic reactions, especially with oxidative drugs. Preventive measures are vital.

## Methods/intervention

Implementing a hospital-based medical alert system aimed at preventing G6PD-deficient individuals from encountering inappropriate drugs. This involves two main strategies: annotating patient records to identify G6PD deficiency and establishing a medication alert system for high-risk drugs.

# Results

1. Establishment of Comprehensive Medication Database: Data on 142 substances were compiled from international sources, with 105 common medications flagged for potential risks associated with G6PD deficiency, categorizing them into prohibited or cautiously used based on risk levels. The sources include UPTODATE and the International G6PD Deficiency Association. 2.Identification of Contraindicated Chinese Medicine - Huanglian: Huanglian was singled out as contraindicated for individuals with G6PD deficiency, among other Chinese medicines. 3.Integration of Pharmacy Alert System: The pharmacy alert system was seamlessly integrated into the dispensing process, prompting pharmacist-physician consultations whenever potentially harmful medications were prescribed. 4.Patient Identification and List Creation: Utilizing the ICD-10-CM Diagnosis Code D55.0, patients with G6PD deficiency were accurately identified and included in a specialized hospital list, streamlining their care. 5. Effectiveness of Implementation: Monthly, physicians intercepted five inappropriate prescriptions; pharmacists received one alert, indicating the system's efficacy.

## **Conclusions/lessons learned**

G6PD deficiency varies in severity, requiring a systematic approach for prevention. Pharmacists, actively engaged with information systems, ensure patient safety. Improving systems and preventive medicine are vital for enhancing medication safety and healthcare quality.

Contact: YANG KAI HSIANG Taipei City Hospital TAIWAN A2432@tpech.gov.tw Building a data visualization management model for big health data at community health service stations by POWER BI

# LEE Mei-Yu, DU Yi-Jing, CHAN Hsin-Lung, HUNG Ta-Chuan, TIEN Jung-Jen, LAI Wan-Zhen

# **Background and objective**

To analyze large volumes of people's health measurements data by POWER BI, we can develop representative indicators and daily management indicators, and provide medical professional resources that meet the needs of improving health.

## Methods/intervention

Follow the steps below to develop community health promotion indicators: 1. To visualize the results of service volume, gender, age, BMI, waistline and blood pressure by Power BI. 2. Develop daily management indicators: Count the service volumes in community. 3. Establish health promotion indicators for community residents: a. Outcome indicators: The average improvement rates of people's BMI, blood pressure, and waistline increased by 30%, 30%, and 40%. b. Indicators for peer comparison: I. The proportion of people over 65 years old with a BMI  $\geq$  27 is less than or equal to 24.9%. II. The proportion of people over 65 years old with a BMI < 18.5 is less than or equal to 2.7%.

# Results

Additional activities such as lectures of Good Health and Nutrition, nursing counselling and health check, and physical fitness courses were provided from 2022 to 2023. The improvement is as below:

- a. Outcome indicators: We compare the BMI, blood pressure, and waistline with the same period of the previous year, the improvement rates are 60.3%, 36.2%, and 45.1% in 2022, and 50.1%, 55.1%, and 45.7% in 2023.
- b. Peer comparison indicators: I. The proportion of people over 65 years old with BMI ≥ 27, 24.25% in 2021, 22.92% in 2022, 21.32% in 2023. II. The proportion of people over 65 years old with a BMI < 18.5, 2.19% in 2021, 3.15% in 2022, and 3.14% in 2023.</li>

# **Conclusions/lessons learned**

Daily management indicators are used as a reference of service volume for nursing staff to plan; health promotion effectiveness indicators are used as team service outcomes.

# Contact:

LU Ying Wen MacKay Memorial Hospital Tamsui Branch TAIWAN cindylu69010@gmail.com The benefits of data visualization on operational decision-making-Using ophthalmology as an example.

# CHANG Chiao-Wen, HUANG Chien-Min

# **Background and objective**

Data visualization allows for insights into the correlations between more data points and assists in making valuable datadriven decisions. Although data visualization has become a widespread technique in recent years, there is limited literature providing evidence of the actual benefits of data visualization. This study aims to provide physicians with comparisons among peers of their medical decision. We primarily focus on the Taiwan Diagnosis Related Groups (DRGs) cases in the ophthalmology department.

# Methods/intervention

Since April 2023, we have created an "Ophthalmology DRGs dashboard" to enhance clinical physicians' responsibilities for improving medical costs. We initiated monthly meeting rounds to sharing each physician's resource utilization for every case. We explored the reasons for high-cost cases within the same DRGs and identified the medical resources. There were 14 itemized fees. A paired t-test was used to analyzed the medical fee records into two parts based on the month of dashboard creation (before and after data visualization implementation).

# Results

A total of 271 patients were included. The majority of cases underwent Unilateral cataract surgery (94.8%). A statistically significant difference was observed in the disparity between medical expenses and reimbursements (p < 0.01). Furthermore, fees of the examination, treatment, and medication also showed statistically significant differences before and after the implementation of data visualization.

# **Conclusions/lessons learned**

The professionalism of physicians and medical practices is difficult to objectively assess. However, research has shown that through DRGs for peer comparison of medical expenses, it can effectively influence physicians' medical practices. Yet, through data visualization, the differences in specific medical expenses can be more intuitively observed, thereby effectively achieving the goal of controlling medical costs.

Contact: CHANG Chiaowen Kaohsiung Medical University Hospital 1030754@kmuh.org.tw Social Media Impact: Analyzing Pharmacy Community Participation in Taiwan

# CHEN Pei-Chun, SHU Su-Han, YANG Kai-Hsiang

# **Background and objective**

Our pharmacy department has maintained a Facebook community for four years, emphasizing effective communication and engagement within pharmacy communities. This study seeks to analyze the impact and participation levels of the community.

# Methods/intervention

From August 2019 to December 2023, Facebook posts were categorized into award announcements, academic discussions, and leisure activities. Average engagement was measured. In academic posts, a binary choice format was used to encourage audience participation.

# Results

354 posts were posted, including 21 award announcements, 266 academic discussions, and 67 leisure-related posts. Award announcement posts received an average of 76 views and 11 likes, academic discussion posts averaged 84 views and 16 likes, and leisure-related posts averaged 94 views and 20 likes. Moreover, academic discussions in person averaged 15 participants per session.

# **Conclusions/lessons learned**

In the last four years, our Facebook pharmacy community effectively shared diverse and valuable content. High post views, exceeding actual participation numbers, highlight the unique benefits of social media communities. Our community promotes health, collaboration, and knowledge sharing, expanding its influence on social media platforms and emphasizing the importance of pharmacy.

## Contact:

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# Mini oral session 2.5: Enhancing access to services, information and communication

Activity to promote health literacy in our hospital

TANAKA Ryosuke, MINAMOTO Isamu, UTSUGI Masaki, SATO Tomomi, SAGAWA Ryo, MAETANI Kensuke, KAWASAKI Takayuki, YAMADA Chieko, MORISHITA Hisaaki, HASHIMOTO Taishi, KUBOTA Yohei, KUSUNOKI Masami, YOSHIKUNI Susumu, TAKAYA Sunao, NISHIHARA Kazuki, MURATA Hirohiko

# **Background and objective**

Hiroshima Kyoritsu Hospital, which caters to a community of more than 250,000 people by providing services ranging from acute care to rehabilitation programs, have been actively collaborating with the local public administration to support health literacy.

# Methods/intervention

In this presentation, we aim to give an update on the progress of our health education network. We also review public feedback towards the activities carried out through this network using questionnaire surveys.

#### Results

From December 2018 to December 2023, we conducted a total of 30 seminars for a total of 739 participants. Education programs included current health issues such as cardiovascular disease prevention, diabetes, tobacco & health, dementia, and advance care planning. The seminars were conducted by healthcare professionals with active Q&A sessions. Partnerships were established with different institutions to maintain our education network. From questionnaires collected, feedback has been overall positive with most attendees reporting satisfaction with the programs provided.

# **Conclusions/lessons learned**

Health literacy plays an important role in maintaining a healthy community. Health promoting hospitals need to actively improve the health literacy of the communities they serve. The education network we established received positive feedback from the public and contributes to nurturing a healthy community.

Contact: TANAKA Ryosuke JAPAN ryo0920suke@gmail.com Review of the effectiveness of "On hand project" provided to vulnerable groups in Seoul.

# SONG Kyoung Jun, LEE Jaekyung, SEO Ran, AHN Sol

# **Background and objective**

The existence of vulnerable populations within a city is always a threat to the city's operations. Seoul is a megacity with over 10 million residents, and the city's average income is \$53,788, but the health issues of the city's medically vulnerable population are always a concern. As a public hospital affiliated to national university hospital, SMG-SNU Boramae Medical Center plans and operates numerous activities about medical equitity.

## Methods/intervention

To care for the most vulnerable groups, nine municipal Hospitals in Seoul started "On hand project" in 2009. The subtheme has been variable up to the urgency of the year. As covid crisis subsided, especially 2023 was analyzed and compared. This program performed by collaborating medical staff for first aid.

## Results

This program was carried out from feb,2023 to nov and was performed for a total of 25 sessions. Homeless care center, doss house help center, urban poor support NGO has cooperated with this program and the total number of patients served was 4,330. 163 patients were referred for secondary medical care, which was 233% higher than the expected target referred.

# **Conclusions/lessons learned**

The importance of health equity was acknowledged, and the need for chronic disease-related health promotion management was confirmed. Screening test including chest Xrays and blood result has implemented to the program. On-site X-rays and blood tests using a mobile clinic has led to the effective identification of patient groups, enabling them to be transported and provided with medical care benefits.

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Effectiveness of the Family Pediatrician Project in Enhancing Children's Health via Home Visits and Telemedicine: A Pilot Health Promotion Program for Young Children in Taiwan

# DU Jung-Chieh, CHIU Ting-Fang, FANG Li-Jung, YANG Winnie

# **Background and objective**

Amidst rising concerns over child health and safety due to a low birth rate in Taiwan, the Family Pediatrician Project was launched to evaluate its effectiveness in elevating detection rate of developmental delays, ensuring home safety, and improving parent-child interactions. This project aims to assist parents of young children aged 0 to 3 years in enhancing their parenting care skills.

# Methods/intervention

This Family Pediatrician Project conducted by Pediatric Department of Taipei City Hospital involved comprehensive health checks and parent-child interaction evaluations via regular home visits and/or telemedicine. We utilized a structured home visiting questionnaires to collect data on children's health status, development milestones, and parent-child interactions.

# Results

During 2020~2023, our initial visits covered 803 participants, with follow-up visits for 264. Significant findings included a rise of detection rate in developmental delay and an improvement in home safety measures post-intervention. However, a notable percentage of families showed a decrease in parent-child interaction scores on subsequent visits, with home organization and adequate stimulation being the most affected areas. We also found that those families with regular parent-child reading habits often obtained higher scores in evaluation of parent-child interactions.

## **Conclusions/lessons learned**

The Family Pediatrician Project has demonstrated potential in identifying children with developmental delays and in enhancing home safety. Nevertheless, the reduction in parent-child interaction scores underscores a need for more targeted interventions to improve parenting skills.

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Free/Low-Cost Medical Care program and patient refrain from medical visit because of financial difficulties in Japan: a cross-sectional study

# NISHIZAWA Hiroki, NISHIOKA Daisuke

# **Background and objective**

Health promotion aims to achieve equity health outcomes of patients. Financial difficulties can inhibit patients from

healthcare access. In Japan, Free/Low-Cost Medical Care (FLCMC) is applied to individuals who have difficulty in paying out-of-pocket healthcare costs. This study aimed to examine whether FLCMC can reduce the risk of refraining from medical visits.

# Methods/intervention

This cross-sectional study used the data of 293 patients who applied for FLCMC in 25 medical institutes since April 2022 to March 2023. The outcome variable was the patients' experience of refraining from medical visits in the past year. The explanatory variables were patients' knowledge of FLCMC and their experience of using FLCMC. We performed multiple logistic regression analysis to identify the association between the variables. This study was approved by the Ethics Committee of Osaka Medical and Pharmaceutical University (2021-188).

## Results

Of the 293 individuals, 115 (39.2%) experienced refraining from medical visits, 118 (40.2%) knew FLCMC, and 76 (25.9%) have used FLCMC. Previous FLCMC use was slightly associated with lower patients' experience of refraining from medical visits (adjusted odds ratio [aOR]; 0.56, 95% confidence interval [95%CI]; 0.31–1.01). However, only knowledge of FLCMC did not prevent them in refraining from medical visits (aOR; 1.03, 95%CI; 0.61–1.73).

## **Conclusions/lessons learned**

Influencing individuals' knowledge of FLCMC only may be ineffective to reduce the risk of refraining from medical visits among individuals with financial difficulties. Lowering the barrier to use FLCMC and dissemination of individuals' experience to use FLCMC is necessary.

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# Mini oral session 2.6: Promoting healthy behavior and selfmanagement in diverse patient populations

Health Literacy and Therapy Adherence in Kidney Transplant Recipients

# WU Ya-Hui, TSAI Chuan-Jhen, CHEN Yen-Cheng, CHANG Mei-Chuan

# Background and objective

While therapy adherence is crucial for kidney transplant recipients to prevent organ rejection, most research focuses primarily on medication adherence. This study examines the

correlation between health literacy and overall therapy adherence, encompassing both medication and lifestyle modifications in kidney transplant recipients.

# Methods/intervention

Conducted from June 2022 to June 2023 at a Taiwan medical center's organ transplant outpatient clinic, this cross-sectional study enrolled recipients who had been followed for over a year. Health literacy was assessed using the Mandarin Multidimensional Health Literacy Questionnaire (MMHLQ). Therapy adherence was evaluated through the Immunosuppressant Therapy Adherence Scale (ITAS), immunosuppressant coefficient of variation (CV), and a custom Lifestyle Adherence Scale addressing self-monitoring, diet, exercise, hygiene, and prevention practices.

# Results

Of the 113 participants (average age 52.6, 55% male, 67.3% with deceased donor transplants), 42.5% exhibited limited health literacy. Adherence scores were higher for immunosuppressive medication (94.9/100) compared to lifestyle adherence (74.4/100). Higher "communication and interaction" abilities, a subscale of MMHLQ, significantly predicted better lifestyle adherence ( $\beta$  = .28, p = .003) in multivariate analysis, while overall health literacy showed no significant correlation with medication adherence.

# **Conclusions/lessons learned**

Effective therapy adherence in kidney transplant recipients extends beyond medication to encompass lifestyle modifications. This study underscores the necessity of enhancing communication and interaction skills to improve adherence, especially for those with limited health literacy. Interventions should focus on simplifying information, fostering patient engagement, and ensuring effective health communication.

# Contact:

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# The Benefit of Diabetic Patients Participate in Mindfulness-Based Diabetic Education Groups

# LO Hsin-Yi, LUO Jia-Ling

# Background and objective

In traditional diabetes teaching education, the goal is to train patients to control their diet and establish good living habits, while ignoring the psychological factors and influences of patients. Patients tend to feel conflicts between controlling blood sugar and enjoying eating, or they may establish habits through involuntary exercise and lack of acceptance. Over time, it becomes difficult to maintain a good lifestyle to control blood sugar. This study intends to use mindfulness as the basis of health education to help patients aware of their behavior and change habits to build a good life and to explores the efficacy. This study designed and implemented a 10-week mindfulnessbased education group for diabetes patients. It adopted a mixed qualitative and quantitative research design. Six research cases are recruited and individual interviews are conducted. The fivefactor mindfulness scale is used to observe the mindfulness learning situation and collect glycated hemoglobin values to explore the impact of this course on patients.

# Results

1. This course is easy to learn and the concept of mindfulness is simple. 2. Participants feel that the emotion course is the most important. Mindful breathing can be beneficial and easy to operate in a short period of time.2. Mindful eating can change eating habits, feel fuller easily, and open up multi-layered feelings about food. Mindful exercise can enhance body awareness, break through inertia, and adjust life patterns. Emotional mindfulness can regulate attention, increase emotional awareness and reduce judgment, and improve sleep quality.3. Act aware, non- judge, observation and Glycated hemoglobin after participation achieve statistical benefits.

# **Conclusions/lessons learned**

Mindfulness-based diabetes group courses can improve patients' self-management about eating and emotions, improve cognition and diabetes control, and are worthy of application.

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Explore the effect of introducing health promotion services with oral exercises among the elderly with dementia in the community of Taiwan.

# LEE Shu-Chen, HUANG Wei-Hsin, LIANG Li-Jen, HU Nai-Fang, CHEN Yu-Hua, CHEN Chiu-Chen, CHANG Chia-Mei, SUNG Pei-Wei

# **Background and objective**

Taiwanese society has entered a super-aging society requiring health promotion measures with early interventions to support healthy aging. Studies indicate malnutrition increases the risks of frailty, diseases, and even mortality thereby declining in quality of life (QOL) among the elderly with dementia. To promote health and QOL in community elderly with dementia, a program encompassing 12 weeks with 0.75-hr session per week was delivered by the community health stations of MacKay Memorial Hospital (MMH). This study aims to explore the effect of the program incorporated with oral exercise videos on improving health in community elderly with dementia.

# Methods/intervention

This study employed one-group pretest-posttest design with purposive sampling and with subjects of elderly people with dementia from four community health service stations. A teaching video of oral exercise, which contains facial and cheek exercises, tongue movements, pronunciation practice, salivary gland massage and swallowing practices, was introduced to the health promotion activities. Study outcomes including demographics, physical status, frailty, mastication and swallowing function were collected using a structured questionnaire.

# Results

A total of 58 septuagenarians or older (mean 80.02±6.95 yrs) completed the study. The measured wrist, weight and BMI in physical status increased non-significantly in the posttest. The frailty measured by the study of osteoporotic fractures (SOF) index, the masticatory ability reported by a self-assessed screening test and the swallowing function reported by the eating assessment tool (EAT-10) were all improved in the posttest; however, only the SOF index reached the significant level (p<0.05).

# **Conclusions/lessons learned**

Promoting oral exercises is important to community elderly with dementia for maintaining healthy nutritional intakes. The services delivered by MMH community health stations were effective to promote health including oral health. The lesson learnt by this study should provide valuable information to academia and health organizations in health promotion.

# Contact:

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Using Self-Determination Theory to Explore the Motivation for Self-Management in Individuals with

**Atrial Fibrillation** 

# LU I-Ying, LOU Meei-Fang

# Background and objective

Atrial fibrillation (AF) is the most common type of arrhythmia. Individuals with AF are 5 to 7 times more likely to experience ischemic stroke compared with the general population. Risk factors for AF include age, hypertension, diabetes, obesity, and smoking. Given that the global population is aging, AF is projected to affect 6 to 12 million individuals in the United States by 2050 and 17.9 million individuals in Europe by 2060. According to the European Society of Cardiology, individuals with AF usually do not engage in relevant health-related self-management behaviors, and this is set to become a significant global public health issue.

# Methods/intervention

The present study used self-determination theory, based on autonomy, competence, and relatedness, to explore why individuals with atrial fibrillation often lack the motivation to complete self-management tasks.

# Results

Improving self-management effectiveness requires attention in 3 key areas: increasing knowledge of the disease and treatment procedures, enhancing individuals ' participation and support systems, and recognizing the importance of healthcare professionals. These aspects align with the core principles of selfdetermination theory. Individual participation represents autonomy; knowledge of the disease and treatment procedures and the ability to use technology reflect competence; and support systems that involve family members, primary caregivers, and healthcare professionals represent relatedness.

## **Conclusions/lessons learned**

Self-management emphasizes a patient-centered approach, and self-determination theory focuses on the individual; the concepts thus favorably align. In summary, if the self-determination theory is satisfied, individuals with AF are motivated to engage in self-management tasks.

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Increasing smoking cessation education rates among individuals undergoing early lung cancer screening.

# TSAI Yen-Ping, HU Li-Chan

# **Background and objective**

Cancer is the second leading cause of death globally (WHO, 2024). In Taiwan, heavy smokers with a smoking history of 30 pack-years or more are at high risk of lung cancer. Besides increasing lung cancer survival rates through early detection and treatment using low-dose computed tomography (LDCT), quitting smoking early is crucial. Implementing a referral process for smoking cessation among individuals undergoing early lung cancer screening to enhance smoking cessation education rates.

# Methods/intervention

Collaborate with cancer screening centers to develop a referral process. When the screening center encounters heavy smokers with a smoking history of 30 pack-years or more, they can refer them through the referral counter for smoking cessation. This process involves scheduling a fast-track appointment at the chest clinic and simultaneously connecting with a smoking cessation counselor to provide face-to-face smoking cessation education services. For individuals with high levels of addiction, smoking

cessation medications can also be prescribed to increase the success rate of quitting smoking.

#### Results

In the period from January to April 2023, before the implementation of the referral process, only 46.88% of smokers received smoking cessation education. After implementing the referral process from May to December, 100% of smokers received smoking cessation education. Among the 52 smokers who received smoking cessation education, 44 (84.62%) were prescribed smoking cessation medications, while 8 quit smoking relying solely on willpower. The follow-up smoking cessation success rate at 3 months was 38.46%, and at 6 months, it was 45.45%.

# **Conclusions/lessons learned**

Individuals willing to undergo LDCT screening are generally more health-conscious. Through the implementation of a fast-track referral process, smoking cessation education rates have been effectively increased. When dealing with heavy smokers, combining smoking cessation education with the use of smoking cessation medications can further enhance the success rate of quitting smoking.

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Illness uncertainty mediates the impact of health literacy on quality of life in patients with systemic lupus erythematosus

# TSAI Su-Hui, LIU Feng-Chong, HU Wen-Yu

## Background and objective

Systemic lupus erythematosus (SLE) is an autoimmune disease causing various degrees of symptom distress and disability. Patients with SLE suffering from disability or facing challenges with ineffective treatment can experience extreme illness uncertainty. Health literacy can affect an individual's ability to engage in health behaviors and outcomes, thereby affecting their quality of life(QOL). However, there is no evidence of an association between health literacy and illness uncertainty in patients with SLE. This study aims to evaluate whether illness uncertainty mediates the relationship between health literacy and quality of life in SLE patients.

# Methods/intervention

A total of 104 SLE patients were recruited as participants from a medical center in northern Taiwan. Demographic data, illness uncertainty, health literacy, and quality of life were assessed using a structured questionnaire. Mediation analysis examined the mediating effect of illness uncertainty on the relationship between health literacy and QOL among SLE patients.

# Results

The sample was predominately female (95.2%) with a mean disease duration of approximately 13.4 years. Health literacy demonstrated a significant effect on illness uncertainty ( $\beta$  = 0.992, p < 0.001) but did not have a significant direct effect on QOL ( $\beta$  = -0.036, p = 0.604). However, after accounting for illness uncertainty, health literacy showed a significant effect on QOL. This indicates that illness uncertainty fully mediated the relationship between health literacy and QOL ( $\beta$  = 0.327, 87.2% mediation effect), whereby higher health literacy reduced illness uncertainty, consequently enhancing QOL.

# **Conclusions/lessons learned**

This study found that health literacy can improve the QOL of SLE patients, and illness uncertainty is an important mediator that affects the QOL. We suggest that implementing psychologically supportive disease education and interventions to improve health literacy reduces illness uncertainty, thus enhancing QOL and well-being among SLE patients.

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# Mini oral session 2.7: Promoting health and well-being of staff

Evaluation of the Effectiveness of Non-face-to-face Health Promotion Activities for Forming Exercise Habits among University Hospital Staff

# LEE Joon Sang, KIM Kue Sook, BACK Seung Ho, LEE Kee Hyoung

# **Background and objective**

Various health promotion activities and programs utilizing nonface-to-face methods have emerged rapidly since Post COVID-19. The objective is to provide non-face-to-face health promotion services to university hospital staff who find it difficult to exercise due to shift work and to evaluate the formation of exercise habits and its effects.

# Methods/intervention

Two groups underwent tailored interventions. Group 1 received non-face-to-face home training via Zoom and dietary counseling, while Group 2 engaged in a non-face-to-face walking challenge using the WalkOn app. Group 1 participants underwent initial assessments, received feedback mid-term, and final measurements were taken. Three top performers were rewarded. Group 2 received education on walking techniques and app usage, with daily motivational support.

# Results

In Group 1, with 82 participants, 51.2% completed the program, showing significant improvements in blood pressure, weight, body fat percentage, and visceral fat levels. Group 2, comprising 100 participants, achieved a 71% completion rate, successfully completing the 200,000-step walking challenge. These findings demonstrate the effectiveness of non-face-to-face interventions in promoting exercise habits and improving health outcomes among university hospital staff. Tailored programs addressing individual needs and constraints offer a promising approach to fostering sustainable behavior change and enhancing overall well-being, especially in the context of demanding work schedules.

# Conclusions/lessons learned

This study applied a non-face-to-face health promotion program model in the post-COVID-19 era. Exercise habits such as attending PT and yoga classes through video lectures and walking in daily life using the app 'WalkOn' were applied without time or space constraints. It is expected that by developing new nonface-to-face health promotion programs and exercise habit tools through the research process, the exercise habits, sustainability, and effects of various occupational groups can be increased.

# Contact:

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The occurrence of musculoskeletal disorders among university hospital staff through an investigation into the harmful factors of ergonomic workload

# LEE Joon Sang, KIM Kue Sook, BACK Seung Ho, LEE Yu Jeong

# **Background and objective**

According to industrial safety and health regulations, employers must conduct investigations into harmful factors every three years when workers engage in ergonomic workload. The objective was to assess the degree of repetitive tasks and excessive strain on the human body among hospital staff to prevent health hazards.

# Methods/intervention

A survey and basic investigation into musculoskeletal disorders were conducted among staff at S University Hospital in Seoul. Face-to-face interviews were conducted based on survey results to comprehensively understand tasks, workload, and work environment, suggesting improvement measures. The survey period was from November 16th to 24th, 2023, with the workload assessment conducted from December 13th to 15th.

# Results

Among 1,497 respondents, 63.7% were deemed normal, 29.6% required management, and 6.9% reported pain. The majority needing management were those with back issues, followed by shoulder, hand/wrist, leg/foot, and neck problems. In the pain group, the highest complaints were about the shoulder and back.

# **Conclusions/lessons learned**

This study, based on ergonomic evaluation, aims to increase the effectiveness of preventing musculoskeletal disorders through comprehensive understanding and workplace improvements.

# Contact:

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The effectiveness of healthpromoting activities through evidence-based experiential activity programs to reduce the stress of outpatient nursing staff

# KIM Tae Yeon, RYU Hye Ran

## **Background and objective**

Outpatient nurses are prone to job stress due to emotional labor, such as customer service, and multidisciplinary roles, such as providing medical services. Job stress can reduce self-leadership, organizational commitment, and job satisfaction. This study attempted to determine whether it was effective in improving nurses' psychological and physical health by applying various experiential activities that were effective in reducing stress.

# Methods/intervention

This quasi-experimental study analyzed the effects of a healthpromoting activity program on outpatient nursing staff from March 2023 to August 2023. Eighty-six outpatient nursing staff were provided with six stress reduction activities, including muscle relaxation stretching, aromatherapy, scent therapy, forest experience, farming, and trekking, ten times over six months. Afterward, job satisfaction, health status, perceived stress scale, VAS (Visual Analogue Scale) stress, VAS fatigue, selfleadership, and organizational commitment were measured and compared before and after the intervention.

# Results

Nursing staff's fatigue (p=.023) and perceived stress (p=.000) before and after the intervention were significantly reduced. On the other hand, organizational commitment (p=.031), subjective health status (p=.005), self-leadership (p=.034), and job satisfaction (p=.005) increased significantly.

# **Conclusions/lessons learned**

Health-promoting activity programs, such as muscle relaxation stretching and aromatherapy, can reduce the stress and fatigue of outpatient nursing staff and help improve organizational commitment and self-leadership.

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Exploring latest effect of a health promotion program on physical fitness of staff nurses in a medical center of Taiwan

# YANG Yi-Ling, TSAI Jung-Mei, CHUANG Kuan-Chi, CHAN Wen-Han, HSU Hsi-Hsien, WU Chiao-Yun, LIN Hsui-Mei

# **Background and objective**

Based on research evidence, MacKay Memorial Hospital has implemented a program called "Let's Go" to encourage hospital staff to engage in physical activity and raise awareness of healthy behaviors. The aim of this study is to investigate the program's latest efficacy on the physical fitness of staff nurses.

# Methods/intervention

A cross-sectional study was conducted during the first quarter of 2024. The "Let's Go" program emphasizes group exercise. The participants of this study involved staff nurses from the nursing department. Physical fitness assessment includes four components: cardiovascular fitness (CRF), flexibility, muscular strength, and endurance. CRF assessment uses a 3-minute step test, flexibility assessment uses a sit-and-reach test, and muscular strength and endurance assessment use handgrip strength and a 1-minute half sit-up test. Item quotients are calculated and characterized into 5-point scales based on standards published by education and labor ministries.

## Results

78 nurses from two branches of the hospital participated in the study, with 77 being female and a mean age of 48.09 years. In CRF assessment, scores on the 3-minute step test were largely very good (29; 37.2%), followed by good (17; 27.2%). For muscular fitness, handgrip strength test scores were mostly average (31; 39.7%), followed by poor (20; 25.6%). The 1-minute half sit-up test scores were mostly very good (25; 32.1%), followed by good (21; 26.9%). In the sit-and-reach tests, most participants showed average flexibility (31; 39.7%), followed by poor flexibility (20; 25.6%).

# **Conclusions/lessons learned**

The study highlights the importance of promoting physical activity and health awareness among hospital staff. By emphasizing group exercise and assessing various fitness components, the "Let's Go" program aims to improve the wellbeing of staff nurses. The findings provide valuable insights for similar initiatives in other healthcare settings.

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What factors determine the behavioural intentions of nursing staff to participate physical examinations? Motivational and health belief model perspectives

# LIN Yu Chiao, CHANG Tsui Fen, CHAO Cheng Min

# **Background and objective**

The specific purposes of this project are: 1. Based on the goaloriented behavior model, combined with personality traits and using health literacy and health self-efficacy as regulating variables, to explore the impact of nursing staff on health checkup behavioral intentions. 2. Compare the model fit of the proposed research models and find out the most suitable influence on the behavioral intention of caregivers to conduct health examinations. 3. Analyze the relationship between important factors that influence the behavioral intention of potential caregivers to conduct health examinations.

## Methods/intervention

This program is based on the theory of goal-directed behavior (including: attitude, subjective norms, perceived behavioral control, desire), and combined with personality traits (including: extraversion, agreeableness, openness to experience, emotional stability, diligence and integrity) and other theories, to explore the influence of caregivers' behavioral intentions on health check-ups; this project treats health literacy and health selfefficacy as moderating variables, and explores whether caregivers' health literacy and health self-efficacy affect caregivers' desire to perform health check-ups on behavioral intentions. Impact. The research variables of this project structure include: (1) 5 exogenous variables: extraversion, agreeableness, openness to experience, emotional stability, diligence and integrity; (2) 5 endogenous variables variable): attitude, subjective norms, perceived behavioral control, desire, behavioral intention; (3) 2 moderator variables: health literacy, health self-efficacy. The research subjects were employees of a hospital system in central China, and questionnaires were distributed to the respondents on the spot. A total of 200 questionnaires were sent out. After recycling, after deleting invalid questionnaires with incomplete answers and regular answers, there were 183 valid questionnaires, with an effective recovery rate of 91.5%. Analysis methods include: reliability analysis, descriptive statistics, and structural equation modeling (SEM).

# Results

The research results show that the reliability, validity, path coefficient and variation explanatory power (R2 value) of this project are all good and increase the confidence of the research results. It is believed that the test results can provide the current hospital, nursing department or relevant departments with Strategy reference. The empirical results point out that in the research model proposed in this project, the variance explanatory power (R2 value) of each potential dependent variable on the overall model is 0.446 (R2=44.6%) for behavioral intention and 0.556 (R2= 55.6%), attitude is 0.173 (R2=17.3%), subjective norm is 0.123 (R2=12.3%), and perceived behavioral control is 0.181 (R2=18.1%). The above data shows that the theoretical framework proposed in this project is sufficient to explain the cause and effect of nursing staff's behavioral intentions in health examinations, and provides a reference for current hospital or nursing department managers to understand the physical health of nursing staff.

# Conclusions/lessons learned

This study is still limited by several research limitations. Due to the lack of discussion from the organizational level, it is recommended that subsequent researchers can explore the organizational level to understand the influence of the organizational level on the behavioral intentions of caregivers for health check-ups to expand Research scope makes the research more complete. In addition, this project only focuses on nursing staff in one hospital in central Taiwan as the main research object, so it cannot fully represent the views of all nursing staff in Taiwan on the subject of this project. It is recommended that follow-up research can expand the scope of the study and compare nursing staff in different regions and hospital levels to understand the differences.

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# Weight Control - Effectiveness Study of "My Home, My Gym" Intervention

# YEH Mei-Hua, TSAI Ming-Tsu, CHEN Chun-Che, HUANG Fen-Fen

# **Background and objective**

The employee health examination found three issues: abnormal waist circumference, high blood pressure, and high blood sugar. According to the reports for the employee health examination, obesity has become a threatening issue in physical fitness as well as in chronic and severe illnesses. Therefore, holding small-group based weight management program by diet control and exercise accessibility in obese employee. The program can be implemented at home to form a habit of doing exercises regularly and constructing the healthy workplace environment.

Through a progressive strength/cardio program using multi-level circuit training, we aim to enhance strength, endurance, coordination, and cardiovascular health. Integration of smart monitoring systems mitigates exercise risks, facilitating weight management, and disease prevention. Diversified teaching methods incorporate everyday items like towels and water bottles. Interactive sessions educate on healthy food choices for individuals dining out, enhancing health literacy. This initiative invites employees, their families, and community members to participate, fostering a healthy workplace and community.

# Results

In 2022, a total of 26 sessions of courses were held with 41 participants, resulting in a combined weight loss of 70.2 kilograms. The top three participants achieved weight loss of 12.7 kilograms, 10.2 kilograms, and 7.5 kilograms, respectively. Full attendance awards were given to 39% of those who participated throughout the program. Statistics show that 34% achieved a weight loss of 1 to 3 kilograms, 17% lost between 3 to 6 kilograms, and 7% lost over 6 kilograms. Additionally, 64% experienced a BMI reduction of less than 3%, and 29% received progress awards.

## Conclusions/lessons learned

The small-group program, incorporating smart monitoring systems and multi-level circuit training, has significantly improved participants, enhanced beliefs, and promoted mutual support among groups. However, the limited class size restricts participation, and with the rising obesity prevalence, future sessions will be increased to accommodate more individuals, fostering a healthy and happy city.

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Improving Chronic Disease Prevention and Healthcare Effectiveness for Tungs' Taichung MetroHarbor Hospital Employees through Transtheoretical Application

# YANG Yu-Chen

# Background and objective

The "stage of change" is referred to as the transtheoretical model, which can serve as a framework for planning hospital intervention measures. This model emphasizes that the change in health behavior is a dynamic process involving five distinct stages precontemplation, contemplation, preparation, action, and maintenance. To promote healthcare and manage chronic disease prevention, hospital also encourages employees to pay attention to their health and organizes relevant activities and preventive interventions to enhance health behaviors, aiming to enhance early detection and treatment.

# Methods/intervention

The methods are as follows 1.Precontemplation and Contemplation Stage Annual Employee Physical Exams in the Hospital 2.Preparation Stage Employees are assessed and graded on the basis of the three high-risk factors of chronic diseases blood pressure, blood lipids, and blood sugar 3.Action Stage Cross-departmental Collaboration within the Hospital to Organize Exercise Programs and Chronic Disease Prevention Dietary Education 4.Maintenance Stage Inviting Employees with Excellent Performance in Past Health Promotion Activities to Share Their Experiences to Encourage Fellow Colleagues

# Results

1.The completion rate of physical exams from 2021 to 2023 exceeded 95%. The goal was to have all employees undergo physical exams. 2.Over the past three years, the number of abnormal results has remained below 20%, demonstrating strict control over employee health and reduction in chronic disease incidences. 3.Participation rates in exercise classes and chronic disease prevention programs reached 80%, with an almost 100% satisfaction level. 4.The sharing sessions by employees with outstanding health performance in the past few years, with a participation rate of 90%.

# **Conclusions/lessons learned**

The ultimate principle of workplace chronic disease management is that prevention is better than cure. It was a stepby-step process through health grading and cross-departmental collaboration to upscale the overall prevention and treatment plan. There was a significant positive correlation between changing behaviors and gaining knowledge.

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# Mini oral session 2.8: Promoting healthy behavior and empowerment

Putting patient partnership into practice within a clinical team: between complexity and enthusiasm. About the PAIRSEP research project.

# MORET Leila, ROUSSEAU Cecilia, GUILBAUD Valerie, LEGRAIS Christine, JACQ-FOUCHER Marylene, WIERTLEWSKI Sandrine

# **Background and objective**

Although patient partnership is developing, few studies have yet explored the clinical benefits of individual peer support. The PAIRSEP study was co-constructed with a healthcare team and a patient partner, with the aim of estimating the impact of peerhelpers (PH) on therapeutic adherence and quality of life of Multiple Sclerosis (MS) patients. The objective here is to tell the story of the first 24 months of the project's roll-out, which was a mixture of administrative complexity and communicative enthusiasm.

# Methods/intervention

This mixed randomized controlled study aims to include patients with relapsing-remitting MS, followed up in a neurology consultation in a university hospital. In the intervention group, patients receive individual support from a PH (3 meetings at 1, 3 and 5 months). A quantitative evaluation (0 and 6 months) is completed by a qualitative evaluation at 6 months.

# Results

Following the announcement of funding for the project in summer 2022, 3 PHs were identified and trained in active listening. At the beginning of 2023, the 3 PHs were ready to start the inclusions. However, a number of administrative difficulties threatened to demotivate both the PHs and the researchers! We encountered delays in signing employment contracts and logistical difficulties in accessing the information system and computer equipment. The clinical team also found it difficult to present the project to patients. Once administrative matters settled, improvements were: weekly meetings with PHs, a flyer presenting each PH for the patients and a steering committee every 2 months. Inclusion did not really start until October 2023, but since then 40 patients have already been recruited!

#### Conclusions/lessons learned

Thanks to a gradual process of mutual acculturation, the project is now seen as highly positive, both by the clinical team, which receives very encouraging feedback from patients who have been cared for by a PH, by the patients themselves ("I'm not alone anymore") as well as by the PHs, whose enthusiasm is infectious!

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How living environment and lifestyle affect perceptions of health prerequisites

UTSUGI Masaki, MINAMOTO Isamu, TANAKA Ryosuke, SATO Tomomi, SAGAWA Ryo, MAETANI Kensuke, KAWASAKI Takayuki, YAMADA Chieko, MORISHITA Hisaaki, HASHIMOTO Taishi, KUBOTA Yohei, KUSUNOKI Masami, YOSHIKUNI Susumu, TAKAYA Sunao, NISHIHARA Kazuki, MURATA Hirohiko

#### **Background and objective**

The first International Conference on Health Promotion was held in Ottawa on 21st November 1986, leading to the famous Ottawa Charter for Health Promotion. In this charter, 8 prerequisites for health were identified as peace, shelter, education, food, income, a stable eco-system, sustainable resources, and social justice/equity. However, how living environment and lifestyles affect perceptions of these health prerequisites has not been fully investigated.

# Methods/intervention

We conducted a questionnaire survey to investigate how the general population in Hiroshima view and value the prerequisites for health. 165 adults who visited a community health festival participated in this survey. Participants were asked to choose the three most important prerequisites for health from the list provided.

### Results

138 (84%) participants were female. 78 (47%) were aged between 60 and 79 years. 134 (81%) were cohabiting with someone. The most important prerequisite for health was peace, listed by 76 (46%) participants. This choice was followed by food (68 participants or 41%) and a stable eco-system (47 participants or 28%). However, male participants tend to choose food as their first choice (13 participants or 48%).

# **Conclusions/lessons learned**

The results of our survey give us insight into the perception of the general population in Hiroshima towards the different prerequisites for health stated in the Ottawa Charter for Health Promotion. Interestingly, while peace was the top choice for most participants, males prioritized food as their primary prerequisite for health. This study suggests the importance of considering diverse perspectives in health promotion efforts.

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The Promotion of Intention Expression of Advance Care Planning in Patients on Maintenance Hemodialysis

# **CHIU Yuting**

# **Background and objective**

Patient Right to Autonomy Act, implemented in Taiwan since January 6, 2019, is the first specialized legislation regarding patient autonomy rights in Asia. After the law's implementation, several hospitals have established advance care planning, but there hasn't been a direct establishment of hemodialysis units yet. Nephrology is better equipped to understand discomforts and complications brought about by dialysis. With this understanding, they can directly discuss end-of-life issues with patients or their families. Hence, the establishment of advance care planning in hemodialysis units is importance and necessity.

# Methods/intervention

The main focus of this article is to explore the experiences of two patients and one family member participating in the advance care planning at the hemodialysis unit, establishing (1) the willingness of patients and their families to participate, (2) discussing the counseling process, and (3) summarizing shared experiences post-execution of the outpatient services.

# Results

The commonality observed among the three cases after participating in and executing the advance care planning is:(1) Having experienced significant life decisions or events, (2) Clarifying and discussing the legal implications and execution processes, (3) Reassessing family relationships, leading to a desire to make advance decisions for their own future.

## **Conclusions/lessons learned**

(1) Given the legal complexities involved in the advance care planning, which can be difficult for individuals to comprehend, simplifying the text or using visual aids for dissemination may be considered. (2) Currently, there is still a relatively low participation rate of patients in the advance care planning at the hemodialysis unit. It may be beneficial to increase the number of promotional sessions or identify potential cases through enhanced awareness efforts.

Contact: YUTING Chiu TAIWAN ki596793@gmail.com Enhancing Shared Decision Making in Clinical Practice: Insights and Strategies from a Structured Survey in a Tertiary Healthcare Setting

# DIAO Yu-Chun, CHOU An-Kuo

# **Background and objective**

Shared Decision Making (SDM) is vital for patient-centered care, enhancing engagement and health outcomes. However, its implementation faces challenges from personal beliefs, environmental factors, time constraints, and skill deficits. A lack of a comprehensive framework to address these issues led to our study using the Integrative Behavioral Model to explore these difficulties.

# Methods/intervention

We conducted a structured survey at National Taiwan University Hospital (2019-2020) to investigate SDM implementation across two groups: those with effective versus less effective SDM practices. Using the Integrative Behavioral Model, we examined domains like SDM knowledge and skills, behavior salience, environmental barriers, and behavioral intentions.

# Results

We collected 30 responses with a Cronbach's alpha of 0.907, indicating high consistency. The survey showed key challenges in SDM: its time-consuming nature, increased work difficulty, and a lack of recognition or appreciation from superiors, colleagues, or families for engaging in SDM. Comparatively, the less effective group showed significant gaps in understanding SDM tools and processes, including the selection of candidates, timing, and methods, alongside difficulties in current implementation.

## **Conclusions/lessons learned**

Through this survey, we identified strategies to enhance SDM's coverage and use including: (1) tailoring planning and promotion efforts to bridge the gap between healthcare providers and patients; (2) optimizing the Patient Decision Aid tool to make it more user-friendly and accessible ; (3) strengthening the understanding and content knowledge of SDM among frontline staff; and (4) establishing a mechanism to provide positive feedback, which encourages continuous participation and improvement. Further research is still required to assess the effectiveness of these improvements on enhancing the coverage and implementation rates of SDM. This will help determine if the proposed strategies can effectively promote SDM in practice.

# Contact:

DIAO Yu-Chun National Taiwan University Hospital, School of Nursing, College of Medicine, Nat TAIWAN <u>d10426006@ntu.edu.tw</u> Lessons Learned from the Translation and Cultural Adaptation of the Vietnamese Version of the Palliative Care Self-Efficacy Scale (V-PCSES)

# NGUYEN Thuy, CHANG Tsai-Hsiu, LEE Shih-Yu, HSIEH Ming-Hsin

# **Background and objective**

Self-efficacy is essential to ensure healthcare providers can confidently in providing family-centered end-of-life care. The most commonly used tool to assess the nurses' or nursing students' perceived confidence in providing palliative care (PC) is the Palliative Care Self-Efficacy Scale (PCSES). It is a reliable and valid tool but has not yet been translated into Vietnamese. This study aimed to translate, and culturally adapt the Vietnamese version of the Palliative Care Self-Efficacy Scale (V-PCSES), and describe lessons learned.

# Methods/intervention

The PCSES was translated using the translation theory and a recommended procedure for cross-cultural study. Content Validity Index (CVI) for each item and the whole scale, and internal consistency reliability, were used for data analysis.

## Results

After a complicated process, a CVI of 1.00 was achieved for each item and the whole scale. The Cronbach's alphas for the whole scale were .95, while .86 and .96 for two subscales. Through the process, we learned the importance of having a proficient team familiar with both cultures involved. It is important to compare with previous translations of the same work to ensure the translated version is linguistically and culturally appropriate.

# **Conclusions/lessons learned**

Cross-cultural studies should pay attention to the cultural appropriateness of the assessment tools, the use of standardized tools, and the measurement equivalence of translated tools. The V-PCSES could be an important tool to assess PC self-efficacy among nurses and nursing students in Vietnam. However, empirical evidence is needed to support the psychometric standard of the V-PCSES.

Contact: THUY Nguyen Hungkuang University TAIWAN msthuyctump@gmail.com Does health coaching have an impact on the ability to apply health information?

# PURNAMA Deni, PRATOMO Hadi, DAMAYANTI Rita, PRASETYO Sabarinah, SOEWONDO Pradana, PRABANDARI Yayi S., RIONO Joss, WITJAKSONO Julianto, HARTONO Budi

## **Background and objective**

Self-management is a fundamental skill that people with chronic diseases such as diabetes mellitus need to have. Diabetes is growing uncontrolled and is a global health alarm. Self-management is supported by the ability to access, understand, assess and apply health information, often known as health literacy. This study aims to assess the effect of health coaching on health literacy in patients with type 2 diabetes mellitus.

# Methods/intervention

Hospital-based randomized control trial study design, registered in ISRCTN with the number 15141896, 134 patients were divided into two groups, 68 subjects received standard care, and 66 subjects received standard care plus one face-to-face and three telephone health coaching within 12 weeks. 62 subjects in each group were analyzed for differences in mean health literacy scores within and between groups.

#### Results

subjects in the intervention group had an increase in the mean health literacy score of 7.53 (95% CI 6.95 - 8.10), while the control group had an increase in the mean health literacy score of 5.01 (95% CI 4.45 - 8.10), the difference of the mean difference between groups was 2.52 (95% CI 1.78 - 3.25), p value 0.000. Significant differences in the average increase in health literacy occurred in the dimension of the ability to apply the health information received, which amounted to 1.1 (95% CI 0.85 -1.37), p value 0.000. while in the dimensions of the ability to access, understand and appraise there was no significant difference. Coaching works to stimulate the ability to confidently apply the health information received and increase selfresponsibility in achieving set goals.

# **Conclusions/lessons learned**

The combination of health coaching with education in diabetes patient management interventions in hospitals can improve patients' ability to apply the health information received so as to support optimal and sustainable self-management skills.

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# Poster session 1.1: Contributions of Health Promoting Hospitals and Health Services to health equity

Establishing an environment that supports health and motivation, as practiced in the 'Nijinoie' nursing small-scale multifunctional facility at Sengoku.

# TANAKA Kunihiko, TOMOE Kimiko, SUZUKI Mika

# **Background and objective**

A woman in her 40s suffered a subarachnoid hemorrhage in April 2020. She underwent tracheostomy tube insertion (speech cannula), gastrostomy tube placement, and developed left-sided paralysis. The services at "Nijinoie" in Sengoku began in December 2020.

# Methods/intervention

We provided four days a week of in-person care and one day a week of home care and nursing visits. Our staff actively engaged in communication, encouraged participation in activities such as exercise, and assessed and shared hobbies and skills among colleagues. Additionally, we tailored the environment to the individual's comfort by playing their favorite music during transportation and bathing times.

# Results

In April 2021, a desire to return to work emerged, leading to a two-month rehabilitation hospitalization. With the ability to intake nutrition orally, the individual became capable of bathing at home and venturing to a nearby supermarket. Setting a goal to attend training for employment support for people with disabilities, they continued rehabilitation, graduating from "Senkoku Nijino Ie" by the end of April 2022. Subsequently, they furthered their rehabilitation at another facility and successfully reintegrated into society by securing employment in the apparel industry in 2024.

# **Conclusions/lessons learned**

Nurses, physiotherapists, and other specialists collaborated to create a supportive environment, aiming to bring the individual closer to activities they were able to do before the onset of illness. By identifying what could be done at present and leveraging the remaining function and motivation of the individual, we were able to provide effective support. As a result, facilitating the individual's return to society was not only a source of joy as caregivers but also a valuable experience.Nurses, physiotherapists, and other specialists collaborated to create a supportive environment, aiming to bring the individual closer to activities they were able to do before the onset of illness. By identifying what could be done at present and leveraging the remaining function and motivation of the individual, we were able to provide effective support. As a result, facilitating the individual's return to society was not only a source of joy as caregivers but also a valuable experience.

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Implementation and Operational Improvement of Financial Support Tools in Obstetrics and Gynecology

# INOKUCHI Seiji, MOCHIZUKI Kiyomi, ODAGIRI Miho, ABE Mizuho, KAWAMATA Etsuji, MIGITA Atsuko, MAEDA Yasumichi, HASHIMOTO Tsukasa, MATSUMOTO Saki, NISHIYAMA Atsushi, KUBOTA Yukako

## **Background and objective**

Since the release of the "Tools for Healthcare Providers and Care Workers: Coordinating Financial Support" the implementation of the tool has been a challenge for the HPH Promotion Committee of Kofu Kyoritsu Hospital. On the other hand, the early detection and intervention of patients with financial difficulties was a challenge for the Obstetrics and Gynecology Department.

# Methods/intervention

1. small group project initiation The committee of 10 members had discussed the issue, but from April 2022, a small project of 3 members was formed. 2. Introduction to the field Guiding questions were placed on the front of the Initial Consultation Questionnaire for Obstetrics and Gynecology Outpatients. On the back, tool questions and information about the hospital consultation desk were added. In addition, an action flow for relevant staff was formulated. The tool was implemented in the OB/GYN outpatient clinic in April 2023. 3. Evaluation and improvement of the operation Data from April to July 2023 were collected and problems were identified. The tool also directed those who "have financial difficulties but do not need to consult now" to the counter, which increased the waiting time and led to dissatisfaction. To solve the problem, the subject was introduced to the consultation window and then asked, "Would you like to consult today?" and the action flow was branched according to the answer. Additional data tabulation and interviews were conducted from March to April 2024, and it was found that no complaints were submitted as before.

# Results

Data tabulated overall results. OTotal first time patients: 430 oTools described: 55 patients (12.8% of initial patients)

# **Conclusions/lessons learned**

We found that more than 10% of first-time patients were concerned about the cost of medical care. However, many of those with financial concerns felt that counseling was not necessary to obtain a range of medical services. A system was established to identify and address patients' financial concerns early at the outpatient counter.

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# Hospital policies analysis of salary and benefits for nursing staffs in Taiwan in 2024

# TSAI Yi-Fan, CHEN Sung-Yun

# Background and objective

According to the report from Taiwan's Ministry of Health and Welfare, the average nursing practicing rate was only 58.6% in 2023. This study armed to collect hospitals in northern, central, southern, and eastern Taiwan to summarize the salary and benefits of nursing staff and provide a reference basis for the hospital's nursing manpower recruitment policies.

## Methods/intervention

This study will summarize the salary and benefit data from January to April 2024. It was found that the salary and benefits of nursing staff include the following five items. Salary benefits include monthly salary, night shift and graveyard shift fee, performance bonus and other fees add up. General benefits include group insurance, nurse uniforms and shoes, health examinations, research and publication awards, advanced reward, etc. Leave benefits include monthly leave, special leave, marriage leave, maternity leave, sick leave, travel leave, etc. Leisure benefits include travel subsidies, social activities, etc. Childcare education benefits include scholarships, etc.

## Results

The average total annual salary is about 25,312.5-43,125 US dollars; the annual salary for day shift is 1 US\$ 9,687.5-20,312.5; the annual salary for night shift is US\$29,375-31,250; the annual salary for graveyard night shift is US\$ 35,000-35,937.5. The most common benefits include providing birthday coupons/gifts for 70%; providing nurse uniforms for 66.7%. The maximum leave is 14 days for marriage leave and 59 days for maternity leave. Among the travel subsidies, the public hospital subsidy is US\$500 and the private hospital subsidy is US\$468.75. The maximum subsidy for children's education in public hospitals is US\$1,118.75, and the maximum subsidy in private hospitals is US\$281.25.

## **Conclusions/lessons learned**

This study synthesis analyzes the salary and benefits of 30 hospitals in Taiwan and finds that the salary and benefits of nursing staff are adjusted according to five major benefits

(salary, general, leave, leisure and childcare education benefits). The study also found that these benefits are not only aimed at improving the overall salary of nursing staff, but also in response to the contribution recognition of the special care of nurses.

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Factors of 72-hour Re-admitted Patients in Emergency Department— An Analysis of the Taipei Medical Center

# CHIU Chia Lin

# **Background and objective**

In order to provide the public with a good medical environment, the objective of this research is to investigate the factors influencing 72-hour re-admitted emergency patients in a medical center, aiming to enhance the hospital's care quality management.

# Methods/intervention

The data for this study was collected from the emergency information system of a medical center located in the northern region. The dataset comprises a total of 289,830 person-time records spanning from January 2019 to December 2020. Among these records, there were 200,705 cases that did not involve 72-hour return visits (N=200,705), and 5,408 cases that did result in 72-hour return visits (N=5,408). To analyze the data, the researchers used SPSS 22 statistical software for analysis.

#### Results

The results of Logis regression analysis are as follows:

- 1. Gender: Women are about 4% more likely than men to return to the emergency department.
- Age: The risk of returning to the emergency department within 72 hours is 1.5 times higher than that of other age groups, and it is statistically significant.
- 3. Injury detection level: the test grade is a first-level patient, which is 2.5 times higher than the risk of 72-hour revisit compared with a patient with a grade 5 test grade, and it is statistically significant. The risk of returning at 72 hours was 2.4 times higher than that of patients with grade 3 to 5, and it was statistically significant.
- Admission class:compared with other admission classes,the risk of returning to the hospital after 72 hours was still relatively high 1.60 times higher,although it was statistically insignificant) (P>0.05).

# **Conclusions/lessons learned**

By understanding the health factors influencing patients' return to the emergency department within this time frame, the overall quality of hospital care can be enhanced. This knowledge can be used as a valuable reference for emergency quality monitoring and provide hospital managers with insights for effective management and quality monitoring to optimize the benefits of emergency care.

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# Advancing LGBTQ Healthcare Equity: An Openly LGBTQ Physician's Journey in Japan

# **YOSHIDA Eriko**

# **Background and objective**

LGBTQ individuals face health disparities due to societal stigma. However, comprehensive LGBTQ education for healthcare providers is lacking in Japan, and few physicians openly identify as LGBTQ.

# Methods/intervention

As a physician, I addressed this gap by publicly identifying as bisexual and non-binary in 2018. Since then, I have worked with medical professionals and LGBTQ community members to raise awareness of LGBTQ issues among medical professionals.

## Results

We started "Nijiiro Doctors", which consists of five physicians, delivering lectures, and offering a 6-month course for doctors. and publishing LGBTQ-focused literature for medical professionals In addition, I'm the only openly LGBTQ member of the Diversity Promotion Committee of the Japan Primary Care Association and the Japan Society for Medical Education. Several medical societies have invited me to give lectures or symposia on LGBTQ issues. I have also researched how LGBTQ issues are taught in Japanese medical schools. At my workplace, I've spearheaded LGBTQ inclusion efforts, by establishing a diversity promotion committee, integrating LGBTQ education into staff training, and introducing a same-sex partnership system into work rules. Moreover, I've also been involved in community outreach, promoting dialogue and education in local communities and schools. I've also contributed to LGBTQ advocacy within the Japan Federation of Democratic Medical Institutions and the establishment of the SOGIE community. We have conducted workplace surveys and participated in LGBTQ pride events.

# **Conclusions/lessons learned**

Minority groups are often described as "vulnerable." While I am aware of this aspect of myself, by working with allies and peers, I have been able to make positive changes for patients, healthcare providers, and communities. Relevance to HPH: HPH's affiliated medical facilities actively employing and supporting the activities of a diverse group of healthcare professionals will benefit their patients and the community. Contact: YOSHIDA Eriko Kawasaki Kyodo Hospital, Kawasaki Health Cooperative Association JAPAN yoshidayoyo@gmail.com

Analysis of the Effectiveness of an Intelligent Medication Delivery and Tracking Portal System on Improving Healthcare Service Quality

# LAI Ming-Yi, CHANG Hui-Min, HSIEH Cheng-Chih

# Background and objective

Efficient medication management is crucial in modern healthcare. Traditional delivery processes lack effective tracking, resulting in low efficiency, unpredictable times, and high error risks. This study develops an innovative Intelligent Dual-sided Medication Delivery and Tracking Portal System (IDMDTP) to enhance delivery efficiency, reduce errors, and enable traceability. The system aims to provide safer and more efficient healthcare services while improving medication management quality in healthcare institutions.

## Methods/intervention

The IDMDTP system features a dual-sided intelligent medication cabinet, RFID authentication, and QR code scanning. A 3-month trial at a medical center evaluated the system's performance and user acceptance. It recorded crucial data points, enabling an analysis of its efficiency and accuracy. A questionnaire survey assessed user perceptions, including ease of use, benefits, and satisfaction.

#### Results

During the 3-month trial, the IDMDTP system recorded 120,207 medication dispensing and delivery operations, with pharmacists and delivery personnel achieving an impressive achievement rate of over 90% when using the system to scan QR codes on medication bags. User satisfaction obviously increased compared to the pre-implementation period.

# Conclusions/lessons learned

The IDMDTP system effectively improves the medication dispensing, distribution, and tracking processes, enhancing the efficiency and accuracy of medication management. The system demonstrates good usability and reliability, gaining high recognition from users. Intelligence and real-time capabilities are the main advantages of the system. By strictly controlling the medication delivery process through RFID card authentication and QR code scanning, the system provides instant queries for nurses. The system saves labor costs and improves work efficiency, but long-term effects and cost-effectiveness need further evaluation.

# Poster Sessions 1: Thursday, November 7, 2024, 11:00-12:30

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To improve door-to-needle time in patients with acute ischemic stroke by utility of interdisciplinary care models

# **LEE Shwu Meei**

# **Background and objective**

Stroke is responsible for disability in tens of thousands of adults in Taiwan every year. Approximately 80% of strokes are due to ischemic cerebral infarction, for which timely thrombolysis could have great benefits in prognosis. Efforts were made for application of interdisciplinary care models to improve door-toneedle time at Yunlin Christian Hospital, a district hospital in Yunlin County.

# Methods/intervention

Members of emergency physicians, nurse practitioners, clinical nurses, radiologists, medical laboratory scientists, and pharmacists were involved. Consensus conference was held for flowchart establishment and every requirement, with a monthly panel to discuss case by case. When code stroke protocol is initiated, establishment of parenteral route and obtaining of blood sample are warranted to be achieved within 10 minutes. Instant contact to radiologists for evaluation in the first place and to medical laboratory scientists for urgent dispatch should be conducted, and the response of evaluation and laboratory results should be obtained within 40 minutes. Neurologists are formally consulted, who are in charge of integrating information and explaining to the patients and his or her family. Once informed-consent is achieved, recombinant tissue plasminogen activator(rt-PA) will be administered under close monitoring, which should be initiated within 60 minutes. The nurse practitioner on duty is assigned to be the case manager and is responsible for process surveillance.

## Results

Throughout August, 2023 to February, 2024, stroke code was activated for 97 patients present to our emergency room. After exclusion of patients with final diagnosis other than acute ischemic stroke or with contraindications, totally 23 cases met the criteria for thrombolysis, all of whom received rt-PA administration after informed-consent was obtained. 15 patients, accounting for 65.2% of all cases, were achieved with door-to-rtPA time less than 60 minutes.

# **Conclusions/lessons learned**

In our previous experience, only 30% of target patients received rt-PA administration with door-to-needle time less than 60 minutes. The application of interdisciplinary care models greatly improves door-to-needle time. Contact: LEE Shwu Meei Yunlin Christian Hospital TAIWAN 801681@cch.org.tw

An Investigation of the Bundle Care Model and Telemedicine on the Effectiveness of Treating Pressure Ulcers in Remote Home Care

# HUNG Hsiang-Lien, LIU Hsu-Hua

# **Background and objective**

Pressure injuries are a common problem in home care, cause wound infection or death from sepsis. Home-based patients are usually disabled, bedridden for a long time or have multiple comorbidities, and the main caregiver at home has already undertaken heavy care tasks, and the wounds of pressure injuries are undoubtedly worse.

# Methods/intervention

Through interdisciplinary teamwork, a bundle care model was provided, and guidance for pressure injury wound care was established for home nurses. Physician provided weekly telemedicine diagnosis and treatment to patients with pressure injury (grade 3 or higher). Multiple health education strategies were used to guide key caregivers. Home care team provide decompression equipment and suitable care.

# Results

The prevalence rate of pressure injury above grade 3 decreased from 11.7% to 6.2%, the healing rate of pressure injury above grade 3 increased from 3.38% to 10.6%. The accuracy rate of pressure injury wound care technology of home nurses increased from 64.6% to 95.6%, and the accuracy rate of pressure injury and pressure injury care skills of home primary caregivers increased from 66% to 91.7%.

# Conclusions/lessons learned

The best way to prevent the occurrence of pressure injuries is to improve the wound healing rate and prevent the occurrence of pressure injuries through interventional use of bundle care model under remote telemedicine diagnosis and treatment. The regular telemedicine service once a week is indeed effective in the healing of pressure injuries above grade 3 at home.

# Contact:

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# Nursing students visit war remains what we learned during our visit

# **ORYOJI Tami, SAKAI Misa, SUZUKI Mio**

# **Background and objective**

War destroys the health care system and deprives local residents of their right to medical care. It is meaningful for nursing students to learn about the history of war and the tragedy of war. The author is a faculty member at a nursing school, and visits war sites with nursing students in her classes. The aim is to report on what the students learned through the visit to the remains of the war.

# Methods/intervention

The class name is "Peace and Human Rights", 30 hours, 1 credit. The target students are first-year nursing school students. Class content includes lectures, visits to war ruins, literature research, and learning presentations. The names of the war ruins that students will visit are ``Rotaco" and ``Shichiriiwa Underground Bunker." Rotaco was a secret airfield of the former Japanese Army, and Shichiriwa underground bunker was a factory for producing fighter planes. Both were built at the end of World War II by the former army's orders, mobilizing around 3,000 people from surrounding areas. When visiting war ruins, a guide will be accompanied by someone who has investigated Rotaco and the Shichiriwa underground bunker. Most students do not know about Rotaco and the Shichiriwa underground bunker until they take the class. In 2022, students' presentations on what they learned from visiting war ruins were divided into categories based on similarities.

# Results

The students' reports were classified into the following eight categories: The names of the seven categories are: "War is the worst SDH," "Peace means that human rights are respected and equal medical care is available," "Nursing students need to learn and pass on the history of war," "It is necessary to learn from the history of war and gain the trust of other countries," and "It is important to maintain peace to protect people's health."

# **Conclusions/lessons learned**

Through the class, the students learned the importance of preventing war and maintaining peace. In the future, the students will work as nurses at a local hospital. The author hopes that students will continue to think about what they can do to oppose war and protect peace.

Contact: ORYOJI Tami Kyoritsu nursing school JAPAN tami-ori@kk.yamanashi-min.jp

# A Study on Medical Ethics from the Five Components of Taiwan Life Education Curricula

# SU Chi-Chun

# Background and objective

Life education cultivates insight and wisdom in interpersonal dealings, stimulates passion for life and caring for others' needs, teaches the relationship between one's actions and others/organizations, promotes respecting others' lives and establishing good relationships with others, society and nature. Medical ethics aims to create harmonious doctor-patient relationships, regulate medical conduct, ensure good diagnosis/treatment decisions, and crucially, promote patient safety and the patient's right to care. Thus, life education lays the foundation for medical ethics practice.

# Methods/intervention

This study used Taiwan's 12-year compulsory "Life Education Issues" curriculum framework to analyze medical ethics research papers. Searching the Airiti Library for titles/keywords/abstracts with "medical" and "ethics", comparing the last 5 years and journals yielded 41 articles. The "Life Education Issues" syllabus has 5 dimensions: "Training in Thinking", "Anthropological Inquiry", "Ultimate Care", "Reflection on Values", and "Spiritual Cultivation" which were used as an analytical framework to discuss relevant medical ethics studies.

# Results

12 articles were screened as relevant - 4 on "Training in Thinking", 1 on "Anthropological Inquiry", 3 on "Ultimate Care", 4 on "Reflection on Values", and 0 on "Spiritual Cultivation".

# Conclusions/lessons learned

Analyzing through the life education lens, medical ethics research focuses on 3 aspects: "Training in Thinking" concerns dilemmas in the current medical environment and practical implementation reflections; "Ultimate Care" explores patient autonomy and refusing conventional treatment; "Reflection on Values" centers on enhancing patient quality of life. "Ultimate Care" studies patient autonomy and treatment refusal, while "Reflection on Values" rethinks medical ethics with new concepts like AI and clinical trials.

Contact: SU Chi-Chun TAIWAN sccsafp@gmail.com Pathway in the implementation of the Health Promotion standards of the Catalonia Network of Health Promoting Hospitals and Centers

JUVINYÀ Dolors, ARÉVALO Maribel, CARBONELL Sílvia, SIMÓN Rosa, BERTRÁN Carme, PÉREZ Ana Carol, SANTIÑÀ Manel, VICENTE Mireia, FERNÁNDEZ Mònica

# **Background and objective**

The HPH Catalunya Network, founded in 2009, is made up of 26 centres in Catalonia. As part of its strategic plan, a working group was created to implement and evaluate health promotion standards in order to influence the governance models of the hospitals and health promotion centres that are part of the network.

## Methods/intervention

- Translation and adaptation of the international standards into Catalan and Spanish, 2006 version and 2020 version. -Performance of two self-assessments by 100% of the centres that make up the HPH Catalunya Network. - Analysis of the presence of health promotion standards in the Hospital Accreditation Model of the Department of Health. - Preparation of a proposal for seven general health promotion standards to be incorporated into this accreditation model.

### Results

The HPH Catalunya Network Standards group has been working for 15 years to integrate health promotion in all centres in Catalonia, in accordance with the objectives of its Strategic Plan. It has achieved the incorporation of 7 standards into the Hospital accreditation model of the Catalan Ministry of Health. The document "The evaluation of health promotion in hospitals and health promotion centres for all the centres in the network" has been published, which incorporates the new standards of HPH International.

#### **Conclusions/lessons learned**

The Standards Group works on the development and continuous revision of standards in order to incorporate health promotion in all settings in hospitals and healthcare facilities. We consider the standards as a pillar to establish clear guidelines for hospitals seeking to improve their approach and progress in health promotion.

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# Gathering to Share War Experiences: Reflecting on 19 Years of Journey

# HATANO Michiko, MISAWA Sachio, KAMEYAMA Hiroko

# Background and objective

Japan has experienced war in the past. The harrowing realities of war are deeply ingrained in the hearts of those who experienced it, especially among those who were young at the time. Maintaining peace is crucial for sustaining healthy communities in our regions. In order to prevent the recurrence of war and to convey the lessons of war to younger generations who may not have experienced it firsthand, we have been holding gatherings for the past 19 years. The sentiment of "Never Again War" continues to serve as the driving force behind our continued efforts.

## Methods/intervention

- Aimed for an annual event centered around the board members.
- 2) Invited speakers who experienced war and prominent local figures to give lectures
- Encouraged participation from younger demographics and children
- Incorporated paper plays, poetry recitals, songs, etc., and presented thoughts through tapestry.

## Results

The number of participants started with 18 in the first event and gradually increased each year, reaching a peak of 180 attendees. Efforts to broaden the participant base by incorporating music were made, and starting from the 17th event, it has been held under the title "Gathering for Peace and Music." Feedback from participants includes statements such as "We must not let children experience war" and "We hope for the continuation of these moving gatherings in the future."

## **Conclusions/lessons learned**

The gathering has become a place where all participants can share a strong conviction: "War must never be repeated." However, in the world, places like Ukraine and Gaza have become battlefields, resulting in the loss of many precious lives. War steals livelihoods and leads to utter destruction. We aim to continue this initiative, spreading the importance of peace to as many people as possible. We pray for a swift end to all conflicts.

# Contact:

KONISHI Tsuyako Tokyo Health Cooperative Association JAPAN <u>t-konishi@tokyo-health.coop</u> The Effectiveness of Implementing Lean Management in Initiating an Integrated Health Promotion and Patient-Friendly Care System in Hospitalized Wards.

## CHUAGE Su-Chueh, CHANG Yen-Ping, CHAN Li-Li

#### **Background and objective**

Our hospital achieved Healthcare Hospital Accreditation and is located in a remote area where the elderly population is increasing. With a growing need for caregivers for inpatients, we initiated the Skill-Mixed Model on September 1, 2023, to optimize the utilization of healthcare personnel. This model ensures comprehensive care for patients, alleviates the financial burden on families, enhances the quality of medical care, promotes disease recovery and healthy discharge, and boosts family satisfaction, thereby elevating the overall quality of healthcare services.

#### Methods/intervention

The professional team collaboration, employing lean management, to establish the process of inpatient care system: 1. Formulate management regulations for integrated inpatient care services. 2. Establish a Skill-Mixed Model patient health information management system for tracking and monitoring. 3. Conduct quarterly quality monitoring indicator surveillance: Excel data analysis of satisfaction surveys. 4. Implement staffing allocation and scheduling for care support. 5. Develop internal and external promotional mechanisms for the hospital. 6. Education and training.

#### Results

Establishing a standardized workflow for integrated inpatient care, consisting of 20 items. Bed utilization rate: 80%. Overall satisfaction averaging 82 points. Smooth therapeutic care processes ensure team members' peace of mind and enable safe guardianship of local residents.

#### **Conclusions/lessons learned**

Recruiting auxiliary caregivers is challenging, and it is also recommended that the government pay attention to the nationwide shortage of auxiliary caregiving personnel. In training or recruitment, it is advisable to consider a diverse range of sources for personnel and educational training.

Contact: CHUAGE Su-Chueh Erlin Christian Hospital TAIWAN 27020@cch.org.tw

## The Barriers to Advance Care Planning in Vietnam: A Narrative Review

## NGUYEN Thuy, CHANG Tsai-Hsiu, LEE Shih-Yu, HSIEH Ming-Hsin

#### Background and objective

Advance Care Planning (ACP) is planning for future healthcare needs. Vietnam is one of the countries with the fastest-aging and increased cancer and pneumonia cases in Asia. Although the ACP has been discussed since 2001, promotion is still uncommon, highlighting barriers that exist. This narrative review explores the factors that caused the delayed development of ACP and its implementation challenges in Vietnam.

#### Methods/intervention

A narrative review was conducted by merging the best available ACP empirical evidence using a forward snowballing search of electronic databases (i.e., PUBMED, Google Scholar). The final state-of-the-art review included 35 references.

#### Results

In the past five years, 15 empirical studies have been conducted in Asia, but none of them were in Vietnam. However, the literature induction and deduction found that Vietnam recognizes the importance of ACP but faces challenges in initiating it. This is because of communication challenges resulting from limited medical resources and a melting pot of diverse cultural values. Additionally, educating healthcare professionals in ACP is also a significant obstacle.

#### **Conclusions/lessons learned**

The government's increased healthcare budget underscores the commitment to education in ACP. Aligning ACP with cultural values and increasing healthcare engagement should be prioritized to ensure successful ACP implementation. Future research should be based on cultural variations to design the implementation, assess effectiveness, and break through barriers hindering ACP discussions and services.

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## Reducing Unexpected Cardiac Arrests in Surgical Wards

## LIN Ya Hui, HUANG Yi-Ju, CHEN Ming Wan, CHIOU Yin Ting, CHUANG Hsiu Wen

#### **Background and objective**

In 2021, the incidence rate of unexpected cardiac arrests in our surgical ward ranged from 0% to 1.97% per month. However,

in January 2022, the rate rose to 4.93‰. Therefore, a project team was established to make improvements. Analysis revealed that the main reasons were as follows:inadequate awareness among nurses regarding changes in patient's health conditions, insufficient confidence and skills in activating Rapid Response Teams (RRT), and the lack of an alert system for risk patient. Objectives were:as cardiac arrests in patients can severely endanger lives, the target was to reduce the incidence rate from 4.93‰ to 0‰, aiming for zero occurrences of such events.

#### Methods/intervention

The project team implemented medical team resource management and simulation-based learning, enhancing nurses resilience in facing changes in patient's health conditions, communication skills, and confidence and skills in activating RRT. They collaborated with information engineers to build a clinical alert system, utilizing a patient information risk systems to detect high-risk patient populations early and organize educational training to enhance professional care abilities.

#### Results

Following project implementation, statistics from January to December 2023 showed that the incidence rate of unexpected cardiac arrests in the surgical ward decreased from 4.93‰ to 0‰, achieving the project objectives.

#### Conclusions/lessons learned

Patients experiencing unexpected cardiac arrest can suffer severe physical harm, such as death, disability, impaired limb function, and even medical disputes. Utilizing simulation-based learning can effectively enhance nursing staff's adaptability when facing changes in patient's conditions. Introducing clinical alert systems can assist and reinforce nursing staff in promptly seeking support from Rapid Response Teams (RRT), enabling early and proactive medical interventions to maintain patient safety.

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# Effectiveness of the barcode verification system in a hospital

## CHEN Yi-Ju, LI Ling-May, CHEN Wei-Ta, LIN San-Chi

#### Background and objective

In the past, at a regional teaching hospital in northern Taiwan, when pharmacists filled the automatic medicine packing machine, they only checked with the naked eye. It was not only time-consuming, but also caused errors in medicine verification. This clinical study was conducted in order to understand whether the introduction of the barcode verification system in a hospital to assist in checking medicines can improve the accuracy.

#### Methods/intervention

The pharmacist converts the GTIN barcode on the medicine packaging box into a QR Code, and inputs the GTIN into the computer's XLSX file, and prints the QR Code into a small paper card and sticks it on the medicine box of the automatic medicine packing machine. When filling medicines, the pharmacist opens the XLSX file and then uses barcode reader to scan two places, one is the GTIN on the medicine packaging box, and the other is the QR Code on the medicine box of the automatic medicine packing machine. The function in the XLSX file will compare the above two places, and save it in the XLSX file.

#### Results

Before the use of the barcode verification system, from November 2018 to October 2019, the error rate of filling medicines was 0.013%(2/15077). The incidence rate of near misses is 0.537%(81/15077). After the use of the barcode verification system, from December 2019 to December 2022, the error rate of filling medicines was 0%(0/59825). The incidence rate of near misses is 0.165%(99/59825).

#### **Conclusions/lessons learned**

This clinical study shows that using the barcode verification system can improve the accuracy of pharmacists filling automatic medicine packing machine, and improve patient medication safety.

#### Contact:

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The achievements and directions for improvement in Taiwan's Healthy Hospitals (HH).

## WU Chien-Yuan, JOU Yann-Yuh, LIANG Che-Yu, KANG Chiu-Chen, CHUNG Yuan-Fang, WEI Shi-Lun, WU Chao-Chun

#### **Background and objective**

Since 2005, Taiwan has been promoting Health Promoting Hospitals (HPH). Starting in 2017, Taiwan has integrated smokefree issues, age-friendly and climate actions into the HPH framework, creating the Healthy Hospitals (HH) certification. The certification includes eight standards: Policy and Leadership, Patient Assessment, Patient Information and Intervention, Promoting a Healthy Workplace and ensuring capacity for Clinic Health Promotion, Implementation and Monitoring, Agefriendly, Person-centered Care, and Climate Action. Taiwan's medical system is divided into medical centers, regional hospitals, and district hospitals. As of 2023, 203 hospitals in Taiwan have been certified as HH, including 22 medical centers (88% coverage), 85 regional hospitals (97% coverage), and 97 district hospitals (26% coverage). To encourage more district hospitals to join the HH initiative, an analysis of the low participation rate among district hospitals is conducted, and appropriate methods are proposed to encourage their participation.

#### Methods/intervention

Conducted a questionnaire survey with 146 district hospitals that have not yet joined the HH initiative to understand their implementation status and difficulties. Also visited district hospitals to understand their implementation challenges. Additionally, organized expert meetings with health promotion experts and hospital representatives to find suitable ways to encourage more district hospitals to join the HH initiative.

#### Results

After analyzing the difficulties and opinions of district hospitals, including difficulties in complying with standards, inadequate manpower, lack of funding and resources, specialty applicability, and the need for counseling plans and reference documents.

#### **Conclusions/lessons learned**

Starting from 2024, the HH certification system will be replaced by a self-assessment system. The self-assessment criteria will be divided into "Medical Centers and Regional Hospitals version" and "District Hospitals version" based on the scale of the hospital. Additionally, the HH policy will plan to provide counseling programs based on hospital needs, cooperate with local governments to provide subsidy programs, and hold reward competitions to encourage hospitals to improve the quality of health promotion.

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## Effectiveness Study of an Integrated Telemedicine Platform Combining Virtual and Real-World Healthcare

#### **TAN Ching-Ting**

#### **Background and objective**

Telemedicine has been developed in Taiwan for more than 20 years. In the past, its primary purpose was to solve the problem of insufficient distribution of medical resources and the fairness of people's medical treatment in remote areas. In response to the global COVID-19 pandemic in 2019, the application of telemedicine has increased dramatically, making telemedicine a new norm that has attracted much attention.

#### Methods/intervention

This research builds a virtual and real integrated video diagnosis and treatment platform that takes into account both online telemedicine and physical outpatient clinics. The video hardware equipment is actually introduced into the outpatient clinic for use, and the video consultation app is put on the global iOS and Google play system platforms to ensure that both medical security and information security are carefully considered.

#### Results

The results are as follows: 1. The average number of patients increased by 1.66 times. 2. Video software testing time

decreased from 5-10 minutes to less than 1 minute. 3. Timeliness of automatic transmission of medical records. 4. The app has been downloaded by more than 5,000 people on Google Play and Android platforms, and has been used by more than 10,000 sessions. 5. The average medical satisfaction score of patients is 92.5 points.

#### **Conclusions/lessons learned**

The "Virtual and Real Integrated Video Consultation System" application app offers a simple and friendly operation interface, so that the public can have a high-quality and satisfactory medical experience. Simultaneously, it reduces the fatigue of traveling, reduce the risk of disease infection, reduce the waiting time and transportation distance of patients, and improve the good doctor-patient relationship and the quality of treatment.

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Post-pandemic Digital Transformation of Healthcare: A Qualitative Study on the Status, Challenges, and Opportunities of Taiwan's Digital Health Insurance Card

#### YAN Yu Hua, KUNG Liang Hsi

#### **Background and objective**

Since the establishment of national health insurance in 1995, the health insurance card has gone through the era of paper cards and first- and second-generation IC cards. In the past three years, Taiwan's National Health Insurance Administration has actively promoted digital health insurance cards in response to the COVID-19 pandemic, replacing physical cards. This initiative aims to address patient inconveniences in atypical medical scenarios like telemedicine and home treatment.

#### Methods/intervention

Semi-structured, in-depth interviews were conducted between August and September 2023. Interview questions were developed based on research objectives. The interview outline included queries on work experience with digital health insurance cards, costs for medical institutions, benefits for institutions and the public, challenges, and acceptance of digital cards.

#### Results

The study revealed that the cumbersome application process hindered the widespread adoption of digital health insurance cards. Applicants are required to apply via a health passbook app, upload photos, and undergo review to obtain a QR code. Manpower shortages for public education were identified as a significant challenge. Moreover, there was no need for the public to convert physical health insurance cards, and no incentive policy was in place. Recommendations include enhancing integration with mobile payment systems and simplifying medical procedures to improve efficiency and public acceptance.

#### **Conclusions/lessons learned**

Taiwan's experience with digital health insurance cards offers valuable lessons for global digital policy promotion amidst pandemic challenges. Emphasis on medical information infrastructure and technological applications is essential for advancing healthcare accessibility and efficiency. Promoting digital policies globally requires addressing challenges encountered during the pandemic, with Taiwan's experience serving as a valuable guide.

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## The Influences of Clinical Psychology Internship of College Nursing Students on Attitudes toward Mental Illness

#### WANG Yuwen, YANG Hsinju

#### **Background and objective**

Health, both physical and mental, is a fundamental human right, yet in a society inundated with stigmatized notions, mentally ill individuals are seldom accorded the fair treatment and respect their healthy counterparts take for granted. Even with proper psychological and emotional care, they remain underprivileged in achieving health and well-being. The stigma associated with mental illness keeps affecting therapeutic relationships and professional practices. The study accordingly aims at exploring the changes in the attitude toward mental illness among nursing students undergoing clinical psychology internship that expose them to close contact with mentally ill individuals and offer opportunities to incorporate anti-stigma training into nursing education.

#### Methods/intervention

The study adopted a cross-sectional research design and recruited through purposive sampling 36 senior nursing students from a university in central Taiwan. The Attitude toward Mental Illness Scale (ATMI) was used for assessment both before and after the internship. The scale includes 32 items or questions grouped under the following five sub-scales measuring respectively "Is my attitude toward mentally ill individuals benevolent?" "My opinion about mentally ill individuals seeking help from folk therapies," "The extent to which I agree that mental illness results from external environmental causes," "My opinion about community inclusiveness toward mentally ill individuals," and "The extent to which I agree that the lifestyles of mentally ill individuals contribute to their illness." Each item was rated by a six-point Likert scale with a higher score indicating

a more negative attitude toward mental illness. Assessments were conducted four weeks before and after the clinical psychology internship, and data were analyzed using descriptive statistics and paired sample t-tests.

#### Results

The average ATMI score dropped from the pre-internship 115.36±10.74 (Mean±SD) to the post-internship 94.22±14.39 (Mean±SD), indicating the significant decrease in negative attitudes toward mental illness (P < .05). It is thus obvious that close and actual contact of mentally ill individuals, understanding the contexts of their lives, keeping them company, and empathizing the burdens that weigh on their emotions do help reduce negative perceptions of mentally ill individuals.

#### **Conclusions/lessons learned**

Learning by now means comes exclusively from textbooks, lectures, and professional training. In the field of psychiatry, building relationships and promoting interactions with mentally ill individuals can be particularly effective in reducing the stigma of mental illness. This not only helps enhance the professional competence of health workers but also serves as a crucial link for transitioning into the workplace after graduation.

#### Contact:

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Investigating the Health Status and Intervention Effectiveness for Elderly Individuals in Rural Areas using ICOPE (Integrated Care for Older People)

#### SONG Jia Chun, LEE Shiao Haung

#### **Background and objective**

Taiwan entered the realm of an "aging society" in 2023 with 17.92% of the population aged 65 and above. The focus shifts from merely longevity to ensuring healthy aging. Embracing the WHO's Integrated Care for Older People (ICOPE) guidelines, our study aimed to assess and intervene in the functional well-being of seniors aged 65 and above. By identifying disability risks early, we implemented strategies to postpone the onset of disabilities.

#### Methods/intervention

Employing a cross-sectional survey approach, our study deployed specialized ICOPE nurses from January 1 to December 31, 2023. Utilizing the ICOPE assessment tool, we evaluated cognitive function, mobility, nutrition, vision, hearing, and depression in the elderly population. Identifying concerns led to structured referral processes, with targeted interventions by ICOPE nurses. Those needing medical care were directed to outpatient services. Interventions encompassed varied programs like cognitive stimulation for cognitive and depression issues, community activities for mobility enhancement, meal delivery, vision correction, and hearing aid services.

#### Results

Enrolling 1119 participants, the majority (25.7%) were in the 65-69 age group, primarily from Yunlin County (97.2%). Common health conditions included hypertension (46.1%) and diabetes (28.9%). The primary post-assessment functional concerns were mobility (18.3%), cognitive function (16.3%), and vision (12.4%). Referrals were made for medical treatment, mobility enhancement, nutrition support, hearing aid, and social assistance. Follow-up rates ranged from 12% to 21.9%, with 549 interventions demonstrating an impressive 99.5% overall functional improvement rate, ranging from 85.9% to 100% for individual domains.

#### **Conclusions/lessons learned**

ICOPE assessments play a pivotal role in early intervention for elderly disability. Our study underlines the effectiveness of proactive interventions in enhancing elderly functional status. Despite some challenges in follow-up participation, the substantial improvement rates post-intervention are noteworthy (88% to 100%). Policymakers are urged to identify barriers to follow-up participation and advocate for comprehensive policies blending acute medical care and community resources to proactively evaluate elderly functional status, sustain positive interventions, and effectively

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# Poster session 1.2: Access to services, information and communication

The Effectiveness of Telephone Interventions with Varied Motivational Messages on Cancer Screening Behavior

## KUO Yi-Chun, CHANG Pei-Chi, WENG Cing-Ya, FAN Sheng-Yu

#### **Background and objective**

Cancer remains the leading cause of death globally, and in Taiwan, it has topped the list of causes of death for over forty years. Cancer screening can reduce mortality rates among the population; however, the coverage rate of cancer screenings in Taiwan is only approximately 30%. Telephone reminders have been shown to enhance cancer screening behaviors. This study explored the effectiveness of telephone interventions that incorporated different motivational messages on cancer screening behaviors to examine whether making the public aware of the benefits and rates of cancer screenings influenced their screening behaviors.

#### Methods/intervention

This prospective longitudinal study used random assignment to divide the general population eligible for cancer screening into four groups: (1) Telephone–Effectiveness Group: emphasizing the benefits of screening. (2) Telephone–Screening Rate Group: emphasizing the proportion of people undergoing screening. (3) Telephone Reminder Group: providing instructions on how to receive screening at the hospital. (4) Letter Reminder Group: using a letter to explain how to receive screening at the hospital. The primary dependent variable was whether participants went to the hospital for screening 6 months later.

#### Results

The study recruited 1,201 participants, with 301 in the Letter Group and 300 in each of the three Telephone Groups. Significant differences were observed in screening rates among the four groups ( $\chi 2$  = 69.38, p < 0.001). Post hoc comparisons showed that the Telephone Reminder Group (62.33%) had a higher rate than both the Telephone–Effectiveness Group (47.00%) and the Telephone–Screening Rate Group (44.67%), with the lowest rate observed in the Letter Reminder Group (28.57%).

#### **Conclusions/lessons learned**

Telephone reminders were more effective than letter reminders and outperform motivational messages in improving cancer screening behaviors. Telephone reminders increased the motivation for cancer screening.

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## Patient Safety Blog for Improving Health Literacy in Taiwan: Sharing 16 Years of Experience

## MINGI Chan Liao, HUNG Huei Ching

#### **Background and objective**

"Chan Liao Ming I Patient Safety Culture Academy " blog has been established for 16 years since May 2008. However, despite the blogger's popularity as a patient safety advocate at national level, health literacy and equity challenges persist. This study aims to explore the readership of the blog as an indication of readers' interest and concern regarding certain patient safety issues.

#### Methods/intervention

A literature analysis of the blog's content over 16 years focused on patient safety issues. By accumulating annual page views, we analyzed to gauge reader engagement and interest in emerging patient safety topics including health equity as a patient safety goal.

#### Results

As of May, 2024, the blog with 993 posts reached nearly 3 million (2,996,500) page views which covered various patient safety topics across 20 subcategories. Top 10 blog posts had page views ranging from about 20,000 to 110,000, indicating reader interest. These current figures were compared with the previous top 10 obtained in 2017. However, niche content may limit broader readership for unknown reasons.

#### **Conclusions/lessons learned**

This blog may provide valuable insights into patient safety, aiding policy formulation and improvement practices. It aligns with international patient safety initiatives, advocating for Zero Harm, Zero Preventable Death and sustainable ESG and SDG promotion. To meet the needs of a broader readership, an adjustment on the policy for preparing future blog posts may be needed for enhancement.

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A Pilot Study of Medical Utilization of Occupational Disease and Injury: A Specialized Hospital Accredited by the Ministry of Labor in Taiwan as an example

## HUANG Su-Ling, YANG Chen-Cheng, CHANG Pi-Yu

#### Background and objective

This study aims to understand the healthcare utilization and trends of occupational disease and injury among labors at Ministry of Labor-accredited specialized medical institutions, to establish a professional service model of "Diagnosis-Treatment-Insurance-Occupational Rehabilitation-Work Ability Assessment-Occupational Therapy-Return to Work-Prevention," and to provide a reference for comprehensive medical resource and rehabilitation service needs.

#### Methods/intervention

In this cross-sectional study, the descriptive and inferential statistical analyses was conducted to explore the demographic distribution and medical utilization patterns related to occupational disease and injury among labors at the case hospital from January 2023 to December 2023.

#### Results

The hospital treated a total of 3,834 individuals for occupational disease and injury, with a total of 9,155 medical visits. Among these, 1,037 patients sought outpatient care, 3,425 individuals

(89.33%) sought emergency care, and 266 individuals were hospitalized. Single-visit patients accounted for 73.2% of the total, while 9.0% individuals required surgical treatment. The proportions of inpatients were highest in the department of orthopedics (47.7%). The dominant injury types were upper and lower limb fractures (67.4%). A significant difference in medical utilization characteristics was observed between those who only sought emergency care and those who only received outpatient treatment, with more male patients and younger individuals under 45 only receiving emergency care and not continuing with outpatient treatment at the case hospital (p<0.001).

#### **Conclusions/lessons learned**

Workers experiencing occupational disease and injury require timely medical care, including emergency visits, hospitalization, surgery, and rehabilitation services, to reduce the risk of longterm health complications, disabilities, and income loss. Establishing a management model for occupational disease treatment can provide comprehensive emergency and critical care for injured labors and contribute to the prevention, treatment, and reconstruction of occupational injuries, assisting injured workers in smoothly returning to the workplace.

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Role of Nurse Practitioners in Shared Decision Making: Examples of Heart Failure Patients in Rural Hospital

## TSENG Wei-Chuan, CHANG Yu-Chen, CHEN Chia-Jung, TSAI Chuan-Hsiu

#### Background and objective

Shared Decision Making (SDM) has been widely applied in clinical practice. However, rural and elderly patients have significant deviations from urban residents in their health-seeking habits, preferences, values and access to medical information.

#### Methods/intervention

The aim of this paper is to discuss from the point of view of nurses practitioners the challenges and factors influencing the implementation of SDM in rural hospitals through literature review.

#### Results

It was found that during the process of implementing SDM in rural hospitals, doctors in attendance had limited knowledge due to time factors and patient health knowledge. They were often unable to really understand the pros and cons of the treatment, or they had explained it in detail, but they could not agree with it. In addition, the elderly living in rural areas respect "doctors" and do not dare to question doctors. They are often unable to effectively express their thoughts in front of doctors, or they may have misunderstandings without realizing it.

#### **Conclusions/lessons learned**

We have committed ourselves to improving core training such as professionalism, problem-solving skills, critical thinking and integrated care of nurse practitioners and actively promoting clinical translation of practical practices so that they can be fully used and applied to SDM for chronic diseases. Educators and physicians are mutual partners and provide medical care together. Older people living in rural areas have a high confidence in specialists and have good interactions. In addition, the team plays a communication and coordination role and is therefore the first choice for the promotion of the SDM. In the promotion process, however, factors such as the ethnic, cultural and demographic characteristics of rural residents must be taken into account and combined with existing medical services to follow the path of the SDM.

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The effect of using social media tool for health education guidance and information in hemodialysis patients

## TSAI Yu-Chen, HO Chao-Hsueh, MA Li-Jun, CHEN Hsu-Fang, WU Chia-Yan, CHEN Fang-Chi

#### Background and objective

Traditional health education guidance which nurse speaks and applies instruction leaflets to patient. Recently, QR code replaced leaflets, although decrease paper wasting but it still exist the insufficient of accessibility and convenience. The aim of investigating the effect of using social media tool for health education guidance in hemodialysis patients.

#### Methods/intervention

This social media was completed on December, 2023. The nurses gathered and designed contents of hemodialytic knowledge and skill for social media. We went through the project as below : 1. Creating a new LINE official account. 2. Apply the name "GitMind" software which to write the map as base of social media. We discuss the presentation of articles (words, pictures, films, connected online...). 3. Utilizing the software of "Bing" and "Canva" to generate sentences, graphic design and video. Total the information and education related hemodialysis including 5 main topics, 16 categories, 49 items in this LINE.

#### Results

We imported the novel intervention that had 134 people joined the media, included hemodialysis patients, doctors and nurses. We followed the satisfaction survey online for patients from March, 1 to 31,2024 : 1. Satisfaction for this social media tool : 98.4%(very good-63.3%, good-34.8%), 0.3%(not bad), 1.3%(no comments). 2. The top 3 usual using the categories by themselves, in order to nursing guidance, notices of hemodialysis patients, introduction of vascular access. 3. Patients suggested us enhanced the top 3 items, in order to diet guidance, medicine guidance and water restriction.

#### **Conclusions/lessons learned**

Our hemodialysis patients had good feedback for the social media tool. Then using this tool, we decreased 94.9% paper wasting. Even ground run by doctors and nurses per-week to explain the condition with patient also used this tool. We will focus on the items of diet guidance , medicine guidance and water restriction to enhance the contents. Social media tool is a good choice in clinical care.

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Improve the users of Long-term care service in Taiwan about understanding the application of Long-term care resources

## CHEN Hsiangyi, TSAO Chihhao, WU Chihan, YU Zihxian, CHENG Shihchun, KUO Chingying, JIAN Xiangting, CHANG Wenling, LI In-Fun, CHOU Chia-Yi

#### **Background and objective**

The aging of the population has become a trend around the world. In Taipei, Taiwan, the number of elderly people has reached the standard of a "super-aged society", accounting for 22% of the population in July 2023. And more than 65% of applicants for long-term care services from the Taipei City Government are over 65 years old, indicating that the age of the applicants (family members or other caregivers) is on the higher side. In Taiwan's long-term care 2.0 policy, case managers are the leaders who guide people to contact long-term care resources for the first time.Facing elderly people in need of resources, case managers often receive repeated inquiries and complaints from the public. Because the content of long-term care resources is too complicated and difficult to understand.

#### Methods/intervention

In order to improve long-term care applicants' awareness of the accessibility of resources, the Long-term Care Management Center of Mackay Memorial Hospital conducted a project study. To gain insight into the reasons why the information that is easily

misunderstood, a 10-question questionnaire on common longterm care resources was designed and purposively sampled 85 Taipei citizens. The pre-test accuracy rate was 72%.

#### Results

There are 5 main factors that are common problems faced by applicants for long-term care services: 1. Too many technical terms 2. Most of the resources are provided on paper, with too much text and too small fonts. 3. Paper copies are easy to lose 4. Too many types of resources (elderly people, children, physically handicapped people, etc.) 5. Information is not updated quickly enough. In order to solve the above problems, Mackay Memorial Hospital implements two major strategies 1. Use communication digital tools such as line group, videos, images, etc. to replace paper copies. 2. Revise the case managers service process to speed up the update of long-term care resources information.

#### **Conclusions/lessons learned**

1. For patients and family caregivers: The caregiver's stress (sleep, physical strength, etc.) is reduced by more than 50%. 2. For staff: The timeliness achievement rate of the care plan in February 2024 was 98%, improving the efficiency of case management. 3. For Hospital: Replace paper with digital data, reduce printing costs by approximately 50% monthly.

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Analysis of the Literacy in Central Venous Catheter Care Among Intensive Care Unit Nurses in a Teaching Hospital in Taiwan

## WANG Szu-Yi, LIN Mei-Hsiang, SUNG Chien-Mei, LEE I-Hsien

#### **Background and objective**

Central venous catheters (CVCs) play a crucial role in the management of patients in the intensive care unit (ICU) of a teaching hospital in Taiwan. While these devices offer healthcare providers convenience in medical interventions, they also pose risks such as catheter-related bloodstream infections (CRBSIs), which can lead to prolonged hospital stays and adverse patient outcomes. Therefore, assessing the literacy of ICU nurses in venous catheter care is essential for optimizing patient safety and outcomes.

#### Methods/intervention

A cross-sectional study was conducted to assess the current competency of ICU nurses in venous catheter care in a teaching hospital. A self-designed questionnaire was administered to gather data from nursing staff members working in ICU settings. Data collection and analysis were conducted between August 1, 2022, and January 31, 2023.

#### Results

A total of 43 completed questionnaires were collected and analyzed. The analysis revealed the following findings: 1.Correctness of catheter site care: catheter replacement timing: 7%, dressing change timing: 32.6%, dressing selection: 32.6%. 2.Correctness of infusion line replacement timing: General infusion lines: 67.4% and Blood products or lipid emulsions: 90.7%.

#### **Conclusions/lessons learned**

Based on the analysis of questionnaire results, there is a need to enhance the understanding and implementation of catheter site care timing and dressing selection among ICU nursing staff. Therefore, in addition to establishing standardized procedures for infusion line care, further measures such as relevant training courses should be implemented to improve the competency of nursing staff in venous catheter care in a teaching hospital ICU in Taiwan.

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Exploring the effectiveness of using cloud based information to enhance the execution of medical instrument maintenance by nursing staff

## LIANG Meei-Huey, SYU Shao-Ze, LIN Yi-Fen, HUANG Ying-Moan

#### Background and objective

Our unit is a surgical ward of a regional hospital, with 50 beds and a total of 15 medical equipment maintenance projects. During the maintenance process of medical instruments, it is necessary to record the maintenance results on a paper-based data card. However, the paper-based record is hung on the instrument with a plastic cover, which makes cleaning difficult and raises concerns about infection control. We hope to use tools to electronically record instrument maintenance results, ensuring data integrity and saving time in querying data.

#### Methods/intervention

The research period is from January to March 2024. For a total of 75 instruments from 15 items in the unit, the maintenance audit content was recorded as a QR code, and the data was immediately uploaded after maintenance. The execution process is as follows: 1. Create a unique QR code for medical equipment. 2. After the QR code is completed, it will be posted on the machine layout. 3. Guide to correctly log in to the QR code form. 4. Confirm the QR code login content in the cloud. 5. Verify login integrity and provide consistency explanations for login data.

#### Results

In February 2024, a completeness check of instrument maintenance records was conducted on 15 weekly medical instrument maintenance items, with a total of 75 QR codes. The results showed that 59 items passed, with a completeness rate of 78.7%. In March 2024, QR code login was reminded again, and the completeness rate increased to 100%. Cloud based information effectively improves the completeness of medical instrument maintenance and can be practically extended to other wards.

#### **Conclusions/lessons learned**

By storing medical instrument maintenance records in the cloud on a computer, for busy nursing work, cloud tools can be quickly used to query instrument data, ensuring that nursing professionals can obtain correct data when using the instrument, and reducing the use of paper. Through the use of cloud information, work efficiency can be further improved.

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The Shared Decision-Making assessment tool can reduce anxiety and improve the quality of medical care among early stage chronic kidney disease patients

## WEI Shu-Yi, TARNG Shung-Yun, CHANG Mei-Yen

#### Background and objective

Using Shared Decision-Making (SDM) support tools, to assist patients facing initial diagnosis of chronic kidney disease (CKD) stage1-3a in gaining a comprehension of their condition, engaging in effective discussions with physicians regarding treatment options and follow-up methods. This will enhance awareness and participation in their own medical process to make appropriate medical decisions.

#### Methods/intervention

1.Our SDM support tool is themed "Facing Early stage of CKD, What Are Your Medical Decision Choices?" 2. The evaluation of the Effectiveness of SDM Tool Assistance Utilizing: the "2021 Patient Safety Improvement Program Effectiveness Assessment Survev Questionnaire (Joint Commission of Taiwan, Public Version)," including three parts: <a>[]</a> Part One: Assessing the impact of tool on your decision-making: rated on a score of 1-5: from score1 being not at all, to score 4 being quite a lot and score 5 being very much. Part Two: Reflecting on the consultation process and expressing your feelings 2 Part Three: Basic information: gender, education, and shared decisionmaker. 3. Enrollment Period: From September 2022 to July 2023. 4. Number of Enrollees: 18 CKD stage 1-3a patients received SDM

tool and questionnaire assessment and 15 successfully completed among them.

#### Results

1. In participants, 53.3% were male.and 66.7% were older than 65 years old. 2. The majority of patients have a high school level of education. The 80% of them actively participating in decision-making by themself. 3. The average score for "Does the SDM tool help you identify issues and make better decisions," is 4.255, indicating a perception of effectiveness is quite a lot to very much 4. For question "Before and after engaging in SDM, how anxious when you facing current medical issues?", the average score of their anxiety level was decreased from score 3.26 to socre 2.13 . 5. The average score for question "Recall your recent clinic visit and circle the numbers next to the following questions to express your feelings." was 4.48. It shows that patients positively acknowledge the efforts made by healthcare personnel in SDM.

#### **Conclusions/lessons learned**

The SDM tools could facilitate the CKD stage1-3a patients much in making appropriate medical decision for themself.

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Utilizing Smart Technology to Disseminate Health Education Messages and Reduce Nursing Workload: A Case Study of Cardiology Ward Patients Receiving Cardiac Catheterization

#### HUANG Yu-Lu, HSU Chieh-Kuan

#### Background and objective

Nursing staff are burdened with busy workloads, including clinical care, documentation, and patient education. In the cardiology ward, staff spend over 40% of their time on inpatient cardiac catheterization procedures, as well as tracking patient understanding and completing records. On average, each patient requires at least 40 minutes of time, leading to increased workload and low satisfaction rates (65% among nursing staff; 90% among patients). The objective of this project is to utilize smart technology tools to facilitate bidirectional communication between staff and patients, provide health information, and other relevant functions to reduce workload and enhance satisfaction levels in hospital.

#### Methods/intervention

1. Review and revise health education leaflets for cardiac catheterization procedures. 2. Record videos for cardiac catheterization procedures, convert them into QR codes, and include them in the leaflets. 3. Implement smart technology

bedside equipment and nursing information systems, establish a bidirectional link for "nursing guidance and video playback" electronic fields, and automatically convert patient test results into formal electronic document. 4.Promote and actively demonstrate the two-way cardiac catheterization health education system and encourage staff to effectively use smart information systems. 5. Simultaneously disseminate leaflets for cardiac catheterization procedures to hospital branch, official websites, and ordinary ward.

#### Results

The time spent on health education for each patient cardiac catheterization procedures decreased from 40 minutes to 20 minutes. Electronic record completeness reached 100%. Staff satisfaction increased to 90%, and patient satisfaction cardiac catheterization procedures was 96%.

#### **Conclusions/lessons learned**

Initially, there were challenges due to staff unfamiliarity with system operations and a preference for paper-based procedures, resulting in some resistance and complaints. However, through multiple arrangements for specialized guidance and communication, cooperation and satisfaction gradually increased.

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Exploring the Relationship between Shared Decision Making and Health Promotion: A Case Study of a Teaching Hospital in the Northern Region

## LAI Chiu-Chun, LI Ling-May, CHEN Wei-Ta, LIN San-Chi

#### **Background and objective**

With the advancement of medical technology, treatment options have become increasingly complex, leading patients to feel confused due to difficulties in understanding medical terminology. This project, exemplified by migraine treatment and smoking cessation, utilizes the Shared Decision Making (SDM) model to guide patients in exploring treatment options, assisting them in understanding their conditions, and integrating their personal preferences and values to jointly devise the most suitable treatment plans.

#### Methods/intervention

The project, spanning from November 2022 to October 2023, emphasized SDM courses, literature reviews, facilitator training, and the development of Patient Decision Aids (PDAs) to aid patients in understanding medical options and decision-making. Assessment and improvement followed the SHARE steps: SEEK: Engage patients in decision-making. HELP: Assist patients in exploring treatment options. ASSESS: Evaluate patients' values and preferences. REACH: Achieve consensus with patients. EVALUATE: Assess patients' decisions.

#### Results

85.0% of healthcare professionals agree that this auxiliary tool contributes to doctor-patient interaction. Among the 94 participating patients, the age groups of 40-49 and 50-59 each account for 27%, with males comprising 48% and females 52%. 88.9% of patients perceive an overall average agreement level of 4.44 regarding the impact of decision-making (on a scale of 1 to 5, where 5 indicates the highest agreement and 1 indicates the lowest agreement).

#### **Conclusions/lessons learned**

Guiding patients through treatment choices using the SDM model can assist them in better understanding their medical conditions and formulating the most suitable treatment plans. Additionally, it underscores the importance of patient empowerment and effective communication in achieving positive health outcomes.

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Rural Healthcare-Crossing Geographical Gaps and Implementing Medical Equality

#### YAN Yu Hua, TSAI Liang Miin

#### **Background and objective**

Optimizing healthcare in regions with limited resources is crucial for achieving social justice and medical equality through universal health insurance. In Taiwan, factors like transportation and population distribution result in inadequate medical services in remote islands, leading to higher death rates in rural areas compared to urban ones. Taiwan's ongoing health insurance policies have gradually improved medical resources and emergency networks in rural regions, reducing the costs and time required for remote medical treatment. This study aims to assess the impact of investing in rural medical care by doctors and Advanced Practice Nurses in 2022 on enhancing public medical utilization and accessibility.

#### Methods/intervention

This study adopted the intentional sampling method and the data was collected in 2022. The outpatients of the rural medical treatment in the case hospital were taken as the research object, and the satisfaction survey form was completed by the medical staff. The case hospital health insurance data was used for analysis.

#### Results

This study found that the overall implementation of western medicine in improving medical care in rural areas could reach 15.2% of the residents' medical treatment rate in towns where individual medical cases were implemented. The three items with the highest satisfaction of above 99% among rural touring medical residents were: doctors' service attitude, touring medical time, and communication skills, and the lowest was medical equipment. This study also found that the common diseases in remote areas were: knee osteoarthritis, unspecified site osteoarthritis, lower back pain, other lumbosacral degenerative spondylitis with radiculopathy, and calcified tendons on the left shoulder inflammation.

#### **Conclusions/lessons learned**

The government's subsidy program and doctor's active participation would help improve the accessibility and satisfaction of people in remote areas. This would be in line with the goal of medical equality and health protection for people.

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Shared Decision-Making in the Treatment of Ankylosing Spondylitis: Experiences with Medication Decision-Making in Individual Cases

## KAO Min-Chen, HUANG Yu-Hui, LAI Pi-Chen

#### **Background and objective**

Ankylosing spondylitis, a genetic autoimmune disease, affects the spine, sacroiliac joints, and tendons, causing progressive back pain and stiffness, impacting daily life. Novel drugs offer improved relief. Shared decision-making empowers informed choices, promoting equal healthcare. This paper explores its evolution.

#### Methods/intervention

This study adopts a qualitative approach through participant observation, and data collection and analysis are conducted through semi-structured questionnaires. A total of 25 cases,3 nurses, care managers, and physicians participated in this research.

#### Results

1.Sense of Participation and Empowerment: By understanding and subsequently selecting treatments that align with their own needs and values, patients gain a sense of empowerment, granting them autonomy in decision-making. 2.Enhanced Clinic Visit Efficiency: Through the application of decision support tools, the time spent in indecision is shortened, thereby improving the efficiency of clinic visits. 3.Anxiety Reduction: Patients' anxiety levels decreased from 100% to 20%, indicating a thorough understanding, which significantly reduces anxiety.

#### Conclusions/lessons learned

Due to medical variations, medication use may require insurance approval, and physicians may make specific medication decisions. These decisions may not always align with shared decision-making between healthcare providers and patients. However, for most patients, shared decision-making fosters participation, enhancing understanding of treatment outcomes and reducing anxiety, promoting compassionate healthcare culture.

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# Poster session 1.3: Salutogenic, safe and healthy workplace

Health Promotion Intervention Plan for Employees of a Local Service Center of Taiwan Electric Power Company

#### LIN I-Ching, YANG Pei-Yu, LAI Fang-Yu

#### **Background and objective**

According to regulations by the Taiwanese Ministry of Labor, companies with 50 or more employees are required to hire onsite health service personnel to provide regular services. These services include 1. health check result analysis and assessment, 2. assisting employers in appropriate job assignments, 3. assessing high-risk workers and providing case management, 4. maternal health protection, and 5. preventing work-related illnesses. The power company is a special industry. Some employees work night shifts and perform high-risk tasks related to high-voltage electricity. This study aims to understand the health examination results of employees at a local service center of Taiwan power company and implement health promotion interventions based on risk assessment to safeguard employee health.

#### Methods/intervention

This study included 356 employees from a Taiwan Electric Power service center who underwent health examinations at Asia University Hospital in 2022. Health behavior questionnaires, work hour surveys, mood thermometers, musculoskeletal symptom surveys, and burnout assessment scales were used for risk evaluated. On-site health service nurse and physician provided health management, actively scheduled health consultations for high-risk employees.

#### Results

Out of the 356 employees, 92 (25.8%) required shift work, 66 (18.6%) were current smokers, and 10 (2.9%) chewed betel nut. 71(19.9%) reported less than 6 hours of sleep. 61 (17%) had metabolic syndrome. 7 had cardiovascular risk assessment

scores >=20%. 54 (15%) were hepatitis B carrier. 8 (2%) were hepatitis C carrier. 116 employees had a mood thermometer score >5 (32.6%). Based on individual risk levels, employees received overload, maternal health, and ergonomics consultations and assessments to determine the severity of occupational injuries or illnesses. Referrals to relevant specialists were made when necessary.

#### **Conclusions/lessons learned**

Employee health is an intangible asset for companies. Early detection of physical and mental health warnings through health examinations and questionnaires allows for workplace environment improvements and appropriate job assignments, ultimately enhancing employee satisfaction and productivity.

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## Enhancing Nursing Staff's Execution of Chemical Spill Handling Procedures

#### CHEN Ching-Hsin, LIAO Meng-Hua

#### **Background and objective**

Accidental spills of anticancer chemotherapy drugs can pose hazards to healthcare workers and the environment. If healthcare workers are accidentally exposed to hazardous drugs or if drugs are splashed on patients, it can lead to longer hospital stays for patients and require more nursing hours to care for patients. Therefore, it is crucial to establish relevant regulations for chemotherapeutic waste to reduce the risk of healthcare workers being exposed to the toxicity of chemotherapeutic drugs and to create a safe working environment for healthcare workers.

#### Methods/intervention

A total of 15 participants were recruited for this study. This crosssectional study used purposive sampling to recruit participants, and through on-site observation, four spill accidents were found in the unit, revealing the following problems: insufficient cognitive understanding of spill handling by nurses and incomplete spill handling guidelines. The intervention measures to solve the problems include: 1. Use game-based teaching and record teaching videos; 2. Bedside demonstration assessment teaching; 3. Design a mnemonic and spill handling 4C poster, and add a "spill handling special package"; 4. Formulate a checklist and establish an audit mechanism. Finally, Pearson's productmoment correlation and stepwise regression analysis were used to analyze the data.

#### Results

Based on the analysis results, the following conclusions can be drawn from this study: (1) The average age of the participants was 32.65 years old; (2) The accuracy of handling chemical drug spills increased from 64.0% to 94.86%. This further improves the

quality of safe hospitalization for nurses and patients, so as to achieve high-quality whole-person care and medical quality.

#### **Conclusions/lessons learned**

Through demonstration teaching and regular audits, the completeness and smoothness of the handling of chemotherapeutic drug spills are effectively improved, which in turn enhances the nursing staff's knowledge of care for chemotherapeutic treatment and improves medical quality to promote patient safety.

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Harmonizing Expectations with Actual Conditions: The Role of Transparent Recruitment in Enhancing Nurse Retention at Health Promoting Hospitals

#### LIU Chia-En, LO Chia-Lun

#### Background and objective

In today's healthcare environment, new nursing staff face significant pressures and high turnover rates. Previous research has scarcely examined their perspectives on recruitment transparency and authenticity. This study explores how complete and credible information affects job fit and retention intentions among new nurses, aligning with Health Promoting Hospitals' (HPH) focus on transparent and supportive work environments.

#### Methods/intervention

This study used a questionnaire to survey 338 nursing staff in Taiwan, assessing how information disclosure during recruitment influences job fit and retention intentions. It compared recruitment information against job seekers' expectations, evaluated the information's credibility, and measured how well job content matched new nurses' expectations. The study then explored how these factors impacted their intention to stay.

#### Results

The results indicated that the completeness and credibility of information significantly affected job fit. Additionally, self-efficacy significantly influenced retention intentions, and the level of job fit further affected the impact of self-efficacy on retention intentions. However, the impact of expectation discrepancies on retention intentions was not significant, suggesting that such discrepancies can be mitigated through improvement measures.

#### **Conclusions/lessons learned**

The study underscores the importance of transparent recruitment information in setting clear expectations for nursing

staff, aligning with HPH values to enhance retention. Hospital administrators should adopt humanized management and increase recruitment transparency to minimize expectation discrepancies, thus improving job satisfaction and retention. Open communication during training at HPH is crucial for reducing psychological dissatisfaction and stress, and supporting effective nursing recruitment and retention.

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# Seamlessly integrate discharge preparation services through team collaboration

#### YEN Kuei Hua, FU Yung Hsuan

#### **Background and objective**

This ward is a rehabilitation ward, where patients often experience delayed discharge or reluctance to leave. In 2020, only 4% of inpatients received long-term care 2.0 services. A total of 94 survey forms were distributed, but only 67% of them were completed in full. The satisfaction rate from the survey was only 71.4%. Therefore, a quality improvement team was established with the aim of improving the completeness of discharge preparation services performed by nursing staff to 85%, achieving an 85% awareness rate of discharge preparation services, reaching a 90% satisfaction rate for discharge preparation services, and enhancing the quality of care.

#### Methods/intervention

1.Establish a Discharge Service Team 2. Implement Education and Promotion 3.Develop Norms and Procedures 4.Produce Promotional Posters

#### Results

1.From January 1, 2021, to July 31, 2023, a total of 956 discharge preparation services were executed with a completeness rate of 90.4%. 2.From April 1, 2021, to May 31, 2021, a total of 2 inservice education sessions were conducted, with 28 participants and an awareness rate of 88%. 3.Long-term care 2.0 services received: 38 individuals in 2021, 36 individuals in 2022, and 41 individuals in 2023. 4.At least 2 discharge preparation service satisfaction surveys were conducted annually:2021: 90% and 92% ; 2022: 93.3% and 93.8% ; 2023: 95.6% and 95.4%.

#### **Conclusions/lessons learned**

Through this improvement plan, colleagues have gained a clear understanding of the discharge preparation content and procedures. They can provide patients and their families with relevant information regarding discharge preparation and longterm care, enabling them to make early choices and preparations. This ensures that upon returning home, they receive immediate assistance, thereby enhancing the quality of care. Contact: LIN YI-FEN TAIWAN tank4121324@gmail.com

Improve the completion rate of emergency nursing staff assisting in the collection of evidence in sexual assault cases

#### KUO Hung-Hui, HU Shu-Yun

#### Background and objective

Sexual assault evidence collection is time-sensitive; every detail of the process is crucial to the rights of individual cases and legal issues. Sexual assault evidence collection is very important; it not only provides justice for victims but also serves as crucial evidence for the court. The emergency nurse plays a vital frontliner role in assisting with the evidence collection process. The integrity of the evidence collection is essential; if the evidence lacks integrity, it could result in incomplete or destroyed evidence, thereby impacting the rights of individual case and giving the perpetrator an opportunity to escape punishment.

#### Methods/intervention

An analysis of the current situation has revealed that the main reasons for the issue are the complex procedures and the unfamiliarity with the operations among staff. To improve the integrity of evidence collection assisted and provided by emergency nurses, several solutions have been proposed. These solutions include providing educational training, establishing an inspection mechanism and regularly monitoring of the completeness of procedure, as well as designing a convenient evidence collection kit, execution process prompt cards, and a template of consent forms to improve the completeness of evidence collection and the accuracy of consent form completion. By using tabletop exercises, recording lessons, and incorporating popular tabletop games in the course, trainees can comprehensively learn and integrate knowledge.

#### Results

After the project was implemented, the completeness rate of the evidence collection kit in sexual assault cases assisted and provided by nurses increased from 53.3% to 100%, effectively achieving the project goal.

#### Conclusions/lessons learned

During the sexual assault evidence collection, emergency nurses must provide both aid and expertise with sensitivity and professionalism. In this process, they must respect the privacy and dignity of the individual while ensuring the integrity and reliability of the evidence. This project enhances emergency nurses' professional capabilities through a diverse training process, enabling them to effectively and professionally assist with sexual assault evidence collection, thereby protecting victims and ensuring justice is served effectively and fairly. Contact: KUO Hung-Hui TAIWAN m822@mmh.org.tw

## A Study on Job Stress, Organizational Commitment and Well-being of Nurses-Taking Hospital as an Example

#### LIN Yu-Lan, HSIEH Ming-Chuan

#### Background and objective

Healthcare is a labor-intensive and highly stressful industry that relies on a large number of medical staff. The ratio of practicing nurses in Taiwan is only 58.4%. Therefore, this study aims to explore the relationship among job stress, organizational commitment and well-being of nurses.

#### Methods/intervention

This study adopted a cross-sectional design. The survey tool is a self-created structured questionnaire. Divided into three aspects of job stress, organizational commitment and well-being scale, and obtained IRB approval. Taking the nursing staff from a medical center in Taiwan as the research objects, a stratified proportional sampling method was used to collect data through an online questionnaire; the response rate was 91%, and uses SPSS 25.0 statistical software for data analysis.

#### Results

The average working pressure of nurses is moderate (M=3.62, SD=0.64). Education level, marital status, number of children, job title, age, years of service, and advancement level show variances in organizational commitment (p<.05), Nursing staff with advancement level above N3 and N4 have higher organizational commitment. There are differences in well-being among job titles and advancement level. Job stress is negatively correlated with well-being, and organizational commitment is moderately positively correlated with well-being (r=0.56, p=0.000). Emotional commitment and normative commitment in organizational commitment are predictors of well-being, with an explanatory power of 49.7% (F=10.193, p< 0.001).

#### **Conclusions/lessons learned**

This result can provide a reference for the future human resources management of the hospital. Hospitals should improve their organizational functions, hospital administrators should create a friendly working environment. Diversify job duties and increase employee satisfaction to improve well-being, and reduce the turnover of nurses.

#### Contact:

LIN Yu-Lan Department of Nursing, National Cheng Kung University Hospital, College of Medic TAIWAN linyl033534@gmail.com The Relationship between Work Stress and Workplace Well-being in Medical Affairs Administrators During COVID-19 – A Study in a Medical Center

## SU Tzu-Hua, CHEN Jin-Liang, CHEN Yu-Cheng

#### **Background and objective**

During the COVID-19 period, the government's ongoing epidemic prevention policies can reduce the risk of infection and mortality. However, they can also increase the work norms, processes, and workload of medical personnel, impacting their physical, mental, and spiritual health, as well as their workplace well-being.

#### Methods/intervention

The research was conducted using a cross-sectional survey method. The survey focused on the opinions of healthcare administration personnel regarding work stress and workplace well-being. Data was collected through questionnaire responses. Data analysis was conducted using IBM SPSS 25.0 statistical software.

#### Results

The level of work stress is highest in the category of professional knowledge and skills, whereas workplace well-being is most prominent in the category of social relationships. Both aspects exhibit significant differences in the administrative group. Pearson correlation analysis reveals a significant negative correlation between work stress and workplace well-being. Multiple linear regression analysis indicates that administrative group and work stress are significant predictors of workplace well-being, with work stress demonstrating a notable predictive ability for workplace well-being (F=12.639, p=0.000).

#### **Conclusions/lessons learned**

Research findings are consistent and complementary to the concept of the PERMA happiness five-element model proposed by the father of positive psychology, Martin Seligman. It is recommended to establish a streamlined and efficient operating system to simplify processes, provide timely and appropriate rewards and encouragement, offer the latest relevant courses promptly, and develop more professional capabilities and services, thereby enhancing workplace well-being and simultaneously improving the quality of medical services.

#### Contact:

SU TZU-HUA National Cheng Kung University Hospita TAIWAN <u>n680123@gmail.com</u> Adopt multiple strategies to increase the handwashing compliance rate of ward units

## LIU Hsiao-Chun, CHUNG Jui-Hei

#### **Background and objective**

Since 2009, the World Health Organization (WHO) has proposed the "Save Lives: Clean Your Hands" campaign, and at the same time designated May 5 as "World Hand Hygiene Day". While hand hygiene is easy to implement, many health care team members in healthcare facilities do not adhere to the same level of compliance, which continues to cause infections. The hospital is a regional hospital with a total of 321 beds, and the care is mainly for patients with respiratory care, chronic disease care, and long-term care. According to the results of the hand hygiene compliance audit of the infection control room of the hospital in December 112, it was found that only 59.5% of the hand washing compliance of the ward unit and 70.9% of the correctness reached the threshold of the hospital. The important factors of low handwashing compliance were confirmed by cause analysis, including: 40% forgot to be busy, 35% felt that the timing of handwashing was unclear, 20% did not care about handwashing, and 16% were other items. Specific goal: Increase the handwashing compliance rate of ward units.

#### Methods/intervention

Methods: 1. Play a hand-washing song on the switchboard every morning to remind everyone to wash their hands, 2. Make a hand-washing video to improve the correct awareness of the five opportunities for colleagues to wash their hands, 3. Place hand sanitizer at the foot of each bed, 4. Set up seed teachers in each ward to guide one by one, 5. Post slogans on the timing and steps of hand-washing in the information care vehicle and dressing change vehicle. 6. The unit strengthens irregular inspections.

#### Results

After the implementation of the project and the intervention of the measures, the compliance of nursing staff in the ward unit increased from 59.5% to 79.1%, and the correctness increased from 70.9% to 72.3%.

#### **Conclusions/lessons learned**

Hand hygiene is the most important part of infection control, and it is the simplest and most effective method of preventive medical care. How to avoid the spread of pathogens in the process of medical care and reduce the occurrence of nosocomial infections will be a topic that we need to pay attention to again and again, and hope that through continuous monitoring and improvement, medical staff can understand the purpose of hand washing, and then be willing to change their behavior and implement hand hygiene in clinical care, so as to truly maintain patient safety.

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## Exploring Young Doctor's Spiritual Health Literacy in Palliative Care

#### TSU Chiu Hua, LIN Ming Nan

#### Background and objective

End-of-life patients are a vulnerable population that requires special care to improve their health equity. The author, a social worker, has been involved in medical education since 2016, teaching medical end-of-life issues to medical students and postgraduate year (PGY) trainees. The 2-year PGY training, implemented in Taiwan in 2019, is a program covering various medical specialties. This study explores young doctors' attitudes towards spiritual health literacy such as palliative care issues, patient autonomy through lectures and demonstrations by social workers.

#### Methods/intervention

Participants: PGY trainees guided by medical social worker, engaging in advance care planning (ACP) clinics, and completing the "Life and Death in Medicine" course. 36 participants were surveyed over 2 years through immediate anonymous questionnaire responses after the course and the clinic.

#### Results

A total of 36 PGY trainees were surveyed, consisting of 22 males and 14 females. The satisfaction rate about the process of the ACP clinic is high, with trust establishment and interaction (94.3%), empathetic explanations and communication (97.2%), leaving time for the opinion expression and emotion addressing (91.7%), team coordination and professionalism (88.9%), After the course and the clinic, PGYs share their personal views on Medical Life and Death: "Death isn't medical failure; failure to ensure peaceful passing is." (71.9% strongly agreed) "Patients have rights to informed consent, choice, and decision-making." (90.6% very understanding) "Palliative care is active care, not abandonment." (80.6% strongly agreed) "If diagnosed in a vegetative state, I'd refuse artificial nutrition and hydration." (61.1% strongly agreed) "Death is part of life; I'd assist patients in dignified endings." (77.8% strongly agreed)

#### Conclusions/lessons learned

Through the training of young doctors, such as PGY trainees, they highly value ACP clinics, supporting patient autonomy, palliative care principles, and the role of love in healthcare. This training improve the spiritual health literacy of the trainees and fosters a mindset of health equity in treating vulnerable patients.

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## Reducing Incidence of Medical Device-Related Pressure Injuries in the Orthopedic Operating Room

## SHEU Yu-Shiuan, WANG Pei-Ru, CHEN Chia-Lan, HSIEH Yi-Cheng

#### **Background and objective**

From January 2021 to June 2022, the average incidence rate of medical device-related pressure injuries (MDRPI) in orthopedic surgeries was 0.56%. The motivation for undertaking this improvement project was to mitigate the risk of patients developing pressure injuries from the use of surgical equipment.

#### Methods/intervention

To identify issues leading to pressure injuries caused by orthopedic hemostatic device medical equipment, methods included on-site audits of personnel operating procedures, testing of hemostatic machines and devices, formulation of a questionnaire to assess surgeons' knowledge of operating hemostatic devices, conducting educational training for personnel on correct operation of hemostatic devices, changing protective operating procedures, and creating a manual for protective operations. Additionally, faulty hemostatic machine and device components were replaced, and instruments were regularly inspected.

#### Results

The average occurrence rate of pressure injuries caused by orthopedic tourniquet medical equipment decreased from 0.56% between January 2021 and June 2022 to 0% between May and December 2023 after improvement, which is below the target of 0.28%. The additional benefits after improvement not only reduced the severity of patient pressure injuries to none, decreased the time for nursing staff to report pressure injuries, but also shortened the wound care time for surgical pressure injuries.

#### **Conclusions/lessons learned**

The project team focused on literature review, changing operational methods, and eliminating defective products as the main pillars of this improvement. After changing the operation method of the tourniquet, not only does it provide even protection to patients during tourniquet operation, but it also enhances the overall cleanliness of the tourniquet appearance. This significantly improves the satisfaction of surgeons and nurses during the operation process.

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Preliminary Exploration of Improving Nursing Staff's Performance in Performing Cleansing Enemas Using Enema Cover Bags

## CHANG Ting-Hsuan, LIN Yi-Fen, LIANG Meei-Huey, CHU Ying-Shan, YANG Shih-Chen, TSAI Yi-Fam

#### **Background and objective**

In our medical ward, 5-6 patients require Mechanical Bowel Preparation (MBP) monthly pre-surgery or exams. During execution, about 85% of long-term bedridden patients experience significant fecal leakage or splashing onto healthcare workers, leading to accidents. Surveys indicate each enema cleaning session takes about 45 minutes, with staff and caregiver satisfaction below 50%. Hence, this project aims to design a simple, convenient, and quick enema cleaning process to enhance patient comfort, reduce caregiver burden, and minimize fecal transmission contamination risk.

#### Methods/intervention

Presented by the team, the "Enema Cover Bag" offers simplicity and accessibility using existing medical materials.

- Materials: Scissors, No. 10 zipper bag (24\*34cm), male urinary sheath (100cm), transparent tape, waterproof breathable transparent dressing (OP-site, 10\*12cm).
- Production Process: Cut the bag's upper and one side, attach OP-site to upper, urinary sheath to lower side, and create 1 cm hole at lower side center.
- Instructions for Use: Align over patient's anus, hang down, insert rectal tube through hole for enema.
- Post-Enema: Feces collect directly; transparent packaging aids observation. Dispose in toilet, following infectious waste guidelines.

#### Results

- The enema cover bag is easy to assemble, convenient to carry, and disposable, ensuring hygiene. Each takes about 2 minutes to make, costing around NT\$7. The project team established production procedures and usage standards to standardize the process.
- 2) From October to December 112, 16 patients were successfully treated without contamination. Each procedure saved about 30 minutes, with a 33.3% improvement rate. Nurses, ward assistants, and caregivers reported 100% satisfaction. The method can be replicated in other wards for efficient implementation.

#### **Conclusions/lessons learned**

The enema cover bag is user-friendly and reduces fecal contamination and spillage, alleviating pressure on medical staff, reducing caregiving hours, and promoting patient-centered care.

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CHANG Ting Hsuan Nursing Department, Taipei City Hospital, TAIWAN <u>B6014@tpech.gov.tw</u> The effectiveness of utilizing a smart detection system in the chronic care ward of the community hospital to reduce patient falls.

#### YEN Kuei Hua, CHEN Tzu-Chi, LIN Yi-Fen

#### **Background and objective**

Preventing falls is a yearly safety goal set by the government. Falls result in physical and psychological harm to patients, prolonging their hospital stays and increasing costs. In 2021, there were 10 patient falls in the chronic ward, with an incidence rate of 0.08%. "Transferring to and from bed" accounted for 60%, and falls despite the presence of caregivers accounted for 80%. 71% of patients did not believe they would fall, while 50% of caregivers did not believe patients would fall. Therefore, a task force was established in January 2022, aiming to reduce the fall incidence from 0.08% to 0.05% and the injury rate from 33% to 8%.

#### Methods/intervention

- 1) Establishment of a Fall Prevention Group
- 2) Implementation of Smart Mattress Detection System
- Organization of Training Sessions for Nursing Staff on Relevant Systems
- 4) Development of Care Protocols and Monitoring Systems

#### Results

- In March-April 2022, six training sessions were conducted for nursing staff, with a total of 64 nursing staff members participating.
- In May-June 2022, patient and caregiver fall prevention education sessions were held in the wards, with a total of 984 participants.
- In 2022, there were 2 fall incident reports, and in 2023, there were 5. The fall rate decreased from 0.08% to 0.02% in 2022 and to 0.04% in 2023. The fall injury rate decreased from 33.33% to 0%.

#### **Conclusions/lessons learned**

Utilizing artificial intelligence technology, the use of a smart mattress detection system can effectively prevent patient falls. Through features such as bed exit alerts, abnormality reminders, and daily care functions, nursing staff can be alerted to provide assistance to patients before fall risks occur. This helps nursing staff to have real-time information about patients, effectively reducing and preventing inpatient falls, enhancing patient safety, and improving care efficiency and quality.

#### Contact:

YEN Kuei-Hua Taipei Municipal Gan-Dau Hospital TAIWAN khyen@gandau.gov.tw Exploring the Relationship of Burnout and Work Resilience on Turnover Intention in Nurses

## WANG Kuei-Ying, LEUNG Pak-On, LU Tsan-Ting, YOBELINA Yohana

#### Background and objective

Studies show that burnout decreases job satisfaction and increases turnover risk among nurses, while workplace resilience reduces burnout and turnover intentions. This study explores the relationship of burnout and work resilience on turnover intention in nurses.

#### Methods/intervention

This descriptive cross-sectional study recruited clinical nurses with at least 2 years of experience in a southern Taiwan regional teaching hospital. Structured questionnaires are used to assess nurses' burnout, work resilience, and turnover intention.

#### Results

255 questionnaires were distributed with a retrieval rate of 84.31%. SPSS 25.0 was used for analysis, including independent t-test, one-way ANOVA, Pearson correlation coefficient, and multiple regression analyses. Findings revealed moderate burnout (M=59.18, SD=22.25), workplace resilience (M=154.41, SD=25.45), and turnover intention (M=30.28, SD=10.06). Younger, unmarried participants with less experience had higher turnover intention. Burnout positively correlated with turnover intention (r=.630, p<.001), while workplace resilience negatively correlated with it (r=-.509, p<.001). Predictors of turnover intention included years of work experience, burnout and work resilience, explaining 45.5% of its variation.

#### **Conclusions/lessons learned**

The results can facilitate nursing administrators to enhance onthe-job training programs. By addressing stressors with effective coping methods, nurses can improve their stress management and workplace resilience, contributing to higher physical and mental health and work motivation.

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The Investigation of the effect of the reasons of Rationing Nursing Care on the quality of holistic nursing care

#### TANG Yi-Chen

#### **Background and objective**

In the context of global healthcare, especially in areas with high patient loads like Taiwan, RNC (Resource Not Commensurate) is

a common issue. It is caused by multiple factors including staff shortages, high acuity of patients, and insufficient material resources. These constraints not only hinder patient care but also lead to job dissatisfaction and increased stress among nursing professionals. As this issue is less discussed in the region of Taiwan, this study highlights the critical areas needing intervention to improve patient care and the nursing work environment.

#### Methods/intervention

260 ward nurses from a medical center in Taiwan were selected through convenience sampling to participate in this study. Chinese Perceived Implicit Rationing of Nursing Care (CPIRNCA) -This scale measures the frequency of rationing as perceived by nursing staff. Chinese Rationing of Nursing Care Reasons (CRRNC) - This scale helps identify the reasons behind why certain nursing tasks are omitted.

#### Results

The most frequently omitted nursing tasks included documentation, timely medication administration, and patient monitoring. Major reasons cited for these omissions were high patient-to-nurse ratios, unexpected increases in patient volume, and lack of support staff. This study's findings underscore the substantial impact of resource limitations on nursing care quality. The data suggest that improving staffing levels, enhancing workflow efficiency, and better resource allocation could mitigate the effects of RNC.

#### **Conclusions/lessons learned**

RNC is a pervasive issue that detrimentally affects patient care and nursing job satisfaction. This study highlights the need for systemic reforms to address the causes of RNC in Taiwan. By adopting the recommended health promotion strategies, healthcare institutions can improve nursing care quality and create a more supportive work environment for their staff.

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Exploring workplace violence and related factors among nurses: the example of a medical hospital in Taiwan

#### HSIEH Hsueh-Nu, CHUANG Chao-Hua

#### Background and objective

Nurses are a high-risk group of workplace violence. The negative impact of workplace violence is far-reaching and related factors are complex. This objective of study is to explore workplace violence and related factors among nurses.

#### Methods/intervention

This was a cross-sectional, correlational research design study conducted in 2020 with a sample of 346 nursing staff from a medical institution. We collected data using a structured anonymous questionnaire and analyzed the prevalence and related factors of workplace violence among nurses using descriptive statistics, chi-square tests, and logistic regression analysis.

#### Results

A total of 317 workers were completed questionnaire (completion rate 91.6%). Most of participants were female (96.8%), aged 40 or younger(55.8%), married(60.3%), and college(inclusive) educational levels(76.7%). The major work characteristics were job tenure of 10 years or less(53.9%), nonsupervisory position(87.4%), shift work(71.9%), working hours more than 40 hours per week(80.8%), and direct contact with patients(94.6%). The prevalence of workplace violence in any type was 44.5%, the prevalence of psychological and physical violence was 41.6% and 14.2%, respectively. The main source of violence was patients. The related factors of physical violence were gender(OR = 5.63, 95% CI = [1.49, 21.27 ]) , shift work(OR = 5.13, 95% CI = [1.52, 17.28]), and the number of colleagues working together each day(OR = 2.41, 95% CI = [1.01, 5.76]); the related factor of verbal abuse was working hours per week (OR = 2.05, 95% CI = [1.10, 3.82]); the related factor of bullying was religious belief (OR = 5.52, 95% CI = [2.00, 15.29]); the related factor of sexual harassment was supervisory position (OR = 4.89, 95% CI = [1.88, 12.69]).

#### **Conclusions/lessons learned**

The prevalence of workplace violence among nurses was high, with verbal abuse being the most common form of psychological violence. It is recommended that managers develop specific strategies tailored to the characteristics of each department to reduce the risk of workplace violence and health hazards for nurses.

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The application of innovative strategies to enhance nursing manpower recruitment

## LU Wen-Chuan, TSAI Yi-Fam, HSUEH Thomas Y

#### **Background and objective**

In recent years, the global nursing workforce shortage has become a major challenge. The background of this project is based on the Northern Taiwan Regional Hospital as an example. According to statistics, the average annual recruitment of new nursing staff during 2021-2022 is only 40 (3.33 people/month), which cannot meet actual clinical needs. We hope to share experiences in improving nursing manpower through diverse recruitment strategies to optimize the quality of nursing services and maintain patient safety.

#### Methods/intervention

The diverse recruitment strategies 1.A real-time manpower system managed by using data-driven recruitment decision 2.To establish and enhance the hospital's brand. 3.To optimize interview skills in administrates to allocate new staffs. 4.To develop diversified and innovative recruitment methods: a.To increase turnover rate of patients with clinical care modification to create a friendly working environment b.To provide a 24-hour contact friendly manpower recruitment 5.To provide higher salary rewards for all nursing staffs.

#### Results

From 2023 to March 2024, a total of 76 nurses were recruited to join the clinical care, with an average increase of 6.33 nurses per month. The overall increase rate was 90.1% while compared with the recruitment number of 40 in 2021-2022 (3.33 per month), showing that these recruitment strategies effectively accelerate the recruitment of nursing manpower.

#### **Conclusions/lessons learned**

The adequacy of nursing manpower is directly related to the efficiency and patient care quality. The real time data analysis and clinical strategy modification might enhance nursing manpower recruitment. We suggested these protocols might provide new viewpoints in nurses recruitment for other hospitals.

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## After the epidemic, create a magnetic nursing work environment

## HUANG Hsin-Ping, YEH Ynh-Chen, CHIANG Pin-Yi

#### **Background and objective**

Taiwan has always faced a shortage of nursing staff. In recent years, the COVID-19 outbreak has also coincided with the outbreak. Many medical staff are unwilling to work in hospitals because of fear. Outpatient nursing staff need to serve a large number of patients every day and meet their various needs, so they often face many sources of stress. Therefore, a reasonable number of outpatient registrations, on-time consultation by doctors and the adoption of a flexible scheduling system can effectively reduce the work pressure of outpatient nursing staff. (Yang, Y. Y., 2005). The turnover rate of outpatient nursing staff in our hospital in 2022 is 12.6%, which is higher than the national nursing turnover rate of 11.73% (Department of Nursing and Health Care, Ministry of Health and Welfare, 2022/07), so it is very important to retain outpatient nursing staff.

#### Methods/intervention

A task force has been set up since January 2023 to conduct indepth and unstructured interviews to understand the factors affecting retention, including: family factors, vacation arrangements, shift patterns, learning plans and information delivery efficiency, etc. Therefore, we plan the following possible improvement measures: 1. Establish smooth communication channels to reduce psychological uncertainty. 2. By formulating a learning plan and announcing it as early as possible. 3. Establish friendly and fair scheduling principles. 4. Establish a vacation system that suits staff's needs. 5. Develop information intelligence auxiliary tools . 6.Organize outdoor activities to enhance unit cohesion.

#### Results

By December 2023, through the intervention of the project team, the retention rate of nursing staff with more than 1 year of experience will be 92.2% (83/90). Further analysis of the reasons for non-retention included personal career planning to transfer to other units in the same hospital (4), retirement (1), incompetence (1), and salary not meeting expectations (1).

#### **Conclusions/lessons learned**

Creating a two-way, open and healthy working atmosphere can greatly improve job satisfaction and life satisfaction. Through the promotion of this project, our working environment can become a huge magnet, attracting more nurses willing to stay in the hospital.

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Using information technology to shorten shift handover time for nurses in acute psychiatric wards

## CHEN Hui-Zhen, CHENG Su-Zu, YAO Wen-Chen, CHEN Yu-Ju, LI Ling-May, CHEN Wei-Ta, LIN San-Chi

#### Background and objective

Use information-based operations to improve nursing staff's delay in leaving get off work due to shift handover issues, thereby improving satisfaction.

#### Methods/intervention

2023.01.01-2023.06.30 Conduct shift time statistics and satisfaction survey based on NIS nursing information. Due to the incompleteness of the system, nurses can only complete nursing medical record writing. An online nursing shift operation information system is promoted and combined with this project. The main reason is improvement.

#### Results

2023.07.1 replaced the new version of HIS Yangshuo information system, promoted the online nursing handover information system, held multiple consensus meetings in the hospital, gradually revised and adjusted the needs of each unit, jointly structured key handover projects according to the attributes of the unit, and integrated nursing The records were checked and transferred to the shift operation system. All medical departments were connected via e-commerce. Handwritten shift orders were cancelled. The shift handover time was shortened from 30-45 minutes to 5-15 minutes. The overall improvement was 90%. The overtime rate was originally 90%. It dropped to 0%, and the satisfaction score of 12 nursing staff increased from 0 to 100%. Promote informatization to clearly care for patients' health and safety issues.

#### **Conclusions/lessons learned**

Promoting computer informatization can help integrate nursing information and simplify processes, and increase the time spent caring for patients.

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## Establishing a Secure and Supportive Healthcare Work Environment

#### LI Meiyi

#### **Background and objective**

The healthcare sector has faced escalating challenges in workplace safety, notably incidents of violence. In response, initiatives were implemented to establish a secure and supportive environment for healthcare professionals, prioritizing their well-being. The objective was to foster a workplace conducive to a sense of security and care for staff.

#### Methods/intervention

Various proactive measures were adopted to achieve this goal. Firstly, a dedicated Employee Care Center was established, providing a space for staff rejuvenation during breaks and offering nourishing snacks for their well-being. Additionally, employees were equipped with mobile phones to facilitate easy access to emergency services, action nursing vehicles, and computers for immediate communication with security personnel, addressing the rising prevalence of violence.

#### Results

Feedback from 100 staff members demonstrated a high level of satisfaction with the implemented measures. The provision of dedicated relaxation space and nutritional snacks garnered positive responses, contributing to an improved work environment. Mobile phones and immediate access to security resources played a crucial role in addressing concerns regarding healthcare violence and fostering staff's sense of safety.

#### **Conclusions/lessons learned**

Positive feedback from staff highlights the success of initiatives in establishing a safer and more supportive healthcare work environment. The Employee Care Center and safety measures not only addressed immediate concerns but also enhanced overall job satisfaction. This underscores the importance of continuous adaptation to meet evolving needs in demanding healthcare roles.

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Initiatives of Chidoribashi General Hospital towards Physicians' Working Style Reform

#### ARIMA Yasuharu

#### **Background and objective**

In Japan, long working hours among employees have been prevalent, leading to issues such as overwork-related deaths and suicides. In response, the government initiated a working style reform program in 2019, implementing regulations on maximum working hours to address excessive overtime. Starting from April 2024, these regulations will also be implemented for physicians. Physicians, as workers, have the right to work in a healthy environment. Our hospital has implemented measures to address excessive working hours among physicians.

#### Methods/intervention

In December 2018, we launched the Chidoribashi General Hospital Physician Labor Project. This included:

- 1) Utilizing card readers to comprehensively track the number of hours physicians are in the hospital.
- Creating a list, known as the agreement list on labor, to distinguish between work and self-study.
- 3) Developing and implementing overtime application forms.
- 4) Institutionalizing half-day leave after night shifts.
- 5) A task shifting system to balance workloads.

#### Results

Physicians became more aware of themselves as workers, leading to a reduction in physicians' overtime hours.

#### **Conclusions/lessons learned**

Initiatives to reduce physicians' overtime were successful, resulting in a decrease. However, despite task shifting, workloads for physicians have not significantly decreased, and they continue to face busy schedules. Fundamental solutions for improving physicians' working conditions require not only actions within our hospital but also nationwide increases in the number of physicians, necessitating government-led reforms.

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ARIMA Yasuharu Chidoribashi General Hospital, JAPAN arima.yasuharu@gmail.com Health Promoting Lifestyle and Insomnia among Psychiatric Nurses with Shift Work in Taiwan: A Nationwide Survey

#### SHEN Shu-Hua, CHIANG Wen-Jen

#### **Background and objective**

The circadian rhythm of shift work may affect physical and mental health of nursing staff and may also have other adverse effects. It is an important issue to pay attention to the health problems of psychiatric nursing staff. To explore factors affecting the health promoting lifestyle and causes of insomnia among psychiatric nurses in Taiwan.

#### Methods/intervention

This study was a cross-sectional research. The subjects of psychiatric nurses were recruited from psychiatric hospitals in Taiwan with a nationwide survey approach. Instruments used in this study inclues "Health Promotion Lifestyle Profile II" and "Chinese Version of the Athens Insomnia (CAIS- 8). Hierarchical regression analysis was used to test the effects of demographic characteristics, health risk factors, different shift patterns and healthy lifestyles on insomnia among psychiatric nurses.

#### Results

Of 1669 nurses participated in this study. Forty-two percentage of the nurses (n = 401) reported to have insomnia. The mean score of health promotion lifestyle was 2.45 points with a scale of 1 to 4. Religion beliefs ( $\beta = .015$ ; p.  $\leq .05$ ), health risk factors ( $\beta = .160$ ; p.  $\leq .001$ ), work shifts ( $\beta = .066$ ; p.  $\leq .05$ ), health responsibility ( $\beta = - .121$ ; p.  $\leq .01$ ), spiritual growth ( $\beta = - .202$ ; p.  $\leq .001$ ), interpersonal relationship ( $\beta = - .155$ ; p.  $\leq .001$ ), and stress management ( $\beta = - .427$ ; p.  $\leq .001$ )were significant variables predicting insomnia among nurses. The model accounted for 23.5% of the variances.

#### **Conclusions/lessons learned**

In this study psychiatric nurses are found to have higher rate of insomnia among different nurses. It is important for hospital managers to pay attention to the health promotion style of nursing staff working in the evening and night shifts and plan health promotion activities for different shifts.

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Enhancing the Emergency Response Capability and Comprehensiveness of Obstetric and Gynecological Nursing Personnel

## CHEN Yu-Ting, HUANG Hsin-Hui, LI Wei-Ching

#### Background and objective

Emergency incidents are most frequently observed within hospital general wards. Delays in adhering to emergency protocols can prolong response times, thereby delaying the timely transfer of patients to intensive care units for advanced treatment. Such delays increase the risk of patient mortality and may escalate into medical disputes. However, timely identification and resolution of issues by nursing personnel, along with early administration of cardiopulmonary resuscitation (CPR) and defibrillation, can significantly improve patient survival rates.

#### Methods/intervention

Post-event interviews and surveys aimed at analyzing the completeness of emergency responses among nursing personnel revealed that incomplete execution of emergency procedures was primarily due to factors such as unfamiliarity with emergency equipment and medications, lack of emergency experience, and inadequate educational training. To address these shortcomings, a comprehensive strategy was developed based on current analysis and literature reviews. This strategy involves utilizing instructional videos uploaded to online platforms and converted into QR codes for convenient access to critical emergency techniques such as defibrillator operation, endotracheal intubation, and manual resuscitator use. Additionally, emergency medication flashcards, flowcharts, obstacle course assessments, and scenario-based role-playing exercises are employed to enhance nursing personnel's familiarity and competence. Regularly scheduled educational training sessions, integrated into a two-year learning passport system, facilitate ongoing improvement in emergency response completeness.

#### Results

Following the implementation of the program, the completeness of emergency responses among nursing personnel increased significantly, from 58.8% to 97.7%. This substantial improvement effectively elevated the quality of emergency responses, leading to enhanced patient survival rates and a reduction in medical disputes.

#### **Conclusions/lessons learned**

In conclusion, enhancing the completeness of emergency responses among nursing personnel not only improves their knowledge and skills but also emphasizes the importance of executing the most comprehensive and accurate emergency measures in the shortest possible time frame. This approach helps to mitigate the impact of human factors or teamwork issues on the success rate of emergency interventions. Ultimately, it leads to improved patient safety and enhances the quality of medical care provided.

Contact: TAIWAN hsc951501470@gmail.com Factors affecting perceived heat stress in hospital kitchens and impact of perceived heat stress on workplace safety

#### LEONG Kenneth Bao Ren, LIM John Wah

#### **Background and objective**

Hospital food service workers are exposed to a variety of workplace hazards in their daily work such as cuts and burns while also being exposed to high temperatures due to cooking processes. Perceived heat stress has been shown to be correlated to physical discomfort, fatigue and occupational injuries in various occupational settings. However, there has been limited literature on the impact of heat stress among hospital food services workers. This study aims to investigate the factors influencing perceived heat stress in hospital kitchens and to explore the impact of perceived heat stress on workplace safety among hospital food service workers.

#### Methods/intervention

A cross-sectional self-administered questionnaire was distributed to all food service workers employed at a tertiary hospital in Singapore. The study incorporated validated questionnaires on perceived heat stress, work processes in hospital kitchens as well as the prevalence of occupational injuries.

#### Results

The response rate was 96% (n=122/127). Using an abbreviated perceived heat stress index, Chefs faced the highest perceived stress compared to other food service workers, such as dietary attendents, cleaners, dishwashers and supervisors (p<0.01). Workers of Chinese ethnicity had higher perceived heat stress compared to other ethnic groups (p=0.01). Food service workers with perceived high heat stress had a higher prevalence of workplace injuries at 40.4%, compared to food service workers with lower perceived heat stress at 21.2% (p=0.048).

#### **Conclusions/lessons learned**

This study investigated heat stress perception in hospital kitchens and its impact on workplace health. Findings from this study would be useful to raise awareness of the importance of addressing perceived heat stress at the workplace. By addressing these factors, healthcare institutions can promote employee well-being, enhance productivity, and ultimately ensure a safe workplace environment.

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## Creating a Happy and Healthy Workplace for a Healthy Workforce

## TSAI Hui Hua, LIU Jia Yu, CHEN Ya Chu

#### **Background and objective**

In recent years, corporate sustainability has become a new benchmark in business operations, and specific strategies of ESG (Environmental, Social, and Governance) are implemented. Maintaining a healthy work environment is crucial for productivity and efficiency. Constructing a workplace to achieve work-life balance is essential, leading to increased organizational identification and retention rates.

#### Methods/intervention

Starting in 2022, we initiated activities under the slogan "I care," advocating health, exercise, and family, which is in-lined with the diverse needs of the workplace. Using a point system, we encourage employee participation with gift vouchers and rewards, which balances work and life for Employees.

- 1) I (Love) for Health : Health Check-ups、 Seminars、 Stress Relief and Cooking Classes、 Weight Management Programs
- I (Love) for Exercise : Fitness Assessments, Yoga, Aerobic Sessions C. I (Love) for Family : Family Day Walk-athon and baking workshops.

#### Results

From 2022 to 2023, the participation rate in increased from 80% to 87.9%. At the end of the year, we conducted a survey and the satisfaction rate increased from 90.6% to 94.5%. Employees provided many suggestions, such as adjusting the time, telling us their favorite activities and creating health-related themes. We used the results to revise the plans for the following year to establish more suitable activities.

#### **Conclusions/lessons learned**

Promoting health requires strong support from top executives. Our hospital has established a Health Promotion Committee, led by the director, to plan and promote activities. In recent years, we organized diverse courses and activities, incorporating sports elements into the design and utilizing apps to increase participation. We built a five "heart" level workplace, aiming to retain talent and promote a healthy environment characterized by care, intimacy, reassurance, and enthusiasm. Our goal is to ensure that employees are in a healthy, friendly, and safe working environment.

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## Promoting LGBTQ-Friendly Hospital Workplaces to Foster Gender Equality

#### **YIN Juncheng**

#### **Background and objective**

In today's society, promoting gender equality and respecting diverse sexual orientations are crucial for the healthy development of healthcare environments. We have actively initiated a project to enhance the understanding of LGBTQ issues among hospital staff through gender equality education. The intervention seeks to break down potential discriminatory attitudes and hostility, focusing on promoting both physical and mental health to create a more equal and respectful working environment.

#### Methods/intervention

Our project primarily adopts gender equality education as the core intervention strategy. This educational program covers various aspects of LGBTQ history, relevant terminology, and challenges in healthcare settings. Simultaneously, through open discussions, seminars, and support groups for mental health, we provide employees with a safe space to further explore these issues and assist them in understanding and accepting colleagues with different sexual orientations.

#### Results

Through our intervention project, we have observed an increase in employees' understanding of LGBTQ-related issues. Simultaneously, instances of hostility and discriminatory behavior among employees have significantly decreased, and positive changes in physical and mental health have become evident. Employees can now work in a more LGBTQ-friendly environment, feeling respected and included.

#### **Conclusions/lessons learned**

The success of this project reflects the positive impact of gender equality education on improving the hospital workplace environment. Lessons learned include the necessity of ongoing education and communication, as well as the establishment of a supportive community environment to promote gender equality.

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## Poster session 1.4: Health workforce practice and training

Enhancing Cross-Profession Instruction Effectiveness for Six Core Clinical Skills in the Post-Pandemic Era

## YEH Shuting, CHANG Yung-Yun, WANG Cheng-Yuan, LIN Yu-Chih, HO Wen-Yu, TSAI Yi-Chun

#### **Background and objective**

The COVID-19 pandemic, which began in late 2019, has significantly impacted clinical teaching methodologies worldwide. In teaching hospitals, training in essential clinical skills—key to healthcare quality and patient safety—faced particular challenges. Since clinical skills require hands-on, practical assessment beyond what paper-based tests can offer, this study explores a hybrid teaching model. This model combines video-based courses with practical on-site exercises delivered through cross-profession instruction.

#### Methods/intervention

A hybrid teaching model was employed, wherein experienced internal medicine physicians initially provided training to nurses. These nurses then conducted online courses that incorporated the six core clinical skills. Assuming the role of clinical caregivers, the trained nurses imparted their knowledge to medical students, integrating common clinical cases into their teaching. The instruction began with slideshow presentations, followed by practical, hands-on experiences for the students. The effectiveness of the training was assessed through pre- and posttests with the medical students, followed by statistical analysis using SPSS. Descriptive statistics were used for basic analysis, and paired sample t-tests assessed the significance of the pre- and post-course differences.

#### Results

This study involved 103 clinical medical students, comprising 70 males and 33 females, predominantly aged 20–25 years (67%). Significant improvements were observed across the six core clinical skills. Notably, the mean difference for intravenous catheter injections was -0.86 (SD = 0.56, P <0.0001), IV push -1.13 (SD = 0.73, P <0.0001), blood pressure measurement -0.51 (SD = 0.58, P <0.0001), blood glucose measurement -0.47 (SD = 0.59, P <0.0001), temperature measurement -0.74 (SD = 0.67, P <0.0001), and blood oxygen level measurement -0.72 (SD = 0.71, P <0.0001). These results underscore the effectiveness of cross-profession instruction in teaching these core clinical skills.

#### **Conclusions/lessons learned**

The teaching and assessment of clinical skills in healthcare are undergoing a digital transformation. Integrating six core clinical skills into cross-profession instructional programs has proven to effectively enhance learning outcomes, thereby advancing the practice of patient-centered, holistic healthcare.

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Innovative teaching on identifying the location of various organ tubes

## SYU Ting-Rong, LIN Chiu-Ling, CHEN Shin-I, LEE Ssu-Tzu, ZHANG Jia-Hua, LI Mei-Fang

#### **Background and objective**

After surgery and examinations, patients may have various types of indwelling drainage tubes placed in different locations depending on the organ. This diversity can pose challenges for novice nursing staff, leading to difficulties in care and learning, ultimately increasing the incidence of accidents.

#### Methods/intervention

This study aims to create lifelike model images depicting various organs along with labeled drainage tube names and colors of drainage fluids. These aids are designed to educate new nursing personnel on understanding organ system anatomy and recognizing the colors of drainage fluids. Statistical analysis will be conducted to evaluate the effectiveness of this approach before and after implementation.

#### Results

In the month preceding the implementation, the pipeline care skills of new personnel increased from 53% to 95%, while their pipeline care awareness improved from 60% to 96.5%. The satisfaction rate of new personnel reached 96.5%. There was a decrease in pipeline-related accidents, consequently enhancing the retention rate of new personnel.

#### **Conclusions/lessons learned**

Introducing realistic human models and drainage tube teaching aids to new personnel facilitates consistency in both their understanding and skills. This intervention effectively enhances the completeness of shift handovers, thereby improving the quality of care and confidence among new personnel.

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## Using HFMEA strategy to reduce the incidence of patient safety events in Operating Room

#### LI Chia-Ling

#### Background and objective

Surgical patient safety has always been a very important issue, severe patient safety events can lead to irreversible results. There were 9 patient safety incidents in 2020. "Surgical consent form does not match the patient" and "Post-surgical skin integrity damage" accounted for the highest proportions, accounting for 58%. Therefore, reducing the incidence of patient safety events errors in the operating room is necessary and feasible, it is hoped that this research will improve the quality of care in the operating room.

#### Methods/intervention

Using the concept of Healthcare Failure Model and Effect Analysis(HFMEA).Operating room nurses used a questionnaire on patient safety perceptions and distributed an anonymous self-administered questionnaire to the operating room team (including physicians, nurses, and cleaning staff). This study enrolled a total of 166 subjects. This cross-sectional study used purposive sampling to enroll subjects, and to conduct questionnaire surveys on the subjects. For statistical analyses, this study used descriptive statistics, one-way ANOVA, Twosample t test, Pearson's product-moment correlation, and stepwise regression analysis to analyze the data.

#### Results

According to the result of analysis, this study could be briefly concluded as the following: (1) the average age of personnel was 33.45 years old, the average seniority at the current unit was 5.27 years; (2) 56% of operating room personnel were correct about patient safety; (3)The operating room team's correct perception of patient safety has increased from 56% to 88%, achieving the purpose of maintaining the safety of surgical patients.

#### Conclusions/lessons learned

Through the collection and analysis of data, and a new surgical patient safety checklist is added to check the correctness and integrity of the patient's surgical safety. This conclusion on the operating room team's will have a lot of help and hope for government agencies refer to this conclusion.

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## Transnational Medical Training: Assessing Tailored Training Effectiveness for Diverse Healthcare Professionals in Eswatini

## LIN Yuan-Wei, CHANG Li-Chen, LIU Chung-Hsien

#### **Background and objective**

Chia-Yi Christian Hospital (CYCH) continues to provide medical training and share Taiwan's expertise worldwide, drawing on its abundant teaching experience. From 2016, it has been involved in a maternal and infant health project in Eswatini, aimed at offering tailored training to health workers to improve healthcare standards and deliver quality healthcare services. This study aims to assess the effectiveness of CYCH's customized training program for medical professionals in Eswatini.

#### Methods/intervention

In 2022-2023, CYCH trained 5 clinical practitioners and 5 Rural Health Motivators (RHM), emphasizing skills enhancement like the Neonatal Resuscitation Program and health education techniques. Besides, nurses dispatched to Eswatini offered onsite counseling to ensure their skills and knowledge. CYCH also supplied models and devices for small-scale projects. Effectiveness of the training was evaluated by post-training assessments of the trainees and interviews with their supervisors.

#### Results

The results show substantial growth among seed trainers, with high praise in subsequent evaluations by their supervisors. The seed trainers confidently apply their knowledge and lead improvement initiatives, including instructing on Continuous Positive Airway Pressure machines. Additionally, 38 local RHMs were trained in blood pressure monitoring for expectant mothers, aiming to enhance the safety of deliveries for expectant mothers.

#### **Conclusions/lessons learned**

The training has met expectations, showing notable advancement in knowledge and skills. Moreover, the trainees gain confidence through successful small-scale projects implementation. Diverse training ensures balanced opportunities for various professions, expediting skill transformation. Connecting professionals from different fields achieves desired outcomes, enhancing personal skills and overall project progress, ultimately improving healthcare quality.

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## Exploring the effectiveness of the intervention of electronic portfolio on NPGY students

#### WEI Fang-Chun

#### **Background and objective**

This study uses the core concepts of CBME to build an electronic portfolio (e-portfolio) system that's based on the NPGY students' competency progress framework. The tailor-made information assistance system, which encompasses education, training, and electronic portfolio, can reflect the user's learning process, teaching, feedback, and personalized course planning. It let users can clearly grasp the learning progress, conduct formative and summative assessments. And adopt multiple methods to evaluate, check, and give feedback on the effectiveness of learning. This study aims to explore the correlation between eportfolio and effectiveness among NPGY students.

#### Methods/intervention

This study adopts cross-sectional questionnaire survey. 104 participants from a medical center in the north of NPGY students will select in a convenient sampling. The research questionnaires included: demographic data, electronic portfolio system (satisfaction of the e-portfolio, satisfaction with the assessment tools, Technology Acceptance Model (TAM)), learning effectiveness and job satisfaction. Statistical methods include descriptive statistics: such as mean, standard deviation, number, percentage, and inferential statistics such as: independent Sample t test, one-way ANOVA, and Pearson correlation.

#### Results

A total of 104 cases was included in this study, age from 20 to 36 years old, with an average age of 23.26 years. Independent sample t-test and one-way ANOVA were used to explore the association between demographic data, learning effectiveness and job satisfaction. The results showed that there was no significant difference in learning effectiveness and job satisfaction by age, sex, education level, department and stage of the learning process (p >. 05). But there was a significant difference in learning effectiveness and job satisfaction by eportfolio (p <. 05). And Pearson correlation was used to understand the correlation between e-portfolio and learning effectiveness, job satisfaction. The results showed that the satisfaction of the e-portfolio (r=.681, p <.000), satisfaction with the assessment tools (r=.691, p <.000) and TAM (r=.811, p <.000) were significantly positively correlated with learning process (p <. 001). And the satisfaction of the e-portfolio (r=.666, p <.000), satisfaction with the assessment tools (r=.714, p <.000) and TAM (r=.650, p <.000) were also significantly positively correlated with job satisfaction (p <. 001).

#### **Conclusions/lessons learned**

The e-portfolio can record students' learning performance, provide continuous feedback and evaluation during the learning process. We found that the e-portfolio is positively correlated to NPGY students' learning effectiveness and job satisfaction. This result can be used in teaching to help them improve learning effectiveness and job satisfaction. Therefore, the use of eportfolio by NPGY students', and the association between their satisfaction with the system, learning effectiveness and job satisfaction are worth exploring.

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## Information of Medical Technology to Support Improved Care in Chronic Ward Nursing Quality

#### CHEN Hong-Wun, YEN Kuei-Hua

#### **Background and objective**

The island of Taiwan has been affected by the global pandemic of coronavirus disease 2019 (COVID-19). Many medical professionals have become infected. This has put pressure on hospital resources and manpower. Nurses have encountered challenges in accessing isolation wards and returning to their nursing stations. Inefficiency in this process increases the risk of infection. Only 60% of nurses are satisfied with the equipment in their workplace. The wireless device for physiological measurements can be used by the patient or a family member, and the results can be uploaded directly to the information system. This technology can streamline the work of medical staff, reduce the risk of exposure to infection, and enhance nurses' satisfaction with the working environment. Furthermore, it has the potential to increase patient and family satisfaction with caregiver services to 85%.

#### Methods/intervention

i.Establish a team of professionals group. Ii.Organize nursing staff education courses. Iii.Organizing patient and caregiver education programs.

#### Results

i.Nurses can save up to 30-40 minutes a day. Ii.The system can reduce handwriting errors. Iii.A survey of nursing staff revealed that 96.5% were satisfied with the device, and 90.6% would encourage patients or caregivers to use it. Furthermore, 94.8% of nurses believed that it effectively reduced their workload. Patient and family satisfaction reached 90.2%, with 88% of respondents indicating their intention to continue monitoring their health after discharge from the hospital.

#### Conclusions/lessons learned

The objective is to utilize intelligent healthcare to streamline nursing tasks, boost work efficiency, and increase satisfaction among nursing staff, patients, and caregivers. This will be achieved by effectively reducing the working hours and burden of nursing staff, and avoiding delayed shifts.

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CHEN HUNGWUN Taipei Municipal Guandu Hospital TAIWAN anna19890202@gmail.com Apply innovative teaching to the correct operation of cantilevers and instruments in hybrid operating room

## HSIEH Fu-Hsiang, CHEN Mei-Ling, JLANG Mei-Han, JHANG Huei-Ru, HUANG Mu-Ren

#### **Background and objective**

The hybrid operating room is furnished with state-of-the-art imaging equipment, which aids surgeons in delivering accurate medical interventions for lesions. Nevertheless, the nursing staff possesses a restricted comprehension of the newly implemented hybrid operating room and lacks familiarity with the utilization of the cantilever position and equipment operation. During the period from April 2023 to June 2023, the rate of awareness among the operating room nursing staff was 60%, while the rate of satisfaction before surgery was 55%.

#### Methods/intervention

Between May 2023 and October 2023, a team was formed to conduct clinical observations and collect data. Three factors were identified: insufficient expertise among nursing personnel in hybrid operating rooms, the absence of operational protocols, and inadequate education and training. The proposed improvement measures are as follows: 1. Intervene with innovative teaching by creating "Hybrid OR Cantilever Match Up" and assisting with games such as the "Kahoot game-based online quiz system". 2. Utilize surgical scenario simulations to gain practical exposure to various forms of cantilever operations. 3. Create comprehensive operating manuals for hybrid operating rooms, complete with detailed illustrations and QR code video links. 4. Administer yearly in-service education to enhance nurses' on-the-job training

#### Results

The execution of the aforementioned strategies resulted in a rise in the awareness rate of the operating room nursing staff from 60% to 95%. A total of 35 people participated in in-service education (with an attendance rate of 100%). The rate of satisfaction before surgery rose from 65% to 100%.

#### **Conclusions/lessons learned**

Using situational simulation and gamification intervention, operating room nursing staff can improve their cognition and effectively operate the composite operating room cantilever, enhance confidence and improve the quality of care.

Contact: HSU Jason Chang Bing Show Chwan Memorial Hospital TAIWAN 14998@cbshow.org.tw Active-Aging Policy Based Creative Teaching Materials for Developing Senior Health Promotion Course

## HU Yu-Wen, WU Pei-Lun, CHEN Hsuan-En, CHANG Chiung-Fang, CHAN Shu-Min, SHIAO Fen-Yu, YEH Tzu-Ching

#### **Background and objective**

As the world population enters a fast-aging pace, health promotion in preventing and delaying senior disability and dementia with advocacy for active aging becomes most pressing. The "Veterans General Hospital Tainan Branch Comprehensive Senior LOHAS Center" was established in 2017 to offer a 12-week community course, targeting at community frailty with high-risk for disability and dementia. This course integrates cognition, nutrition, and physical fitness subjects as multiple interventions. The improved eye chart helps screening senior vision through interactive games. Seniors also improve cognition capacity, hand-eye coordination, and reaction to delay disability and dementia.

#### Methods/intervention

Based on planning>action>feedback>replanning action research, the course materials develop improved eye charts, color signs, and direction signs, made of corrugated board mostly. The teaching materials are wrapped with masking tape on the edges to prevent skin injury. The letters on eye chart are inlayed with LED in different colors for easy identification. The eye chart is incorporated with cognitive cards to improve health literacy.

#### Results

The teaching materials received national creativity golden award and patent. The intervention course using creative teaching materials improves senior's health literacy, social engagement, confidence boosting, and implementing health behaviors in life to meet the active-aging goals.

#### **Conclusions/lessons learned**

Improved eye chart incorporated with board game cards can preliminarily screen the vision and cognitive levels in community seniors. The presentation of quantitative data will further analyze the public characteristics and other courses needed for intervention.

#### Contact:

HU YU WEN Kaohsiung Veterans General Hspital Tainan Branch TAIWAN ywhu6488@gmail.com Utilizing high-fidelity simulation scenarios in training can enhance the learning effectiveness of psychiatric nursing personnel in patient emergency care

## LU Chia-Wen, CHEN Wu-Yu, KUO Mei-Wen, WU Mei-Chuan

#### **Background and objective**

According to the 2021 Taiwan Patient Safety Reporting System, there were a total of 46 cases of unexpected cardiac arrest in psychiatric hospitals, with a remarkably high mortality rate of 86.2%. The American Heart Association (AHA) emphasizes the "Chain of Survival," highlighting the critical steps of executing high-quality CPR, defibrillation, and advanced cardiovascular life support (ACLS) during cardiac arrest. Research indicates that developing emergency response team cooperation, known as Airway-Circulation-Leadership-Support (A-C-L-S), through highfidelity simulation scenarios, can significantly improve learning outcomes for healthcare providers. Despite psychiatric nursing personnel receiving biennial emergency training courses, there is still a need for review regarding emergency protocols and medication knowledge. To assess the ACLS knowledge and skills of psychiatric healthcare personnel, this study formulated an "ACLS Cognitive Assessment Test" and an "ACLS Technical Skills Assessment Form." Sixty psychiatric healthcare professionals underwent testing, with an average cognitive score of only 54% and a technical skills achievement rate of merely 58%. Therefore, this study aims to enhance ACLS knowledge and skills among healthcare providers through high-fidelity simulation-based emergency training.

#### Methods/intervention

Structured steps for designing high-fidelity simulation emergency training: Teaching Focus: ACLS knowledge and skills. Teaching Objectives: To enable participants to make the most appropriate judgments and interventions when a patient experiences unexpected cardiac arrest. Student Learning Objectives: Following the American Heart Association's Chain of Survival: Seek assistance immediately upon occurrence. Initiate CPR promptly. Interpret the need for defibrillation. Assist with airway management. Continue CPR until the emergency team takes over. Student and Material Analysis: Train 60 psychiatric healthcare personnel in groups of 4, totaling 15 groups. Teaching Methods and Strategies: Role-playing. Cooperative learning. Discussion, employing high-fidelity simulation scenarios of psychiatric patient emergencies. Practice Time: Each group practices for 20 minutes, totaling 5 hours. Teaching Equipment: 1 full-body mannequin. 1 defibrillator. 1 ambulance (including emergency-related supplies). 1 stopwatch. 1 set of ECG controllers. 1 temporary actor (patient).

#### Results

After the simulation training, 60 psychiatric healthcare personnel underwent testing with the "ACLS Cognitive Assessment Test" and the "ACLS Technical Skills Assessment Form." The average cognitive score reached 100, and the technical skills achievement rate was also 100%. Both results showed statistically significant improvements (p < 0.05).

#### **Conclusions/lessons learned**

The high-fidelity simulation training approach is not meant to replace various other teaching methods but rather to become one of the components in nursing education and training. It serves as a bridge between the knowledge and skills learned in training courses and their application by healthcare colleagues in actual clinical settings. By integrating simulation training into the curriculum, while balancing learning effectiveness and patient safety, it can enhance teacher satisfaction and student confidence, ultimately fostering a higher quality healthcare environment.

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Enhancing Immediate Response Emergency Care Competence and Self-Efficacy in Nurse Practitioners through Experiential Learning

## YANG Ya-Lun, CHENG Li-Chuan, LEE Wei-Chen, KOO Malcolm, LIN Shih-Chun

#### **Background and objective**

Nurse practitioners are essential as frontline caregivers in emergencies, especially during the critical initial three minutes. However, research on the use of self-directed learning to enhance emergency care competency (ECC) is limited. This study explored the use of experiential learning to improve ECC and selfefficacy among nurse practitioners.

#### Methods/intervention

A single-group pretest-posttest design was used to study nurse practitioners at a regional teaching hospital in southern Taiwan. Participants completed a 26-item ECC questionnaire at baseline (T0) and participated in a video-recorded training session with reciprocal feedback. After the training (T1), they filled out the ECC questionnaire again along with a 10-item self-efficacy questionnaire. Assessments were repeated one month later (T2). A repeated measures general linear model with Bonferroni adjustment was used for statistical analysis.

#### Results

The study included 95 nurse participants with a mean age of 42.1 years (SD = 6.7), of which 91 were women (95.8%). ECC scores significantly increased from 34.6 (SD 8.8) at T0 to 46.4 (SD 4.3) at T1 (p<0.001) and from T0 to 44.7 (SD 4.9) at T2 (p<0.001). The scores were also significantly lower at T2 compared to T1 (p=0.018). In addition, the self-efficacy score improved from 26.2 (SD 0.60) at T1 to 28.0 (SD 0.62) at T2.

#### **Conclusions/lessons learned**

Emergency care training through experiential learning could significantly improve ECC and self-efficacy among nurse practitioners. Future studies should evaluate the benefits of experiential learning in improving the quality of emergency care among other frontline clinical nurses.

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Reduce the incidence of pressure injuries in patients with Non-invasive positive pressure respirator masks

## TAN Ya-Yun, KUO Han-Lin, LEE Shi-Ying, CHEN Hui-Man, KUO Ai-Chia, LIU Ya-Min, HSIEH Yu-Ho, CHEN Shih-Ting

#### **Background and objective**

Facial pressure injuries are prone to occur when non-invasive positive pressure respirator masks are used in the intensive care unit. The incidence of pressure injuries from non-invasive positive pressure respirator masks in our unit is 38.3%. We hope to use quality control methods to reduce the incidence of pressure injuries in patients with Non-invasive positive pressure respirator masks.

#### Methods/intervention

1.Order noninvasive positive pressure respirator combined care form; Standardized unit care procedures, Design a non-invasive positive pressure respirator combination care form. 2. Strengthen nursing staff's awareness of non-invasive positive pressure respirator care; Take a care video and make a QR Code 3. Establishing an audit mechanism for facial skin pressure injury care; Cultivate the seeds of the unit and remind each other, develop noninvasive positive pressure respirator combination care and facial skin pressure injury audit form.

#### Results

The incidence rate of new pressure injuries caused by the use of non-invasive respirators was 38.3% before improvement, 11.2% after improvement, the improvement rate was 71%, and the achievement rate was 101%. In addition, the extra out-of-pocket cost for family members to purchase wound dressings will be reduced. Moreover, the time spent by nursing colleagues caring for facial pressure wounds can be shortened: dropped from 20 minutes to 3 minutes per day.

#### **Conclusions/lessons learned**

In this quality control circle activity, we have indeed grasped the main reasons and formulated countermeasures to achieve implementation results. The incidence rate increased slightly in the second quarter. After discussion with the team, it was necessary to strengthen the morning meeting publicity, hoping to maintain this and conduct regular reviews.

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## Enhancing Caregiver Skills through 3D Model Guidance

#### WU Su Shing

#### **Background and objective**

Enhance the confidence and competence of family caregivers and nursing staff in suctioning techniques through innovative 3D modeling, ensuring proper care for patients upon discharge, reducing readmission rates, and enhancing the overall quality and safety of healthcare services

#### Methods/intervention

The research team used 3D printing technology to create a suctioning training model that simulates the real respiratory tract structure, named "Extracting Hope." Nurses used this model to guide family caregivers through hands-on practice and provided relevant educational instructions. New nurses and nursing interns also participated in using the model and in satisfaction surveys

#### Results

The innovative 3D model effectively boosts caregiver confidence, ensuring smooth patient transitions and enhancing nursing staff learning experiences. Primary caregivers reported increased confidence and reduced anxiety, while novice nurses and interns demonstrated improved skills and understanding. Overall, the project facilitates better home care and patient safety

#### Conclusions/lessons learned

This innovative suctioning training model is significant for improving family caregivers' suctioning skills and confidence, thereby enhancing the quality of post-discharge care and increasing overall satisfaction levels. The model has broad applications in clinical practice and education, warranting further dissemination and research

Contact: WU SU Shing Yun-Lin Branch CHINA Y00932WU1@GMAIL.COM A Study on the Relationship Between the Work Values and the Job Satisfaction among Nurse Practitioners

#### FENG Chia-Jung, WANG Kuei-Ying

#### **Background and objective**

The healthcare system plays a crucial role in modern society, with nurse practitioners being integral members of the medical team. Their responsibilities encompass not only possessing professional clinical skills but also navigating diverse and intricate medical scenarios. Strong work values are imperative for successfully tackling work-related challenges, leading to heightened job satisfaction and an increased inclination to remain in their roles. This study aims to investigate the relationship between work values and job satisfaction among nurse practitioners.

#### Methods/intervention

A cross-sectional study was conducted with a convenient sample of nurse practitioners from Taiwan as the research subjects. Data were collected via a structured web-based questionnaire from June 25, 2023, to July 15, 2023. Descriptive statistics and inferential statistical analysis were performed using SPSS 25.0 software.

#### Results

(1) The average score for work values was 2.68 points (on a scale ranging from 1.00 to 4.77), with "altruism" receiving the highest score (M=2.97 points, SD=1.07), followed by "professional autonomy" (M=2.75 points, SD=1.07). (2) The average score for job satisfaction was 3.71 points (on a scale ranging from 1.50 to 5.82 points), indicating a range from slightly dissatisfied to slightly satisfied. The highest job satisfaction was reported in the category of "professional and social interaction" (M=4.20 points, SD=0.92). (3) A positive correlation exists between work values and job satisfaction (r=.328, p<.01), indicating that higher positive work values among nurse practitioners are associated with elevated job satisfaction.

#### **Conclusions/lessons learned**

Nurse practitioners who are able to practice their values in the workplace tend to experience increased job satisfaction. The traits, attitudes, and values vary across different generations, highlighting the need for greater emphasis on cultivating work values in student education.

#### Contact:

FENG Chia-Jung An Nan Hospital, China Medical University, Tainan, Taiwan TAIWAN littlebee0628@gmail.com The Research of Legal Chinese Teaching Materials for Quality in Health Care : An Example of Institutional Nursing Assistants of Vietnamese

## JHU Yuan-Jhen, CHIEN Ju-Huei, OU Hsiu-Hui

#### **Background and objective**

Many clinical care hospitals encounter a shortage of nursing manpower. So national legislation allows for the entry of foreign caregivers to ease the burden on clinical nursing staff. However, for foreign caregivers who speak Chinese as their second foreign language, the language barrier among those foreign nursing assistants often causes communication inconvenience and difficulties in medical care.

#### Methods/intervention

A total of 30 Vietnamese who work in Institutional Nursing are included in this study. The questionnaire includes three parts: basic personal information, language background, and legal Chinese course design. Based on the questionnaire information provided by participants, we designed an exclusive Chinese legal teaching course, which includes "employment rights", "contract disputes", "care disputes", and "verbal violence".

#### Results

Analyzing the data, there are 30 women with 43.3% being 26-30 years old. They are 53.3% mainly college and junior college graduates, and have worked 63.3% in Taiwan for more than 3 years. According to the survey on the language background level of the subjects, although 97% of the learners have learned Chinese in their home country, the work of caregivers is mostly technical and labor-oriented. There are still 3% of subjects who have never learned Chinese at all. The most popular learning method is "self-study" which involves working and learning Chinese in Taiwan. According to the language background statistics of the subjects, most of them find it not difficult to learn Chinese. So 60% of the subjects are willing to learn a Chinese textbook on legal topics related to their own lives and careers.

#### **Conclusions/lessons learned**

Vietnamese caregivers, for example, who speak Chinese as a second language frequently deal with pertinent legal concerns at work, such as "work rights," "contract disputes," "care disputes," and "verbal violence." Communication problems and linguistic hurdles can lead to poor communication in health care. Chinese legal-related teaching material and courses help foreign nursing assistants not only comprehend their rights at work but also build effective communication skills to enhance the standard of care.

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## Training Care Staff in Residential Long-term Care Institution

#### YANG Shih-Chen

#### **Background and objective**

According to statistics, the share of the population in Taiwan aged 65 years and above reached 18.35% of the total population in 2022, indicating that Taiwan has become an aged society. With an eye to improving the quality of service, the Residential Longterm Care Institution provides comprehensive care services for the elderly through interprofessional team-based care that focuses on diversified services to address individual differences and disability prevention programs, while also devoting particular attention to care staff training.

#### Methods/intervention

1. Talent selection: Administering interviews and screening tests to determine an applicant's enthusiasm for and dedication to long-term care. 2. Talent development: Tailoring training plans to different positions and ranks; arranging visits, observations, practical training programs, and other activities. (1)Facility manager: Planning out the scope of facility business, managing quality index, costs and operations, and strategizing responses to evaluation and assessment results. (2)Nurses : Implementing assessment and care, formulating and executing health care plans, and maintaining the quality of life . (3)Nursing assistants: Performing the functional roles and services of a nursing assistant, fulfilling requirements and service skills, and cleaning and comfort skills, and other related matters. 3.Talent retention: Independently organizing long-term care training programs or co-organizing government-sponsored ones for the staff; discussing and learning care consensuses using an interprofessional team-based model; enhancing professional development and competencies for care.

#### Results

In addition to long-term care programs planned and developed according to the operational needs of the facility, the care staff was also assigned to other care facilities for care practice training and evaluation.

#### **Conclusions/lessons learned**

Conducted through these measures, The Residential Long-term Care Institutionit has not only enhanced the comprehensiveness of care service competencies among the care staff, but also increased team cohesiveness and created an age-friendly service environment.

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## WU Chia-Fen, CHEN Kuei-Min, CHOU Fan-Hao, WANG Hsiu-Hung

#### **Background and objective**

Gender diversity and education is a topic of growing interest in industry, particularly within the healthcare system. Nursing education can create a culturally respectful atmosphere and establish a gender-friendly environment through reflection and self-awareness. This ensures effective and non-discriminatory communication both in the school and clinical internship settings.

#### Methods/intervention

Encouraging nursing educators to participate in gender competency training and courses will proactively address the challenges of gender diversity issues. In nursing education institutions, it is possible to promote the development of technological teaching materials to provide students with more opportunities for learning about gender diversity issues, and by using expert sharing, clinical skill instruction and online interactive questioning as methods to cultivate students' awareness of gender-diverse care and carry this empowered awareness through to clinical practice is a feasible intervention and an accessible approach.

#### Results

In clinical practice, healthcare institutions should establish guidelines for providing care to diverse gender populations, and such guidelines considering diverse gender care in clinical practice while incorporating relevant academic knowledge such as professional ethical principles, disease care, infection control and others, will ensure comprehensive gender care education.

#### **Conclusions/lessons learned**

Gender diversity issues have become an integral part of modern healthcare, and nursing educators and professionals should continually enhance their gender competence to ensure the delivery of equal, friendly and high-quality nursing care services.

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Exploring the Factor Structure of the Taipei Evidence-Based Practice Questionnaire in Taiwanese Registered Nurses

LIN Shih-Chun, CHEN Chia-Jung, KOO Malcolm, CHENG Li-Chuan

#### **Background and objective**

Background and objective: The Taipei Evidence-Based Practice Questionnaire (TEBPQ) was developed to assess healthcare workers' competencies and attitudes toward evidence-based practice (EBP). This study aims to explore the factor structure of the TEBPQ among Taiwanese registered nurses, contributing to the refinement and validation of the instrument.

#### Methods/intervention

Methods: A cross-sectional questionnaire survey was conducted on 646 registered nurses (600 female, 92.9%) from a regional teaching hospital in southern Taiwan. Participants completed the 26-itemTEBPQ on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Exploratory factor analysis using principal axis factoring with direct oblimin rotation, and the number of factors determined based on parallel analysis. All analyses were conducted using Jamovi software, version 2.4.

#### Results

Results: The TEBPQ exhibited a high overall McDonald's omega (0.96), indicating excellent internal consistency. The Kaiser-Meyer-Olkin measure was 0.96, and Bartlett's Test of Sphericity showed a significant p-value (<0.001). The analysis revealed a five-factor structure that explained 66.5% of the total variance. The items within each factor were similar but not identical to the original structure proposed by the scale developers.

#### **Conclusions/lessons learned**

Conclusions: Our investigation into the TEBPQ among Taiwanese nurses revealed a refined five-factor structure, indicating a variation from the initially proposed domains. This suggests a need for ongoing assessment of the TEBPQ to reflect EBP competencies among healthcare professionals.

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Experience in Developing International Partnership with the Mental Health Arena in Southeast Asia

#### WANG Shu Hui, CHOU Li Shiu

#### **Background and objective**

In 2018, Kaohsiung Municipal Kai-Syuan Psychiatric Hospital was supported by the Government and some famous domestic national institutes to form a team called "International Mental Health Cooperation and Training Center" (IMHCTC, in short) to implement the training program specifically focused on the field of severe mental illness.

#### Methods/intervention

IMHCTC is an institution under the authority of Ministry of Health and Welfare which is the Central Government in Taiwan. The purpose is to integrate the mental health network, to introduce its excellent mental rehabilitation model and to train the related professionals in Southeast Asia through the way of online/field teaching.

#### Results

We provide the opportunity for the psychiatric professionals in Southeast Asia countries who can come to Taiwan for the on-site training. From 2018 to 2023, IMHCTC has totally trained 779 professionals from twelve countries in Southeast Asia countries. We've sent the psychiatric team from Taiwan to do the overseas training. Three overseas training centers have been established in Vietnam and Indonesia to cultivate up to 684 psychiatrists. IMHCTC hopes to bring a better effect of psychiatry and rehabilitation to local patients through these seed teachers.

#### **Conclusions/lessons learned**

We collected and reviewed the feedback from all the already participated, and made some moderate adjustments in the course contents according to their specific needs so to help to be in line with their actual clinical practice to the patients in their countries. Anyway, IMHCTC would like to collaborate and to build a holistic framework through our expertise to improve the human beings' mental health.

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## SDH perspective for all medical staffs - Creation, analysis and utilization of SDH interview sheet

#### **YANO** Kaori

#### **Background and objective**

SDH is a ``social determinant of health," and we are forced to view the causes of disease from a societal perspective, rather than blaming the patients themselves. We worked to ensure that all staff members carried out medical activities from an SDH perspective.

#### Methods/intervention

Our hospital's Medical Activities Committee deliberated for about nine months and created a "SDH Interview Sheet." All staff members pay attention to the social background of patients and users, and use this information to connect social issues underlying illnesses to social prescriptions and support. We conducted interviews in 364 cases in FY2022 and 411 in FY2023, and are publishing NEWS on the status of initiatives and distinctive cases.

#### Results

This time, we will report the analysis results for 2022 compiled at Misaki Hospital. The subjects were newly admitted and outpatients, and the analysis results were 328 cases excluding duplicates and invalid cases. When the questions were divided into ``social scales'', ``economic scales'', and ``health'' and

scored, it was found that the scores for the social scales were generally high, and as the scores increased, it became clear that intervention by a social worker was needed. Ta. In particular, it appears that intervention is necessary when the social scale score is 9 or higher. We determined that 19 points was an appropriate cutoff value. However, we found that even if the overall score was lower than 19, if the social scale scores were high, intervention was needed and more in-depth interviews were needed.

#### **Conclusions/lessons learned**

The results of Misaki Hospital's latest analysis show that even if a patient scores low on the economic scale or health scale, if the score on the social scale is high, intervention by a social worker is necessary. If scores on social scales are high, it will be more difficult to resolve financial or health problems, so careful intervention is required. In the future, it seems necessary to further analysis of survey results within corporate offices.

#### Contact:

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Improvement project to improve the accuracy of care and prevention of incontinence-associated dermatitis

## SU Ching I, PAN Ming Feng, TANG Wan Rong, FU Chien Yu, HUANG Yu Hsin

#### Background and objective

In 2019, the average monthly incidence rate of incontinenceassociated dermatitis among patients in the intensive care unit of our hospital was 8.0%. However, the average incidence rate from February to March 2020 reached 10.5%, which exceeded the average value of last year and has a gradually increasing trend. The survey found that only 54.6% of the nurses' knowledge and skills of incontinence-associated dermatitis care were correct. After analysis, we found that the main reasons were: a lack of care knowledge and skills, lack of standards for prevention and care, lack of uniform standards for care products, and education and training Failed to meet clinical needs. Our goal is to reduce the incidence of incontinence-associated dermatitis and the correctness of care through this project.

#### Methods/intervention

From April 27, 2020, to November 30, 2020, we formulated the standard procedures for the prevention and the care of incontinence-associated dermatitis, provided colleagues with chart marks and warnings, visualized the order of use of skin protection preparations, conducted interactive teaching, and made study manuals.

#### Results

After the implementation of the project, from December 2020 to May 2021, the accuracy rate of nurses' prevention and care of incontinence-associated dermatitis increased from 54.6% to 90.4% and the average monthly incidence of incontinenceassociated dermatitis dropped to 4.2%.

#### **Conclusions/lessons learned**

The occurrence of incontinent dermatitis leads to infiltration and pain of perineum and perianal skin, which affects the quality of life, increases the hours of care, and causes distrust and complaints from patients or family members on the quality of medical care.Formulate nursing standard procedures, provide charts and warnings, and organize interactive teaching and learning manuals for easy reference, which can effectively improve nurses' awareness and skills of incontinent dermatitis care, reduce the incidence of incontinent dermatitis, and improve overall care quality.

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# Poster session 1.5: Monitoring, implementation and evaluation

Compliance with Patient Information and Intervention Standards through Health Promotion Actions and Indicators in a Medical Center of Taiwan

## TSAI Jung-Mei, CHAN Wen-Han, HSU Hsi-Hsien, YANG Yi-Ling, CHUANG Kuan-Chi, LU Ming-Huei

#### Background and objective

MacKay Memorial Hospital (MMH), a medical center certified with the Health Promotion in Hospitals (HPH) in Taiwan, is dedicated to implementing the HPH policy. A specialized task group, operating under the oversight of a dedicated committee, focuses on health promotion actions related to patient information and intervention. This study explores the yearly progress in two branches of the hospital.

#### Methods/intervention

A task group with a review panel assembles with delegates from responsible hospital units. The review meetings occur four times per year to oversee the action progress which is monitored by indicators with achievable milestones. A self-assessment tool based on the Taiwan integrative model of HPH (iHPH) standards is used for compliance tests. Compliance rates are calculated by the percentage of indicators fulfilled completely.

#### Results

The health promotion actions overseen by the task group encompassed eight iHPH sub-standards, measured by 61

indicators and involved 15 different hospital units. The actions covered iHPH sub-standard 3.1.1 (seven units; 21 indicators), 3.2.2 (two units; four indicators), 3.1.3 (four units; four indicators), 3.1.4 (three units; three indicators), 3.1.5 (four units; six indicators), 3.1.6 (seven units; 10 indicators), 3.2.2 (one unit; one indicator) and 3.2.4 (four units; 11 indicators). In 2023, the compliance rates of the two hospital branches reached 96.7% and 95% separately. Potential barriers for complete fulfillment, such as shortage of resources, manpower, changes in patient demographics and facility construction, were explained.

#### **Conclusions/lessons learned**

MMH prioritizes holistic care for patients, families and communities. The hospital is committed to enhancing the quality of care it provides. The health promotion actions and indicators related to patient information and intervention are comprehensive and successful, aligning with HPH policy. This study offers valuable insights for future initiatives in related areas.

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The Effectiveness of Utilizing Business Intelligence (BI) in Visualizing Data on Pressure Injuries in the Operating Room

## WANG Pei-Ru, SHEU Yu-Shiuan, CHEN Chia-Lan, HSIEH Yi-Cheng

#### Background and objective

Taiwan's Medical Quality Promotion Association, accredited by the International Society for Quality in Health Care Ltd. (ISQua), incorporated pressure injuries into Taiwan's Clinical Performance Indicator (TCPI) care indicators in 2015. In 2016, the Ministry of Health and Welfare designated the prevention of surgical pressure injuries as an annual objective, recommending evaluation of risk factors during surgery and the development of relevant monitoring and improvement plans. However, clinical nursing staff face challenges in integrating and analyzing nearly 3500 patient data entries per month, hindering real-time presentation of operating room pressure injury conditions and timely preventive measures provision.

#### Methods/intervention

Introduction of BI facilitates rapid visualization of data, aiding data managers in extracting meaningful information from large datasets. Monthly, the system automatically converts hospital's pressure injury reporting system data into SQL, allowing staff to generate visual charts by month, department, bed position, pressure injury site, etc. This eliminates manual sorting, enabling real-time analysis and issue identification for timely improvement measures provision.

#### Results

After the completion in August 2022, upon reviewing a large volume of annual data, it was found that supine patients in cardiovascular surgery were most prone to pressure injuries, followed by prone patients in orthopedic surgery. Following multiple discussions and on-site inspections by members of the operating room team, measures were taken specifically for prone patients. In 2023, the operating room independently designed special fabric bed sheets for prone patients, which proved to be significantly effective. As a result, the annual incidence rate of pressure injuries for prone patients decreased from 0.08% in 2022 to 0.04% in 2023.

#### **Conclusions/lessons learned**

Both annual and monthly pressure injury incidence rates decreased. BI enables rapid review of new data, facilitating effective preventive measures implementation. BI is vital for monitoring pressure injury indicators, ensuring patient safety and healthcare quality.

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## Analysis on Tube Incidences from Patient Safety Reporting System

#### LIN Pei-Hsun, LAI Fang-Tsu

#### **Background and objective**

Over the last five years, Taiwan's patient safety reports revealed that tube-related incidents constitute 13% of adverse medical events, ranking third, causing 65.3% of injuries, including life-threatening occurrences like self-removal, slippage, blockage. This study aims to improve tube safety through strategies like risk assessment, interdisciplinary collaboration to minimize adverse events.

#### Methods/intervention

To promote the pipeline safety program, it includes: establishing a pipeline safety team, implementing the patient safety goals set by the Taiwan Ministry of Health and Welfare, establishing a reporting system and indicator information platform, establishing risk assessment tools, regularly reviewing and utilizing quality management tools for improvement.

#### Results

From January 2018 to December 2023, there were a total of 491 reported incidents of patient tube-related issues in the hospital, with unplanned removal being the majority. particularly concentrated during the late night shifts, totaling 74%. No harm events constituted 48%, while mild and moderate injuries accounted for 27% and 24% respectively, requiring reinsertion. Most incidents occurred while patients were in bed, at 74%, followed by during repositioning, at 5%. Unrestrained patients constituted 57%, with a high proportion, 91%, not administered sedatives. NG tube incidents comprised the highest at 45%,

followed by endotracheal tube at 42%. Among these, 90% of incidents involved tube dislodgement, primarily due to patient self-removal. The primary contributing factor to incidents was patient physiological factors at 53%, mainly due to patient agitation, followed by staff-related factors at 23%, primarily due to failure to apply restraints. The incidence rate of inpatient tube-related events decreased from 0.08% in 2018 to 0.04% in 2023.

#### **Conclusions/lessons learned**

By conducting risk assessments and fostering crossdepartmental collaboration, redefining standard procedures can effectively enhance pipeline safety, reduce injury rates, and ensure patient safety.

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Implementation rate of rehabilitation activities after hip fracture surgery

## LIN Jhih-Yu, CHU Chung-Hua, ZHUANG Shi-Jia, CHENG Wei-Ning

#### **Background and objective**

According to database statistics, the number of hip fractures continues to rise every year; independent living functions decline, increasing related complications, hospitalization days, and medical costs; early intervention and implementation of planned rehabilitation after surgery can reduce complications and shorten hospitalization , and even reduce further fractures and mortality. Improve the implementation rate of rehabilitation activities after hip fracture surgery, thereby promoting patients to get out of bed early and shorten hospitalization, thereby improving the quality of care.

#### Methods/intervention

Utilize a variety of clinical strategies, including (1). Formulating post-hip fracture rehabilitation care guidelines with both visual and textual explanations. (2). On-the-job education and practical courses.(3). Utilizing animated educational videos through Vyond as educational tools and and simple rehabilitation picture cards.(4). Use Power BI standard monitoring instrument to monitor board execution rate.

#### Results

Following the implementation of the clinical plan, The execution rate of rehabilitation activities rose from 70.9% to 92.3%, and the percentage of patients mobilizing within 48 hours increased from 75.0% to 90.2%. The average length of hospital stay decreased by 1.76 days. and satisfaction with health education improved to 95.5%.

#### **Conclusions/lessons learned**

Early intervention with exercise measures following hip fracture surgery can facilitate the swift recovery of patients' daily life activities. After the implementation of the policy, the project target value was achieved; the average length of stay dropped from 10.3 days to 8.54 days, reducing medical costs and achieving the additional benefit of early and smooth discharge. The team continued to monitor to improve medical quality.

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## Using the Power BI system to improve the effectiveness of occupational safety and health management in the Medical Center

#### HSING Hui-Fen, LEE Mei-Yu, GAU Mei-Jin

#### Background and objective

Every nurse has the right to work in a healthy and safe environment that does not pose risks of harm and disease. Occupational injuries increase psychological distress and job dissatisfaction, leading to resignations and exacerbating the shortage of nursing staff. Regularly collecting accurate information on accidents, injuries, and disease incidents among nursing staff is crucial for policy-making.

#### Methods/intervention

We have built an electronic occupational disaster reporting system. When nursing staff experience occupational injuries, they actively report them. We use SQL language to import data from the occupational disaster reporting system into the Power BI system and combine data from different hospital regions. We develop intelligent dashboards and highlight key data. The templates include statistics, graphics, cards, and are shared on the hospital administrators' website

#### Results

In 2023, 129 occupational accidents in nursing. 48 (38%) were due to caring COVID-19 patients and subsequently contracting the virus. 30 (24%) traffic accidents, 9 (7%) violence, 7 (6%) needlestick injuries.Based on the analysis of occupational accident data, we have enhanced the convenience of PPE protective equipment and practical operation courses to improve the correctness of use, significantly reducing the incidence rate (376 cases in 2022, 76%). In the analysis of traffic accidents, 16 cases were motorcycle accidents. As a result, we held 'Traffic Safety and Traffic Law Issues' course to enhance the response capabilities of employees. We regularly conduct medical violence drills and purchase 'personal alarms' for nursing staff, and fully use 'safe needle devices' to strengthen workplace safety for personnel.

#### **Conclusions/lessons learned**

The Power BI system can efficiently track the effects of improvements, shorten data processing time, reduce labor costs, and shorten the reporting process. Data visualization provides intuitive occupational safety information through charts, which is conducive to communication between supervisors and staff, and further improves the efficiency of occupational safety management and workplace safety.

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## Health Promotion and Intelligent Systems: Optimizing Vaccine Administration Processes

#### **CHEN Yi-Chun**

#### **Background and objective**

Vaccination is the most effective method for preventing and controlling infectious diseases. Common administration errors, such as duplicate doses or inadequate spacing, are often related to personnel errors and procedures. Thus, we've developed a vaccination system, including auditing, smart guidance for refrigerators, and automatic record uploading, to enhance quality and reduce workload.

#### Methods/intervention

We integrate with the National Immunization Information System (NIIS) via API for instant vaccination record access. We've added a vaccine auditing mechanism to outpatient medical orders and developed a smart guidance system for vaccine refrigerators to ensure accuracy during injection. Vaccination records are also automatically uploaded to NIIS.

#### Results

Two abnormal incidents occurred between 2022 and 2023. Since the full implementation in October 2023, no abnormal incidents have occurred to date. With the introduction of vaccine administration time efficiency, it now only takes one minute to complete a vaccination query, improving vaccination efficiency. Previously, it took 9 hours to upload vaccination records, but with the new system, it only takes 5 minutes to complete.

#### **Conclusions/lessons learned**

These optimization measures have significantly improved the efficiency and accuracy of the vaccination process. They also reduced the manual workload and ensured the timeliness and accuracy of data. These improvements not only enhance public health data management but also overall work efficiency, laying a solid foundation for future vaccination demands.

Contact: CHEN YI-CHUN TAIWAN tracy1619@gmail.com The Impact of Pay for Performance Program on the Progression of Disease Course for Early Chronic Kidney Disease Patients

## KUO Wei-Yin, TSAI Wen-Chen, KUNG Pei-Tseng

#### **Background and objective**

Taiwan had implemented a Pay-for-performance program on early-stage chronic kidney diseases (early-CKD P4P) since 2011 to manage kidney disease and to decline the progression of kidney function. The first study's purpose was to explore the impact of kidney disease stage and health conditions on those patients who participated in the early-CKD P4P program. Secondly, compare the differences of decline progression of kidney function between patients participating and non-participating in the early-CKD P4P program.

#### Methods/intervention

In this study, individuals diagnosed with stage 1 to stage 3a CKD in 2015 were followed until 2017, and then the Cox Proportional Hazards Regression was used for the first study purpose. Secondly, patients who participated and non-participated in the early-CKD P4P program were matched with a 1:1 ratio by the Propensity Score Matching methods (PSM), to evaluate the influence of the early-CKD P4P program on decelerating CKD progression by another Cox Proportional Hazards Regression.

#### Results

Among 48,388 newly diagnosed with early-stage CKD patients in 2015, there was only 25.1% participated in the early-CKD P4P program. Compared to CKD patients with stage 1, patients with stage 2 (HR=1.30, 95%CI:1.22-1.39) and stage 3a (HR=1.24, 95%CI:1.18-1.31) were more likely to participate in the early-CKD P4P program. After using PSM, among patients participating in the early-CKD P4P program, 13.6% of patients' eGFR declined over 25%, which was significantly lower than patients nonparticipating in early-CKD P4P. Those patients who joined the early-CKD P4P program were less likely to decline eGFR over 25% (HR=0.83, 95%CI:0.77-0.88) after adjustment of controlling variables. Patients with stage 3a and participating in the early-CKD P4P were less likely to decline their eGFR over 25% (HR=0.79, 95%CI:0.73-0.85). By contrast, there was no significant difference for those stage 1 and stage 2 patients who joined the early-CKD P4P.

#### **Conclusions/lessons learned**

The stage of CKD patients significantly influenced healthcare providers' decision of apply for early-CKD P4P program, but patients' health condition was not an impact factor. The early-CKD P4P program significantly reduced the risk of decelerating CKD progression.

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## Using cross-team collaboration to improve TB notification delays

## WANG Yi-Huang, CHIANG Chu-Yu, LIN Mei-Hua

#### **Background and objective**

Tuberculosis is a chronic infectious disease that is widespread all over the world, and about 2,000~3,000 people in Taiwan suffer from tuberculosis every year, with a high incidence rate of the elderly and men, and it is listed as a notifiable infectious disease in the country, and it is necessary to complete the notification within a week to prevent clusters caused by droplets or airborne transmission (Disease Control Administration, Ministry of Health and Welfare, 2024). In view of the high severity of the situation, we formed an improvement team to prevent the recurrence of the incident, and improved the accessibility and quality of diagnosis and care, and improved case management to stop the spread and prevent the occurrence of the disease.

#### Methods/intervention

The improvement team composed of professionals in different fields will review and analyze the incident, and after establishing the problems, the improvement action plan will be formulated as follows: 1. Modify the inspection report tracking process and operation standard, 2. Increase the second channel for the issuance of inspection report notices: such as mail, 3. Establish a two-way feedback mechanism 4. Add a notification and warning system 5. Strengthen the tuberculosis case management system - turn passive into active inquiry and other five improvement plans.

#### Results

Statistics from 2023.04~2024.03 reported 39 cases of tuberculosis, none of which were delayed; Improvement measures such as manufacturing and double checking, the satisfaction rate has increased from 45% before the improvement to 100% after the improvement, and the tracking time in the inspection report has also been changed It takes 3~5 days to report the instant mail on the same day.

#### **Conclusions/lessons learned**

After cross-departmental communication and coordination, a complete tuberculosis tracking mechanism was constructed, which not only improved the quality of medical safety care, but also improved the job satisfaction of personnel, and could more accurately grasp the early detection and early treatment of tuberculosis, so as to prevent the occurrence of cluster incidents.

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## The Key Role of Pharmacists in Health Promotion: A Study on the Relationship between Patient Safety Culture and Adverse Event Reporting

#### **CHEN Li-Chuan**

#### **Background and objective**

This study examines pharmacists' perceptions of patient safety and their institution's safety culture through a survey. It also analyzes adverse event reporting data to improve reporting culture and enhance patient safety.

#### Methods/intervention

The Taiwan Joint Commission on Hospital Accreditation utilized the "Patient Safety Culture Survey" with 46 questions across 8 dimensions. Pharmacists' scores in each dimension were compared with overall hospital data and pre-post data to explore links with adverse event reporting.

#### Results

In 2023, our hospital distributed a total of 1,147 questionnaires and recovered 850 (24 invalid questionnaires), with a recovery rate of 74%. The pharmacy department recovered 36 valid questionnaires. Comparing the survey results of the whole hospital in 2023 with those in 2022,"Unit safety culture" aspect: whole hospital: 40.6%, rising from 2022:51.5% to 2023:66.7%, "Feelings towards management ":whole hospital:48.8%,rising from 67.6 in 2022 to 68.6% in 2023, "Teamwork" for the whole hospital: 51.8%, rising from 68.6% in 2022 to 68.7% in 2023,The percentage of positive answers in each aspect is higher than that of the whole hospital From 2022 to 2023, incident reports increased from 440 to 642, of which medication incidents accounted for 41% to 58%, and attempted medication incidents increased by 17%.

#### **Conclusions/lessons learned**

There is a close correlation between the patient safety culture of the pharmacy department and the reporting of incident events. Safety culture can increase the willingness to report incident events. Pharmacists also play a key role here, identifying potential risks from monitoring and evaluation and taking timely measures.

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## Analysis and Improvement of Medication Incident Reporting to Enhance Patient Safety

#### **CHEN Li-Chuan**

#### Background and objective

Establishing a voluntary, non-punitive, confidential, and collaborative learning-oriented reporting system is a fundamental and important management indicator for hospitals to enhance patient safety. This study aims to analyze the medication incident reporting system in 2023 and identify appropriate improvement measures.

#### Methods/intervention

This is a retrospective study that collected and analyzed data from the hospital's incident reporting system in 2023. The analysis focused on the types and causes of medication incidents, with the goal of preventing and promptly identifying medication incidents, followed by review and improvement.

#### Results

In 2023, there were 374 medication incidents, of which 308 (82%) were near-miss events. Analysis of the causes of physician prescribing errors revealed that 139 (37%) were due to "failure to adjust the dose based on the patient's renal function", 53 (14%) were "dosage errors", and 44 (12%) were "quantity errors". Interventions were implemented, such as setting up 11 error-preventing alerts in the computerized physician order entry system, providing error reminder cards to medical departments, conducting education and training, holding meetings, and promoting via email and social media.

#### **Conclusions/lessons learned**

This study analyzed the types and causes of medication incidents related to physician prescribing errors in 2023. By understanding the error patterns and collecting issues identified by pharmacists during order verification, as well as common physician errors, immediate detection and timely improvement were achieved from the initial reporting to subsequent monitoring and optimization, thereby enhancing patient medication safety and preventing serious adverse drug events.

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Reducing the incidence of patient falls in the oncology ward through interdisciplinary collaboration

#### CHEN Chieh-Yi, LIN Ya-Ching, LIN Su-Chen

#### **Background and objective**

With the advancement of healthcare, people are living longer, and Taiwan became the aged society in 2018. In our oncology ward, most patients are aged over 64. Due to the side effects of chemotherapy and other disease factors, these patients are considered a high-risk fall population. Since falls are common safety incidents, fall prevention is the first priority for oncology ward patients. We would be utilizing interdisciplinary collaboration to reduce the incidence of patient falls in the oncology ward.

#### Methods/intervention

Through the PDCA(Plan-Do-Check-Act) for analysis, we found that most patients were aged over 64 and had companions, yet were perceived as capable of independent activity leading to falls. Fall prevention improvement strategies were devised by the team as follows: 1. Team-oriented: All family members and caregivers were incorporated as members of the team's collaborative fall prevention group. 2. Mutual support: Leveraging the spirit of mutual assistance through the TRM(Team Resource Management), when family members leave the ward, encouraging mutual care among patients. 3. Collective prevention: In the absence of accompanying family members, social workers are consulted to assess the feasibility of hiring caregivers. 4. Task allocation: High-fall-risk wristbands are provided for patients to wear, enabling healthcare team members to collectively remind patients engaging in independent activities to prevent falls.

#### Results

After the implementation of improvement measures, caregivers and other medical staff in the same ward can remind patients to prevent falls together. This not only reduces patient injuries but also enhances the quality of nursing care.

#### **Conclusions/lessons learned**

Last year, the Ministry of Health and Welfare unveiled the "2023-2024 Hospital and Clinic Healthcare Quality and Patient Safety Objectives." The fourth objective focuses on preventing patient falls and minimizing injury severity through collaborative teamwork to ensure safe care environments. From the above, it can be understood that effective fall prevention can enhance the inpatient care experience for older adults, and establish teamwork to create elderly-friendly hospital environments.

Contact: CHEN Chieh-Yi NTUH Hsin-Chu Branch TAIWAN joy072930@gmail.com Evaluation of the implementation of health promotion standards for hospitals in Indonesia

## PURNAMA Deni, ANWAR Bahrul, HERLIDJANA Dominica, WAHYUNI Nenggih, HERLAN Deden, TIROI Hasiholan, AIDA FATHYA Nurul, HERAWATY Desy

#### **Background and objective**

Regulation of the Minister of Health of the Republic of Indonesia Number 44 of 2018 concerning the Implementation of Health Promotion by Hospitals has been implemented for 5 years. The regulation contains standards adapted from the 2006 International HPH standards. The aim of this study was to assess the implementation of hospital standards for health promotion based on the Regulation of the Minister of Health of the Republic of Indonesia Number 44 of 2018.

#### Methods/intervention

A cross-sectional study design was implemented in 33 hospitals in Indonesia, consisting of six central hospitals, 24 regional hospitals and three private hospitals. The evaluation instrument was developed by the Indonesian HPH Network and the Ministry of Health. Hospitals completed the instrument and the research team conducted field verification. The analysis was to estimate the proportion of compliance with health promotion standards for hospitals.

#### Results

The evaluation results show that the overall fulfillment of the standards is 80.5%. While the fulfillment per standard is as follows: standard 1 Health promotion regulation 83.3%, standard 2 health promotion assessment 81.25%, standard 3 health promotion intervention 79.4% and standard 4 monitoring and evaluation 78.1%. The strength is that all hospitals have regulations on health promotion, but resources are still limited both in quantity and quality, which has an impact on health promotion interventions that are not yet optimal.

#### **Conclusions/lessons learned**

The Regulation of the Minister of Health of the Republic of Indonesia Number 44 of 2018 has been accepted to be implemented quite well in the last five years. The thing that needs to be improved is the fulfillment of resources both in quantity and quality.

Contact: PURNAMA Deni Indonesian HPH Network INDONESIA superdeni007@gmail.com Reducing readmission rates for heart failure patients through the application of interdisciplinary care.

## LIN Cheng-Sheng, YANG Yi-Chun, LIN Pin-Chun

#### **Background and objective**

Heart disease holds the title of the leading cause of death nationwide and ranks second among the top ten causes of death in Taiwan. Heart failure, a complex and severe chronic condition, often accompanies various comorbidities and has a high recurrence rate. Literature indicates a 20% readmission rate within thirty days. It is hoped that through interdisciplinary care, discharge to home self-care can be enhanced to reduce readmission rates.

#### Methods/intervention

1.Designate admission orders code to automatically initiate interdisciplinary care through information system, including rehabilitation, nutrition, medication, and case manager. 2.Develop heart failure patient education package based on guidelines. 3.Utilize multimedia such as educational booklets and videos for one-on-one bedside education sessions. 4.Regular follow-up phone calls after discharge to track medication adherence and self-care effectiveness in patients. 5.Report visit rates and care outcomes for each profession at quarterly team meetings.

#### Results

Through the implementation of interdisciplinary care combined with integrated information, the team's education visit rate increased from 89.7% in October to December 2022 to 97% in April to June 2023. Additionally, the 30-day readmission rate decreased from 10.3% in October to December 2022 to 7.1% in April to June 2023.

#### **Conclusions/lessons learned**

Through the integration of patient data and interdisciplinary care via information systems, rapid provision of treatment and education is enabled, assisting patients in developing self-care abilities and implementing self-management to improve their condition. This not only reduces readmission rates but also enhances self-care techniques, increases the quality of care, and improves patient satisfaction with healthcare. Therefore, interdisciplinary care is a promising new model worth promoting.

Contact: LIN PIN CHUN TAIWAN a0980418339@gmail.com Visualizing Hospital Health Promotion Activities on Social Determinants of Health: Effects and Prospects of the HPH Evaluation Intervention System

## NARITOMI Koutarou, IKEDA Hiroko, FUNAKOSHI Mitsuhiko, NAKASHI Takahiro

#### Background and objective

Intervention targeting Social Determinants of Health (SDH) is increasingly necessary within hospitals. In Japan, societal support is expanding for a wider range of cases, however there is no mechanism to quantitatively evaluate the implementation status of equitable healthcare practices in hospitals. Therefore, our hospital developed a system called the "HPH Evaluation Intervention Sheet" to assess both the SDH of patients and intervention actions, allowing us to visualize SDH. We report on the overview of the system, its effectiveness, and challenges.

#### Methods/intervention

The HPH Evaluation Intervention Sheet is a database created by extracting information related to the determinants of health from existing electronic patient records. There are six determinants: smoking, alcohol consumption, nutrition, poverty, isolation, and oral hygiene. A two-stage intervention process is employed including both simple and active interventions. Active interventions are conducted by specialized staff when predetermined intervention criteria are met. Necessary data is automatically input and calculated from existing patient records, minimizing staff burden.

#### Results

For the six determinants, evaluation rates, prevalence rates, and intervention rates can now be easily accessed. Regarding poverty, the prevalence rate was 15%, and the implementation rate of support by medical social workers was 26% of this figure.

#### **Conclusions/lessons learned**

Quantitatively understanding patient poverty and isolation situations is now feasible, along with conducting interventions utilizing social resources. This allows us to comprehend the practice status and challenges of equitable healthcare at our hospital. We plan to promote awareness and improvements to facilitate practical utilization of the HPH Evaluation Intervention Sheet.

Contact: NARITOMI koutarou JAPAN kt-naritomi@fid.jp The Hospitalization Preparation Service Center in Taiwan promotes patient-centered self-service hospitalization measures to reduce bed waiting times and alleviate the burden on nursing staff

## ZHUO Xiao-Lian, WANG Xue-Rong, LIN Pei-Ting, CHEN Ya-Hui, XU Hong-Yi

#### **Background and objective**

Background-Extended waits at inpatient prep center lead to: declining patient health, heightened family anxiety, reduced satisfaction, and increased nurse stress, impacting service quality and doctor-patient relationships.Purpose-An efficient preparation team reduces the nursing workload, ensuring patients receive timely care.

#### Methods/intervention

In 2023, the prep team introduces patient-centered selfadmission: appointment scheduling, mobile app usage, online guides, and patient-directed ward entry. Criteria include: prior hospitalization, patient consent, lucidity, mobility, caregivers' presence, induction of labor, and family agreement. Patients must contact ward staff before arrival to coordinate check-in times.

#### Results

"Analysis": 1. Statistical analysis of patient bed waiting times in each ward. 2. Evaluation and review of processes. 3. Deployment of nursing staff focusing on self-admission criteria."Intervention conditions": 1. Physical bed wait <30 mins. 2. Virtual bed wait <60 mins."Findings": 1. Patient wait time reduced to <15 mins (increased from 65.8% to 98.3%). 2. Virtual bed delay decreased from 75% to 67.4%, with average wait time dropping from 1h 43m to 1h 27m.

#### **Conclusions/lessons learned**

Thorough analysis and cross-unit cooperation expedite patient admissions. Meticulous planning and implementation reduce waiting times, optimize bed utilization, and enhance patient services, ultimately improving nursing efficiency.

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Ensuring Patient Safety in Smart Healthcare: A Case Study

LIAO Wen-Tsz, WU Jia-Min, LIEN Chi-Hsun, HSU Hung-Yi, TUNG Ann-Chen

#### **Background and objective**

With the advancement of smart healthcare, there is a growing concern over medical information incidents. The Emergency Care Research Institute annually monitors patient safety hazards arising from medical technologies. Taiwan is in the early stages of developing a systematic framework for managing patient safety risks in the healthcare information system (HIS).

#### Methods/intervention

This study identified potential patient safety risks in HIS and equipment, conducting assessments systematically. We investigated past patient safety events.

#### Results

Analysis of patient safety events from 2018 to 2021 showed that technology-related incidents accounted for approximately 1.8% to 3.4% annually (out of 3083 total events, 80 were technologyrelated, averaging 2.6%). Over time, the proportion of technology-related incidents increased. Medicine-related events constituted the most significant proportion (36 incidents, 45%), followed by examination events (22 incidents, 28%). Although 47 incidents (59%) did not cause harm, 24 (30%) resulted in near misses, but nine incidents (11%) caused actual harm to patients. Notably, HIS issues comprised 87.5% of technology-related incidents, highlighting the critical importance of system stability and reliability for healthcare institutions. Regarding decision support functionalities, most error cases (72.5%) did not involve decision support functions, yet their errors still impacted medical processes and patient safety. Finally, the leading causes of incidents primarily involved software-related issues and humanmachine interface problems, underscoring the importance of software system design and management.

#### **Conclusions/lessons learned**

Although the proportion of information-related incidents is relatively low, their impact is significant. Ensuring the security of medical technology and patient safety requires collaborative efforts within the healthcare environment.

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The efficacy of combined treatment of Traditional Chinese Medicine and Western medicine in alleviating dizziness and acute pain at the emergency department patients

#### LI Yi, CHIANG Hui-Chaun, LEE Yung-Heng

#### **Background and objective**

In recent years, there have been notable cases of acupuncture being used in emergency settings in foreign hospitals. Empirical research also indicates that after acupuncture intervention, Visual Analog Scale (VAS) scores significantly decrease, and it can reduce patients' repeated visits to the emergency department or prolonged stays in observation areas.

#### Methods/intervention

The service process is as follows: (1) Evaluation by the attending emergency physician to determine eligibility for referral; eligible cases proceed to Chinese medicine consultation. (2) Obtaining consent from the patient or family members. (3) Further assessment by the Chinese medicine practitioner, explaining the intervention methods such as acupuncture and orthopedic manipulative therapy to the patient and family, with no prescription of traditional Chinese herbal medicine, and signing of informed consent forms along with pre-treatment assessments using standardized scales. (4) Treatment by the Chinese medicine practitioner, documenting the number and locations of acupuncture points on an assessment form placed by the bedside, accompanied by a sign indicating "Chinese Medicine Treatment in Progress" on the IV pole to minimize medical risks. (5) Removal of acupuncture needles and posttreatment assessments by the Chinese medicine practitioner upon completion of treatment. (6) Provision of relevant health education and scheduling of follow-up appointments at the Chinese Medicine outpatient clinic by the Chinese Medicine Case Manager.

#### Results

The diagnoses upon referral were as follows: dizziness in 156 cases (58.4%), soft tissue pain in 68 cases (25.4%), chest discomfort or pain with palpitations in 20 cases (7.4%), acute abdominal pain in 16 cases (5.9%), musculoskeletal pain disorders in 6 cases (2.2%), and migraine in 1 case (0.3%).

#### **Conclusions/lessons learned**

Through the integration of Chinese and Western medicine, patients not only experience rapid alleviation of symptoms but also effectively reduce the number of emergency department visits and even decrease the frequency of recurrent visits.

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## Effectiveness of Using Care Bundle to Prevent Delirium in Intensive Care Unit Patients

## DONG Jia-Rou, HUANG Hsiu-Yen, CHANG Ya-Chu, HSU Tzu-Chuan, LIN Yi-Chun

#### **Background and objective**

To reduce patient delirium and to improve patient safety. The incidence rate of delirium in our unit from October to December 2020 was 29.3%. The reasons include a lack of a delirium assessment process and care routine, the absence of addressing patient pain and agitation promptly, and no re-evaluation of agitation. This project aimed to improve the occurrence of

delirium in patients by using combined care in intensive care teams.

#### Methods/intervention

From March to June 2021, the delirium assessment and care process was revised based on the literature. The CAM-ICU scale was added. The early severe delirium prediction model (E-PRE-DELIRIC) was applied, and the decision support system was introduced in combination with the PADIS bundle and ABCDE bundle. When a patient was assessed as being at high risk for delirium, the system automatically prompted the care team to take necessary care measures based on the assessment results. Pharmacists and doctors also joined the discussion in establishing an analgesic, sedation, and delirium medication order system.

#### Results

The incidence of delirium decreased significantly from 29.3% to 10.1% from July to September 2021 (P<0.01), 9.7% from October to December, and 11.8% in 2022. The average number of days patients stayed in the ICU was 4.9 days before improvement but dropped to 4.2 days after improvement. The completion rate of the PADIS bundle and ABCDE bundle increased significantly from 67.1% to 90.8% after improvement. Physicians' compliance rate with patients' prescriptions for analgesia, sedation, and delirium medication reached 88.7%.

#### **Conclusions/lessons learned**

Early detection of high-risk cases and intervention through interprofessional teamwork can indeed reduce the incidence of delirium.

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Redefine inpatient falls risk model in a medical center: easier to measure results

## WANG Yu-Tsang, SHEN Ya-Han, KANG Ya-Ting, KUO Yen-Ting, HU Chieh-Ying

#### Background and objective

articipating hospital has adopted the Hendrich II Fall Risk Model for the past 20 years. Measurement tools that are more than 20 years old may need updating. In response to health promotion and to improve patient safety, this study redefines risk factors for falls assessment. Establishing a more effective and measurable fall risk model.

#### Methods/intervention

Excluding those who were younger than 20 years old or whose medical records were incomplete, and defined those who had fallen events as the case group, and those who had no fall records as the control group. All collected variables are included

in the regression analysis, and after estimation, the Odds Ratio >1 and p-value <0.05 of the occurrence of a fall event are considered risk factors. We found that in practice, those who are difficult to measure the "Get Up and Go test" of the Hendrich II Fall Risk Model are mostly inpatients who are in poor condition, so this study considers the inability to measure as one of the options.Use SAS version 9.4 to perform statistical analysis.

#### Results

This study included 45,766 hospitalizations, including 258 falls and 45,508 hospitalizations without falls. According to the multiple logistic regression model, a total of 7 risk factors for falling events. Confusion/disorientation/impulsivity ; Symptomatic Depression Dizziness / Vertigo; Male; Any Administered Antiepileptics; Rising from a chair multiple attempts , but successful/ unable to rise without assistance during test/ unable to assess vs. pushes up, successful in one attempt ; Patient source (emergency vs. outpatient ). All OR>1.6, p-value<0.05. Compared with those without risk factors, those with one to more than 5 risk factors, All OR>2.4, p-value <0.0001. The best cut-off point for ROC is the presence of two risk factors at the same time, with sensitivity = 0.84; specificity = 0.57; Youden Index = 0.41. AUC=0.7562, p-value <0.0001.

#### **Conclusions/lessons learned**

his study develops a simpler fall assessment model, with any two risk factors that may lead to falls, and the risk of falling is as high as 8 times. By making good use of the fall assessment model, most in-hospital falls can be avoided.

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## Evaluation of care combining reminiscence therapy and games for the elderly with mild and moderate dementia

#### LAI Shu Hui, LIOU Yi Siou

#### **Background and objective**

According to estimates from the Ministry of Interior's demographic data at the end of December 2022: Taiwan's elderly population over 65 years old totaled 4,085,793, of which 7.54% were patients with dementia. According to literature review, it was pointed out that reminiscence therapy can be of substantial help in daily care for people with dementia , and can appropriately improve their psychological distress. Therefore, this study aims to use reminiscence therapy combined with game mode to determine whether there is a significant effect in improving the tendency of depression among hospitalized elderly people with dementia.

#### Methods/intervention

The subjects of this study were elderly people over 65 years old with dementia who were hospitalized in the neurology ward of a hospital. The Mini-Mental State Examinationand Geriatric Depression Scalewere used to screen the patients with dementia and randomly selected them. They were divided into two groups. One group participated in the reminiscence therapy combined with game mode, three times a week, for thirty minutes each time, a total of nine times. The other group was the control group and did not perform reminiscence therapy and games.

#### Results

After research, the average MMSE pre-test score was 20.27 points, and the average MMSE post-test score increased to 20.55 points, showing an increasing trend, but there was no significant difference. In terms of the detection of depressive tendencies (a score of five or more indicates a depressive tendency), the average pretest score was 9.31 points, and the average posttest score dropped to 4.92 points, p<.05, showing an obvious downward trend, reaching a significant level.

#### **Conclusions/lessons learned**

The research shows that the experimental group can significantly improve or reduce the depression tendency of elders with mild and moderate dementia. Therefore, the combination of reminiscence therapy and game mode is particularly meaningful for the care of the elderly with dementia. Because the elderly with dementia have cognitive function problems and have specific long-term memories in time and space, the use of reminiscence therapy can help them The narrative of long-term memory has its own meaning, and when supplemented by games, it has a resonant effect.

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## Poster session 1.6: Promoting healthy behavior of staff

Building resilience through symphony and poetry for COVID-19 encumbered healthcare workers: a Taiwanese qualitative study

#### LIU Hui-Yueh, PENG Jung-En, WU Te-Yu

#### Background and objective

In 2021, Taiwan's healthcare workers were encumbered by the coronavirus disease of 2019 (COVID-19) pandemic, resulting in overwhelming stress. This study aims to improve healthcare workers' self-awareness towards their stress and work efficiency by implementing symphonic poetry to inspire explorations of resilience.

#### Methods/intervention

This study was administered to a panel of physicians, nurses, and specialist nurses via in-depth interviews, followed by content analysis for data analysis. Interviewees must have participated in the "Meeting Mahler, Meeting Myself" concert held by the medical center to be included. The concert was based on the poetry of the fifth movement Satz, from Mahler's Symphony No. 2 Resurrection and featured symphonic poetry and a manual. The manual combined pictures and a complementary interview guide to enable participants to share their pandemic experiences and health.

#### Results

A total of 19 healthcare workers participated in the interviews. The participants had all participated in the symphonic poetry concert "Meeting Mahler, Meeting Myself" held by the institute, the average age was 44.1 years old, and the working experience was 19.1 years. Including nine physicians (47.4%), eight nurses (42.1%), and two specialist nurses (10.5%). The results were categorized into three major themes: "The pandemic aggravate physical and mental exhaustion", "Symphonic and poetry can build my resilience to stress", and " Enhancing mental toughness to overcome adversity ".

#### **Conclusions/lessons learned**

Healthcare workers experienced stress and exhaustion during the pandemic. Symphonic poetry can be a supportive tool to inspire explorations of resilience for healthcare professionals encumbered by the pandemic.

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Managing stress and sleep disorders of employees in engineering consulting firm – Pilot study

#### **HUSEH Ping**

#### **Background and objective**

Excessive work stress can lead to negative physiological, psychological, and behavioral responses in employees, while sleep disturbances can further exacerbate psychological, physiological, and social issues. The purpose of this study was to explore the relationship between employees' sleep quality and stress levels.

#### Methods/intervention

A pre-experimental research design was used to collect 35 employees. Stress reduction and sleep aid techniques program was delivered to employees. The study tools included demographic data, heart rate variability (HRV) analysis and the Pittsburgh Sleep Quality Index. The program last for 12 weeks. Data establishment and statistical analysis were conducted using the SPSS 24 software package.

#### Results

A total of 35 participants attended in this program. The average age of participants was 41.97 years old. Results showed the average total sleep quality score was 7.97 points, with the highest scores observed in total sleep duration, subjective sleep quality, and sleep disturbances. After the intervention, it revealed a significant improvement in participants' total sleep quality scores (t=2.28, p=0.03) and sleep onset latency (t=1.97, p=0.04).

#### **Conclusions/lessons learned**

Improving sleep quality requires the cultivation of long-term good sleep habits. Personal factors such as chronic diseases, sleep apnea, stress, and anxiety can also affect sleep. Through lectures teaching simple muscle relaxation techniques and breathing exercises, employees can enhance their knowledge of sleep hygiene and develop coping strategies for sleep disturbances, thus further improving sleep quality.

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To Explore of the Work Stress and Emotional Labor: An Example of Nurses

### LIN Rose Su-Jung

#### **Background and objective**

Nursing is inherently a high-stress profession, with various sources of pressure including interactions with patients and their families, hospital policies, and the roles and responsibilities of the nursing staff themselves. Nurses must control and even suppress their emotions, which over time can lead to high emotional labor. Therefore, this study aims to explore the relationship between job stress and emotional labor among nurses.

#### Methods/intervention

This study employed a cross-sectional design, using a structured questionnaire to survey 200 nurses from hospitals in the northern Taiwan. The questionnaire included a job stress scale and an emotional labor scale, both of which are reliable and valid.

#### Results

The results of the study indicated that as the number of years in service increases, the level of job stress tends to decrease. Among unmarried and childless nurses, job stress is relatively higher and emotional labor is greater. The level of interaction of emotional labor was significantly positively correlated with personal reactions and job competence of job stress among nurses.

#### **Conclusions/lessons learned**

This study recommends that hospitals start paying more attention to the job stress and emotional labor of healthcare personnel. Establishing good practices can help alleviate nurses' stress and reduce the burden of emotional labor.

#### Contact:

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## Building the appropriate workplace for nurses through measuring the nurse's stress status by BSRS-5

#### LI Pingi

#### **Background and objective**

Nurse retention is a critical issues in hospital. Therefore, we use the Brief Symptom Rating Scale(BSRS-5) to investigate the nurses' stress and develop the strategies for creating a appropriate workplace for them.

#### Methods/intervention

In this project, the BSRS-5 was administered to nurses working at gynecology and pediatrics departments in the medical center between January 2019 and September 2023. According the classification of their scores, we gave nurses various strategies. These strategies including: 1.Create a appropriate and accepting atmosphere in the unit. 2.Stabilize the kind of the patients to reduce the working stress.3.Reprogram the education strategies to help nurses adjust the workplace.

#### Results

The BSRS-5 scores are significantly negative influence on intention to stay(the lower scores of BSRS-5,the higher intention to stay). The gynecology department's average score decreased from 3.48(2020) to 2.18(2021), 1.79(2022), 1.74(2023) and the pediatrics department's average score decreased from 2.71(2020) to 2.36(2021), 1.40(2022), 1.54(2023). Therefore, we used the strategies on the other two unit (Delivery room and Baby room) on 2022 and 2023. In the delivery room, the average score decreased from 2.47(2022) to 2.00(2023). In the baby room, the average score decreased from 2.56(2022) to 2.20(2023). The turnover rate decreased from 7.7%(delivery room) and 12.5%(baby room) to 0%(2023).

#### **Conclusions/lessons learned**

BSRS-5 could measure the nurses emotional status and stress, which in turn influenced nurses' intention to stay. Therefore, hospitals should improve the atmosphere in the unit, stabilized the kind of thepatients, and reprogrammed the education strategies to increase nurses' intention to stay.

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## In face of the epidemic, the nurses' feelings and courage

## SUN Feng-Ching, HSU Pei-Lan, HUANG Ling-Ya, CHEN Shu-Nu, CHEN Bi-Chun

#### **Background and objective**

As the epidemic of COVID-19 continues, the workload, physical and mental impact of front-line nurses facing high-risk infectious diseases have been greatly affected. The work stress affects the physical and mental health of nursing staff, which in turn affects the quality of patient care. This research probes into the experience of front-line nurses who face high-risk infectious diseases. For this purpose, two levels of experience are discussed separately: (1) The experience of the nurses' feelings in facing the epidemic (2) The motivations (courage) and barriers of nurses in caring for patients of the epidemic.

#### Methods/intervention

The participants of this study were nurses in southern Taiwan general hospitals who worked in the front-lines in caring for epidemic patients. These participants were chosen by a purposive sampling method. A total of 21 nurses were recruited and invited into focus groups. A series of semi-structured guidelines were implemented for data collection as tools in this study. Data were analyzed by content analysis.

#### Results

In this study, four themes were analyzed and summarized:

- (1) Dialogue between physical and mental suffering and professional tasks
- (2) Power of support (family, peers and coping methods)
- (3) Guarantee of work safety
- (4) Upholding one's initial commitment versus retention intention.

#### **Conclusions/lessons learned**

It is recommended that the medical system may develop a plan to support the nursing staff in practicing safety plans and maintaining family life. Furthermore, nursing education may focus on cultivating the nurses' abilities to cope with stress, so as to improve the willingness to stay and provide a solution to the dilemma of lacking manpower to nurture a mutually beneficial situation.

#### Contact:

SUN Feng-Ching Department of Nursing, Kaohsiung Municipal United Hospital, Kaohsiung, Taiwan TAIWAN sfcmail333@yahoo.com Intervene in the weight loss effect of hospital employees through diversified methods

## TSAI Pao-Ping, HUNG Shih-Yu, LEE Pei-Hsuan

#### **Background and objective**

Obesity is the fifth leading risk factor for death worldwide. According to employee health examination results, many employees have excessive BMI values. Indicates that obesity is a common problem. It is difficult for busy medical staff to manage their own health. Therefore, we conducted an intervention study using online social media and professional courses in different fields to explore the effectiveness of weight loss among their employees.

#### Methods/intervention

1.Course content: Psychologists provide positive health psychology knowledge, physical therapists design basic exercise and injury prevention, and nutritionists provide healthy diet knowledge, etc. 2.Course format: 11 physical courses. 3. Course period: 2 months in total. 4. Supplementary course content: A social group is established, and participants upload photos of their diet, exercise, and weight every day. Weekly online feedback from nutritionists and physiotherapists. Participants can ask questions and get answers online in real time. 5. Postcourse tracking: In the third month, participants will be followed up after the course.

#### Results

in the beginning,the average BMI of the 16 participants was 29.5 $\pm$ 7.5, the average weight was 78.2 $\pm$ 22.1 kg, the average body fat rate was 39.2 $\pm$ 11.5%, and the average muscle weight was 44.4 $\pm$ 12.5 kg. After the course, the average BMI of the participants decreased by 1.0 $\pm$ 1.1, the average weight decreased by 2.8 $\pm$ 2.6 kg, the average body fat rate decreased by 1.8 $\pm$ 1.8%, and the average muscle weight decreased by 0.9 $\pm$ 2.0 kg. Comparing the follow-up in the third month after the course and the post-test again, the average BMI decreased by 0.1 $\pm$ 0.6, the average weight decreased by 0.3 $\pm$ 1.6 kg, the average body fat rate decreased by 0.1 $\pm$ 0.6 kg.

#### Conclusions/lessons learned

Due to the different work schedules in hospitals, a multi-faceted approach to healthy diet intervention for hospital employees can significantly reduce BMI, weight and body fat rate. It is hoped that future courses will attract more employees to participate.

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## Process Management Intervention Reduces Overtime Hours of Nursing Staff In The Endoscopy Room

#### WANG Shin-Yi, LIU Chin-Hua

#### **Background and objective**

The inspection items in the examination room are complicated, and there are many and complicated rules for scheduling inspection periods. In order to reduce the long waiting time for examinations, nurses often work overtime to perform routine and temporary inspections, clean the endoscope, and submit specimens for examination. Affect the nurse's regular rest time. In order to improve work quality, reduce unnecessary overtime hours for nursing staff, and provide a friendly workplace environment, improvements are made through process management methods to make nursing staff feel at ease at work and thereby improve work efficiency.

#### Methods/intervention

Participate in pre- and post-inspection work activities through process management. Use the retrospective method to collect overtime hours and overtime key points. According to statistics, from July to December 2023, the number of overtime hours worked by nursing staff reached 426 hours, of which the reasons were: 63.3% follow-up or delayed diagnosis, and 21.5% cleaning tube scopes. Intervention measures for the above: 1. Establish a screening nurse. 2. Utilization of empty clinic rooms. 4. Hire technicians for cleaning tubescopes. 5. Apply for part-time staff.

#### Results

From January to March 2024, nursing staff worked overtime hours of 134.5 hours, follow-up or postponed consultations dropped to 48.6%, and cleaning endoscopes dropped to 8.6%

#### **Conclusions/lessons learned**

It is hoped that by improving the process, the overtime hours and turnover rate of nursing staff in the endoscopy room will be reduced, and the physical and mental health of nursing colleagues will be ensured under the condition of patient safety.

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Exploring the Effectiveness of Horticultural Therapy in Stress Adjustment Relief of Medical personnel: A Case Study of a Hospital in Southern Taiwan

## HU Yi-Fen, CHOU Chien-Chi, HUANG Wen-Ho

#### **Background and objective**

Medical personnel suffer tremendous physical and psychological stress in the professional working environment. Horticultural therapy can harness the healing power of plants to improve physical and mental health. The purpose of this study is to explore the effectiveness of horticultural therapy on stress adjustment of medical personnel through actual contact with plants and the use of horticultural materials.

#### Methods/intervention

Purposive sampling was adopted to collect medical personnel from hospitals in southern Taiwan join horticultural therapy courses as our objects. During the event, from January 2023 to January 2024,,with two sessions, each lasting two hours. Under the guidance of a horticultural therapist, objects learned and used gardening materials. Horticultural therapy well-being scale was used for the effectiveness evaluations physical movements, interest, hobby, relief, sense of achievement, social skills, logics and gardening skills after the courses, and Likert Scale and Chinese 14-item Perceived Stress Scale as well.

#### Results

We have 95 effective objects in total and the average age is 44.3 with 95.8% female. The background is university 66.3%, stands on the top place. We can see significant improvements (P<.00) of the objects on physical movements, interest, hobby, relief, sense of achievement, social skills, logics, gardening skills after the courses, especially the sense of relief. On Chinese 14-item Perceived Stress Scale stress adjustment that those who Pre-test "NORMAL" is 74.7% and it raises to 85.3% after intervention. The Pre-test "LITTLE STRESSFUL AND NEED RELIEF" is 25.3% and it drops to 14.7%(P<.00).

#### **Conclusions/lessons learned**

Horticultural therapy can promote interpersonal relationships, improve mood, enhance a sense of accomplishment at the spiritual level, and relieve stress for medical personnel. We recommend that medical institutions provide horticultural therapy courses for staff health promotion. The findings shouldn't be over-inferred due to limited samples. We believe a better approach for further research is to expand the study scope to different groups, and conduct follow-up research in related areas.

Contact: HU YI-FEN Tainan Municipal Hospital TAIWAN n71760@gmail.com Improving the Completion Rate of Low-Dose Computed Tomography Thorax Examinations for Employees.

## HUANG Hui-Chuan, XU Shu-Wei, LIN Tzu-Shan

#### **Background and objective**

Low-Dose Computed Tomography Thorax (LDCT) is an internationally validated screening tool that can detect lung cancer at an early stage. Early-stage lung cancer surgeries involve the removal of less lung tissue, thus minimally impacting postoperative lung function and quality of life. Currently, Taiwan is actively promoting lung cancer screening to ensure its citizens benefit from high-quality cancer prevention and treatment services. Our hospital places significant emphasis on employee health care by providing health-promotion benefits, including free LDCT Thorax screenings.

#### Methods/intervention

This screening is self-funded, with 64 employees randomly selected to receive free screenings, to be completed within six months. Three months into the implementation, it was found that employees had not issued screening orders or had forgotten the scheduled dates and times after issuing the orders. Consequently, employee follow-ups were initiated to address the reasons for not issuing screening orders and the failure to attend screenings post-order issuance, with the assistance of department supervisors for enhanced advocacy.

#### Results

In the first three months before the follow-ups, only 24 individuals completed the screening. After two months of follow-up efforts, 60 people had completed the screening, with the remaining four completing it three weeks before the deadline, achieving a 100% completion rate. Screening outcomes included one individual requiring surgical treatment and five scheduled for follow-up consultations in the outpatient clinic after one year.

#### Conclusions/lessons learned

Conclusion: Lung cancer is the leading cause of cancer death, yet it is preventable. In a hospital setting, where health care is paramount, prevention surpasses treatment. Through health screenings that detect abnormalities, employees can significantly enhance their own health maintenance and prevention efforts.

Contact: HUI-CHUAN Huang Chi Mei Hospital, Chiali TAIWAN hhc6277@gmail.com Impact of Health Promotion Activities on Quality of Life, Wellbeing, and Intention to Stay Among Employees of a Case Hospital

#### WU Ying-Hui, HSU Che-Han

#### **Background and objective**

163 Taiwanese institutions hold WHO certification as health promotion hospitals, fostering internal standards and staff involvement in health activities. The research aims to explore how employee participation in such initiatives impacts their quality of life, well-being, and intention to stay.

#### Methods/intervention

This was a cross-sectional study employing a questionnaire design covering basic information, quality of life, well-being, and intention to stay. The measurement tool demonstrated good validity and reliability, approved by the Institutional Review Board. Sampling was conducted from August to November 2023. 378 questionnaires were distributed, yielding 366 valid responses, with a valid response rate of 96.9%. Descriptive and inferential statistical analyses were performed using SPSS version 25.

#### Results

The study findings indicate that employees derive the highest level of satisfaction from receiving birthday vouchers, holiday bonuses, and attending hospital-provided meal gatherings, with a participation rate of 92.3% among the subjects. Furthermore, participation in mental health promotion activities, such as courses, stress relief programs, clubs, and artistic classes, significantly influences hospital staff intention to stay(p = .041). Multiple stepwise regression analysis identified key factors influencing intention to stay, including the "physical domain" of quality of life, as well as "optimism" and "job satisfaction" from the happiness index (adjR2 = .213, p = .026).

#### **Conclusions/lessons learned**

Future initiatives should prioritize organizing additional in-house health promotion activities related to mental health to boost hospital staff intention to stay. This would contribute to improving the well-being of employees, patients, families, and even community residents, thereby establishing health promotion activities as a crucial incentive for retaining hospital staff.

Contact: WU Ying-Hui YEE ZEE GENERAL HOSPITAL TAIWAN yinghui581225@gmail.com Exploring the Care Experience and Feelings of Intensive Care Unit Nurses after Withdrawing Life-Sustaining Treatment from Terminally III Patients

## HOU Guo-Min, CHU Yi-Tsen, CHEN Ching-Huey

#### **Background and objective**

ICU nurses often focus on patients' and families' reactions to death, neglecting their own emotional challenges after witnessing repeated deaths. This can lead to the oversight of nurses' needs for emotional management and adaptation. This study investigates ICU nurses' experiences and emotional coping after withdrawing life-sustaining treatment from terminally ill patients, aiming to enhance support and self-adaptation strategies for nurses, thereby improving care quality and work environment.

#### Methods/intervention

Utilizing qualitative research, purposive and snowball sampling were employed at a southern medical center. Ten ICU nurses with experience in caring for terminally ill patients were interviewed one-on-one, with data analyzed through qualitative content analysis.

#### Results

The study identified five key areas: 1. Medical dilemmas, including understanding discrepancies, withdrawal timing obstacles, ICU limitations, and lack of end-of-life care expertise; 2. Family reactions, focusing on decision-making dilemmas, reluctance to let go, and the emotional burden of patient suffering; 3. End-of-life care practices, highlighting comfort care, pain reduction, and support in making informed medical decisions; 4. Life value reflections, emphasizing life's impermanence; 5. Motivation in caregiving, driven by ethical commitment, family and peer support, and personal spiritual growth.

#### Conclusions/lessons learned

The study provides insights into ICU nurses' comprehensive experiences with end-of-life care, balancing proactive treatment with the awareness of its potential harm. It underscores the importance of professional standards, continuous patientcentered care evaluation, and the profound impact of emotional and professional support on nurse resilience and care quality. The findings offer valuable guidance for ICU management and educational initiatives, aimed at fostering nurses' professional development and emotional well-being.

Contact: CHU YI-TSEN Chang Jung Christian University TAIWAN yitsen@mail.cjcu.edu.tw Prevalence and factors associated with pre-sarcopenia and sarcopenia among middle-aged female healthcare workers in Taiwan

#### TAN Ting Wan, CHUNG Yu Chu

#### **Background and objective**

Sarcopenia is a complex condition whereby there is progressive and generalized degenerative loss of musculoskeletal system and muscle functionality, which would have devastating effect on quality of life, morbidity, and increased mortality among middleaged female healthcare workers. Female healthcare workers often experienced high occupational stress and emotional exhaustion related to the working condition. Female healthcare workers who are overworked and overstressed, tends to have risk of lifestyle disorder such as: improper diet, poor eating habit, inadequate physical activity and sleep disorder, which have been reported amongst rotational shift workers. The aim of this study is to examine the prevalence and factors of middle-aged female healthcare workers at high risk of pre-sarcopenia and sarcopenia.

#### Methods/intervention

This is a prospective cross-sectional study was carried out to examine the factors associated with measures of skeletal muscle mass, muscle strength, physical performance and sarcopeniarelated quality of life in a group of random sample of women aged 40 to 65 years of age middle-aged female healthcare workers in Taiwan.

#### Results

Age was negatively associated with muscle mass and muscle strength. BMI, fat percentage, arm lean mass, leg lean mass, bone mineral density, waist circumference were lower in participants with pre-sarcopenia and sarcopenia.

#### **Conclusions/lessons learned**

This study finding highlighted the significance middle-aged healthcare worker screened as positive for possible sarcopenia should be assessed. There is need to take awareness and motivate middle-aged healthcare workers to practice healthy lifestyle for prevention against the risk of sarcopenia.

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Enhancing the Resilience of Medical Institution Employees through Self Awareness Activities

CHANG Hsuan-Kai, CHOU Yuan-Yuan, CHENG Sung-Yuan, CHAN Chik Yi

#### Background and objective

Hospitals have responsibility to provide measures to reduce fatigue and emotional exhaustion in order to address the stress and trauma among healthcare workers caused by COVID-19 (NASEM, 2021). MacKay Memorial Hospital refers to the five dimensions of enhancing resilience: purpose, self-awareness, mindfulness, self-care, and relationships (Duke Center for Healthcare Safety & Quality), and use "self-awareness" as the core dimension to plan a two-day and one-night activity to improve hospital staff's resilience.

#### Methods/intervention

Self-awareness means: "knowing, understanding, reflecting, and thinking" about one's own "state, changes, impacts, and causes" in terms of "emotions, behaviors, thoughts, relationships, and personal characteristics." This activity is designed in three aspects to promote self-awareness: 1. Cognitive Awareness: Through lectures, speakers guide participants to reflect on their original intention for work, the most successful and frustrating experience, and so on. 2. Experience Awareness: Perceiving oneself through level-breaking activities; 3. Relationship Empowerment: Write down one's original work intention, past achievements and setbacks, as well as the process of overcoming them, and share it with group peers. After sharing, fold this paper into a paper airplane and shoot it out amidst the cheers of other colleagues, symbolizing starting off again with blessings.

#### Results

In 2023, a total of 428 employees participated, and 353 of them filled out the questionnaire. 90.1% felt "emotionally relieved". As for open-ended question, 22 people mentioned "spiritual growth", "renew from heart", and "knowing myself"; 24 answered "getting strength", and "supported". The participants not only relieved and psychologically supported, but also their resilience is improved and restored.

#### **Conclusions/lessons learned**

1.This activity allows employees to experience that "selfawareness" is beneficial for enhancing psychological resilience and helping them rediscover their inner motivation and motivation to continue working. 2.This activity carried out in this architectural pattern can be simplified or extended based on the unchanged content elements and the length of time employees can participate. It is a highly operational, replicable, and flexible activity.

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The correlation between work stress of medical staff and their quality of life (QOL) during COVID-19

TSAI Tsai-Ling, SUN Shou-Chuan, HSU Chen-Yuan

#### **Background and objective**

Since Coronavirus disease 2019 (COVID-19) in December 2019, the work stress of medical staff has further affected the quality of life (QOL). The purpose of this study is to explore the correlation between work stress and QOL of medical staff.

#### Methods/intervention

It adopted a cross-sectional research design in a medical center in central of Taiwan and collected 140 valid questionnaires. The "Basic Information Questionnaire", "Caring for High-Risk Infectious Diseases Stress Scale" and " The World Health Organization Quality of Life questionnaire, WHOQOL-BREF" were used to investigate. The statistical software SPSS Statistics 28 was used for data archiving and one-way ANOVA and Pearson correlation analysis.

#### Results

This result found that the main work stress of medical personnel during the epidemic was discomfort caused by protective equipment. Marriage, years of service, religious beliefs, hospital grade, service location and testing experience were all statistical significantly related to work pressure and QOL (p < 0.05).

#### **Conclusions/lessons learned**

The results of this study hopefully could provide relevant information to front-line medical staff and their managers, and pay attention to the correlation between work stress and QOL of medical staff.

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## The Relationship of Job Demands, Job Resources with Well-being in Hospital Staff

#### LEE Ching-Er

#### **Background and objective**

Job Well-being is the positive feeling of employees achieving work goals and realizing their potential. This study explores the relationship of job demands, job resources with Well-being in Hospital Staff.

#### Methods/intervention

This study employed a cross-sectional design and conducted convenient sampling at a hospital in Taiwan. The study participants were employees of the hospital. The research tools consisted of four parts: demographic characteristics, job demands questionnaire, job resources questionnaire, and happiness questionnaire. A total of 432 questionnaires were distributed, with 418 valid responses received (96.76%).

#### Results

This study found that: (1) The average age of the participants was 38.09 years old (SD=8.58), with a majority being female. (2) Hospital staffs had an average score of 60.18 (SD=6.53) for job demands, 47.50 (SD=9.45) for job resources, and 60.94 (SD=10.92) for well-being. (3) There was a significant relationship between job demands and job resources among hospital staffs; as job demands increased, the required job resources also increased. (4) Hospital staffs well-being was significantly correlated with job demands (r=-.467) and job resources (r=..441), indicating that higher job demands were associated with lower hospital staffs well-being, and higher well-being was associated with lower required job resources.

#### **Conclusions/lessons learned**

The results indicate that when there are changes in the healthcare environment resulting in increased job demands for staffs, their sense of well-being decreases. However, timely provision of job resources by the hospital can prevent the decrease in staffs well-being. Additionally, when staffs well-being is high, the required job resources decrease. Therefore, it is recommended that hospitals provide staffs with diverse work-life balance strategies to enhance their well-being, which will be crucial for staffs to cope with the variability of the healthcare environment.

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## Organizing HPH Festival to regain energy of staff through communication

#### **ONISHI Akiko, YUKI Yoshie**

#### **Background and objective**

Nishiyodo Hospital affiliated with Yodogawa Workers Welfare Association has developed various HPH activities since joining the International HPH Network in 2014, but due to the Covid-19 pandemic, many of these practices had to be suspended. HPH committee got creative for new online exercise classes, smartphone classes, and "How are you? phone calls". However, communication even between staff members was restricted and our staff were exhausted in the course of addressing the situation. Also, the number of staff increased because our organizations were integrated recently, so we had to educate new staff about health promotion and promote our activities. So, we organized an event called HPH Festival to advocate and encourage the staff.

#### Methods/intervention

For convenience of staff, the festival was held on Saturday afternoon at an affiliate annex clinic of our hospital. 4 zones were set up. 1. Leaning Health Friends Association, 2. Physical exercise, 3. Music and dance, 4. Health promotion to learn about the concept and the activities of our hospital. Participants can collect stamps as they go around different booth, and receive a reward of sweets and coffee when all the stamps are collected.

#### Results

More than 180 persons including Health Friends Association members attended. In survey, more than 94 percent responded it was very good or good to participate. Feedbacks were very positive, and suggestions and requests were made for more events like this. All participants and staff enjoyed interaction with people for the first time in a while, and went home with smiles.

#### **Conclusions/lessons learned**

This event reminded us the importance of communication, interaction and smiling. We received many requests from Health Friends Association members to hold likely event in the local communities, which is now under consideration. We are now prepared to shift our daily health promoting activities to look ahead into the post-Covid-19 era.

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## The Effectiveness of Utilizing "Multiple Stress Relief and Healing Activities" to Promote the Mental Health of Employees in Healthcare Settings

## CHANG Chun-Han, LIN Hsiu-Mei, HUANG Wei-Hsin, CHEN Chie-Pein, CHIU Yu-Ting

#### Background and objective

Employees in healthcare settings experience significant physical and mental stress due to the high-risk work environment. To address this issue, various stress-relieving and therapeutic activities were organized to enhance staff resilience and psychological well-being. The results demonstrate that these activities enhance employees' stress management abilities, improve psychological health, and foster work-life balance.

#### Methods/intervention

From September 2022 to August 2023, a series of stress-relieving courses were conducted: (1) Art Therapy, aiming to explore individuals' inner worlds through color painting and achieve self-healing; (2) Aromatherapy, using essential oils to achieve a soothing effect on the mind; (3) Massage therapy, teaching proper pressure techniques to relax tense muscles. A total of 16 sessions, each lasting 2 hours, were scheduled. The course utilized lectures to guide immersive thinking, employed art mediums for personal expression, and encouraged colleagues to share their physical and mental states to achieve stress relief goals. A questionnaire survey was conducted at the end of the course to assess the effectiveness of the activities.

#### Results

A total of 423 participants enrolled, with administrators comprising 40.9%, medical technicians 31.2%, nursing staff 25.5%, and physicians 2.4%. Course overall evaluation satisfaction was 93.5%, with a 14% average increase in six performance indicators compared to pre-course assessments. Notably, the indicator of "I feel I can overcome the problems I encountered" improved by 15%.

#### **Conclusions/lessons learned**

Participation in diverse stress relief activities effectively enhances the mental health of healthcare employees. However, participation is limited, especially for shift workers, due to the practical nature of small group activities. Increasing the number of activity sessions is hoped to accommodate the needs of more staff members.

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A Study on the Relationships among Nursing Staffs' Metabolic Syndrome Cognition , Attitude and Health Behavior

## TENG Hsiu Yun, LIN Yu Ling, CHIANG Hui-Chaun, LEE Yung-Heng

#### **Background and objective**

Research indicates that unhealthy dietary behaviors and shift work are significant factors contributing to metabolic syndrome among nursing personnel. This study aims to investigate the relationship between metabolic syndrome awareness, attitudes, health behaviors, and related factors among nursing personnel.

#### Methods/intervention

A cross-sectional survey was conducted using an anonymous structured questionnaire among 460 nursing personnel at a teaching hospital in the central region of Taiwan. Metabolic syndrome awareness and attitudes were considered independent variables, while health behavior was the dependent variable. A total of 417 valid questionnaires were collected. SPSS 25.0 was utilized to analyze the association between metabolic syndrome and various variables, as well as to examine the influencing factors of awareness, attitudes, and health behavior on each other.

#### Results

In this study, the prevalence rate of metabolic syndrome among nursing personnel was 9.1%. The research results indicated significant differences (P<0.05) in the occurrence of metabolic syndrome among nursing personnel based on gender, personal history of chronic diseases, and self-perceived health status. Correlation analysis between metabolic syndrome awareness, attitudes, and health behaviors showed a positive correlation (P<0.01) between attitudes and health behaviors. Regression analysis was conducted with health behavior as the dependent variable, revealing significant differences (P<0.05) in the impact of age, education level, shift work status, personal history of cardiovascular risk factors, body mass index, and attitudes on health behaviors.

#### **Conclusions/lessons learned**

This study found that shift workers exhibit poorer health behaviors compared to those on regular shifts. Therefore, when planning health promotion activities, it is important to consider the needs and preferences of shift workers, prioritizing efforts to increase their willingness to participate and enhance motivation for behavior change.

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## The effectiveness of diverse weight loss strategies on hospital employee weight control

## TSAI Fa-Hui, TSAI Hui-Na, LIAO Hui-Chuan, WU Hsi-Chin

#### **Background and objective**

The impact of obesity on health extends beyond physical decline and may also lead to an increased risk of developing metabolicrelated diseases such as hypertension, diabetes, and hyperlipidemia in the future. To assist hospital employees in overcoming the health threats posed by obesity, a program promoting diverse weight loss strategies is being implemented.

#### Methods/intervention

A quasi-experimental design was used, purposively selecting 57 hospital employees as research subjects. Before the study commenced, measurements of weight, body fat, and BMI were taken using a body fat analyzer as baseline data for the research subjects. Subsequently, an 8-week intervention of "multiple weight loss strategies" was implemented, including: (1) personalized low-carbohydrate diet design and providing a service for ordering healthy meal boxes; (2) establishing correct dietary knowledge and behavior; (3) daily monitoring of weight changes and sharing successful weight loss experiences; (4) reinforcing beliefs in healthy weight loss; (5) establishing a single dietary control consultation window; and (6) implementing a reward system. Data collection and analysis of the research subjects were conducted before and after the intervention.

#### Results

Statistical analysis revealed that the 57 employees collectively lost 330.4 kilograms (an average weight loss of 5.9 kilograms per person), with a total body fat reduction of 168.1% (an average body fat reduction of 3.0% per person), and an average BMI decrease of 2.3% per person, demonstrating significant effectiveness. Continuing the follow-up for two months, 84.2% maintained their weight without regaining the lost weight.

#### **Conclusions/lessons learned**

The intervention of "diverse weight loss strategies" for hospital employee weight control has been beneficial in achieving weight loss. By enhancing employees' correct dietary knowledge, fostering proper dietary habits, promoting group support and shared weight loss experiences, providing timely encouragement, employees can successfully lose weight and maintain it without rebounding.

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Exploring the effectiveness of hospital staff undergoing a weight loss strategy plan intervention in reducing the risk of chronic diseases.

## TSAI Hui-Na, TSAI Fa-Hui, LIAO Hui-Chuan, WU Hsi-Chin

#### **Background and objective**

Individuals with higher body weight have a higher incidence of chronic diseases and higher mortality rates. To assist hospital employees in overcoming the health threats brought about by obesity, a weight loss strategy program has been implemented.

#### Methods/intervention

Using a quasi-experimental design, 18 hospital employees aged 35 and above with a BMI of 24 or higher were purposively invited to participate as research subjects. Before the study commenced, measurements of weight, waist circumference, and blood pressure were taken for the research subjects, along with referencing their health examination reports. This information was used for the baseline chronic disease risk assessment. Subsequently, an 8-week "Weight Loss Strategy Program" was implemented, which included: (1) Personalized lowcarbohydrate diet design and offering the service of ordering healthy meal boxes; (2) Establishing correct dietary knowledge and behaviors for employees; (3) Reinforcing employees' healthy beliefs in weight loss. Data collection and analysis of the research subjects were conducted before and after the intervention.

#### Results

Statistical analysis revealed that the average age was 45.8 years old, with an average weight loss of 4.17 kilograms per person and an average reduction of 6.67 centimeters in waist circumference. Chronic disease risk assessment results are as follows: (1) Coronary heart disease: 4 individuals decreased from moderate risk to low risk. (2) Hypertension: 3 high-risk individuals decreased to moderate or low risk; 3 moderate-risk individuals decreased to low risk. (3) Cardiovascular adverse events: 1 highrisk individual decreased to moderate risk; 2 moderate-risk

#### **Conclusions/lessons learned**

The intervention of the "weight loss strategy plan" has indeed proven beneficial in reducing the risk of chronic diseases among hospital staff.

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The health equity assessment of correlation between employee overload and Hypertension, Hyperglycemia, and Chronic Kidney Disease among Medical Center Staff in Northern Taiwan: A Case Study

#### **CHEN Ming-Shu**

#### **Background and objective**

Taiwan's comprehensive national healthcare insurance and medical resources have led to high healthcare quality and satisfaction but have also resulted in excessive workload among hospital staff, affecting health equity. This study aims to explore the correlation between workload and health status, specifically focusing on hypertension, hyperglycemia, and chronic kidney disease (CKD) with diverse medical and administrative staff in the medical center.

#### Methods/intervention

This cross-sectional study, approved by the hospital Institutional Review Board (IRB) under case number 111131-F, involves healthcare institution personnel as the study sample. We utilized the Occupational Overload Assessment Scale from the Bureau of Occupational Safety and Health of the Ministry of Labor (Taiwan) and employee health examination data. Statistical analyses explored factors associated with the correlation between work overload and the risk group for high blood pressure, high blood sugar, and concurrent CKD.

#### Results

In a specific medical center, employees in the high-risk group showed significantly higher values in age, weight, BMI, waist circumference, triglycerides, and LDL cholesterol compared to the non-high-risk group. The high-risk group for HDL cholesterol was significantly lower than the non-high-risk group, consistent with other research findings. Gender differences were significant in the risk group with high blood pressure, high blood sugar, triglycerides, and concurrent CKD. Although work overload and personal fatigue did not show significance in the risk group, both demonstrated a significant negative correlation with age.

#### Conclusions/lessons learned

Large medical institutions or teaching hospitals in Taiwan are generally overloaded or understaffed with medical staff, especially in the Nurse group. The preliminary analysis results of this study suggest that most senior employees have health indicators out of the laboratory criteria, and junior employees are under a greater work overload. There is a need for attention from hospital senior managers and government departments regarding excessive workload.

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Using data mining to examine chronic disease risk assessment of hospital employees - taking administrative staff as an example

#### LEE Yi-Lien

#### **Background and objective**

In the past, studies generally focused on clinical medical staff such as doctors and nursing staff as the main research subjects of hospital workplace health, and rarely paid attention to administrative staff who provide logistical support. Therefore, we hope to assist hospitals in the risk assessment of chronic diseases by data mining and analysis of administrative staff. Reference in developing health promotion activities.

#### Methods/intervention

Taking the administrative staff of a certain hospital as the target, data mining technology was used to obtain the health examination report data from January 1 to December 31, 2023. The collected data were divided into 5 categories and 28 variables were analyzed for data analysis to explore the administrative Personnel risk assessment for chronic diseases.

#### Results

A total of 375 people were included in the statistical analysis, 300 people (80%) were aged 41 to 60 years old, and 161 people (42.86%) were 24≦BMI≧35. Risks of adverse cardiovascular events, coronary heart disease, hypertension, stroke, and diabetes The proportions of assessed high-risk individuals were 67 (17.87%), 25 (6.67%), 119 (31.73%), 35 (9.33%), 148 (39.47%), and another 52 (13.87%). Already suffering from hypertension; 33 people (8.80%) already suffering from diabetes. Inferential statistical single-factor variation analysis showed that age and BMI had significant differences in the risk assessment of hypertension and diabetes.

#### Conclusions/lessons learned

The number of administrative staff is not as large as that of the medical staff, but they are also an important human resource for the hospital. The hospital should provide lifestyle, medical concepts based on risk assessment for staff in different positions,

so that employees can improve their living habits through adjustments, enhance their health concepts, and reduce the risk of disease. The risk of chronic diseases and improving the treatment effect of existing chronic diseases.

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# Using data mining to analyze physicians' chronic disease risk assessment

#### **LEE Yi-Lien**

#### **Background and objective**

Physicians play a core role in the medical health system and are the main leaders of the medical team. Patients turn to doctors for physical health needs, but doctors are also human beings, and their health status seems to be rarely discussed. Therefore, we hope to use data exploration to Analyze doctors' risk assessment of chronic diseases to assist hospitals in formulating health promotion activities.

#### Methods/intervention

Taking doctors from a certain hospital as the target, data mining technology was used to obtain the risk assessment results of chronic diseases from January 1 to December 31, 2023. The collected data were divided into 3 categories and 20 variables were used for data analysis to explore Physicians in chronic disease risk assessment.

#### Results

There are 693 doctors (excluding special doctors and interns), 364 people with less than 5 years of experience account for 52.53%, 460 people under 40 years old account for 66.38%,  $24 \leq BMI \geq 35$ , a total of 282 people (45.93%), cardiovascular For risk assessments of adverse events, coronary heart disease, hypertension, stroke, diabetes, etc., only 75 people completed the task, with a response rate of 10.8%. The proportions of high-risk individuals were 23 (30.67%), 11 (14.67%), 17 (23.29%), 12 (16%), 26 (34.67%), and 16 (21.92%) had already Suffering from hypertension; 7 people (9.33%) already suffered from diabetes. Inferential statistical single-factor variation analysis showed that age and seniority have significant differences in the risk assessment of hypertension and diabetes.

#### **Conclusions/lessons learned**

The professional quality and experience of doctors are an important basis in a hospital to build its core competitiveness. The productivity of doctors will directly affect the quality of medical services. Therefore, chronic disease risk assessment should be included in the necessary examination items when doctors take office to facilitate understanding of the health status of doctors. Carry out health management activities.

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You take care of the patients - The hospital takes care of you!! Health promotion in the workplace is our responsibility.

#### SHIH Shu Chin

#### **Background and objective**

Ensuring employee well-being is crucial for delivering top-quality medical services. Given the demanding nature of jobs in healthcare settings, detecting and addressing employee health risks early is paramount. Human capital plays a pivotal role in hospital operations and long-term growth. This study explores leveraging the "Chronic Disease Risk Assessment Platform" to identify and mitigate disease risks among employees, tailoring health promotion strategies accordingly. By implementing diverse health promotion initiatives, enhancing employee wellbeing, and fostering a healthy work environment, hospitals can enhance care provision for patients.

#### Methods/intervention

This study employs a longitudinal experimental design with pretest and post-test single-group convenience sampling, involving 398 employees aged 35 and above. Following approval from the National Health Administration to utilize the "Chronic Disease Risk Assessment Platform" and securing consent from employees, occupational safety nurses input physiological data into the system to assess the risk of developing major chronic diseases over the next decade. The tailored interventions comprise targeted health education, health and nutrition seminars, health promotion groups on LINE, fitness programs, weight management classes, and large-scale running events. A reevaluation using the platform is conducted after one year.

#### Results

Analysis of the research findings indicates predicted high risks of chronic diseases in 2022: 1. coronary heart disease (10.4%), 2. stroke (12.5%), 3. diabetes (56.6%), 4. hypertension (37.8%), and 5. adverse cardiovascular events (20.3%). Post-intervention in 2023, risks for hypertension (34.1%), adverse cardiovascular events (18.1%), and stroke (9.2%) decreased significantly, highlighting notable reductions in the predicted risks of major chronic diseases over the next decade.

#### **Conclusions/lessons learned**

The study underscores the efficacy of the "Chronic Disease Risk Assessment Platform" in diagnosing employee health issues, facilitating targeted health promotion initiatives that mitigate chronic disease risks. This proactive approach leads to a mutually beneficial outcome for hospitals and employees, fostering a healthier workforce and enhancing patient care quality.

## Poster Sessions 1: Thursday, November 7, 2024, 11:00-12:30

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## Poster session 1.7: Tobacco prevention and cessation

Whether the Low-Dose CT Screening policy promotes smoking cessation rate?

#### LIU Ta-Wei, LU Hsiu, CHEN Cheng-Yu

#### **Background and objective**

Lung cancer has been a prevalent and growing malignancy. Considering all risk factors contributing to lung cancer, smoking and secondhand smoke have the most significant impact, and the promotion of smoking cessation represents an opportunity for primary healthcare providers to exert the most influence. We seek to understand the relationship between different smoking cessation channels encountered by patients in hospitals, their willingness to quit smoking, and the success rate of smoking cessation. There has been an increase in new patients seeking smoking cessation assistance due to their association with the low-dose computed tomography (LDCT) lung cancer screening program. As the fifth cancer screening program newly introduced in Taiwan since 2022/7/1, LDCT screening includes a requirement for receiving smoking cessation services.

#### Methods/intervention

We collected data from patients aged between 50 and 74 years who visited Taipei Tzu Chi Hospital from Oct. 2023 to Mar. 2024 to investigate whether there are differences in smoking cessation rates between patients from outpatient clinics and those referred due to lung cancer screening requirements. Through telephone interviews or questionnaire surveys in outpatient clinics, we collected data on smoking status at the third month after initiating smoking cessation programs.

#### Results

Total 93 people were recruited, with 83 entries from the group that did not undergo LDCT screening and 10 entries from the group that underwent LDCT screening as part of lung cancer screening requirements. The smoking cessation rates were respectively 36.4% and 50% at third month.

#### Conclusions/lessons learned

The smoking cessation rate for individuals participating in smoking cessation due to lung cancer screening requirements appeared to be higher than those attending general smoking cessation clinics. This suggests that using subsidized lung cancer screening as the primary incentive may significantly increase the smoking cessation rate. Contact: LIU TAWEI Taipei Tzu Chi Hospital TAIWAN sododavid@gmail.com

The experience of a regional teaching hospital in promoting smoking cessation in a prison in northeastern Taiwan

#### LIN Tzu-Shun, LIN Chun-Yen

#### **Background and objective**

The prevalence of smoking among prison inmates in Taiwan exceeds 80%. Taiwan has even enacted legislation to reward inmates for quitting smoking, and Taiwan's prison management system adopts a variety of solutions to manage smoking issues. Generally speaking, women's prisons are completely smoke-free, while men's prisons allow male inmates to choose to be assigned to no-smoking areas or not when they are incarcerated. Promoting smoking cessation for inmates is an important issue in health promotion

#### Methods/intervention

In Taiwan, the interventional services of smoking cessation treatment plan covered by the National Health Insurance include two courses of treatment per year, with each course of 8 weeks of medication and return visits every 2-4 weeks for professional consultation and health education. the cost of smoking cessation drugs is an additional cost of living for these prisoners, because the health insurance no longer requires self-payment for the smoking cessation drugs, so we start to run smoking cessation clinics in prisons since November 2022.

#### Results

From November 2022 to April 2024, a total of 92 People attend smoking cessation clinics. Among them, 54 people were successful in quitting smoking, and the point-prevalence of smoking abstinence at 3 months was 31.21% (54/173), and 26 people have successfully quit smoking, and the point-prevalence of smoking abstinence at 6 months was 23.42% (26/111).

#### **Conclusions/lessons learned**

TThe point-prevalence of smoking abstinence at 3 months and 6 months for inmates was 31.21% and 23.42% respectively. While the outpatients of our hospital (including prison outpatient clinics), were 28.94% (68/235) and 21.97% (29/132) respectively. In conclusion, prisons have many meaningful incentives for inmates to quit smoking, and the reimbursements of Taiwan's National Health Insurance also cover inmates' smoking cessation medication. No additional financial burden is required, and the success rate of quitting smoking is slightly higher than that of the general population.

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# The efficacy of drug-assisted interventional treatment for smoking cessation

#### **HSIEH Hsiu-Ling, CHEN Bi-Chun**

#### **Background and objective**

There are four major medical options for smoking cessation: quitting smoking by willpower alone, smoking cessation education, smoking cessation drugs, and combining drugs with education. Studies have shown that those who choose smoking cessation drugs combined with smoking cessation education have a higher success rate. The purpose of this study is to explore a regional teaching hospital in the south the effectiveness of outpatient smoking cessation case treatment.

#### Methods/intervention

This study analyzes the outpatient smoking cessation cases of a regional teaching hospital in the south, and collects outpatient smoking cessation cases from January to December 2023. The conditions for accepting cases are those who are over 18 years old, have a nicotine addiction test score of 4 or more, or smoke 10 cigarettes a day. The number of participants in the study was 957. They were randomly divided into two groups: the control group: only received smoking cessation health education, and the experimental group: received smoking cessation treatment and health education. Taking the first outpatient smoking cessation date of the case as the base day, telephone interviews were conducted to evaluate the smoking cessation status in the third and sixth months. The seven-day smoking cessation rate was used as the main outcome indicator. The statistical results were statistically analyzed through SPSS23.0.

#### Results

The efficiency of the experimental group was higher than that of the control group and the results were significant (the experimental group's quit smoking rate dropped by 20% at the seventh day of three months, and the quit smoking rate dropped by 17% at the seventh day of six months).

#### **Conclusions/lessons learned**

The success rate of smoking cessation is significantly related to the active intervention of smoking cessation treatment and health education. It is recommended to actively provide free smoking cessation treatment information from the National Health Department to increase the utilization rate of smoking cessation cases and improve the success rate.

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HSIEH Hsiu-ling Kaohsiung Municipal United Hospital TAIWAN shlly22@gmail.com Evaluation of Smoking Cessation Interventions among Incarcerated Individuals: Insights from National Taiwan University Hospital Yunlin Branch

## YOU Bih-Jen, LIU Yung-Hung, SHIH Ming-Feng

#### Background and objective

Smoking cessation is pivotal for health promotion, particularly among incarcerated individuals who face elevated smoking rates. Challenges such as limited healthcare access and prison culture hinder cessation efforts. In Taiwan, prisons lack comprehensive smoking bans, exacerbating the issue. National Taiwan University Hospital Yunlin Branch collaborates with Yunlin Prison to provide healthcare, including smoking cessation support, aiming to improve health outcomes and post-release reintegration. This study seeks to assess smoking cessation effectiveness among inmates to inform tailored intervention strategies.

#### Methods/intervention

Within Yunlin Prison, a smoking cessation clinic administered bupropion 150 mg tablets to aid cessation. Inmates did not receive formal cessation education from our smoking cessation educators. Cessation success rates at three and six months in 2023 were compared to male civilians using Chi-square tests.

#### Results

In 2023, 27 inmates (median age: 42) and 365 male civilians (median age: 55.9) received medication therapy. Inmate cessation rates were significantly lower at three months (12% vs. 35.4%, p=0.015) and six months (9.1% vs. 35.7%, p=0.005).

#### **Conclusions/lessons learned**

Smoking cessation success rates among inmates receiving medication therapy are significantly lower compared to those among the general population. Apart from prison culture and individual characteristics, the lack of comprehensive smoking cessation education may also contribute to lower cessation success rates among inmates. Future strategies for prison smoking cessation should incorporate comprehensive smoking cessation education to better assist inmates in quitting smoking.

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## Smoking cessation for adolescents

#### **CHEN Chih-Dao**

#### **Background and objective**

Adolescent smoking cessation is an impotent health promotion for future. An increasing smoking rate for adolescent including ecigarette has been noted in Taiwan. To find the risk factors for adolescent smoking is an key step for smoking cessation consultation. Our study was focused on an completed physical mental health questionnaire survey to find the risk factors for adolescent smoking.

#### Methods/intervention

A total 60 subjects were included for an completed physical mental health questionnaire survey. The factors included age, gender, BSRS scores, health related behaviors, self body image and family function. We conducted a cross-sectional study. Univariable analysis and logistic regression were used.

#### Results

The significant factors including gender(OR:6.88 95%Cl:1.18-26.11), BSRS score(OR:1.18 95%Cl:1.01-1.37), drinking within 30 days(OR:6.34 95%Cl:1.97-20.43) and worry about health(OR:-3.52 95%Cl:-10.75--1.15).

#### **Conclusions/lessons learned**

Our study showed mental health, unhealthy behaviors and ignore health condition were key components for health survey. There are periodic health check for child and adult older then 40 in Taiwan. No completed health check for adolescent. We try to promote a periodic health check for adolescent in Taiwan with a completed physical mental health questionnaire.

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Workplace smoking cessation management - Taking a metal equipment manufacturer as an example

## SU Wenshin, CHEN ChienChou, CHANG Ko, HUANG Ming-Ren, YEN Chia-Chi

#### **Background and objective**

According to the World Health Organization (WHO), one person dies every 13 seconds from excessive smoking, and about 3 million people die from smoking every year. According to the statistics of the Health Promotion Administration, 35.0% of adults over the age of 18 in Taiwan smoke, and more than 20,000 people die each year from smoking-related diseases. The most important way to promote workers and their relatives and friends to effectively prevent the harm of tobacco products is to quit smoking! Workers spend at least a third of their day in the workplace, so quitting smoking in the workplace is an important issue for employee health promotion.

#### Methods/intervention

- 1. Promote smoke-free workplaces and establish management systems: 1-1. Promulgate and promote the plan of establishing a smoke-free workplace, and put up posters for public notice. 1-2. Set ten smoking areas in the factory, as well as tripod turnstiles, sensors and monitors at the entrance and exit of each smoking area. Employees who have smoking needs must apply to the management department for granting accessing to their identification card, allowing them to pass through the tripod turnstiles. The Department of Management has also added a new code of practice, which limits the smoking time of employees to 20 minutes a day. In case of overtime, the working hours will be extended accordingly. In addition, if an employee is found smoking in a non-designated area when the occupational safety staff of the workplace inspects the plant from time to time every day, the employee shall be punished with a fine.
- 2. Provide smoking cessation counselling and health promotion scheme: 2-1. Work with health clinics or medical institutions to conduct seminars and activities on smoking harm prevention and control. 2-2. Health care staff of the Labour Health Service advise smoking staff on the harm of smoking during on-site service, and assist staff who wish to quit smoking to refer them to the "Second Generation Smoking Cessation Service Scheme" outpatient clinic. 2-3. Conduct employee health check every year.
- Analyze the employee smoking rate annually as well as the awareness rate of smoking employees on the hazards of tobacco products, and conduct a questionnaire survey before and after the management to understand the effectiveness of smoking cessation management.

#### Results

Since 2020, public institutions have implemented workplace smoking cessation management, and the results are as follows:

- 1. Employee smoking rate: 35.9% in 2020 before management, and 31.8% in 2021, a decrease of 4.1%.
- 2. The awareness rate of tobacco hazards: 46.1% before 2020 and 76.9% after 2021, an increase of 30.8%.
- 3. The rate of smokers receiving smoking cessation services increased by 2% compared with the previous year.
- 4. In 2020, the program was awarded the healthy workplace certification mark by the Health Promotion Administration of the Ministry of Health and Welfare during workplace smoke control and health promotion designation event.

#### **Conclusions/lessons learned**

The public institution advocates the purpose of "health promotion" in the workplace, improves employees' awareness of health, and effectively promotes smoking cessation management in the workplace through strict control of smoking hours, planning of smoking areas and combining with the assistance of health clinics or medical institutions to handle health promotion activities related to smoking cessation.

#### Contact:

SU wenshin Kaohsiung Municipal Min-Sheng Hospital TAIWAN wenshin0504@gmail.com Tailored smoking cessation intervention strategies based on the stages of change for the vulnerable population

## CHAE Jisoo, LEE Jiyoung, KIM Subin, KWON Subin, CHOI Jiwoo, KIM Hyekyeong

#### **Background and objective**

Health inequality is accelerating due to the gap between regions in non-face-to-face smoking cessation counseling services in Korea. Accordingly, there is a need to improve the strategy of smoking cessation services for vulnerable groups. This study aims to establish the basis for tailored smoking cessation services in public health centers and proposes counseling strategies based on the stages of change for cessation.

#### Methods/intervention

Data were collected through an online self-report survey. Demographic factors, health status, personal and environmental factors related to smoking cessation, and non-face-to-face healthcare needs were investigated. Based on the PRECEDE-PROCEED model, the predisposing factors, enabling factors, and reinforcing factors were diagnosed. ANOVA and Scheffe & Dunnett T3 post-analysis were performed using SPSS 27.0.

#### Results

By examining differences between personal factors related to smoking cessation by age group, the younger, the more motivational strategies are needed for planning smoking cessation, and the older, the more reinforcing strategies are needed to maintain smoking cessation(p<0.5). As a result of Scheffe and Dunnett T3 post hoc analysis, the stages of precontemplation and contemplation had comparatively reduced frequencies of experiencing processes of change, necessitating the motivating strategy to advance the stages. From precontemplation to preparation, consciousness, dramatic relief, self-reevaluation, social liberation, and reinforcement management increased; declined during the action stage; and increased again during the maintenance stage.

#### **Conclusions/lessons learned**

By providing tailored smoking cessation counseling based on the TTM, individuals can experience appropriate cognitive and behavioral processes of change, achieve proper decisional balance, and enhance self-efficacy. Services like smoking cessation roadmap profiling, which thoroughly assesses smoking behavior and motivates people to acknowledge their smoking status, are required. It is feasible to close the service gap for smoking vulnerable groups and increase the accessibility of smoking cessation service registration.

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REPUBLIC OF KOREA chopt12345@naver.com The stages of change for smoking cessation among smoking workers according to individual characteristics and workplace environment features

## KWON Mijeong, LEE Jiyoung, CHAE Jisoo, LEE Kyeon, PARK Subin, KIM Hyekyeong

#### **Background and objective**

The WHO reports over 8 million global smoking-related deaths annually, suggest this trend will persist until 2030. South Korea's smoking rate (15.9%) closely resembles the OECD average (16.0%), but male rates (27.8%) exceed the OECD male average (20.2%), underscoring the urgency for workplace smoking cessation efforts among individuals in 40s and 50s. Prior research emphasizes the importance of workplace health environments and their impact on smoking cessation intentions, emphasizing the necessity for tailored programs. This study aims to explore the correlation between individual worker characteristics, workplace environment factors, and stages of smoking cessation to develop customized programs based on the Trans-Theoretical Model.

#### Methods/intervention

In the '2023 Workplace Smoking Cessation Environment Creation Project,' surveys were conducted using online and offline selfadministered questionnaires among employees from 14 workplaces selected for the project from August to September 2023. Data collected were analyzed using SPSS 27.0, including frequency analysis, descriptive statistics, X<sup>2</sup>-test, F-test, and logistic regression analysis.

#### Results

In the contemplation stage, higher nicotine dependence decreased quitting attempts by 0.9 times (p<.05), while higher self-efficacy decreased attempts by 0.7 times (p<.05). Poor supervisor communication increased attempts by 1.3 times (p<.01), while high emotional support increased them by 1.3 times (p<.01). For the preparation stage, higher self-efficacy increased attempts by 1.8 times within 1 month (p<.001). Increased exposure to smoking cues raised attempts by 1.3 times (p<.05), and company norms favoring smoking raised them by 1.8 times (p<.01).

#### **Conclusions/lessons learned**

By identifying the stage of change for smoking cessation based on individual and environmental characteristics, findings highlight the influence of factors like nicotine dependence, and workplace norms on cessation readiness. Strengthening social support and implementing tailored interventions are crucial for enhancing smoking cessation outcomes among workers.

Contact: KWON MIJEONG Ewha womans university REPUBLIC OF KOREA enigma0605@naver.com Health insurance-supported lowdose computed tomography (LDCT) improves the success rate of smoking cessation

## YU Tzu-Ying, CHEN Pin-Yu, LIN Chang-Sheng, LIN Hung-Yu, TSAI Mei-Yueh

#### **Background and objective**

Lung cancer is the first cause of cancer-related death in the world.Low-dose computed tomography (LDCT) is currently the only screening tool with international evidence that can detect early lung cancer and serve to reduce lung cancer mortality by 20% in heavy smokers. However, whether LDCT can benefit smoking cessation is yet to be determined. To address, this study compared smoking cessation rate between patients undergoing smoking cessation service and patients receiving combination with smoking cessation service and LDCT.

#### Methods/intervention

From July 2022 to December 2023, 455 volunteers with smoking history were enrolled. 389 patients received smoking cessation service alone (SC group) while 66 patients who had smoking history and family history of lung cancer engaged in smoking cessation service along with LDCT (LDCT group).Chi-square calculator was used to determine the difference between the two groups. Yates's correction was used to reduce the error in approximation. Statistical significance level was set to 0.05 (0.5%).

#### Results

Among the 455 patients, the proportion of smoking cessation of SC group was 30.33% (118/389), while that of LDCT group was 59.09% (39/66). The difference between SC and LDCT was significant, X2 (1, N = 455) = 19.4, p < 0.001. This result indicated that patients undergoing LDCT were more likely than patients with SC service to achieve smoking cessation.

#### **Conclusions/lessons learned**

This study conclues that health insurance-supported LDCT provides potentiation effect on smoking cessation service. We infer that LDCT results reported to patients could confer awareness of health promotion and improve smoking cessation success.

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Electronic Cigarette Use Among Rural Taiwanese adolescents and its associated factors

#### Background and objective

Electronic cigarettes (e-cigarettes) have emerged as a novel tobacco product in recent years, with a rising prevalence of usage among adolescents in Taiwan. They have become one of the primary tobacco products used by youth. Adolescence is a critical period characterized by rapid physical, psychological, and cognitive development. Thus, continuous monitoring of adolescent tobacco product usage is imperative. Additionally, there is a need to design and provide meaningful health education programs tailored to the specific needs of adolescents to steer them away from the harms associated with tobacco use.

#### Methods/intervention

This study adopted a cross-sectional design. Data collection took place from September 2022 to November 2022 in three rural schools located in southern Taiwan. A total of 282 adolescents participated in the study, with consent forms completed by both the adolescents and their guardians.

#### Results

The prevalence of e-cigarette use among rural Taiwanese adolescents was 9.9% (12.7% for males and 6.5% for females). The primary reasons for using e-cigarettes were peer influence (34.8%) followed by preference for flavors (26.1%). Factors influencing e-cigarette use included lack of discouragement from family members who smoke (OR=3.47), weekly allowance exceeding NT\$2000 (OR=9.48), and lower perception of tobacco harm (OR=0.88).

#### **Conclusions/lessons learned**

Compared to the e-cigarette usage among Taiwanese adolescents in 2021, the situation among rural adolescents appears more severe. Tobacco control among adolescents is a crucial aspect of overall tobacco control efforts, particularly in rural areas where medical resources are limited. It is imperative to implement and promote tobacco control programs in communities and schools through health promotion hospitals, tailored to address factors influencing e-cigarette use, thus aiding rural adolescents in avoiding the harms of tobacco.

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The effectiveness of using tobacco hazard prevention measures on the community - Taking a northern regional hospital in Taiwan as an example

CHIEN Hsu-Min, LEE Hsiao Ping, CHEN Yu Hua

WAN Yu Hsuan

#### **Background and objective**

In Taiwan, the total population is about 23 million, and it is estimated that about 5 million people are smokers, and at least 25,000 people die from smoking every year. Studies have found that the health benefits of quitting smoking will increase with the longer the period of quitting. It can also reduce the risk of cancer and death. Therefore, our hospital uses various health education programs to promote tobacco hazard prevention, from employees to community residents, to strengthen their awareness of the hazards of smoking and their attitudes and abilities to refuse smoking, and to create a smoke-free environment. Smoke healthy living environment.

#### Methods/intervention

Tobacco hazard prevention measures 1.Providing Diverse Smoking Cessation Services: Including smoking cessation classes, outpatient clinics, and health education counseling services. For pregnant women and adolescents, multiple smoking cessation services are provided, with follow-up assistance needed at least twice. 2.Promotion Methods: Utilizing broadcasting, posters, leaflets, internet, electronic billboards, and scrolling marquees, among others. 3.Tobacco Hazard Awareness Lectures: Organizing a total of 6 awareness lectures in hospitals and communities.

#### Results

Through the implementation of the tobacco control program, participation in tobacco hazard awareness lectures increased from 1502 to 4095 individuals, achieving a 100% target rate. The quit smoking success rate within 6 months improved from 25% to 34.16%.

#### **Conclusions/lessons learned**

The tobacco control efforts have yielded tangible results in implementing smoke-free hospital policies and providing smoking cessation services. Moving forward, it is essential to continue strengthening the promotion of diverse collaborative care networks and tobacco control strategies to ensure a healthy living environment for the public

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Investigate the effects of health literacy-enhanced education on metabolic indicators of smoking and non-smoking employees in a workplace

#### WEI Shu-Yi, CHANG Mei-Yen, LIN Yu-Hui

**Background and objective** 

This study focuses on the effects and changes of metabolic indicators related to body mass index (BMI) and metabolic

syndrome (MS) among smokers and non-smokers before and after receiving health literacy-enhanced education.

#### Methods/intervention

 Research objects: In the employee health questionnaire. 10 employees were found to be in the "smoking group", and 11 new employees were randomly selected as the "non-smoking group".
 Enhanced health literacy education : Smoking cessation educators and nutritionists give relevant education on the harm of smoking, smoking cessation advice and "prevention of metabolic syndrome" 3. Metabolic indicators: record the changes of body mass index (BMI) and related indicators of metabolic syndrome, such as waist circumference (WC), blood pressure, triglyceride, high-density lipoprotein (HDL) and blood glucose, in the year before and after health education. 4. Statistical analysis: The Chi-squared test and MCHINAemar's test were used.

#### Results

Comparing the significant changes in metabolic indicators before and after intervention in the smoking group (SINGAPORE) and the non-smoking group (NSG): 1.The average waist circumference (WC) - In SINGAPORE, WC changed from 80.8 cm to 84.4 cm after intervention, p=0.008. - In NSG, WC was from74.7cm at baseline and 77.3 cm after intervention. 2.The high-density lipoprotein (HDL) so-called good portion of cholesterol - In SINGAPORE, HDL was significantly constant lower level at 49.2 -In NSG, HDL was from 62.7 to 63.8 mg/dl. (P=0.008) 3. The triglyceride (TG) - In SINGAPORE, TG was from 87.8 mg/dL to 126.8 mg/dL after intervention, p=0.024 - In NSG, TG was from 116 to 87.8 mg/dL after intervention. P=0.008 4.The systolic BP after intervention was 140.7 mmHg in SINGAPORE higher than 122.6 mmHg in NSG (P=0.029).

#### **Conclusions/lessons learned**

1.In this study, smokers had a significant increase in waist circumference. This indirectly dispels the myth that "smoking helps prevent weight gain. 2.A negative changes of metabolic indicators on the smokers after only receiving education on smoking cessation without actually quitting action.

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Study on the effectiveness of smoking cessation class held by a professional team in an industrial park by a health hospital in Southern Taiwan

CHANG Mei-Yen, WANG Wan-Ting, WEI Shu-Yi, YEN Chia-Chi

#### **Background and objective**

The professional smoking cessation medical team of a health hospital in Southern Taiwan has been applying the form of smoking cessation class to smoking employees in an industrial park for three consecutive years to explore the effectiveness and satisfaction of employees' smoking cessation.

#### Methods/intervention

In a health hospital in Southern Taiwan, various smoking employees have been invited to participate in the smoking cessation class designed by a professional smoking cessation medical team for three consecutive years. At the same time, preand post-cognitive tests and satisfaction questionnaires were given, and the team analyzed and discussed during the telephone interview survey of smoking cessation success at the end of each batch of graduations, and 6 months after the end of the class. The study was designed by correlation and different group type pre- and post-test.

#### Results

The results showed that the success rate of smoking cessation in the third year increased by 220% compared with the first year. At the 6th month point, the success rate of smoking cessation increased by 60%. The reasons are as follows: The course content of the smoking cessation class has been adjusted every year according to the outcome of the previous year, analyzing and investigating the smoking status, and the post-graduation satisfaction has also been assessed, making the class a customized one, so the total number of "Very satisfied" rate and satisfaction items has increased by 60% in the third year compared with the first year.

#### **Conclusions/lessons learned**

As smokers have difficulty in quitting smoking, if the smoking cessation tools can be more diversified, it can be used more effectively to improve the health of the people and reduce the use of health insurance. The duration of the smoking cessation class is long, and by introducing correct and customized course content of the professional smoking cessation medical team, patients' smoking cessation behavior, tobacco harm awareness and healthy thinking can be enhanced, and eventually successfully quit smoking by the aid of peer experience, mutual help, with timely smoking cessation services provided to them.

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Insights from Workplace Smoking Cessation Programs in Northern Taiwan.

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#### **Background and objective**

Smoking cessation is the most cost-effective measure to reduce smoking-related diseases and deaths. Our smoking cessation program, spearheaded by a team of medical professionals, adopted the transtheoretical model to craft pragmatic course content, aimed at fostering cessation among workplace employees through multifaceted approaches.

#### Methods/intervention

Participants embarked on a 6-week of 2-hour weekly journey beginning in May 2023, covering a spectrum of topics including the health perils of smoking, nutritional guidance for quitting, stress management techniques, aerobic exercises, prevention of relapse, and narratives from successful quitters. The program also integrated a smoking cessation board game to solidify refusal skills, complemented by aromatherapy for stress alleviation. Our assessment involved a comparative analysis via pre-and-post questionnaires and weekly CO level evaluations throughout the course. A Line group was established to foster a supportive community, offering health education and ongoing support, with a follow-up on cessation status six months postprogram.

#### Results

Among the 10 participants (10% female, average age 41) in our smoking cessation program, 80% exhibited a reduction in CO levels at the conclusion of the course relative to the onset. The pre- and post-test scores for the smoking hazard awareness assessment increased from 78 to 83. 40% declared themselves non-smokers at half-year follow-up.

#### **Conclusions/lessons learned**

Regular CO assessments appeared to bolster the quitting resolve among attendees. Participants could see their CO test results improve, enhanced their motivation to quit smoking. The camaraderie and mutual encouragement within the group, along with the expertise of seasoned facilitators, were instrumental in the program's success. Meanwhile, employer support for smoking cessation activities has the potential for effectiveness.

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Smoking prevention classes for local elementary and junior high school students

#### **NOGUCHI Ai**

#### Background and objective

Nishiyodogawa Ward in Osaka City faced severe pollution due to emissions from factories and transportation, causing health issues like asthma. Nishiyodo Hospital, committed to public health, initiated smoking prevention classes for students and parents due to high smoking rates, especially among parents of clinic-visited children.

#### Methods/intervention

We collaborated with schools, conducting smoking prevention classes initially for upper-grade elementary students, then expanding to junior high schools. Classes involved informative lectures and role-playing exercises. Collaborations with health centers, medical associations, and hospitals increased participation in schools over time.

#### Results

Sustainability study of smoking prevention classes showed high awareness among students for up to a year, declining by the second year. However, children exposed to passive smoking exhibited improved awareness. Another study targeting hospital staff smoking rates via Health Promoting Hospitals activities showed no significant results.

#### **Conclusions/lessons learned**

Continued smoking prevention education targeting both elementary and junior high students is crucial. Individualized approaches, especially for children exposed to passive smoking, may prevent smoking initiation. Despite pandemic challenges, efforts to explore effective HPH activities should persist.

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Factor associated with smoking cessation success: a retrospective cohort study from a southern medical center in Taiwan

## WU Ying-Hsuan, CHUANG Yun-Shiuan, LEE Chun-Ying

#### **Background and objective**

Cigarette smoking remains the leading cause of preventable death worldwide. This study identified associated factors of successful cessation among individuals attending a smoking cessation clinic.

#### Methods/intervention

Between 2017 and 2019, participants who visited the smoking cessation clinic at Kaohsiung Medical University Hospital (KMUH) were collected. Questionnaire and individual counseling were given to participants, either with or without pharmacotherapy. Outcomes were assessed at 3 and 6 months via phone interviews and categorized into 4 groups: (1) never quit, (2) quit at 3 months but relapsed by 6 months, (3) didn't quit at 3 months but succeeded at 6 months, and (4) maintained cessation at both 3 and 6 months. Successful cessation was defined as abstaining from smoking at both time points. Multinomial logistic regression analysis was conducted to identify predictors of successful cessation after adjusting for potential confounders.

This study received ethical approval from the Institutional Review Board of Kaohsiung Medical University Hospital.

#### Results

Among 2,403 participants, the success rate for cessation was 40.0%. Factors associated with a higher success rate included recent hospitalization (aOR:1.39, 95% Cl:1.13-1.70), older age (aOR:1.02 95% Cl:1.02-1.03), increased individual counseling sessions (aOR:1.21, 95% Cl:1.10-1.33), longer duration of pharmacotherapy (aOR:1.05, 95% Cl:1.00-1.10), having a history of cancer (aOR:1.62, 95% Cl:1.20-2.20) or cardiovascular disease (aOR:1.50, 95% Cl:1.17-1.92). The success rate was lower among those who smoked  $\geq$  20 cigarettes/day (aOR:0.52, 95% Cl:0.40-0.69), or had medium or higher Fagerström test score for cigarette dependence (aOR:0.75, 95% Cl:0.58-0.97, and aOR:0.48, 95% Cl:0.36-0.64, respectively).

#### **Conclusions/lessons learned**

Identifying key predictors allows for personalized cessation strategies, potentially improving outcomes.

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Using sharing decision-making intervention to improve the success rate of smoking cessation among lung cancer screening groups

## CHEN Hui-Min, PEIR Dan-Mo, LIANG Mei-Zhen, TSAI Yu-Chen, LAI Shao-Hua

#### **Background and objective**

Low-dose computed tomography (LDCT) chest imaging can be used as an auxiliary diagnosis for lung cancer prevention, proving that it can significantly reduce lung cancer mortality in high-risk groups. It is unclear whether there is a correlation between lung cancer screening and smoking cessation among screened adults. Research shows that establishing shared decision-making tools and intervention timing can help improve the success rate of quitting smoking. Therefore, this study explores whether the use of a smoking cessation medication selection decision aid can improve smoking cessation outcomes in a lung cancer screening population.

#### Methods/intervention

We designed a decision-making tool. Choice of smoking cessation medication tools for heavy smokers and provides tracking of three-month and six-month quit rates.

#### Results

A total of 280 patients were followed up from 2022 to 2023. Comparing the differences between the two groups, it was found that from October to December, 2022, the smoking cessation rate of the general smoking cessation outpatient group was 20% at three months and six months, while the smoking cessation success rate of the group with lung cancer screening was 23% at three months and 16% at six months respectively. In 2023, the success rate of smoking cessation in general smoking cessation clinics was 27% in three months and 25% in six months respectively, while that in lung cancer screening population was 39% in three months and 33% in six months respectively.

#### **Conclusions/lessons learned**

After shared decision-making is implemented, health care professionals use tools to intervene and evaluate the overall effectiveness of smoking cessation. We found that the three-month quit progress rate in 2023 was 69% and the six-month quit progress rate was 106%. The smoking cessation effect of the lung cancer screening group is better than that of the general smoking cessation clinic group, and the effect is obvious. Therefore, for heavy smokers who are willing to accept free lung cancer screening and share smoking cessation drugs and medical decisions, it is even more necessary to strengthen the national health awareness of smoking cessation and take effective measures to quit smoking.

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Factors Influencing the Six-Month Point Tobacco Abstinence Rate Using Tobacco Quitline in Taiwan: An analysis

## GUO Sin-Mei, LIN Ching-Hsiung, KOR Chew-Teng, CHIU Nan-Ying, WU Chao-Chun, YI Li-Jie, HUANG Yu-Ying, LIU Yen-Tze

#### **Background and objective**

Established in 2003, the tobacco Quitline 0800-636363 in Taiwan provides telephone-based tobacco cessation counseling service offering well-trained free coaching. However, factors leading to increased success rate of cessation efforts with Quitline service remain unclear. This study aims to explore the factors contributing to a higher six-month tobacco abstinence rate through Quitline service in Taiwan.

#### Methods/intervention

The source of data is from Taiwan Smokers' Helpline of Health Promotion Administration, Ministry of Health and Welfare. Individuals receiving Quitline service completed a follow-up survey (August 2022 to July 2023). Factors among age group, cigarette consumption, length of smoking, cohabitant smoking, household smoking bans, nicotine dependence scores, time until the first cigarette after waking up, motivation and quit date setting were investigated, multivariate logistic regression model for successful smoking cessation was further engaged.

#### Results

Of 3,114 cases enrolled, six-month point tobacco abstinence rate is about 43.7%. Compare to teenagers, cessation rate is lower in adults and the elderly. Factors of stronger motivation (adjusted odds ratio= 9.06, 95% confidence interval= 5.95, 13.8) and well implementation of quit date setting (adjusted odds ratio=2.23, 95% confidence interval= 1.66,2.99) had higher success rate of quitting smoking. In contrast, cigarette consumption more than 30 and time until the first cigarette after waking up less than 30 minutes had lower tobacco abstinence rate. Reasons for successful cessation are associated with exercising selfdetermination and enhancing physical health. Of note, among 1,753 failed cases, 451 individuals attempted to quit smoking for more than 24 hours.

#### **Conclusions/lessons learned**

A proactive attitude towards smoking cessation coupled with reduced nicotine addiction, is key to achieving the goal. Additional surveys on the reasons for failure, specifically targeting individuals who have attempted to quit smoking, should be considered.

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Fighting against windmills – tobacco cessation in a political vacuum

## VITZTHUM Karin, CERCI Deniz, RUSTLER Christa

#### **Background and objective**

Germany prides itself on aiming for high standards in many aspects of healthcare provision, but has remained at the very end of the EU tobacco control scale since the beginning in 2006. Industry interests and lobbyists interfere with the political hierarchy rather openly and undermine legitimate health promotion requirements. Smoking prevalence remains at a high level and has even increased after the COVID epidemic. The German Network for Tobacco free Healthcare Services is a nongovernmental organization which provides a comprehensive approach to raise awareness, supports tobacco free campuses, emphasizes staff education, shares best practice examples and facilitates peer exchange on a national and international level. Currently comprising of about 120 health institutions with different levels of implementation of eight global standards, learning from each is a key factor to improve quality of treatment for smokers who wish to quit as a bottom up initiative. This poster shows a few best practice examples from a communal hospital located in a socially deprived urban area with a long tradition of ten years as a "silver" smokefree hospital.

#### Methods/intervention

summarizing a variety of eight standard oriented measures to provide and enforce tobacco cessation guidelines

#### Results

Selection Standard 2 & 6 & 7: world no tobacco acitivities: Cigarette-farewell-machine Vitamine instead of nicotine Nonsmoking matches my profession Social media campaigns Standard 8: support for political initiatives: Smokefree on tour Standard 5: smokefree campus: Teaser in turkish in front of the children's wards Standard 3: role of staff: Staff's Smoking status Digital learning module Perception of staff in psychiatry Standard 4 & 7 & 8: research areas: Money for stopping in pregnancy Cognitive disabled COPD patients Lung cancer and quality of life Longterm abstinence rates

#### **Conclusions/lessons learned**

Long breath is needed to reach minimal goals given the lack of political vacuum.

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## Poster session 2.1: Approaches for Health Promoting Hospitals and Health Services to improve health equity of their patients

Sharing the achievements of the Taiwan Patient Safety Culture Club in promoting patient safety and health promotion in Taiwan

## CHIU Ya-Yi, CHAN LIAO Ming-I, HUNG Hui-Ching, PENG An-Na

#### **Background and objective**

Taiwan Patient Safety Culture Club (TPSCC) is operated under the Jen-Ai Foundation and is the only public welfare organization in Taiwan whose purpose is to promote patient safety. The WHO defines: "The purpose of patient safety is to prevent and reduce risks, errors and injuries to patients during the medical process." This summary will share some of the patient safety activities TPSCC has hosted to achieve this objective.

#### Methods/intervention

In response to the "Reduce Preventable Deaths to Zero" campaign promoted by the Patient Safety Movement Foundation, founder , Dr. Ming-I Chan Liao organized patient safety walk at the national level. In 2019, he also obtained the authorization of "To Err is Human" patient safety documentary from the United States to screen it in Taiwan to convey to the hope that patients and their families can actively participate in medical care and create a safe medical environment for patients.

#### Results

In recent years, TPSCC has held 3 walking events to raise awareness of the importance of patient safety. In 2023, it once again obtained authorization from the United States to screen and organized the "National Movie Screening of American Patient Safety Documentaries" with 10 medical institutions across Taiwan. The total number of actual participants is estimated to be more than 2,500+ people. These efforts to promote patient safety are unprecedented in Taiwan.

#### **Conclusions/lessons learned**

In the process of health care, the medical team should avoid preventable adverse medical events. TPSCC has been established for 12 years and has worked with many medical institutions to promote patient safety. It will continue to encourage and strengthen the medical-patient partnerships in its involvement in patient safety and the importance of sustainable HP in Taiwan.

Contact: CHIU YA-YI Jen-Ai Foundation TAIWAN jah5063@mail.jah.org.tw Discussion on the Current Situation of Using the ICOPE Elderly Functional Assessment Scale to Assess the Prevention and Delay of Disability in the Elderly - taking a Hospital in Rural Areas in the south as an example

## WEI Jia-Yu, LIEN Chen-Shan, HUANG Wan-Hsua, CHEN Yung-Hung, LEE Yung-Heng

#### **Background and objective**

The purpose of this study is to evaluate and understand the current health status of the elderly through the ICOPE Elderly Function Assessment Scale, and to screen out those with a higher risk of disease, and actively introduce intervention measures to prevent and delay disability, thereby improving Healthy remaining life and quality of life of the elderly.

#### Methods/intervention

Use the ICOPE Functional Assessment Form for the Elderly provided by the National Health Department to conduct a comprehensive health assessment for seniors over 65 years old to screen out seniors with a higher risk of disease and understand potential health threats to the seniors in the jurisdiction.

#### Results

The case collection period for this study was from October 2009 to the end of November 2019, and the total number of cases received was 150 people. The results of this survey show that eight of them are targeted at a total of 84 elderly people (56%) who normally do not need advanced assessment. Among the remaining 66 people: 24.24% have hearing impairment, 16.67% have cognitive impairment, 12.12% have malnutrition, 10.61 have mobility impairments, 10.61% have depression, 7.6% have visual impairment, and 45.45% have medication problems.

#### Conclusions/lessons learned

According to the statistical flag of the Kaohsiung Civil Affairs Bureau in 109 The average proportion of the elderly population aged 65 and above in the nine districts of the United States is 24.65%. All districts have entered the definition of a super-aged society early in advance. This study also found that early initial screening of the elderly through the ICOPE Elderly Functional Assessment Scale, and timely preventive and delayed health promotion intervention, can help the elderly implement selfhealth management, thereby improving their health status and quality of life.

Contact: WEI JIAYU Cishan Hospital, Ministry of Health and Welfare TAIWAN yorovwei@gmail.com Investigation of the Care Needs and Quality of Life in Patients with Glaucoma: a protocol for a mixed methods study

## HUANG Wan-Ting, CHEN Mei-Ling, JIANG Bing-Fang

#### Background and objective

Patients with glaucoma face increased risks of accidents and diminished daily living activities due to poor vision, blurred vision, and difficulties in adapting to light. These factors could significantly affect their quality of life. However, there is currently limited literature on the care needs and quality of life of patients with glaucoma. Therefore, this study aims to investigate the care needs and quality of life in patients with glaucoma.

#### Methods/intervention

A mixed methods design will be used in this study, which will be conducted in the ophthalmology outpatient clinic of a hospital in Taiwan. Adult patients diagnosed with glaucoma by an ophthalmologist and who consent to participate will be invited to join the study. After obtaining informed consent, researchers will arrange for participants to complete a questionnaire and conduct a one-on-one interview in a private consultation room at the clinic. The questionnaire includes demographic information, disease-related information, and quality of life. The interview guide will consist of the following questions: 1. Can you describe the impact of glaucoma on your daily life? 2. Can you share your thoughts and feelings about the glaucoma care you are currently receiving? 3. Can you discuss your needs regarding glaucoma care? Statistical analyses will include descriptive statistics such as frequencies, percentages, means, and standard deviations, independent sample t-tests, analysis of variance, and Pearson correlation analysis. The interview data will be analyzed by using content analysis.

#### Results

This study will provide a deeper understanding of the care needs and quality of life of patients with glaucoma, offering reference for clinical healthcare providers.

#### **Conclusions/lessons learned**

Understanding the care needs and quality of life of patients with glaucoma enables clinical healthcare providers to deliver care that meets the patient's needs and to implement interventions addressing factors that affect their quality of life.

Contact: HUANG Wan-Ting Da-Yeh University TAIWAN wanting@mail.dyu.edu.tw Correlation Between Resilience and Medication Adherence in patients with coronary heart disease

## WU Mei-Hua, LIN Mao-Jen, CHEN Shiah-Lian, HO Hsing-Chiu, LI Yu-Ru, LIAO I-Chen

#### **Background and objective**

Coronary arterial disease (CAD) is a highly prevalent disease and cardiovascular medications are the key to slowing down the disease progression. Several studies have revealed poor medication adherence among patients with coronary heart disease. This study aims to investigate the association between resilience and medication among patients with coronary heart disease.

#### Methods/intervention

This is a cross-sectional study, and all participants were joining this study voluntarily. A total of 98 patients who were diagnosed with CAD for more than 6 months participated in this study. A structured questionnaire was used to collect demographic information including sex, age, level of resilience, types of drugs, and compliance with medication.

#### Results

This study reveals several findings as follows: (1) There is a significant difference with medication compliance including marriage (p=.006) and economic income (p=.021); (2) A significant difference was noticed in treatment and medication compliance among patients who has been received cardiac catheters (p=.001); (3) Resilience is not significant thy related to medication adherence (p=.125).

#### **Conclusions/lessons learned**

Improving medication adherence in coronary heart disease patients is crucial. Enhancing medication adherence is a key point to restoring resilience among CAD patients. The resilience is associated with medication compliance without intermediary effect among those CAD patients. Early detection and assessment of CAD risk factors can be useful in preventing the prognosis of this disease. It is crucial to provide different healthcare dependent on the levels of resilience.

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Examination of "Issues regarding patients without any relatives" in our hospital

**HONDO Satoko** 

#### **Background and objective**

The number of hospitalized patients without any relatives has been increasing at our institution. In such cases, staff are burdened with tasks like arranging homes and handling matters after death. This leads to ethical dilemmas especially regarding financial management and discharge support. This study examines desirable approaches to support based on an analysis of cases we've assisted.

#### Methods/intervention

We established a "Team for patients without any relatives " and developed a manual for handling such cases, along with creating assessment sheets for patients without family support. For this study, we examined 69 such patients who were hospitalized at our institution from April 2022 to March 2023. We evaluated their gender, age, insurance status, cognitive function, methods of financial management, and intervention contents.

#### Results

There were 58 male and 11 female patients. The age range was from 50 to 90 years old, with the majority being 70-year-old males (28 patients). Among the whole groups, 50 were recipients of public assistant, accounting for approximately 72% of the total. While 18 patients exhibited some cognitive impairment, only 4 utilized welfare services. Interventions included retrieving belongings from their homes, withdrawing cash, applying for public assistance programs, paying medical and utility bills, arranging for home departure, and handling matters after death.

#### **Conclusions/lessons learned**

Most patients led solitary lives with minimal social connections before hospitalization. It became evident that instead of providing support reactively, a proactive approach is necessary for patients without family and relatives. Therefore, fostering easy-to-access support networks and facilitating connections to welfare systems by hospital staff are deemed effective. Specifically, participation in community gatherings such as salons and cafes or engagement in local activities are deemed crucial.

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## Small Cell Lung Cancer Presenting with Symptoms of Myasthenia Gravis

#### YU Chia-Hsuan, CHEN Yi-Chun

#### **Background and objective**

Lambert-Easton myasthenic syndrome (LEMS) is a rare neuromuscular disorder that mostly affects who over the age of forty. Most are caused by autoimmune diseases or tumors, and 60% of them are related to small cell lung cancer. It attacks the neuromuscular junction, resulting in reduced release of vinylcholine, leading to symptoms such as diplopia, autonomic nervous system dysfunction (such as dry mouth, difficulty urinating, etc.), weakened tendon reflexes, and dysphagia. The main treatments include: steroids, oral immunosuppressants, intravenous immune globulin, plasma exchange, etc.

#### Methods/intervention

The case involves a 60-year-old male employed in China. In September 2022, he was admitted to the hospital due to neck ptosis and exertional dyspnea. Diagnosis revealed carotid artery stenosis, for which he underwent balloon angioplasty. However, he continued to experience symptoms like dysphagia and dysarthria, prompting his return to Taiwan. Following examination at our hospital, Myasthenia Gravis (MG) was suspected.He underwent double-filtered plasma exchange and repetitive stimulation tests, which indicated over a 100% increase under 30Hz stimulation. Blood tests for anti-AchR and anti-MuSK were negative, suggesting LEMS. CT scans revealed swollen right lower paratracheal and hilar lymph nodes. A subsequent ultrasound of the right cervical lymph node indicated neuroendocrine carcinoma, indicative of metastatic Small Cell Lung Cancer (SCLC). The final diagnosis confirmed small cell lung cancer, for which the patient underwent concurrent chemoradiotherapy (CCRT). Following treatment, the patient regained mobility without requiring a wheelchair. Nursing interventions focused on prevention of aspiration pneumonia, fall prevention, and addressing psychological distress.

#### Results

Following LEMS diagnosis, regular follow-up CT scans are recommended to facilitate early detection of cancer and prompt initiation of tumor-related treatments to alleviate discomfort.

#### **Conclusions/lessons learned**

When patients present with symptoms resembling MG, careful consideration should be given to potential paraneoplastic syndrome (PMS). As typical PMS manifests neurological symptoms, early diagnostic tests such as anti-VGCC antibodies, electromyography, and repetitive stimulation tests should be conducted.

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A Collaborative Home Care Model of Traditional Chinese and Western Medicine May Potentially Reduces Unplanned Hospitalization Rates among Home Care Patients

## CHI I-Chang, TSAI Hsin-Yi, LI Wan-Xiu, LIN Jung-Sheng

#### **Background and objective**

Since 2016, our institution has been involved in the government's home healthcare program. Patients receiving home care have specific medical needs but face challenges in accessing healthcare, have limited self-care abilities, or struggle

with communication. This study investigates whether incorporating traditional Chinese medicine (TCM) into current home care models can balance patients' medical needs and reduce their unplanned hospitalization rates.

#### Methods/intervention

Between May 2023 and February 2024 (a total of 10 months), patients receiving home healthcare services from our institution, expressing interest in TCM care regardless of age or illness severity, will receive TCM interventions alongside current healthcare (once a week, including herbal medicine and acupuncture). A simple comparative analysis will be conducted on the unplanned hospitalization rates of patients after TCM intervention in the first three months and the final three months, compared to those not receiving TCM care and historical hospitalization rates.

#### Results

Before TCM intervention, the unplanned hospitalization rate averaged 6.44% over three months. In the three months after TCM intervention, with 39 cases served and 4 hospitalized, the rate was 10.25%, Barthel Index averaged 5.7. Disease distribution: cerebrovascular disease 35%, dementia 25%, cancer 20%, others 20%. Among those not receiving TCM, the rate was 5.70% (total cases: 667, hospitalized: 38), Relative Risk: 1.80. In the last three months of TCM intervention, with 43 cases served and 1 hospitalized, the rate was 2.33%, Barthel Index averaged 8.3, with disease distribution similar to previous months. Among those not receiving TCM, the rate was 6.45%, Relative Risk: 0.35.

#### **Conclusions/lessons learned**

Patients receiving home care often become medically vulnerable due to disease-related mobility limitations and decreased ability to express discomfort. This study suggests that supplementing the current home medical care model with TCM care may reduce the unplanned hospitalization rates of homebound patients. However, further long-term observation and more in-depth statistical analysis are needed due to the short observation period and insufficient sample size.

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## The "Lively 100 Years" project

## SAKIYAMA Hiroshi, IRIE Keiichi, NAGAE Tomoe, HAYASHI Kaori, HATANAKA Yuichi, HONDA Syuichi, MURAKAMI Kenji

#### Background and objective

Like many other places, Omuta City is experiencing rapid population decline. While many residents are moving out of the city, extending the healthy life expectancy of those who reside here is also an important issue. We aim to transform Omuta City, at least the area around our hospital, into a longevity town and have launched the "Lively 100 Years" project.

#### Methods/intervention

Realistically aiming for longevity requires not only the prevention of cancer and arteriosclerosis but also early detection and treatment at the hospital. However, in Japan, many hospitals do not have a generous budget. Therefore, we thought of encouraging residents to practice prevention through healthy eating and exercise while also receiving cancer and arteriosclerosis screenings and tests at the hospital. This approach would allow the hospital to have financial flexibility and continue the project. We aim to take a step further from previous longevity programs and set the goal of living an active life up to 100 years, even in the presence of a disease. In other words, both the residents and the hospital are part of the "Lively 100 Years" project.

#### Results

Recently, we successfully held the first meeting of the "Lively 100 Years" project with 33 participants. Next, we will hold an exchange meeting for the "Second Dream Note," an End-of-Life Care Plan (ACP) that includes Advance Care Planning. However, our "Second Dream Note" from the hospital is unique in that it encourages pursuing things left undone in life as a "second dream," which wasn't progressing as expected in the usual ACP. To live a "Lively 100 Years," not only a healthy body but also psychological motivation is necessary. The exchange meeting aims to share how everyone is practicing their "second dream" using the "Second Dream Note."

#### **Conclusions/lessons learned**

Our efforts are still in their infancy. We are determined to continue and further develop this initiative.

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A survey on social factors influencing changes in lifestyle and health of persons with diabetes during the COVID-19 pandemic Background

## NEMOTO Koichiro, MURASE Akiyo, UEDA Maiko, NAKAMURA Kenji, YUKI Yoshie

#### **Background and objective**

In Osaka Prefecture, maximum mortality from COVID-19 was observed around May 2021. As diabetes was a major risk factor for severe case, the patients were anticipated to suffer higher psychological and social anxiety. Also, type 2 diabetes was known to be associated with social determinants of health, and as our hospital provides the Free or Low-Cost Medical Care Program for those in need, we surveyed patients with diabetes in 2021 to investigate changes in stress, sleep, exercise, diet, economic status, and social isolation, and reviewed the effects on HbA1c.The purpose of this study was to determine how economic status, HbA1c changed in the COVID-19 pandemic for persons with diabetes with vulnerable economic status.

#### Methods/intervention

Subjects were the persons with diabetes making regular visit to Nozato Clinic. Some of them filled in the survey form when they visited our clinic during September to October 2021. After obtaining written consents, we analyzed their weight, HbA1c, and medical expense burden. The HbA1c data obtained from June to July 2019 were used as the baseline. The study was conducted with the approval of the Nishiyodo Hospital Ethics Committee. For statistics software, SPSS ver. 17 was employed, and significance level was set as five percent.

#### Results

The numbers of regular Health Insurance system users (HSU), Welfare system users (WSU), and Free or Low-cost Medical Care Program users (FPU) were 535, 68, and 28 respectively. For financial difficulty, 29.4 percent of HSUs and 23.6 percent of WSUs felt harder than before whereas 60.7% of FPUs said harder. For changes in HbA1c, FPUs were higher than WSUs before the pandemic (not significant), and it grew higher during the state of emergency period.

#### **Conclusions/lessons learned**

Our study showed that those in vulnerable economic status even before the outbreak of COVID-19 suffered more during the pandemic period. We should recognize that poverty is one of the important factors contributing to worse blood glucose management among FPUs.

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## Frontline Insights: Critical Care Nursing and End-of-Life Practices in Taiwan

## CHU Yi-Tsen, LEUNG Pak-On, WENG Chia-Wei

#### **Background and objective**

Intensive Care Units (ICUs) are primarily focused on life-saving interventions, yet there is an increasing demand for quality endof-life care. This requires nurses to address both the physiological needs of patients and the emotional support of families coping with the cessation of futile medical treatments, ensuring a dignified death. Despite their crucial role, ICU nurses often find it challenging to exercise their professional autonomy. This study explores the experiences, emotions, motivations, and challenges ICU nurses encounter in providing end-of-life care, using focus group interviews.

#### Methods/intervention

Using purposive sampling, ICU nurses from a regional hospital in Southern Taiwan were selected for focus group discussions. These discussions were structured around a semi-structured interview format, transcribed verbatim, and analyzed to extract and synthesize key themes.

#### Results

The study analyzed ten ICU nurses aged 25 to 45 with 3 to 23 years of experience, identifying five key themes: 1. Navigating the Dichotomy: Nurses face ethical dilemmas transitioning from lifesustaining to palliative care. 2. Empowerment within End-of-Life Care: There's a need for greater recognition of nurses' critical roles in decision-making at the end of life. 3. Holistic Comfort: Nurses address patients' physical, emotional, and spiritual needs for comprehensive care. 4. Handling the emotional stress of assisting families: Supporting families through emotional challenges of end-of-life decisions. 5.Personal Resilience: Maintaining resilience and professional integrity is crucial for nurses frequently exposed to death and dying.

#### **Conclusions/lessons learned**

End-of-life care is a critical, ongoing duty in ICUs. This study highlights the essential skills required by nurses, such as effective symptom management, communication, and grief counseling, to bridge the gap between medical care and family needs. Future research should expand to include more ICU settings, enhancing the development of effective end-of-life care strategies, screening tools, and models.

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Reducing Prone Positioning Pressure Injuries in Severe COVID-19 Patients Using Diverse Strategies

## CHEN Hsiao-Hsien, YANG Wan Chun, CHENG Ya Tzu

#### Background and objective

COVID-19 patients are prone to developing Acute Respiratory Distress Syndrome , and prone positioning therapy is clinically used to improve their low blood oxygen levels. However, this therapy may lead to pressure injuries as a complication, causing pain, infections, prolonged hospital stays, and increased mortality rates. Our unit observed a pressure injury incidence rate of 1.38% due to prone positioning in 2022, higher than the hospital's ICU average of 0.36%. Therefore, a project team was established to analyze the reasons, including the lack of standardized procedures, inadequate knowledge and care, and insufficient protective equipment. The completeness rate of pressure injury care was only 53.6%. We aim to equip nursing staff with correct care knowledge and skills to enhance the quality of nursing care. From April to June 2023, this project implemented a diverse strategy improvement plan, including: Conducting in-service education training on "Tracheal Tube Fixation Belt Skin Care Strategies." Creating "Prone Positioning Care" prompt cards. Recording instructional videos on "Prone Positioning Turnover Techniques." Establishing a fixed audit system. Purchasing tracheal tube fixation belts and fat pads (C-type, limb, and shoulder-to-knee fat bed pads) tools, integrating multiple strategies into the standard operating procedures.

#### Results

From July to December 2023, after implementing the project, the completeness rate of pressure injury care among 32 nursing staff for severe COVID-19 patients undergoing prone positioning therapy increased from 53.6% to 95.2%. The incidence rate of pressure injuries decreased to 0.29%. These results indicate a significant effectiveness of the intervention measures.

#### **Conclusions/lessons learned**

By implementing this research strategy plan, we aim to prevent patients from developing pressure injury complications due to illness, promote the overall health of critically ill patients, and enhance the quality of nursing care in health-promoting hospitals and healthcare services.

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A status survey on drinking, smoking, social isolation and economic hardship, and Nishiyodo Hospital's effort of interventions

#### HAGIWARA Seiya

#### **Background and objective**

Recent research results show that drinking, smoking, social isolation and economic hardship are major determinants of health. Therefore, we believe that healthcare providers need to treat patients, paying attention not only to the medical condition but also to the economic status and social isolation of the patient.

#### Methods/intervention

Interview sheet with questions on drinking, smoking, social isolation and economic hardship is used to check the levels. In addition to conventional questions on drinking and smoking, social isolation and economic hardship questions were added since April 1, 2021. The data are collected every 6 months for 2.5 years until September 30, 2023, and intervention status is reported.

#### Results

Statistics on the status were studied and compared, and growth in intervention rates were assessed per every 6 month data set on determinants of smoking, drinking, social isolation and economic hardship. To note, blanks were found more on social isolation and economic hardship than on drinking and smoking in any data set.

#### **Conclusions/lessons learned**

After the first 6 months, the number of interventions dropped once but is recovering. It seems that interventions became standardized as regular practice and methods are shared and accumulated among HPH committee members. We want to increase the intervention rate and confirm effectiveness with statistics. Blanks on interview sheet will occur, as how to fill in is up to patients and they may be unable to or intentionally choose not to answer the questions. Still, we deem that answering on drinking and smoking but not on social isolation and economic hardship suggests some psychological barriers or feeling of avoidance on the part of patients, and a lack of understanding on the necessity on the part of healthcare providers.

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Original Bed Bathing Intervention for Improvement of Body Odor in Longterm Bedridden Patients.

## CAI Ya Wun, CHANG Tsui Fen, LIN Yu Chiao, CHENG An Yun

#### **Background and objective**

According to statistics from the Ministry of the Interior, as of the end of February 2023, the population of individuals aged 65 and above in Taiwan reached 4,188,313. With the increasing elderly population, coupled with the prevalent small family structure, there arises a pressing need for external assistance in caregiving. The occupancy rate in care facilities as of 2023 averages at 96%, predominantly comprising long-term bedridden seniors with complete dependency on daily living activities. Until August 2023, social workers have received six feedback forms from families, all of which highlight concerns regarding the excessive body odor emanating from bedridden patients. This underscores the significant importance families place on addressing body odor issues in long-term bedridden patients.

#### Methods/intervention

After analyzing the reasons, we reached a consensus on intervening with original bed bathing techniques. Organizing audits and competitions for original bed bathing techniques. Setting the audit passing score to be above 85 points and promoting the competition reward rules, in order to stimulate learning among caregiving assistants.

#### Results

The audit of original bed bathing techniques improved from 60.4% before improvement to 92.9%. Until February 2024, one feedback form from social workers, specifically a patient body odor feedback form, was placed in the suggestion box.

#### **Conclusions/lessons learned**

The original bed bathing intervention has been proven to be an effective method for reducing body odor in long-term bedridden patients. Implementing this simple intervention can improve the overall health status and quality of life of this patient population.

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Quality improvement practice of standard diabetes care in a general hospital: action research to provide equal care for outpatients

#### ISSE Naohi, FUSHIMI Yuta

#### **Background and objective**

Primary care physicians must treat diabetic patients based on standardized guidelines. This includes diagnosis and classification, management of glycemic control with pharmacological, exercise, or diet therapy, comprehensive medical evaluation and assessment of comorbidities, and risk reduction interventions. Care quality depends on each physician in a clinic. The authors started a quality improvement practice for diabetes care to provide high-quality care equally for outpatients in a general hospital.

#### Methods/intervention

The target population consisted of diabetic outpatients with the diagnostic names, type 1 or type 2 diabetes mellitus. The eligible patients included those who had at least four office visits in a year at the Department of Internal Medicine and/or General Medicine. The researchers assessed ten quality indicators of diabetes care in their medical charts. Physicians' names were anonymized in the summary of the analytical results. The results were open for physicians at the clinic, and the researchers provided a set of summarized items of standardized diabetes care for typing medical charts. The second round of research will be executed one year after the first round.

#### Results

The first round of research demonstrated extremely low achievement rates of ten quality indicators, such as about 20% achievement of yearly ophthalmologist visits, microalbuminuria tests, and foot care assessments. The second round of research results will be shown at the upcoming conference.

#### Conclusions/lessons learned

Implementing a set of summarized items for common use in the electric medical chart would be beneficial to realize equal care for outpatients with diabetes, irrespective of clinic physicians. Contact: ISSE Naohi Okayama General Kyoritsu Hosptal JAPAN issenaohi@yahoo.co.jp

Speculations from nursing students who completed interviews with foreigners residing Japan

#### SUZUKI Mio, SAKAI Misa, ORYOJI Tami

#### **Background and objective**

As of 2023, a total of 20,585 foreigners are residing Yamanashi Prefecture. Students are to analyze health issues among the residents. Number of interviews were organized to have nursing students grasp the idea to discuss health issues and experiences foreigners have in everyday life.

#### Methods/intervention

Interviews were conducted at a Japanese language school, Catholic church, and a community of Japanese residents from China. Based on interviews from 12 countries, each group discussed various health problems they have along with difficulties they face in daily basis.

#### Results

In result students learned and experienced the difficulty in communicating with detailed medical terms and the differences in the Japanese medical system compared from their own home countries. Particularly Japanese medical systems made it difficult to receive the treatment they personally expected. To reduce stress from the differences in lifestyles and to prevent misunderstanding between both parties, the importance of learning language stood out. Creating videos in multiple languages and authorizing an interpreter with informed consent will give patients a wider option for treatments. Pamphlets and posters in multiple languages showing various choices and medical fees would help to understand the Japanese medical system.

#### Conclusions/lessons learned

As a result, regardless nationality, we learned the environment for equal medical care is insufficient. We are determined to actively participate in international exchange and sports events to deepen mutual understanding. Furthermore, working with members of PHP and host hospitals will help nurses to focus on training for their future.

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## Role and Outcome Analysis of Pre-ESRD Pharmacist Clinics in Regional Teaching Hospitals in Taiwan

### **TSENG Huang-Cheng**

#### **Background and objective**

In the past, patients with Pre-ESRD were cared for by physicians and nurses in hospitals. The Taiwanese government, in 2021, committed to integrating pharmacists into the care of Pre-ESRD patients. Our department assigned pharmacists to participate in the program. As a result, pharmacists have been integrated into our hospital's Pre-ESRD team.

#### Methods/intervention

Patients need to visit the pharmacist clinic first, where their recent medication is reviewed, including traditional Chinese medicine, health supplements, and other medications. Non-steroidal anti-inflammatory drugs are explained regarding their impact on kidney function, with recommendations for physicians to discontinue their use if necessary. The adherence to medication is evaluated, and methods to improve adherence are provided to patients with poor adherence. When there are concerns about prescriptions, recommendation forms are filled out for patients to hand to the physician during their appointments.

#### Results

From January 2023 to December 2023, a total of 140 eligible patients were served under the program. The services provided include disease self-care education for 134 instances, medication guidance for 92 instances, medication knowledge sessions for 132 instances, and counseling on avoiding medication-induced kidney damage for 23 individuals. Additionally, there were 15 significant recommendations for physicians to adjust prescriptions and the identification of 23 cases where patients were taking medications harmful to the kidneys.

#### **Conclusions/lessons learned**

After the inclusion of pharmacists, specifically provided explanations on medications that could worsen kidney function to reduce the risk of kidney deterioration in patients. Additionally, 15 prescriptions with uncertainties were raised and subsequently modified by physicians, highlighting the importance of pharmacist involvement.

Contact: HUANG CHENG Tseng Ten-Chan General Hospital TAIWAN bliss520@yahoo.com.tw Frailty Measurement Workshop Aimed at Utilizing the Regional Medical Collaboration Network "Salvia Net"

## KOBAYASHI Ryohei, MIYAZAWA Yumi, TAGUCHI Takayuki

#### **Background and objective**

In response to the "2025 Problem," which represents the challenges of the aging population, utilization of information communication technology (ICT) in regional medical collaborations has been encouraged. "Salvia Net," the first system to share medical information among medical and caregiving professionals in the Tsurumi ward of Yokohama City was established in 2019. We held a frailty measurement workshop in order to assess a frailty risk and take solution in older adults. We could early detect frail people and provide appropriate for them, using "Salvia Net".

#### Methods/intervention

A frailty-check measurement workshop was held at the Ushioda General Hospital in Tsurumi ward, Yokohama city. Participants completed questionnaires on physical function, nutritional status, oral function, cognitive function, and social aspects. We measured their physical and cognitive functions. Based on the results, physical therapists gave them feedback and materials related to frailty prevention.

#### Results

Through the frailty-check measurement workshop, frailty risks among older adults in the community were identified, and feedback was provided. Among the 29 participants (average age 77.5  $\pm$  6.0 years, 65.5% women), over 70% were classified as frail or pre-frail.

#### **Conclusions/lessons learned**

We enhanced participant's motivation for extending healthy life expectancy through the frailty measurement workshop. It is necessary for establishment of sustainable collaborations, further utilization of ICT and initiatives to address community needs in the future. Based on this data, we implemented a frailty risk display alert into electronic medical records.

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## Poster session 2.2: Improving care of people with multiple health problems and comorbidity I

Optimization of Continuous Renal Replacement Therapy Operational Skills in the Intensive Care Unit: Evaluation of the Effectiveness of an Educational Training Program

## HUANG Yi-Chun, HUANG Ching-Yu, CHEN Yan-Jing, CHEN Yu-Ning, LIU Wei-Lun, WANG Szu-Yi

#### Background and objective

Continuous Renal Replacement Therapy (CRRT) is widely used in the intensive care unit (ICU) for critically ill patients, requiring a highly skilled nursing team. Timely management of device alarms and prolonging filter use can reduce treatment interruptions, directly impacting the quality of care and potentially reducing patient mortality risk. Therefore, optimizing clinical operational skills of CRRT in the ICU is crucial and valuable.

#### Methods/intervention

In the medical ICU of a regional teaching hospital in New Taipei City, from December 01, 2020, to December 31, 2023, we established standardized procedures and technical assessments. We designed and completed a series of flipped classroom simulation case courses, involving 54 nursing staff in an educational training program. These courses included hands-on practice, clinical scenario simulation videos, online interactive scenario simulations, as well as the production of care manuals and simple operation random cards.

#### Results

Data analysis from January 2024 to April 2024 revealed a decrease in abnormal CRRT alarm handling time from 11% before intervention to 9%, and an increase in the average single-use time of filters from 18 hours to 23 hours.

#### **Conclusions/lessons learned**

Through this educational training, we successfully improved nursing staff's CRRT operational skills and significantly enhanced the handling of abnormal alarms while reducing unexpected treatment interruption time. These results indicate that through standardized procedures and scenario simulation teaching, the quality of CRRT operation in the ICU can be effectively improved, thereby enhancing patient safety and treatment outcomes.

#### Contact:

HUANG YI-CHUN Fu Jen Catholic University Hospital / Fu Jen Catholic University TAIWAN huang830413@gmail.com Investigate the health care needs, related factors and demands satisfaction of hospitalized patients with traumatic spinal cord injury in Taiwan. A pilot study

#### YEH Shih-Hua

#### **Background and objective**

Spinal Cord Injury (SCI) presents severe challenges and high costs, necessitating comprehensive care. Unmet needs can worsen anxiety and mental health. This study fills a research gap by evaluating SCI patients' needs and satisfaction, providing insights to improve clinical care and guide future research.

#### Methods/intervention

This study employed a descriptive correlational design to assess health care needs and satisfaction among 57 TSCI inpatients. Using purposive sampling and structured questionnaires, data were analyzed with SPSS 20.0. Statistical methods included descriptive statistics, t-tests, ANOVA, Pearson correlation, and regression analysis. Inclusion criteria were stable vital signs and clear consciousness; exclusions involved other neurological or mental disorders. Ethical approval was secured, and data collection involved daily ward visits for participant recruitment and consent.

#### Results

This study of 57 TSCI patients revealed high care needs (mean 84.09) and moderate satisfaction (mean 78.79). Significant predictors included caregiver presence, medication use, anxiety, and physical function. Psychosocial needs were higher among women and unmarried patients, with predictors explaining 57.1% of the variance.

#### **Conclusions/lessons learned**

The study highlights that TSCI patients have high care needs but moderate to low satisfaction, with elevated depression and anxiety levels. Regular psychological support and comprehensive care are crucial. Variability in patient needs based on symptoms and function emphasizes the need for targeted research across recovery stages. Medical staff stress warrants investigation into coping mechanisms and stress management. Specialized nurse training and practical learning are essential for effective care. A collaborative, integrated approach involving a multidisciplinary team can bridge gaps in care satisfaction and enhance overall patient support.

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Improving the completeness rate of nursing handover in the intensive care unit after liver transplantation. A Nursing Project

### YANG Hui-Chuan, WU Tai-Chin, CHEN Yun-Ju

### Background and objective

In 2019, this ICU managed 32 liver transplant patients. Rising transplant volumes and a shortage of senior nurses lead to reliance on inexperienced graduates, risking suboptimal care. Effective post transplant care demands high expertise and skill. This project aims to improve ICU nurses' shift completion rates and care knowledge, and establish standardized post operative practices.

### Methods/intervention

This project advances health promotion and services by enhancing ICU nurses' expertise in post liver transplant care, reducing medical errors and care uncertainty while boosting efficiency. These improvements promote patient health and safety, aligning with health promotion goals of elevating care quality and minimizing risks. The project also fosters clinical standardization for consistent, high quality care. Future efforts should focus on creating a cross departmental information platform to optimize patient data management and further enhance postoperative care.

#### Results

The project greatly improved post operative liver transplant care. ICU nurses' care completion rose from 64.5% to 95.7%, and cognitive scores increased from 68% to 93.9%. Satisfaction with learning methods and clinical information application reached 95%, reflecting notable gains in care competency and efficiency.

### **Conclusions/lessons learned**

The project significantly improved ICU nurses' knowledge, skills, and shift handover for liver transplant care, reducing errors and uncertainty while boosting efficiency. Both senior and new staff now effectively manage liver transplant patients. Future efforts will standardize care and enhance nursing information. A cross departmental information platform is recommended to optimize patient data management and improve postoperative care.

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## Strategies of preventing pressure injury in the operating room

### LIU Wen-Liang, CHANG Hsin-Yii, LIN Ying-Chao, CHIEN Ju-Huei, LI Yu-Ru, TSAI Ya-Hui, CHUANG Shu-Ting, LEE Li-Chun

### **Background and objective**

The incidence of pressure injuries among surgical patients in our hospital was as high as 1.10%. This project aimed to establish a comprehensive preventive intervention to avoid occurrences of pressure injuries and improve the quality of care.

### Methods/intervention

In this study, we identified and classified numerous major root causes and risk factors. Several countermeasures are implemented, as follows: (1) Risk assessment: a "High-risk Group Assessment Form" was designed to evaluate the risks of pressure injuries before surgery. (2) Risk control: provide preventive medical dressings or patches to high-risk crush injury groups. (3) Personnel training: multiple education courses and training workshops for care teams, and proficiency performance audits in using prevention dressing. (4) Reevaluated medical dressings and upgraded equipment: We reevaluated and updated preventive pressure injury dressing patches and also provided updated equipment and appliances.

### Results

The improvement outcomes were observed as follows: (1) The proficiency evaluation of the operating room staff in preventing pressure injuries was increased from 48% to 100%. (2) The assessment of professional performance in utilizing preventative dressing is 100%. (3) During January 1, 2013 and March 31, 2024, the incidence of pressure injuries among operating room patients decreased from 1.10% to 0.08%, a significant reduction of 83.63%.

### **Conclusions/lessons learned**

It is an extremely effective approach for assessing patient risk before surgery, and providing different medical dressings for different individuals may reduce the likelihood of pressure injury. In the future, we aim to integrate this strategy into the "E-surgery system" to streamline the surgical workflow.

### Contact:

CHIEN Ju Huei Taichung Tzu-Chi Hospital, Buddhist Tzu-Chi Medical Foundation, Taiwan TAIWAN tc001311@tzuchi.com.tw Exploring the willingness to participate in anonymous HIV screening in outpatient clinics: A preliminary study at a regional teaching hospital

### CHEN Shin-Yi, CHANG Hao-Chih, CHEN Jo-Fan

### **Background and objective**

HIV/AIDS is an international public health concern. Its incurable nature and unique transmission routes often lead to societal rejection, resulting in HIV infection and death. Anonymous testing encourages high-risk groups to get tested without fear of exposure, aiding in HIV prevention and reducing the healthcare burden.

### Methods/intervention

Strategies to enhance anonymous testing include: 1. Establishing an online appointment system for anonymous testing. 2. Creating and distributing promotional posters for anonymous testing. 3. Increasing the visibility of testing information through hospital websites, social media, and public broadcasting. 4. Promoting safe sexual practices and the avoidance of needle sharing. 5. Advising individuals at risk of HIV infection, who test negative, to participate in the pre-exposure prophylaxis (PrEP) program after a medical evaluation, to reduce the incidence and mortality of HIV.

#### Results

Through these strategies, the willingness of high-risk groups to undergo HIV testing can be significantly increased. According to statistics from our hospital, from January to December 2023, the number of anonymous HIV tests conducted rose significantly, with a total of 550 tests compared to 200 in 2022.

### **Conclusions/lessons learned**

The increase in anonymous testing has indirectly boosted the willingness to participate in the PrEP program. If the test result is negative, individuals at risk of HIV infection are encouraged to join the PrEP program to reduce the risk of HIV infection. If the test result is positive, individuals are treated with antiretroviral therapy to achieve an Undetectable = Untransmittable (U=U) status, meaning that an undetectable viral load equals no risk of transmission. This enhances the quality of healthcare and achieves a win-win situation for both patients and healthcare providers.

#### Contact:

CHEN Shin-Yi Department of Nursing, Kaohsiung Municipal Siaogang Hospital, Kaohsiung Medical TAIWAN Utilizing the Concept of Rehabilitation to Assist in Caring for a Stroke Survivor Experiencing Feelings of Hopelessness

### LYU Li-Wei

### **Background and objective**

This study describes an elderly individual who experiences limb weakness due to a stroke, which hinders their ability to perform daily activities independently, necessitating assistance from others. The sudden deterioration in health has led to a sense of hopelessness about future life, thereby affecting the effectiveness of treatment and rehabilitation.

### Methods/intervention

The nursing period was from May 20 to June 07, 2020. Data was collected through direct observation and discussions to conduct a comprehensive assessment based on Gordon's 11-item functional assessment. It was found that the patient had health issues such as reduced physical activity and feelings of hopelessness. By applying the concept of rehabilitation and engaging in interdisciplinary collaboration, the individual's daily routines were integrated with the rehabilitation plan to maximize the rehabilitation period and preserve physical function. Family members were encouraged to participate and were guided in relevant caregiving techniques to minimize the psychological impact on the individual, enhance rehabilitation motivation, and improve effectiveness.

### Results

Through interdisciplinary collaboration and strong family support, the individual was able to confront and successfully implement the rehabilitation plan. They progressed from being bedridden to using a wheelchair and did not experience complications such as muscle contractures or pressure injuries. Eventually, the condition stabilized, and they were discharged smoothly, achieving successful home care.

### **Conclusions/lessons learned**

The individual initially resisted treatment due to the sense of hopelessness brought on by disability following the stroke. Through a positive therapeutic relationship and interdisciplinary collaboration, tailored rehabilitation plans have enhanced the quality of life post-stroke.

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### Enhancing Patient Comfort in Urodynamic Testing: A Comparative Study on Lidocaine Gel Application

### LIN Shi-Shan, TSAI Chuan-Hsiu, LIANG So-Jung

### **Background and objective**

Urodynamic testing is a crucial, yet invasive diagnostic tool for evaluating lower urinary tract dysfunctions. The discomfort associated with catheter insertion often hampers the accuracy of the results due to pain-induced artifacts. This study focuses on improving patient-centered outcomes by integrating effective pain management techniques into the testing process.

### Methods/intervention

We refined the application process of lidocaine gel, using a syringe to instill 5 ml of the gel into the urethra in segments, carefully avoiding pressure against the urethral opening. Following a 5-minute waiting period to ensure adequate anesthetic effect, a catheter was inserted. Pain levels were quantitatively assessed using a visual analog scale (VAS) immediately after insertion and upon completion of the test.

### Results

From October to December 2022, 132 patients were treated with lidocaine gel. We then retrieved previous data to compare the self-reported pain score. From June to September 2020, 130 female patients received a water-based lubricant during their urodynamic tests. Statistical analysis revealed urethral/bladder pain index during the test was 4.9 in the previous group compare to 3.3 of intervention group (p<.0001). After UD examination, VAS scores were significantly different among two group, 3.3 vs 2.1 (p<.001)

### **Conclusions/lessons learned**

Implementing lidocaine gel significantly mitigated pain associated with catheter insertion in urodynamic testing. This study highlights the potential for improved patient comfort without compromising test accuracy, suggesting a shift towards more humane diagnostic practices in urology.

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### The Effectiveness of Using Integrated Care in Acute Medical Ward Care

### HUNG Chien-Wen, HSIEH Hui-Chun, SUNG Hsiu-Yu

### **Background and objective**

Integrated care has been introduced in the acute medical ward, and the skill-mixed care model has been used to divide care work into different levels, nurse aides have been added to take care of the basic care work to help patients avoid the risk of falls and pressure injury. The goal is to improve the quality of care and reduce the burden of care on family members and nurses.

### Methods/intervention

1. 12 beds will be provided from November 2022 to December 2023 in the Integrated Medicine Ward with 30% coverage. 2. commissioned a manpower dispatch company to assign 6 nurse aides, with a care ratio of 1:6 and a 12-hour second shift. 3. The nurse aides' care activity programs are informative. 4. Provide the option to participate in integrated care.

#### Results

A total of 2974 patient days were admitted, occupying nearly 70% of the beds. The incidence rate of pressure injuries was 0.37%, and the incidence rate of falls was 0.09%. Family satisfaction rate reached 90%, the most satisfied is that the pressure of family care can be shared; dissatisfied is that there are not enough beds. Nursing staff satisfaction:83.2%, the most satisfied with the sharing of non-professional care work; dissatisfied with the immediacy of communication with family members; nurse aides satisfaction was 80.5%, the most satisfied with the proportion of patients with high severity of the disease is too high when they feel that the workload is too heavy.

### **Conclusions/lessons learned**

Integration of care can alleviate the financial burden of family members and share the workload of non-professional nursing staff, and it is recommended that the number of beds be increased. When patients have more care needs, such as agitation and critical illness, it is recommended to adjust the ratio of nurse aides' manpower according to the number of hours of care for each patient. Overall, this can show care for patients and families and enhance the professionalism and efficiency of the care team.

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### Reducing Thrombectomy Preparation Time in ER Stroke Patients With Lean Methodologies.

### HUNG Yu-Ping, LIN Fen Jyin, YANG Chun-Yi, HSUEH Chiung-Fang, JEE Wang-Ling

### **Background and objective**

Acute ischemic stroke demands swift intervention. Thrombolytic therapy or arterial thrombectomy are crucial. However, as our hospital is lack of thrombectomy facilities and patients rely on transfer to medical centers for intervention. In 2022, delays in

thrombectomy preparation for 10 acute stroke patients were due to staff unfamiliarity (48%), lengthy examination wait times (30%), and information system issues (18%), resulting in a 217minute average preparation-to-transfer time. To address this, our ED formed a lean improvement team aiming to reduce thrombectomy preparation time from 217 to 90 minutes, targeting an achievement rate increase from 0% to 70%.

### Methods/intervention

1.Education: Consensus meetings and training for both emergency department and neurology department staffs to gain intimate cooperation. 2.Equipment: Installing broadcast system to accelerate initiation of patient evaluation and collaborating with information staff for efficient pre-set medical orders. 3.Policies: Streamlined patient transport and imaging procedures, and defined thrombectomy SOPs to avoid time waste and inappropriate moving of patient.

### Results

From Nov 6 to Dec 31, 2023, thrombectomy prep time reduced from 217 to 90 mins in 3 cases, achieving an 82% success rate. PCE of thrombectomy process increased from 24.6% to 68.3%, and staff's accuracy improved from 68% to 95%.

### Conclusions/lessons learned

Swift action is crucial in stroke cases. Lean methodologies effectively cut thrombectomy prep time, enhancing patient care and medical efficiency. Multidisciplinary efforts ensure streamlined processes, aligning with health principles and promoting better outcomes.

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Using Quality control circle methodology to reduce ventilatorassociated pneumonia (VAP) infection rates in the respiratory care ward- taking a regional hospital in Taiwan as an example

### **LIEN Chuan Wen**

### **Background and objective**

Ventilator associated pneumonia (VAP) refers to hospitalacquired pneumonia occurring after more than 48 hours of mechanical ventilation. Once it occurs, it not only prolongs the duration of ventilator use and hospital stay but also serves as one of the significant factors contributing to patient mortality. The VAP rate in our unit from 2021 to 2022 was 0.49%, higher than that in other units. This affects ventilator liberation and increases healthcare costs. Therefore, we employed quality improvement methods to identify risk factors for VAP and proposed improvement strategies to clinically prevent and reduce the incidence of VAP infections, thereby enhancing the quality of care.

#### Methods/intervention

Through the quality control circle's ten methodologies, literature review, brainstorming sessions, and root cause analysis, we identified the reasons for ventilator-associated pneumonia (VAP) and proposed improvement strategies. These strategies include:1.Providing on-the-job education on VAP.2.Creating a template for securing the ventilator tubing and establishing standard procedures for clearing water from the tubing.3. Ensuring that nursing staff can implement preventive measures for VAP by providing a mnemonic "SHE" (Suction, Head up 30-45 degrees, Emptying).

### Results

After implementing the strategies, the VAP infection rate decreased from 0.49% to 0%. Additional benefits included an improvement in VAP care knowledge assessment scores from 86.46 to 100 points. Furthermore, there was a reduction in antibiotic usage costs, decreasing from 38,057 NT before improvement to 0 NT after improvement, resulting in savings of 38,057 NT in antibiotic medical expenses.

### Conclusions/lessons learned

Through the quality control circle (QCC), improvement strategies were implemented to enhance nursing staff's professional knowledge, reduce the incidence of VAP, and revise nursing clinical operation standards. These improvements were further disseminated to other units to enhance the quality of care.

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### Using Lean Methodologies to Improve the IV Medication Return Process

### LIN Yu-Jo, YANG Sue-Lin, LAI Pao-Chun, LIANG Meei-Huey, HUANG Shu-Yin, TSAI Yi-Fam

### **Background and objective**

The current drip return process is cumbersome, inefficient, and error-prone, leading to significant waste of manpower, space, and resources. Manual verification consumes over 7 minutes per drip, compared to 1 minute for other medications. Accumulated drips occupy valuable hospital space, with significant material losses due to lack of system support. Optimizing the return process with lean techniques improves operational efficiency and service quality in healthcare institutions.

#### Methods/intervention

Improving bulk drip return process through the following lean methodologies: System Enhancement:Upgrade existing medical information systems to accurately record and calculate all drip return data, enhancing efficiency and accuracy. Mandatory Drip Check:Automated verification of drip quantities upon patient discharge ensures timely return of unused drips, minimizing waste and optimizing inventory management.Display of Return Quantity: System revisions display each drip's return quantity on return forms, facilitating identification and total return calculation, thus improving process efficiency."

### Results

Through lean methodologies, the hospital has reduced drip usage by 1087 bottles, saving NT\$33,000 equally, compared with the previous year. Storage space was reduced from 1.5 to 0.3 square meters, saving NT\$1.2 million per unit. Automated calculations cut nursing hours by 20+, saving NT\$55,000 per unit yearly. The reduced drip expiration accumulation has saved NT\$18,000 per unit yearly.

### **Conclusions/lessons learned**

Lean methodologies implementation significantly improves drip return process. Results include reduced drip usage, efficient space utilization, decreased labor costs, and elimination of expired drip expenses. This not only alleviates nursing workload but also enhances resource utilization, patient safety, and service quality. It validates the feasibility and benefits of applying lean techniques in healthcare. Improving information systems and optimizing processes can serve as a reference for healthcare institutions.

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### An Effectiveness Analysis of Postacute Care for older people with First-onset Stroke

### **YING Mei**

### **Background and objective**

Post-acute care for stroke patients is an important health issue in Taiwan. Stroke was the second leading cause of death and also the first cause of adult disability which caused social impact severely. Stroke treatment and care because of progress, decline in stroke mortality, the first since the death in 1981, fell to fourth place in 2023. The aim of this study is to explore the comparison of the daily living functions of stroke patients in post-acute care after the intervention of physical therapy and speech therapy.

### Methods/intervention

This retrospective study reviewed the patients with First-onset stroke from 2016 to 2017. This study collected 28 older people. The residents receive physical therapy and speech therapy in our nursing home. It changes before and after rehabilitation treatment. The effectiveness of Modified Rankin Scale (MRS), Barthel Index (BI), and Functional Status in physical therapy is examined using the Paired sample t-test and one-way ANOVA. The effectiveness of the Functional Oral Intake Scale (FOIS) in speech therapy is examined using the Wilcoxon sign rank test and Spearman's rank correlation coefficient.

#### Results

The average age of the subjects was 72 years (SD=10.7yrs). The average number of days was 89.3 in the nursing home. After the physical therapy intervention, they showed significant improvements in Functional Status and MRS. Among the 12 residents receiving speech therapy, 5 residents had NG tubes in place when they were admitted. After being transferred out of the nursing home, 3 residents had their NG tubes removed; the average FIOS of the 12 residents in the initial evaluation was 1 point, and the average score improved to 3 points, showing significant.

### Conclusions/lessons learned

In this study, 4 residents improved their Barthel Index scores, and 16 residents had unchanged scores. The scores of those who stayed for more than 90 days improved the most. It is true that after stroke in the subacute stage, as long as proper rehabilitation and other medical care are continued, the patient can recover and effectively improve the patient's physical function and mobility. Although speech therapists conducted clinical observation and evaluation in this study, the data analysis only used FIOS to represent the patient's degree of dysphagia. If other relevant variables can be added, the safety and effectiveness of the patient's eating function can be subdivided.

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Reducing the Incidence of Aspiration Pneumonia in Stroke Patients with Comprehensive Care

### WANG Shu-Hui, DENG Heng-Yi, SU Chia-Ni

### **Background and objective**

Stroke is the leading cause of death and disability in the global population, and cerebrovascular disease ranks fourth among the top 10 causes of death in humans. If integrated care can improve the complete swallowing training of caregivers, the proportion of aspiration pneumonia can be reduced.

### Methods/intervention

Develop a standard process for swallowing assessment: produce swallowing assessment guidelines. Improve the clinical skills learning model: design swallowing assessment forms, record swallowing assessment teaching videos and posters. Create a high-quality nursing environment: purchase swallowing assessment aids, design simple feeding aids and tube-filled dolls, make swallowing assessment game cards, translate multilingual health education leaflets, record dysphagia feeding guidance videos, and improve the nursing skills of stroke caregivers to prevent the patient is suffocating.

### Results

The incidence of aspiration pneumonia in stroke patients decreased from 1.45% before improvement (January-December 2021) to 0% after improvement (October-December 2022), and the effect remained at 0% (January-April 2024). The accuracy rate of swallowing function assessment performed by nursing staff in stroke ward has increased from 0% to 100%. Stroke ward nursing staff scores for dysphagia and eating skills increased from 54.5 to 95.5.

### **Conclusions/lessons learned**

In order to improve the accuracy of swallowing function assessment performed by nursing staff in stroke ward, the countermeasures were carried out in parallel to other wards after team discussion, and the teaching video of swallowing function assessment and dysphagia feeding skills instruction video were converted into QR Code, and with swallowing function assessment teaching aids, to provide each ward to implement the elderly care group health education auxiliary teaching materials, won the praise and affirmation of patients and caregivers, after class feedback thanks to the hospital for providing the most friendly care environment for patients, which is the greatest benefit of the team's circle.

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Interdisciplinary Care Coordination Improves Heart Failure Patient Discharge Medication Adherence and Reduces Mortality Rate

### LIN Pin-Chun, LIN Cheng-Sheng

### **Background and objective**

Heart disease is the second leading cause of death nationally, with heart failure marking the final stage. Guidelines from the European Society of Cardiology and American Heart Associations emphasize four major guideline-directed medication therapies (GDMT) to reduce mortality in patients with heart failure with reduced ejection fraction (HFrEF). At our institution, the mortality rate surged to 10.9% in Q2 of 2022. Our goal is to enhance the completeness of discharge medication prescriptions through interdisciplinary care coordination to ultimately decrease mortality rates.

### Methods/intervention

1ESC and ACC guidelines regulate healthcare advocacy. 2.Dedicated case managers, pharmacists, and physicians collaborate to develop medication treatment plans. 3.Inpatient one-on-one bedside education followed by post-discharge telephone follow-up. 4.The case manager audits the medication prescription completeness rate monthly, reviews the list of prescriptions not completed, and presents for discussion and improvement at the meeting.

#### Results

Through continuous advocacy and review during meetings, the discussion and visitation rates of case managers and pharmacists both exceed 93.1%. For hospitalized patients with HFrEF, the completeness rate of GDMT prescriptions at discharge increased from ACEI/ARB/ARNI 56.8%, B-blocker 68.0%, MRA 41.9%, SGLT2 27.0% in 2022 to ACEI/ARB/ARNI 72.8%, B-blocker 75.4%, MRA 57.74%, SGLT2 73.9% in 2023. The one-year post-discharge mortality rate decreased from 5.9% in 2022 to 4.1% in 2023.

### **Conclusions/lessons learned**

Research indicates that achieving effectiveness requires compliance from both physicians and patients in medication adherence. Recognizing physicians with high prescription rates as peer role models during meetings serves to inspire others. Through ongoing interdisciplinary collaboration, continuous discussion, and refinement, not only is the completeness rate of guideline-directed medication therapy (GDMT) prescriptions increased, but patient mortality rates are also reduced. This approach fosters positive morale among colleagues.

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Promoting the Efficacy of Discharge Planning through the Transdisciplinary Team Model

### CHENG Yu-Ling, CHEN Pin-Yu, HUANG Shu-Li

### Background and objective

In patient-centered high-quality healthcare, interdisciplinary communication among clinical professionals is essential and cannot be achieved solely by physicians or nurses. To better prepare patients for discharge and provide more comprehensive care to those with ongoing care needs, interdisciplinary discussions and meetings are utilized. Through collaborative teamwork among various professional teams, patients and their families can feel at ease in transitioning to aftercare at home.

#### Methods/intervention

The study examines patients discharged from a teaching hospital in Hsinchu City, Taiwan, between 2021 and 2022, needing ongoing care. Interdisciplinary discharge meetings were held during hospitalization to plan care. Quality was measured by rates of emergency department returns within 3 days and readmissions within 14 days post-discharge.

### Results

A total of 2,291 transdisciplinary discharge meetings will be held in 2021-2022, involving various disciplines such as nutrition, rehabilitation, and pharmacy. The rate of return to the emergency department within 3 days post-discharge decreased from 3.16% to 2.78%, and the readmission rate within 14 days post-discharge decreased from 1.69% to 1.57%, both of which were lower than the peer values. Therefore, through interdisciplinary communication meetings, the continuity of care and utilization of relevant resources for patients after returning home can be effectively enhanced.

### **Conclusions/lessons learned**

Through the integrated care mechanism of interdisciplinary teams, discharge interdisciplinary team meetings are convened to address patient needs. Patient and family involvement in decision-making ensures individualized and continuous care post-discharge, aiming to enhance the quality of life after returning home and reduce issues such as return to the emergency department within 3 days post-discharge and readmission within 14 days post-discharge, thereby minimizing healthcare resource wastage.

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Investigation of Medication Adherence in Pharmaceutical Intervention Services for Patients with Chronic Kidney Disease.

### WU Yi-Chen, CHEN Mei-Ju

### **Background and objective**

It is often for patients with chronic kidney disease (CKD) to have polypharmacy for comorbidities. Pharmaceutical care can provide medication education etc to improve the adherence for better progress of disease. This study aims to understand the impact of pharmaceutical intervention for patients with CKD.

#### Methods/intervention

We collected data from the selective patients referred by the outpatient of nephrology clinic from 2022 to 2023, who had been visited at least twice with an interval of more than 77 days. The selection criteria included: ICD-10 diagnosis of N18.3, use of more than 5 medications, presence of at least two chronic diseases, and Urine Protein Creatinine ratio greater than 200. The pharmaceutical services included confirming adherence with Adherence to Refills and Medications Scale (ARMS), providing pillboxes, mutual check the drug indications with patient, reducing drug related problem, providing correct medication information etc.

### Results

A total of 73 visits were collected, involving 31 patients. After excluding the patients with a basic score (12 points) of the ARMS of first visit, 21 individuals were included. The average ARMS score and number of medications of first visit was 17.57±3.22 and 12.9±4.3, respectively. The average difference between the

ARMS and number of medications of two visits was  $-1.19\pm4.38$ and  $0.48\pm2.18$ , respectively. Statistical analysis revealed a significant association between CKD stage and ARMS difference (P=0.002), with average ARMS differences of -1.6 for stage IIIb, -0.67 for stage IV, and -1.5 for stage V. The worst adherence items of ARMS for stage IV was " How often do you change the dose of your medicine to suit your needs?"For stage V, the worst items was " How often do you forget to take your medicine?"

### Conclusions/lessons learned

Statistical analysis revealed a significant finding between CKD severity and patient adherence. Patients with milder CKD showed significant improvement in adherence, likely due to better self-management, and were more confidence in medication therapy. Conversely, severe stage of patients may change the medical behavior due to the complexity of medication interval or the distrust for unstable progress after taking medication. We hope that this article can devote information to improve adherence for the kidney disease.

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Nursing Experience in Caring for a Patient with Necrotizing Fasciitis-Induced Septic Shock

### LIN An-Chi

### Background and objective

When a wound infection leads to severe sepsis, patients who do not understand the severity of the disease are more likely to develop negative emotions such as anxiety, which can affect the effectiveness of treatment. This article is about the experience of caring for a patient in the intensive care unit who developed necrotizing fasciitis and septic shock due to liposuction surgery. Through a comprehensive nursing assessment, appropriate nursing interventions were provided to improve the patient's physical and psychological problems, enhance the quality of care, and promote their healthy recovery.

### Methods/intervention

As a nurse, collect data through observation, interviews, and physical assessments, and use the Gordon Eleven Functional Health Patterns Assessment as an assessment tool to identify nursing health problems.

### Results

For the patient's nursing problems, provide appropriate nursing measures to improve the nursing problems, and at the same time use nursing skills to establish a therapeutic interpersonal relationship, use empathy to listen and accompany, encourage patients to express their inner feelings and reduce their anxiety, and finally improve their condition, successfully remove the endotracheal tube and transfer to the general ward and discharge. Critically ill patients are unable to express themselves due to endotracheal intubation, and coupled with the inexperience of nurses, this leads to communication difficulties and increased anxiety. It is recommended that nurses strengthen their understanding of the concept of anxiety, use their observation skills and empathy to discover problems in a timely manner. Through teamwork and online resources, they can provide support and assistance to promote patient recovery and reintegration into society.

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Nutritional Status and Sarcopenia among Elderly Residents at a Psychiatric Nursing Home in Central Taiwan: A Cross-Sectional Study

### YANG Hsinju

### **Background and objective**

Malnutrition and sarcopenia are common health concerns in the elderly population. The study was therefore conducted to explore the correlation between nutritional status and sarcopenia among elderly residents at a psychiatric nursing home.

### Methods/intervention

A total of 62 elderly (aged 65 and above) residents from a nursing home affiliated with a psychiatric hospital in central Taiwan were recruited to participate in the cross-sectional study,Sarcopenia screening was conducted using the 2019 ASWG (Asian Working Group for Sarcopenia) diagnostic criteria, and MNA (mini nutritional assessment) and Subjective Swallowing Ability Assessment for screening nutritional risk, and chi-square test performed to examine correlation.

### Results

The average age of the participants read 69 .79 $\pm$ 3.72 years old . 54.8% (34/62) of the participants reported normal nutritional status, while the remaining 45.2% (28/62) were at risk of malnutrition. 87.1% (54/62) perceived no swallowing difficulty. In line with the 2019 AWGS diagnostic criteria, 74.2% (46/62) of the participants were diagnosed with sarcopenia with the highest prevalence found in those with nutritional risk (41.9% or 26/62). Chi-square tests were performed to examine variables such as nutritional status, swallowing difficulty, sarcopenia, and screening items including low muscle strength, low physical performance, and low muscle mass. Results indicated that nutritional status was correlated to body mass index (X2=7.03; p≤0.01), low muscle mass (X2=13.08; p≤.001), and sarcopenia (X2=9.23; p $\leq$ .002). On the other hand, while failing to reach statistical significance (X2=3.96; p=0.05), swallowing difficulty appeared to be potentially correlated to sarcopenia.

### Conclusions/lessons learned

Compared with general population, people with mental disorders tend to be more likely to experience malnutrition and develop sarcopenia and are therefore more susceptible to rapid functional decline and adverse health outcomes. Early detection of existing and potential sarcopenia is of crucial importance for expediting timely intervention to improve muscle strength and physical performance through exercise and dietary supplementation.

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Empirical care for stroke patients receiving warm water footbath to improve lower limb spasm

### LAN Tsai Chin, LEE Lin-Lin

### Background and objective

Stroke is an important cause of disability among people. It not only affects daily life functions, but also creates a burden on caregivers. Limb spasticity is a common complication after stroke. About 58% of patients will experience spasticity, and the spasticity becomes more serious as time goes by. Tension in the early stage of the disease will cause reduced limb mobility and pain. If not detected and treated in time, it will lead to joint contracture in the later stages, hindering the recovery of nerve function, making care and cleaning difficult, and thus affecting the quality of life. To explore whether warm water foot bath can improve lower limb spasm using the five A steps of evidence. To increase medical staff's attention to the problem of lower limb spasticity in post-stroke patients, and to enhance their understanding of alternative therapies. Based on the individual health care needs of patients, they can make good use of evidence-based methods to find appropriate care models.

### Methods/intervention

Based on empirical steps, a PICO problem is formed. P: Stroke, I: Warm water foot bath, C: Conventional treatment, O: Lower limb spasm. To find synonyms using MeSH terms, search the Cochrane Library, PubMed, CINAHL, Google Scholar, Airiti Library, and other literature repositories. Use Bollinger logic "OR" and "AND" and use "Limit" to search, deduct duplicates and related documents unrelated to the topic, and finally include 2 RCT documents that match the topic for review.

### Results

An empirical review of two controlled experimental studies by Matsumoto et al. in 2010 and 2014 found that warm water foot baths can improve lower limb spasticity after stroke. Adopt a cross-team model and start execution after going to bed at noon every day. Soak your feet in warm water at 41°C to knee height for 15 minutes while seated.Using a cross-team model, the results of applied to clinical outcomes and reviews were consistent with the improvement in MAS evaluation on the Modified Ashworth scale.

### **Conclusions/lessons learned**

Warm water foot bath is a non-drug therapy, non-invasive and simple to implement. It can effectively improve lower limb spasticity and improve the quality of life of stroke patients. It can also be used for home self-care in the future.

Contact: TAIWAN syb153192@yahoo.com.tw

Utilizing Integrated Record Forms to Enhance the Effectiveness of Group Activities in Community-based Dementia Service Stations

### LIN Chia-Hui, HUNG Hsiu-Yang, HUANG Huei-Ling, HUANG Tsui-Mi

### Background and objective

Providing well-planned group activities for persons with dementia can promote social participation, delay functional deterioration and improve the quality of life. Evaluation before and during group activities is the key to success. The purpose of this project is first to understand the situation of group activity leaders in conducting assessment before and observing during the group activities. Next, to develop an intervention program to provide individualized group activities that meet the needs of the persons with dementia.

### Methods/intervention

This project was conducted in northern Taiwan. In the first phase, data analysis was conducted on the assessment results of 29 community-based dementia service stations to identify problems and needs, and on-site observations and interviews were conducted at six service stations. In the second phase, based on the results of the previous analysis, the "Integrated Pre-Activity Assessment and Group Participation Record Form" intervention program was implemented. The intervention measures included: implementation, development of instructions for the use of the form, and organization of educational trainings.

### Results

Results of the first phase showed that the 29 service stations only attained 62.3% of full compliance in the item of "activity planning and implementation", which was the lowest score among all indicators. Interviews showed that some of the service stations did not conduct assessments before activities, did not make any adjustments based on individuals' abilities, did not hold presession meetings, and had incomplete records of pre-session assessments and activity logs. In the pilot test, 95% of the group activity leaders who participated in the intervention program were able to use the integrated form correctly, and their satisfaction level with the integrated form reached 90%.

### **Conclusions/lessons learned**

The results of this study can be used as a reference for the future planning and implementation of programs at the community service sites for dementia.

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## Poster session 2.3: Promoting health of the elderly

The Impact of Pilates on the Physical and Mental Well-Being of Older Adults

### CHEN Pei-Chun, CHIU Tzu-I, LIU Yen-Tze, HUANG Su-Tsai, CHANG Yu-Jun, CHEN Mei-Chu

### **Background and objective**

The aging population faces a concerning prevalence of falls, resulting in significant health risks and societal burdens. Pilates has emerged as a potential solution for injury prevention and physical enhancement among older adults. This study aims to investigate the impact of Pilates on the physical and mental wellbeing of older adults.

### Methods/intervention

A quasi-experimental design with a pre- and post-test for two groups was utilized. Fifty-two participants, averaging 70 years of age, were involved. The 8-week Pilates regimen, designed by certified instructors, consisted of two 60-minute sessions per week. Exclusion criteria included inability to squat and history of spine or joint surgery.

### Results

Post-intervention assessments showed significant improvements in upper limb endurance (P=0.013), lower limb endurance (P=0.001), flexibility (P<0.001 for both upper and lower limbs), and static balance (P<0.001). Mental health benefits included reduced anxiety and irritability (P=0.015), depression (P=0.007), and social distress (P=0.009), alongside increased positivity and optimism (P=0.021). Quality of life enhancements were noted in physical health (P=0.016) and psychological well-being (P=0.023).

### **Conclusions/lessons learned**

The findings indicate that Pilates significantly benefits the elderly's physical fitness, mental health, and quality of life. It is advised to promote Pilates within communities to enhance balance and prevent falls among the elderly.

### Poster Sessions 2: Thursday, November 7, 2024, 14:25-15:45

Contact: CHEN Pei-Jyun Changhua Christian Hospital,Taiwan TAIWAN eyu139@yahoo.com.tw

The relationship between intrinsic capacity and health behaviors of the elderly

### LEE Pei-Hsuan, HUNG Tuey-Wen, HUNG Shih-Yu, HUANG Hsiu-Chen, YANG Hui-Fei, WENG Cheng-Chieh

#### **Background and objective**

Taiwan is expected to be a "super-aged society" in 2025. Health problems related to aging syndrome are bound to become increasingly serious. This study aims to explore the correlation between health behaviors and intrinsic capacity((IC) through the ICOPE evaluation and the Health Behavior Questionnaire for the Elderly.

### Methods/intervention

The study cohort included older adults aged ≥65 years who participated in community health screening between July 2011 and November 2024. The participants using the ICOPE screening tool and Elderly Health Behavior Questionnaire. IC's domains are vitality, cognition, locomotion, sensory (vision and hearing), and psychology.

#### Results

A total of 924 elderly people with an average age of over 74 years old. The results of their self-assessment through the ICOPE questionnaire showed that 41.34% of the participants reported memory decline, 21.97% reported a decline in mobility, and 8.12% reported a weight loss of more than 3 kilograms within three months, 40.91% reported that they had difficulty seeing far and near, 21.97 reported that they had hearing impairment, and at least 8% of the respondents said they had experienced depression-related situations in the past two weeks. Further comparative analysis with the Elderly Health Behavior Survey found that 16 participants who reported memory decline were still smoking (4.18%), 1 was still chewing betel nut (0.26%), and 40 (10.47%) occasionally Or drink frequently; among participants who reported that their mobility was declining, 7 were still smoking (3.44%), 2 were still chewing betel nut (0.98%), and 18 (8.87%) drank occasionally or frequently; among the participants who self-reported malnutrition, 2 People (9.09%) drink alcohol occasionally or regularly

#### Conclusions/lessons learned

Through this assessment, we can help the elderly understand and be alert to the decline of their own intrinsic capacity, while at the same time arousing the relationship with their own health behaviors and helping the elderly with weak inner abilities develop good health habits. Contact: LEE Pei Hsuan Ditmanson Medical Foundation Chia-Yi Christian Hospital TAIWAN cych13199@gmail.com

The Effectiveness of Using Multicomponent Exercise Intervention in Improving Sarcopenia among Community Elderly - Pilot Study

### CHEN Yi-Fang, CHANG Shu-Chun, SHIH Whei-Mei

#### Background and objective

Aging often leads to declines in muscle strength, balance, and gait stability, increasing the risk of muscle loss and falls, thus affecting the quality of life and resulting in substantial healthcare expenditures. The purpose of this study was examine the effectiveness of using multicomponent exercise intervention in improving sarcopenia among community elderly.

### Methods/intervention

Convenient sampling with a structured questionnaire was employed in collecting 31 elderly participants from a community center. The intervention consisted of an 8-week single-group pretest-posttest design with one session per week, lasting approx. 2 hours, involving multicomponent exercises (resistance training for upper and lower limbs, elastic band exercises, handicrafts, cognitive games, and sarcopenia education). Data were analyzed using SPSS 22.0 software package.

#### Results

In 31 participants, 7 (22.6%) was detected with sarcopenia at baseline and remained the same after the intervention. However, significant improvement in the chair stand test (p < .001) and the six-meter walk test (p = .011) after intervention. There was a significant improvement in sarcopenia awareness after education (p < .001). Logistic regression analysis showed that individuals with normal BMI were less likely to have sarcopenia compared to those with abnormal BMI (OR = 0.508, p = 0.039), indicating that BMI is an important predictor of sarcopenia. The satisfaction rate of the 8-week multicomponent exercise intervention was as high as 94.4%.

### **Conclusions/lessons learned**

Multicomponent exercise can help to delay decline in physical function, enhance independence in daily activities, and improve quality of life. Better functional fitness among the elderly leads to better self-care in daily life, further delaying the aging process.

Contact: CHEN YI-FANG New Taipei Municipal Tucheng Hospital TAIWAN yiphong@cgmh.org.tw Improving palliative care utilization through a quality control circle approach

### CHIEN Ju-Huei, LIN Chia-Chia, HUANG Yu-Ming, HO Tsing-Fen

### **Background and objective**

Palliative care is a crucial component of today's healthcare infrastructure. Taiwan's palliative care needs have grown significantly as the country's population ages. The purpose of this QCC project was to enhance clinical practice's integration of palliative care services, particularly for patients with terminal non-cancer illnesses who have prolonged hospital stays.

### Methods/intervention

In this project, a quality control circle (QCC) was formed. We first evaluated and identified the top three root causes of patients not receiving palliative care consultation or referral: (1) unclear timing for the medical team to refer patients to palliative care; (2) unclear definitions for end-of-life patients; and (3) a lack of awareness of palliative care among medical team members. This initiative consists of three main activities targeted at improving palliative care treatments for terminally ill patients.

### Results

Three primary initiatives were implemented: (1) redefining referral criteria for palliative care and establishing a clear protocol; (2) offering lectures and training related to palliative care for medical professionals; and (3) setting up a Line APP referral notification mobile application. At the end of the QCC project, the rate of referral patients increased from 31.6% to 75.5% in 2023.

### **Conclusions/lessons learned**

Establishing a comprehensive palliative referral protocol can make professional work effectiveness and increase referral rates. Increasing medical professionals' knowledge and providing professional palliative care support helps professional staff feel less stressed and able to deliver patient-centered care free will and dignity.

#### Contact:

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Using Social Cognitive Theory to Explore the Confidence Level of Community Elderly People in Performing Stretching Exercises to Improve Sleep - A Pilot Study

### HONG Yu-Ting, SHIH Whei-Mei

### Background and objective

According to a 2021 survey by the Taiwan Sleep Medicine Society, the prevalence rate of chronic insomnia nationwide is 11.3%. Insomnia is especially common in the elderly over 65 years old, and the proportion of insomnia among those aged 60 to 69 reaches 22.7%. It impacts on physical and psychological health of elderly. The purpose of this study was to explore the effects of intervention program using social cognitive theory for sleep quality of dwell elderly in the community.

### Methods/intervention

This was a pre-experimental research design. The elderly people who were over the age of 60 in a community were collected for this study. A structured questionnaire including demographic and self-efficacy were used for data analysis. The intervention included stretching handouts and stretching videos. The program included last for 12 weeks. Data were analyzed using the SPSS 26 software package for statistical analysis.

### Results

A total of 30 elderly people over the age of 60 in a community were recruited for this program. The average total score of self-efficacy was  $58.8\pm24.3$ . There was no significant difference in self-efficacy between demographic attributes. After the intervention, it revealed a significant improvement in elderly's self-efficacy (t=2.28, p=0.03).

### **Conclusions/lessons learned**

The findings of this study provide implications for activity design that consider special circumstances and provide recommendations, including enhancing self-confidence through successful experiences and feedback, and performing exercise in a stress-free environment.

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### Exploring the Effectiveness of Fall Prevention among Elderly Inpatients from a Health Promotion Perspective

### CHUAGE Su-Chueh, DAI Ling-Yi

### Background and objective

Falls are a critical indicator of patient safety and healthcare quality monitoring. In our department, which encompasses both internal and surgical wards, over 70% of hospitalized patients are aged 65 and above. In 2022, there were a total of 16 fall incidents, resulting in a fall rate of 0.15%. Not only does this exceed the threshold of 0.06% set within our hospital, but it also places us at the top in terms of fall rates hospital-wide. Hence, this has spurred the motivation for the initiation of the current improvement project.

### Methods/intervention

- (1) Planning Diverse Health Education Strategies
- (2) Conducting Patient and Caregiver Fall Prevention Group Health Education.
- (3) Organizing In-Hospital Nursing Fall Prevention Education.
- (4) Cross-Disciplinary Nursing Fall Prevention Education.
- (5) Lower Limb Strength Training for Inpatients.
- (6) Fall Prevention Environmental Checks.

### Results

The incidence rate of inpatient falls: Following the implementation of a multifaceted fall prevention improvement program from January 1, 2023, to April 30, 2023, during the evaluation period from May 1, 2023, to December 31, 2023, there were a total of 6858 inpatient days, with 4 fall incidents recorded. The fall incidence rate was 0.05%. This represents a reduction in the fall incidence rate from 0.14% before the improvement efforts to 0.05%, marking a decrease of 64.3% in the fall incidence rate.

### **Conclusions/lessons learned**

Falls are not solely caused by single factors but rather by a complex interplay of various factors. Effective assessment tools that consider multidimensional risk factors, education received by medical teams, patients, or caregivers on fall prevention, and the integration of resources across teams to provide individualized and diverse fall prevention measures can prevent one-third of fall incidents.

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Factors Influencing Willingness to Pay for AI-Assisted Exercise Programs among Older Adults: A Study in rural Taiwan

### WU Yi-Chen, TSAI Chuan-Hsiu, YEN Chia-Feng, PERNG Shoa-Jen

### Background and objective

Changes in lifestyle, aging populations, declining birth rates, and the increasing prevalence of chronic diseases pose significant health challenges. To enhance disease prevention and reduce secondary disabilities, personalized, high-quality exercise programs with technological assistance are necessary. However, compared to free or public exercise services, technology-assisted exercise equipment or programs face operational costs. Despite this, consumers are increasingly willing to pay for healthpromoting interventions, making it a consideration for future government-led sports business initiatives.

### Methods/intervention

This cross-sectional study employed a self-designed structured questionnaire administered through face-to-face interviews from March 9, 2023, to May 30, 2023, targeting participants aged 55 and above who had experienced AI-assisted exercise programs in a community in Hualien City, Taiwan. A total of 111 valid responses were collected and analyzed.

### Results

Significant differences in willingness to pay for Al-assisted exercise programs were observed based on age, education level, economic status, hypertension, regular exercise habits, previous payment for exercise, group exercise class experience, and gym membership. Attitude was identified as a key factor influencing willingness to pay. Participants found a single session fee of 100 NTD acceptable, while those aged 75 and above and some with lower than junior high school education expected free participation.

### **Conclusions/lessons learned**

Older age was associated with lower willingness to pay, while higher attitude scores correlated with greater willingness to pay. To encourage older adults to engage in exercise, it is essential to first emphasize the benefits and safety of exercise and enhance their attitudes, thus initiating their willingness to try. The acceptable fee for a single session was found to be around 100 Taiwanese dollars, which could be further explored in future studies considering aspects such as the exercise environment, service quality, uniqueness, and effectiveness.

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Comparative effects of a Walking map APP assisted and Nordic walking on exercise intention, exercise behavior and physical function among elders

### CHEN Yi-Ru, TSAI Chuan-Hsiu

### **Background and objective**

Walking is a widely accessible form of physical activity, particularly advantageous for older adults due to its simplicity and affordability. Technological assistance could be used in visualizing exercise parameters like duration, distance, and goal achievement. The aim of this study is to investigate theeffects of technology-assisted interventions on elderly individuals' exercise intention, self-efficacy, and physical function.

### Methods/intervention

Quasi-experimental design was conducted and 56 participants were recruited, with 30 in the intevention group and 26 in the control group. the intervention included weekly Nordic walking sessions with mobile application assisted for 12 weeks, while the control group followed a fixed distance regimen.

### Results

Significant improvement was noted on elderly functional fitness, including upper and lower limb strength, flexibility, grip strength, and functional arm reach (p<.05) in the intervention group. Conversely, only lower limb strength and grip strength was significant improvements (p <.05) of the control group. In addition, significant attitude changes and perceived better behavioral control was reported of the intervention group. In contrast, the control group displayed improvements solely in attitude and subjective norm (p <.05), indicating a more limited impact on behavioral determinants.

### **Conclusions/lessons learned**

These findings of this study supported Walking map APP providing a promising effect on behavioral control and better functional improvement. Future interventions could focus on visualized exercise parameters (like distance , maps) to enhance perceived behavioral control, thereby increasing willingness to exercise and improving functional health and overall health.

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Effects of Whole-Body Vertical Rhythm Training on Fatigue, Physical Activity Measures, and Quality of Life Among Middle-Aged and Older Adult Patients Receiving Haemodialysis

### **SHEN Yen Fen**

### **Background and objective**

The prevalence of haemodialysis patients is notably high in Taiwan, with increasing numbers due to improved dialysis quality. However, haemodialysis can induce negative physical, psychological, and social effects. This study aims to investigate the impact of whole-body vertical rhythm training on fatigue, physical activity measures, and quality of life in middle-aged and older adult haemodialysis patients.

### Methods/intervention

Participants were divided into experimental and control groups. The experimental group received whole-body vertical rhythm training, while the control group received routine care. Data on fatigue, physical activity, and quality of life were collected before and after the intervention. The experimental group underwent training three times a week for 10 minutes per session over 8 weeks. Statistical analysis was performed using SPSS25 software.

#### Results

The experimental group demonstrated superior quality of life outcomes compared to the control group. Specifically,

improvements were observed in body function role limitation, physical pain, social function, psychological limitation, and the effect of kidney disease on life. However, the training program did not significantly impact physical activity measures.

#### Conclusions/lessons learned

Whole-body vertical rhythm training shows promise in enhancing quality of life among middle-aged and older adult haemodialysis patients. This underscores the importance of integrating exercise interventions into the care and management of these patients to address their multifaceted health challenges.

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### Effectiveness of Health Promotion Intervention on Suspected Sarcopenia in Community-Dwelling Elderly

### CHEN Ya-Hsin, CHANG Shu-Hung

### Background and objective

Taiwan is one of the countries experiencing the most rapid growth in the elderly population. It is expected to surpass 20% by 2025, marking a "super-aging society." Therefore, promoting healthy aging and delaying disability among elderly is a critical societal issue. The aim of this study was to explore the effectiveness of health promotion interventions on suspected sarcopenia in community-dwelling elderly.

### Methods/intervention

This study adopted a quasi-experimental research design with community-dwelling elderly in Taiwan. Divided into experimental and control groups based on residential areas, from July 12, 2023, to September 6, 2023. The experimental group receive a 12-week health promotion intervention by two hospital nurses, includes home-based resistance band exercises, diverse nutritional education, utilization communication software for care, self-management passports, and weekly individual consultations. The control group maintains regular activities. After the intervention, data are collected through demographic variables, physiological indicators, and dietary behavior questionnaires.

#### Results

A total of 63 participants, with an average age of 74.3 years, mostly female (96.8%). Statistical tests show no significant differences between the two groups in terms of demographic, sarcopenia indicators. After promotion intervention, paired t-tests within the experimental group reveal significant differences in sarcopenia indicators: grip strength (t=-3.18, p=0.004) and 5-time sit-to-stand test (t=2.67, p=0.012). There is also a significant difference in dietary behavior post-intervention. Additionally, ANCOVA tests show significant effects of the intervention on grip

strength (F=4.824, p=0.032,  $\eta 2p$ =0.074) and 5-time sit-to-stand test (F=0.459, p=0.050,  $\eta 2p$ =0.008) after controlling for covariates, indicating a moderate explanatory power of the health promotion intervention.

### **Conclusions/lessons learned**

Short-term health promotion intervention programs show effectiveness, but post-program, elderly may revert to their original behaviors. Future recommendations that nurses could train community volunteers to continuously encourage healthy behaviors among elderly, thereby strengthening their health behaviors.

#### Contact:

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Analysis on the Current Distribution of Elderly Population and Generation Groups in Urban and Rural Areas of Taiwan

### WANG Shen-Nien, LIEN Chen-Shan, HSU Shih-Hsien, LEE Yung-Heng, HUANG Wan-Hsuan, CHEN Yung-Hung, WEI Jia-Yu

### **Background and objective**

The purpose of this study is to understand the prevalence of metabolic syndrome in the elderly population in Taiwan and the differences between urban and rural areas through field surveys, and then explore the health inequality between urban and rural areas in Taiwan.

#### Methods/intervention

This article adopts a cross-sectional study to investigate the current status of metabolic syndrome in various urban and rural settlements in Taiwan. Through field surveys, basic information of elderly people over 65 years old and relevant information such as five indicators of metabolic syndrome were collected and analyzed.

### Results

The study admission period was from September 17, 2022 to December 31, 2022. A total of 1,810 cases were admitted, of which 1,014 had metabolic syndrome (56%), and 466 people were in the metropolitan area (25.8%), accounting for , a total of 1,344 people in remote areas (74.2%). In this survey, a total of 214 people suffered from metabolic syndrome in urban areas (45.6%), and a total of 800 people suffered from metabolic syndrome in remote areas (59.5%). Chi-square test was used to analyze the relationship between work type and whether they suffer from metabolic syndrome. It was later found that ( $\chi$ 2=24.6, p<0.001) reached a significant difference.

### Conclusions/lessons learned

A 2018 study in Taiwan showed that the national prevalence rate of metabolic syndrome was 19.7%. In this research survey of the elderly, it was found that both the overall metabolic syndrome and the disease incidence in urban and rural areas are more than 2 times higher than the national prevalence rate, and the incidence of metabolic syndrome in remote areas is significantly higher than that in urban areas. Therefore, this study recommends that public awareness education on metabolic diseases in remote areas should be paid attention to, and the implementation should focus on nutritional balance and changing dietary habits, thereby bridging the health gap between urban and rural areas.

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### Factors Influencing Quality of Life (QOL) among Elderly Users of Home Rehabilitation Services (HRS)

### MIYAMA Keisuke, UENO Taku, KAWASAKI Wataru, TURU Daisuke, TANAKA Daisuke, TUCHIDA Sayu, NAKASHIMA Yurika, YAMADA Erika, FUNAKOSHI Mitsuhiko

### **Background and objective**

It is crucial to clearly identify the factors influencing QOL of elderly individuals in relation to their daily life. However, among users of HRS, there are individuals who struggle to find hope in their daily lives due to physical, mental, and environmental factors. Therefore, this study aimed to investigate the factors influencing QOL in relation to daily life among elderly users of HRS.

### Methods/intervention

The study included 25 users (10 men and 15 women) of HRS from our institution with an average age of 74.6 years. The survey encompassed these various factors; age, gender, level of care required, intervention time per week for HRS, duration of HRS use, presence of cohabitants, satisfaction with home life, frequency of interaction with relatives and friends, roles at home and in the community, social participation, medical support, social support, life expectations. In addition, data was accumulated according to EuroQol 5 Dimension (EQ5D), Barthel Index (BI), Home-base-Life-Space Assessment (Hb-LSA), Aid for Decision-making in Occupation Choice (ADOC), grip strength and several factors. Participants were categorized into high and low groups based on EQ5D average scores, and intergroup comparisons were conducted with a significance level set at 5%.

### Results

The mean EQ5D score was 0.58. The high-value group was comprised of 12 individuals (5 men and 7 women) with an average age of 78.0 years, while the low-value group was comprised of 13 individuals (5 men and 8 women) with an average age of 71.4 years. In the high-value group, the duration of HRS intervention was significantly shorter. Additionally, the BI total score and individual items such as grooming, toileting, stairs, dressing, and defecation were significantly higher. Grip strength of the non-dominant hand also showed significantly higher results.

### **Conclusions/lessons learned**

The high-value group in EQ5D maintained muscle strength and had higher abilities in activities of daily life, while the low-value group exhibited lower scores. It was reaffirmed that improving daily life activities is crucial for enhancing the overall well-being of elderly individuals receiving HRS. Involvement in mental aspects is also considered essential for those with difficulties improving daily life activities.

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# Using a multi-pronged approach to reduce the incidence of frailty at discharge

### WU Pei-Shuang, WANG Chen-Wei

### Background and objective

More than 60% of Taiwan's population over the age of 65 suffers from two or more chronic diseases, which reduces the body's reserve capacity and makes them vulnerable to debility when hospitalized for acute illnesses. Frailty is a reference indicator for future disability. According to analysis, the incidence of frailty when discharged from our hospital is as high as 81.49%. In order to reduce the incidence of frailty, this study used a questionnaire survey to find that caregivers are worried about patients falling, do not know how to help patients get out of bed, and have insufficient knowledge of nutritional care. , Insufficient operating instructions for assistive devices, and nursing staff's weak cognition may be related.

### Methods/intervention

This study follows hospitalized patients over the age of 65, with a Clinical Frailty Scale (CFS) score of 4 or above indicating frailty at discharge. Solutions were developed through team discussions, including teaching on fall prevention, how to assist patients in getting in and out of bed, nutritionists providing nutrition care plans and adjustments to diet texture, rehabilitation therapists producing operating instructions for common assistive devices, and holding a nursing seminar on frailty. Nursing education and training will track the frailty levels of a total of 220 people when they are discharged from hospital in 2023 to understand the effectiveness of improving the incidence of frailty.

### Results

The results showed that through health education, response teaching and consistency in the care process, a total of 147 people had a CFS frailty assessment of 4 or above at discharge, and the overall frailty incidence rate was reduced to 67.24%. It can be seen that active education, training and process improvement can improve frailty care awareness and skills and effectively reduce the occurrence of frailty.

### **Conclusions/lessons learned**

The results of this study confirm that a multimodal improvement program can reduce the incidence of frailty and improve the quality of care, thereby reducing the risk of disability, readmission rates, institutionalization, and death.

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### Development and Application of Board Games For Elderly Traffic Safety

### YAO Shiow-Jinq, JUNG Jia-Rong, WU Chia-Shan, CHEN Mei-Fang

### **Background and objective**

As we enter an aging society, traffic safety for the elderly is an issue that cannot be ignored. In comparison to traditional lecture-based campaigns, innovative board games for traffic safety education are worth promoting. The aim of this study is to develop a board game suitable for educating the elderly on traffic safety and to evaluate the practical effectiveness of this novel teaching method.

### Methods/intervention

This study adopts quasi-experimental design. The intervention involves implementing a four-week program of board games for traffic safety education at community learning centers in southern Taiwan. The effectiveness is evaluated based on the traffic safety knowledge and attitudes of the elderly participants.

### Results

The study recruited 40 elderly participants, with an average age of 72.95 years. There were 18 male participants (45%) and 22 female participants (55%). The majority had a university education (N=19, 47.5%), and 80% primarily used motorcycles as their mode of transportation. The pre-test response rate for traffic safety knowledge was  $84.25\% \pm 11.24$ , while the post-test response rate was  $91.63\% \pm 5.71$ , showing a significant difference (t=-3.70, p<.001). For traffic safety attitudes, the average pretest score was  $4.48\pm.36$ , which increased to  $4.53\pm0.38$  in the post-test. This indicates a positive impact of the traffic safety board game intervention on the knowledge and attitudes of the elderly participants.

### **Conclusions/lessons learned**

This study provides insights for community and educational program design, as well as research intervention design. It also promotes the use of board games for traffic safety education in hospitals and communities, enabling relevant personnel to apply them effectively.

### Contact:

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"Co-op's 10 Basic Care" initiatives for the Elderly at the nursing care home "Katsura no Ki"

### OSHIMI Yoshiaki, FUJIKI Mayumi, NAGATANI Hitomi, GOTO Toshiko, SATO Noriko

### **Background and objective**

Nursing homes provide housing and nursing care services with team care provided by familiar staff, from preventive care to end-of-life care. We aim to help residents independently achieve the following five goals in their daily lives: "eat well," "excrete properly," "move properly in daily life," "sleep well," and "maintain a clean appearance." We have put into practice the "Co-op's 10 Basic Care".

### Methods/intervention

- Nursing care staff will participate in the "Co-op's 10 Basic Care Training" sponsored by the corporation.
- (2) Provide oral function improvement services that combine "organic oral care" and "functional oral care" through collaboration and cooperation with dental medical institutions.
- (3) Practice and review of end-of-life care through team care, including medical collaboration with the attending physician (Death conference)

### Results

- As a result of the comprehension test for "Co-op's 10 Basic Care", it was found that the staff members were aware of "Co-op's 10 Basic Care".
- (2) While assessing the resident's posture and movement abilities, care is developed that utilizes the movement and force mechanisms of the human body.
- (3) By keeping the oral cavity clean and maintaining the eating and swallowing function, there have been no cases of hospitalization for aspiration pneumonia.
- (4) The residents' thoughts and wishes are listened to, and care is provided with appropriate content, amount, and timing in mind.
- (5) We experienced 8 end-of-life care cases in 2023. Care is provided with an emphasis on the "now" of the residents, always keeping in mind that they are in the final stage of their lives.

### **Conclusions/lessons learned**

The Co-op's 10 Basic Care Plans are based on the perspective that residents make their own decisions, and by engaging in repeated dialogue with them to support their "zest for life" and help them cope with the new conditions of disability and aging. This is a technique for thinking and supporting new ways of living under the new conditions. In the future, we would like to brush up on our efforts to prepare the foundations for daily life.

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### Frail Health Examination at Clinic A -Focusing on the Prevention of Low Nutrition

### **KA Ryoko**

### **Background and objective**

We have used the "Questionnaire for the Elderly" for health check-up in 2021-2022 to raise awareness of the prevention of locomotive syndrome and frailty, as well as focus on early intervention to prevent malnutrition and prevention of aggravation. We will report on the results.

### Methods/intervention

The subjects were elderly people covered by the National Health Insurance System who had undergone a health checkup. Those who answered three or more of the 10 items (items related to nutrition, oral cavity, exercise, and social participation) in the "Questionnaire for Older Elderly People" were considered frailty subjects. Among those eligible for frailty, 1) those with a BMI of 21.4 or less were considered to be at risk of malnutrition, 2) those with a history of falls were considered to be eligible for locomotive syndrome. People at risk of malnutrition with underlying health conditions will be referred to nutritional counseling by a registered dietitian.

### Results

(1) Of the 147 persons who underwent health checkups, 51 were frail. (2) The results of the questionnaire showed that "Walking has become slower" was the most common response, accounting for over 90% of the respondents. "It has become difficult to eat hard food" was selected by more than 60% of the respondents, indicating a decline in masticatory function. (3) Of the 51 frail subjects, 23 were at risk for low nutrition. The main reasons for low nutrition were problems with oral functions, cognitive dysfunction, and continuation of a metabolic prevention diet. After the implementation of the program, all participants showed improvement in their eating behavior, and four of them gained 1.2 to 3.8Kg of weight in around 3 months.

### **Conclusions/lessons learned**

1. After the health checkup, the intervention by doctors and nurses to prevent malnutrition was easy to gain the cooperation of the families, and the improvement effect after

implementation was also high. Prevention of malnutrition during frailty health checkups can be said to be effective. 2. Since a decline in masticatory function is a factor that causes malnutrition, it is necessary to prevent not only malnutrition but also oral frailty.

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Distribution of social and behavioral factors among older patients and their acceptance of selfadministered screening

### KAWABATA Misuzu, MIZUMOTO Junki

### Background and objective

Although the central role of primary care in addressing the social and behavioral determinants of health, little is known about the prevalence of these factors among older people and the willingness and ability of older people to complete selfadministered questionnaires on their social conditions. The aim of this study was to determine the prevalence and distribution of social and behavioral factors among older patients and to assess their acceptance of a comprehensive self-administered screening for these factors. In addition, representative cases were examined to determine the impact of these factors on patient care.

### Methods/intervention

This descriptive study was conducted in an outpatient clinic within a small hospital. Over the course of one year, questionnaires were distributed to all patients regularly attending the outpatient clinic. Patient consent was obtained on an opt-out basis, and the study was approved by the Research Ethics Committee of the University of Tokyo Graduate School of Medicine (No. 2022315NI).

### Results

Data analysis is ongoing, but preliminary results from 272 participants indicate that about half of them did not use the long-term care system. Of those who did, about 20% did not use any services. About a quarter of the participants drove themselves to the hospital, while another quarter relied on family members for assistance. In addition, half of the participants relied on family members for household tasks. On average, participants took 5.7 minutes to complete the questionnaire, and their willingness to participate was generally positive. Representative case analyses underscored the importance of collaboration among healthcare professionals.

### **Conclusions/lessons learned**

A majority of older patients lived by themselves or with an aid of family members. The use of a simple and well-received health

promotion program underscores its practicality and potential for implementation in diverse healthcare settings.

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The effectiveness in preventing frailty of exercise intervention provided by community pharmacists to older persons with chronic conditions: A pragmatic randomized controlled trial

### HIROTA Noritake, OKADA Hiroshi, OKAMURA Noboru

### **Background and objective**

Once older persons become frail, the risk of falls, bone fractures, and other problems increases. Exercise intervention is a form of prevention that has a high degree of evidence. We investigated the effectiveness of frailty prevention consisting of exercise intervention by community pharmacists at 11 pharmacies as HPH pharmacies operated by Osaka Pharma Plan.

### Methods/intervention

In total, 103 older persons between 70 and 79 years of age who were suffering from chronic conditions between January and March 2021 were enrolled. They were then randomly assigned to either the Intervention group (IG: 61 patients) who were subjected to intervention by a pharmacist, or the Usual Care group (UG: 42 patients) who were not subjected to intervention. At the beginning of the trial and 6 month after, their muscle mass, etc. were measured using a body composition meter, and their Five-Times Sit-To-Stand Test results were also measured. Patients in the IG were provided with information by way of leaflets during the time they were guided regarding taking their medication for a period of one to six months that encouraged exercising at home. Those in the UG were given the standard guidance related to taking their medication.

### Results

The amount of change in muscle mass was  $1.08\pm7.83\%$  in IG and  $-0.43\pm2.73\%$  in UG, indicating that there was a trend toward an increase in IG. The percent change in the Five Times Sit-To-Stand Test times at +6 M was  $-0.002\pm0.24\%$  in IG and  $-0.04\pm0.21\%$  in UG, but in cases in which the second measured time was faster than the first measured time, the results were 65.2% for IG and 29.2% for UG, indicating a significant difference (p=0.0056).

### Conclusions/lessons learned

It has been previously reported that providing information to patients causes a change in patient behavior. The results of the present study are highly significant as they suggest the possibility that this may hold true even when used to prevent frailty, based on the evidence obtained.

### Poster Sessions 2: Thursday, November 7, 2024, 14:25-15:45

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Using dietary and exercise education guidance to improve the condition of sarcopenia in elderly individuals has shown effectiveness.

### LAI Shu-Chen, CHIEN Hsu-Min, LIN Chiou-Fen

### **Background and objective**

Population aging is a significant social change and challenge globally. With aging, the prevalence of sarcopenia, a condition characterized by loss of muscle mass and strength, increases. Sarcopenia can lead to an elevated risk of falls, disability, and even mortality among older adults. Currently, there is no direct treatment for sarcopenia in clinical practice. However, providing adequate high-protein diet and appropriate exercise training is one of the most effective preventive measures. Therefore, how to prevent and delay the onset of sarcopenia in older adults, as well as maintaining their physical function, is a crucial issue in promoting healthy aging.

### Methods/intervention

For those with pre-sarcopenia or sarcopenia who are over 65 years old, a total of 122 participants were enrolled in the study. They received dietary and exercise education intervention. Measurements of sarcopenia indicators were conducted one week before the intervention and at 8 weeks post-intervention. Data collected included age, gender, exercise habits, sarcopenia health knowledge, muscle strength (grip strength), physical function performance, muscle mass, and other variables for statistical analysis before and after the intervention.

### Results

The statistical analysis revealed significant differences in muscle strength (grip strength) and physical function performance before and after the intervention, with p-values < 0.001 for both variables. These results indicate that dietary and exercise education intervention can indeed improve muscle strength and physical function performance in older adults.

### **Conclusions/lessons learned**

Through dietary and exercise education intervention, older adults can enhance their health knowledge and gain a better understanding of their own conditions, thereby strengthening their health behaviors. In the future, extending the intervention duration and conducting follow-up assessments can further identify other influencing variables, serving as valuable references for the care of older adults. Contact: SHU-CHEN Lai TAIPEI CITY HOSPITAL Renai Branch TAIWAN B0413@tpech.gov.tw

The efficacy of senior-friendly toys on enhancing a feeling of well-being among elderly people: A pilot study

### LIN Kuan Pin

### **Background and objective**

The global emergence of population aging presents a significant challenge, with a considerable proportion of the elderly populace within communities exhibiting either healthy or sub-healthy conditions. Engagement in social activities not only facilitates social participation among the elderly but also contributes to the promotion of mental health care. The main objective of this study is to explore the effectiveness of senior-friendly toys on enhancing a feeling of well-being among elderly individuals in community.

### Methods/intervention

A pilot quasi-experimental single-group pretest-posttest study design was conducted on 20 convenience sample of seniors from a community day care center in central Taiwan. The participants received senior-friendly toys program at least one hour per week for a duration of three months. A short form Chinese Subjective Well-Being Scale was utilized to assess difference in participants' feeling of well-being before and after the intervention, and qualitative data was collected to present their perception. Data analysis was performed using pair t-test.

#### Results

The average age of participants was 79.8 years old (SD = 6.18). Most participants were female (63.6%), and living with family (90.1%). The results showed that the feeling of well-being of the participants can be improved after the intervention of senior toys. (t = 2.45, p < 0.05). Most of the participants indicated that they perceived feeling of well-being, social interaction, accomplishment and nostalgia from participating in activities.

### **Conclusions/lessons learned**

The implementation of senior-friendly toy interventions has demonstrated efficacy in enhancing the sense of well-being among the elderly. It is recommended that day care centers integrate senior-friendly toys into activity designs to enhance the enjoyment and contentment of the elderly, thereby advancing the objective of active aging.

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### **Polydrug Use in Older Adults**

### KIM Kue Sook, HO JaHyun,

### **Background and objective**

We investigated the comorbidities of individuals who were prescribed statins to identify the use of bone mineral density (BMD)-reducing drugs, examine polydrug use trends involving these drugs, and explore their relationship with osteoporosis

### Methods/intervention

We analyzed claims data from the Korean National Health Insurance Service (January 2014–December 2018). We sampled 20% of 8,379,419 patients aged ≥50 years who were prescribed statins. Among them, we analyzed the data of those who were administered two or more prescriptions for 14 days or longer within 6 months of the initial date of statin prescription. Data on comorbidities and drugs that can potentially reduce BMD were obtained. Osteoporosis-related diagnoses were obtained as an outcome measure. The relationship between statins and BMDreducing drugs was analyzed using logistic regression.

### Results

Among the 4,138 statin users aged 50 years or older, 552 were diagnosed with osteoporosis. The most common comorbidity in statin users was hypertension, followed by ischemic heart disease, diabetes mellitus, and stroke. The most frequently administered BMD-reducing drugs were proton pump inhibitors (PPIs). The osteoporosis diagnosis rate was higher in patients who were prescribed both statins and PPIs or both statins and levothyroxine than in those using only a statin

#### Conclusions/lessons learned

PPIs and levothyroxine should be prescribed cautiously in statin users and bone densitometry should be proactively performed considering the increased risk of osteoporosis.

#### Contact:

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Exploring the effect of ICOPE (implementing integrated care for older people) approach in Taiwan's medical institution.

### WANG Yung-Huang, HSIEH Yung-Chi, HU Yi-Chun, WU Chien-Yuan, JOU Yann-Yuh, WEI Shi-Lun, WU Chao-Chun

**Background and objective** 

Due to the aging of the population and increase of frail and disabled people yearly, the World Health Organization (WHO)

proposed the ICOPE (Integrated care for older people) integrated care plan for the elderly.Since 2021, Taiwan has followed the 5step ICOPE model, and hospitals provided the elderly screening for risk factors that may cause disability.Since 2023, Taiwan expanded screening base to community medical institutions for pilot program. The purpose is to improving accessibility for the elderly and strengthen the connection between the hospital and community medical institutions.

### Methods/intervention

Our study analyzed the elderly above 65, implemented ICOPE model by medical institutions in 22 counties in Taiwan. The model include 5 steps: screening, positive test followed by detailed assessment, health education and referral to community bases, medical or long-term care institutions, positive case follow-up and posttest. This study analyzed four intrinsic capacities positive test : cognition(by Brain Health Test, BHT), mobility(by Short Physical Performance Battery, SPPB), nutrition(by Mini Nutritional Assessment Short-Form, MNA-SF) and depression(by Geriatric Depression Scale-15, GDS-15).

### Results

Analytic targets are positive cases that have completed tracking and post-test. Total of 11,456 cases were recruited from 486 medical institutions. The cases consisted of 3,966 males and 7,490 females, with an average age of 77.35  $\pm$  7.66 years. A pretest-posttest research shows improvement in cognition(1.71 $\pm$ 2.82 , p<0.05), mobility(0.57 $\pm$ 2.19, p<0.05), nutrition(2.17 $\pm$ 2.16, p<0.05), and depression(2.95 $\pm$ 3.27, p<0.05)

#### **Conclusions/lessons learned**

This study showed that medical institution involved in ICOPE model to reduce and delay the risk of the elderly on disability is effective. However, the physical and mental function intervention systems are diverse, and the elderly may participate in other systems. Long-term data collection and detailed intervention model discussions is needed for future policy planning.

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Frailty Risk Assessment on Outpatients and Home Patients by a Health Support Pharmacy

### KONDO Manami, NAKAJIMA Kimiko, TSUDA Izumi, YAMADA Masaaki, NISHIOKA Kayo, HIROTA Noritake

### Background and objective

Frailty in Japan is defined as a state of reduced resilience to stress due to age related loss of reserve capacity. Although numerous reports have been published on frailty evaluation and effectiveness, no frailty study has been made yet on home patients. Therefore, as a health support pharmacy, we attempted a frailty risk assessment comparing outpatients and home patients in order to consider future frailty countermeasures.

### Methods/intervention

The target was set after obtaining consent on outpatients aged 65 years or older who use the pharmacy and home patients who receive regular home visits and services from their medical institution and by our pharmacist. The survey was conducted from October 1 to 30, 2020, and assessment was made utilizing the Questionnaire for the Late Stage Elderly by the Ministry of Health, Labor and Welfare, Japan.

### Results

The survey was conducted on 31 outpatient and 33 home patient. The mean age was not significantly different between the two groups. The rate of living alone was significantly higher for home group, p less than 0.001. In the frailty risk assessment, smoking rate was significantly different and 41.9percent for outpatient group and 9.1percent for home group, p less than 0.001. No significant differences were found for other items, and satisfaction with daily life showed high tendency in both groups.

### **Conclusions/lessons learned**

The results of this survey showed no significant differences in frailty risk between outpatients and home patients, and in general, patients were highly satisfied with their daily lives. As a health support pharmacy, we would like to further investigate the background condition of patient regarding frailty risk.

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## Smartphone Classes for the Elderly and Health Promotion

### SHIRANE Kumi, MAEDA Motoya, TAKEUCHI Akiko, YUKI Yoshie

### **Background and objective**

With increasing digitalization of access to services and information, it is urgent and essential for elderly to learn how to utilize smartphone. Since many elders have trouble with accessing such information through their smartphone, hospital provided support to empower elders so they can use communication apps to participate in events and enhance social inclusion.

#### Methods/intervention

Nishiyodo Hospital HPH Committee collaborated with Kenko Tomonokai (Health Friends Association) to hold monthly Smartphone Class. Experts teach basic operations assisted by hospital staff. Participation fee is 500 yen/person, deficit is covered by the hospital. Participants learn how to use communication apps like LINE or ZOOM, and support desk helped with individual questions.

### Results

By March 2024, 13 classes were held for 139 total participants. All learned LINE; some also learned ZOOM. Support desk was available at any time for questions. Participants can now receive hospital information via LINE, attend hospital movie or game events. They also share info with other friends via LINE and bring them, expanding social connections. Also, learning ZOOM allowed them to take part in online Healthy Exercise sessions.

### **Conclusions/lessons learned**

The barriers elderly people have with smartphone can be lifted if properly assisted. Education on Smartphone app use empowered elderly, improving their access to health information and events, thus increasing social participation and helping prevention of isolation. The challenge is to continue such empowerment until they can make hospital appointments or application of public services through their smartphones.

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Longitudinal Fall Risk in Different Muscle Health Statuses Among Community-Dwelling Older People

### KAO Tung-Wei, CHAO Yuan-Ping, PENG Tao-Chun

#### **Background and objective**

Fall is a tremendous issue in geriatric population, particularly among individuals with compromised muscle health. The debate persists regarding whether muscle mass or function poses a greater risk for falls. We aimed to examine the longitudinal fall risk across varying muscle health statuses among older adults in the community.

### Methods/intervention

Participants aged 65 and above, who underwent annual health assessments, were enrolled from 2015 to 2023. Handgrip strength, walking speed, and muscle mass were measured. Possible sarcopenia was characterized by declined muscle function despite normal muscle mass. Presarcopenia was identified by low muscle mass with preserved muscle function. Sarcopenia was manifested as double loss in muscle mass and function. Participants without prior falls at baseline were monitored continuously until a fall was reported during subsequent annual visits. Comparative analyses of fall risks across various statuses of muscle health were conducted.

### Results

A total of 863 participants included in the study. The group with possible sarcopenia exhibited higher body mass index, lower physical activity and slower gait speed compared to other groups. Participants with possible sarcopenia experienced the highest incidence of falls (27.15%), whereas individuals with robust had the lowest occurrence of falls (12.65%). The hazard ratios (HR) for fall events were 2.65 (95% confidence interval [CI]=1.72-4.08) for possible sarcopenia, 1.54 (95% CI=0.92-2.57) for presarcopenia, and 1.87 (95% CI=1.04-3.33) for sarcopenia. Adjusting for multiple covariates, the fall risk remained significantly higher in the possible sarcopenia group (HR=2.10, 95% CI=1.28-3.43) than those with sarcopenia (HR=1.31, 95% CI=0.69-2.46).

### **Conclusions/lessons learned**

Older adults with possible sarcopenia exhibited a greater propensity for falls compared to individuals with sarcopenia. There is a pressing need to prioritize muscle function promotion as a preventive measure against adverse clinical outcomes.

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### Using Case Management Model to Enhance Compliance with Osteoporosis patient medication

### HUANG Ya-Lin, LIANG Che-Han

### **Background and objective**

With the aging population, osteoporosis has become the second largest category of disease globally. Research indicates that effective use of osteoporosis medications can reduce the risk of fractures by 30-70%. According to data from the Central Health Insurance Administration, the treatment rate for osteoporosis is close to 40% for both males and females. As of June 2022, our hospital's medication treatment rate is only 38.89%. We hope to increase the medication rate for osteoporosis patients through a case management model.

### Methods/intervention

Collaborating with the Benchmark Learning and Information Department, we have established a case management system to conduct fracture risk assessments for patients. We emphasize to patients the severity of recurrent fractures and the importance of continued medication use. Individualized health education is provided to address patients' insufficient knowledge. Regular follow-up calls are conducted to monitor medication and nonmedication adherence. Conduct quarterly meetings to discuss and analyze issues, and propose improvement methods.

### Results

- The awareness rate of osteoporosis patients increased from 76.5% in 2022 to 88.89% in 2023.  $\pm$  The medication adherence rate of osteoporosis patients increased from 38.89% in 2022 to 75% in 2023.

### **Conclusions/lessons learned**

The prevalence of osteoporosis places substantial demands on societal and healthcare resources. Utilizing case management

models that provide personalized health education has demonstrated significant efficacy in enhancing medication adherence among patients. Osteoporosis represents a critical public health concern that cannot be overlooked. Proactive initiatives in osteoporosis prevention and management are crucial for reducing fracture risks, minimizing elderly disability, and mitigating healthcare and family expenditures, thereby fostering a mutually beneficial situation among society, healthcare systems, and families.

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How have residents' lives changed since moving into the Serviced Housing for Older People?

### WANG Hequn, KAWAGUCHI Kenjiro, Lingling, IDE Kazushige, KONDO Katsunori

#### **Background and objective**

In Japan, the Serviced Housing for Older People (SHOP) system was established to meet the growing need for safe and secure housing for older people living alone or with their spouse. However, the effects of moving to SHOP on the lifestyle and wellbeing of residents remain unclear. This study aims to compare changes in diet, physical activity, social behavior, and mental health between those living alone and those living with their spouse after moving to SHOP.

### Methods/intervention

The study sample comprised 1,076 residents (mean age 83.9 years, 30.6% male) from 39 SHOPs. We assessed the changes in 14 items after the participants' relocation. For each item, the percentages of "Increased," "Neither," "Decreased," and "No response" were calculated based on whether they lived alone or with others. The chi-squared test and Fisher's exact test were used to test the differences between the two groups.

### Results

Most residents (55.6%) reported increased opportunities to eat each meal after moving to SHOP, followed by more than 40% who reported increased opportunities to go out, eat with others, talk to people other than family members, and walk. However, 33.4% of residents reported decreased opportunities to participate in group activities. Larger proportions of single residents had significantly more opportunities to eat with others, talk to people other than family members, enjoy daily life, social support, and participate in group activities than those living with their spouse.

### Conclusions/lessons learned

Positive changes were observed among SHOP residents after relocation, particularly among those living alone. In addition, the

study identified directions for improving the services that SHOP provides to promote residents' health and well-being.

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### Interventions of pharmacists help reducing polypharmacy and drugrelated problems to elders

### HSIAO Pei-Yu, CHEN Miao-Ting, CHOU Ming-Yueh, LIANG Chih-Kuang

### Background and objective

Comorbidity and ageing contributing to polypharmacy, prompting as a widespread global issue. The interventions of pharmacists to the elders prior their first visit to an integrated geriatric clinic, not only help to recognize the negative effects of drug-related problems (DRPs) including non-adherence, adverse drug effects, potentially inappropriate prescribing, and drug duplication from different sources, but also reducing polypharmacy as well.

### Methods/intervention

This study enrolled 2203 patients from January 1st 2020 to December 31st 2023, whom were the first-time visit to an integrated geriatric clinic. These patients were being surveyed of drug adherence from all medical facilities and the comprehensive medication reconciliations with pharmacists' recommendations included, were complete prior their visit to the doctors.

### Results

The analyzed 2203 elders with mean age of 79 y/o, 18.6% of whom displayed poor adherence. When discussing the inappropriate medication using behaviors, self-adjustments to medications comprised the most; over 95% of the elders and the caregivers got improved adherence after the pharmacists' education. The medications frequently being misused were dihydropyridine derivatives, platelet aggregation inhibitors and benzodiazepine derivatives. DRPs were reported immediately and a total of 389 medication recommendations were provided with 82.3% of which being accepted by the doctors, leading to the significant reduction (p<0.001) in the mean number of total medications used (decreased from 6.5 to 5.8) and potentially inappropriate medications (decreased from 1.2 to 1.0) after receiving an integrated pharmaceutical care.

### **Conclusions/lessons learned**

Pharmacists strengthen the medication literacy of the elders and their caregivers by further discussed into the real medication using behaviors. The collaboration with the geriatric clinic could discover then correct DRPs right away, and thus efficiently reducing polypharmacy, potentially inappropriate prescribing and also the total drug burden. Contact: HSIAO Pei-Yu Kaohsiung Veterans General Hospital TAIWAN phsiao@vghks.gov.tw

Efforts to spread advanced care planning (ACP) using communityshared ending notes "To live like that person until the end"

### HIRANO Eriko, HARADA Seiichirou, IZUMIYA Motoko, MINORIKAWA Siho, HIDEOKA Wakako, NOMURA Kenji, FUKUBA Isao

### **Background and objective**

It is hoped that people's wishes will be respected until the end, and that they will live their lives to the fullest. However, in actual medical settings, when the risk of death approaches, the patient's intentions are often unclear. Therefore, as the superaging society accelerates, there is a need for advanced care planning (ACP) to become more widespread. In 2019, local residents and medical and nursing care professionals collaborated to create a community-shared ending note called ``Shittoko Note,'' and began disseminating ACP. We will look back at our hospital's past activities and consider future challenges.

### Methods/intervention

After creating the ending notes, we put up posters in our hospital to promote their use, and held ACP study sessions for the community and distributed them to patients. However, actual use was limited, so nurses and rehabilitation staff worked together to incorporate ACP learning sessions into group rehabilitation for inpatients. Furthermore, in cooperation with the health promotion coordinator and members of our medical co-op, we held community study sessions at local community centers.

### Results

Until now, approximately1,500 copies of the ``Shittoko Note'' have been distributed at our hospital. Study sessions were held at five locations over the past six month, with approximately 100 participants. In group rehabilitation, some staff members dealt with small groups of 5-6 people. Patients' levels of understanding varied, and it was difficult for them to understand medical care (such as life prolonging treatment). We explained each patient in detail and support for filling out the form. In a survey conducted after the study session, the majority of participants viewed ACP positively.

#### **Conclusions/lessons learned**

Elderly people have a high level of interest in their final lives. Even if they are uninterested at first, they become interested as the situation changes. Therefore, it is important for multiple professions to work together and repeatedly communicate the necessity of ACP. It is also important to provide detailed practical support tailored to each individual's understanding so that the tools can be put to practical use.

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## Exploring "What Matters" for older adults in the community

### LEE Yi-Hsuan, YU Yung-Chen

### **Background and objective**

Recent advancements in age-friendly care have emphasized the "What Matters" principle from the 5Ms model to enhancing care for older adults. Guiding the goals of care, improving quality and satisfaction. However, clarity about what older adults deem important remains vague, and care plans rarely assess this aspect. Thus, this study aims to preliminarily understand what community-dwelling older adults prioritize, serving as a reference for future healthcare.

### Methods/intervention

This survey was conducted at a community senior university through semi-structure questionnaire, including three parts: 1. Important functions and activities: participants selected items they considered crucial from Functional, Enjoy Life, and Connecting aspects, then identified the top three overall. 2. Factors influencing medical decisions, such as religious beliefs, culture, pain, economic, and family involvement. 3. Considerations regarding health care, focusing on choices between life quality and longevity, concerns in health care, and sources of strength during disease exacerbation.

### Results

A total of 59 older adults completed the survey. The top-valued functions and activities were thinking clarity, independent mobility, maintaining good relationships with family and friends, and engaging in personal interests. Pain relief and financial factors significantly influenced medical decisions, while culture and religious beliefs had less impact. Most older adults desired some family involvement. When considering their health and future care, they prioritized companionship from family, maintaining dignity, and having others care and listen. Family support was the most significant source of strength during disease exacerbation, followed by religious beliefs. Most older adults preferred a dignified end-of-life experience without extending life at significant costs.

### **Conclusions/lessons learned**

This study provides initial insights into what community-dwelling older adults prioritize in their lives. The findings suggest a need for further discussion in hospital settings or targeted towards frail older adults. Contact: LEE YI-HSUAN TAIWAN jleej80@gmail.com

Effect of customized health education intervention on postoperative health outcomes of patients with vertebral compression fractures

### LEE Yi Nung

### **Background and objective**

As the population ages, fractures caused by osteoporosis are one of the most important health issues for postmenopausal women and the elderly, and will seriously affect the quality of life and life of patients. According to the International Osteoporosis Foundation (IOF) According to statistics, the prevalence rate of vertebral compression fractures over the age of 65 in Taiwan is 19.8% for women and 12.5% for men. For patients with osteoporosis-related vertebral fractures, although the disease does not have a fatal crisis, it does cause vertebral fractures. The reduction of physical function and uncontrollable pain will seriously impact their quality of life.

### Methods/intervention

There were 20 people in the experimental group and 20 people in the control group, for a total of 40 people. The experimental group received customized multimedia health education intervention, while the control group received conventional leaflet health education care. The Beck Anxiety Scale and physiological index measurements (blood pressure, respiration, pulse) were used as pre- and post-assessment tools, and the collected data were analyzed descriptively and inferentially using SPSS for Windows 22.0 statistical suite software.

### Results

The results of the study showed that the two groups before the health education had high homogeneity. After the health education intervention, the experimental group had significantly lower Beck anxiety post-test scores than the pre-test (Paired-t=15.78, p=.00), systolic blood pressure and diastolic blood pressure. There was no significant difference in other indicators between the two groups. The results of this study confirm that receiving customized multimedia health education briefings can effectively reduce preoperative anxiety for spinal surgery patients.

### **Conclusions/lessons learned**

Multimedia health education measures are used to share experiences of successful surgical cases to help patients reduce their fear of unknown surgery and provide complete care content to meet the needs of patients. Medical staff also give full play to their professional nursing functions, so that Improvement of overall medical quality. Contact: YI NUNG Lee Tri-services general hospital TAIWAN yinung2@gmail.com

### Association between Tooth Loss and Cognitive Function among the elderly in Taipei

### CHOU Yi-Chang, HSIAO Ching-Fang, WU Yi-Zhen, HSIEH Hsin-Ling, NIEN Ya-Hui, WENG Shih-Han, TSENG Chih-Hao

### Background and objective

There is a longitudinal association between tooth loss and cognitive function. However, this association still lacks sufficient evidence. This study aimed to examine the association between the number of teeth and cognitive function among the elderly in Taipei.

### Methods/intervention

From 2006–2016, we recruited 6,177 elderly people with less than 20 remaining teeth, and selected controls matched for age, gender, comorbidities, and lifestyle from those with 20 or more remaining teeth for comparison. A total of 22,586 people underwent at least two publicly funded health examinations, with 107,186 visits. Number of teeth was determined through dental examination. Cognitive function was measured by the Short Portable Mental Status Questionnaire score (SPMSQ) or AD8. We collected data on the number of teeth at baseline. Cognitive function was defined as a score of  $\geq$ 3 on the SPMSQ or a score of  $\geq$ 2 on the AD8. The generalized estimating equation (GEE) model was used to examine the longitudinal relationships between the number of teeth at baseline and cognitive function.

### Results

The mean teeth number at baseline was 9.32(standard deviation [SD] = 9.77), and the mean SPMSQ score at baseline was 0.31(SD = 1.02, n=21219); the mean AD8 score at baseline was 0.47(SD = 1.00, n=1367). After GEE analysis with adjustment for multiple covariates, compared to participants with  $\geq$ 20 teeth, participants with 10–19 teeth and < 10 teeth at baseline were associated with a higher risk of cognitive decline (adjusted odds ratio [aOR] =1.25, 95% confidence interval [CI] = 1.09-1.42; aOR= 1.45, 95% CI= 1.25-1.69, respectively).

#### Conclusions/lessons learned

A lower number of teeth were associated with poorer cognitive function scores. Therefore, preventing tooth loss could potentially benefit the maintenance of cognitive function among the elderly.

### Contact:

CHOU Yi-Chang Taipei City Hospital TAIWAN t0036@tpech.gov.tw Impact of changes in the number of teeth on psychological disorders among community-dwelling older adults in Taipei

### HSIAO Ching-Fang, NIEN Ya-Hui, WU Yi-Zhen, HSIEH Hsin-Ling, TSENG Chih-Hao, WENG Shih-Han, CHOU Yi-Chang

### **Background and objective**

Aging populations worldwide are facing a significant burden of psychological disorders that affect their quality of life and overall health. Oral health is associated with psychological disorders; however, the effect of changes in the number of teeth on psychological disorders remains unknown. This study evaluated the impact of changes in the number of teeth on the subsequent development of psychological disorders among communitydwelling older adults in Taipei City.

#### Methods/intervention

From 2005 to 2016, 65,518 community-dwelling individuals aged 65 years and older participated in the physical examination program in Taipei. We collected data on the number of teeth during each examination. Psychological disorders were defined as a score of  $\geq$ 6 on the Brief Symptoms Rating Scale. A generalized estimating equation (GEE) model was used to examine the longitudinal relationship between changes in the number of teeth and the development of psychological disorders.

#### Results

The participants lost an average of 5.2 teeth during follow-up, with 25.6% dropping more than one level from baseline. After GEE analysis with adjustment for multiple covariates, participants whose tooth number dropped by more than one level had a high risk of developing psychological disorders (odds ratio [OR]: 1.13, 95% confidence interval [CI]: 1.07–1.19). Subgroup analysis revealed that participants with more than 20 teeth (OR: 0.86; 95% CI: 0.78–0.93) or 10–19 teeth (OR: 0.87; 95% CI: 0.76–0.99) at baseline had a lower risk of developing psychiatric disorders than those without dentures.

#### **Conclusions/lessons learned**

A rapid decrease in the number of teeth is associated with an increased risk of psychological disorders in older adults; however, the use of dentures can reduce this risk until the number of teeth drops below 10.

Contact: CHOU Yi-Chang Taipei City Hospital TAIWAN t0036@tpech.gov.tw Analysis of the current service situation of public long-term care institutions - taking the Nangang long-term care institution affiliated to Keelung Hospital as an example

### CHEN Yu-Ju, CHENG Su-Zu, YAO Wen-Chen, LI Ling-May, CHEN Wei-Ta, LIN San-Chi

### **Background and objective**

The proportion of the population over 65 years old in Taipei City is as high as 19.75%, the second highest in the country. Taipei City's consumption level and cost are relatively high, which has led to the migration of some institutional operators. Therefore, the Ministry of Health and Welfare used the space saved by the public sector to renovate the medical institutions under the ministry. Rizhao's residential long-term care institutions serve as demonstration sites and continue to build long-term care resources.

### Methods/intervention

According to the Executive Yuan's "Public Service Base Preparation-Renovation Plan for Long-term Care and Welfare Base Renovation", the remaining space on the 3rd, 4th and 5th floors of the Nangang Post Office will be rented to provide services for 71 beds in institutional accommodation and 16 people in community-style day care. , the first public long-term care institution in the country. The establishment license will be approved in September 2022 and operations will begin in October 2022.

### Results

As of December 2023, residential long-term care institutions have admitted 50 beds, and day care services have reached 18 people. 77% of the residents come to Taipei City, with Nangang, Songshan, Neihu, and Xinyi Districts accounting for 72% in that order. The majority are 62% female, the average age is 82.5 years old, 84% are over 75 years old, 78% are below 60 on the Pap scale, 40% have been diagnosed with dementia, and 40% are diagnosed with dementia. Those with pipelines accounted for 32%. The satisfaction of residents and their families with institutional services reached 98.5%.

### **Conclusions/lessons learned**

Retaining long-term care talents depends on improving the working environment and equipment, increasing wages and benefits, and strengthening education and training of talents, such as cooperation with care and service training institutions, the government's southward policy to open special classes for international industry-university cooperation, or the training of foreign manpower.

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### Experience of Elderly Residents' Families Signing Advanced Care Plan in Long-Term Care Facilities

### YANG Shih Chen

### **Background and objective**

The case involves a centenarian who has recently moved into a care facility. Faced with the challenges of aging and the inability to self-care, the primary concern is how to establish expectations for a dignified end-of-life experience before the loss of independent activities. This is aimed at both addressing the incapacity of elderly care and reducing the burden on family members. It is crucial to develop a plan that considers and respects the personal wishes of the elderly individual and implement a positive approach to end-of-life care before the deterioration of physical independence becomes a reality.

### Methods/intervention

1.Establish trust with the family involved in the case, employing active listening and empathy skills to understand the attitudes and preferences of both the elderly individual and their family toward end-of-life care. 2.Introduce and present a wellillustrated advanced care planning booklet, facilitating a comprehensive appreciation of the elderly individual. This includes information on five applicable scenarios, two lifesustaining medical interventions, four decision options, and the process of executing an advance healthcare directive. 3.Approach the process with an attitude of respect, understanding, and non-judgment, accepting the decisions of the individual willingly and assisting in explaining and guiding them through the signing process.

#### Results

Through life review, explanations about assistive devices, and sharing relevant case studies, family members openly acknowledged and respected each other. Acting as mutual witnesses, they successfully completed the signing of the advance healthcare directive.

### Conclusions/lessons learned

Elderly individuals, family members, and healthcare teams collaboratively establish care goals. With a shared comprehension, when faced with the five applicable scenarios, there is a calm acceptance of choosing not to undergo two lifesustaining medical interventions. Simultaneously, through open communication among family members, there is mutual respect for the decisions made in advanced care plan, resulting in optimal end-of-life care and support.

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### Using Case Management Model to Enhance of Osteoporosis Care Patients Thereby Reduce the Rate of Recurrent Fractures

### HUANG Ya-Lin, LIANG Che-Han

### **Background and objective**

With the aging population, osteoporosis has become the second most common disease globally. After the first osteoporotic fracture, the chance of getting a second osteoporotic fracture rises up to 50%. Annual fracture recurrence rate of the other medical center is 14.7%. However we reported 27.78% recurrence rate from our hospital, which is significantly higher than that of other institutions. By means of implementing case management system, we are hoping to increase the patient's awareness to osteoporosis care program, which may lead to reduction of the rate of recurrent fractures.

### Methods/intervention

In collaborating with the information department through benchmark learning, we had developed a case management system. The system includes medical history, family history, medication history, lifestyle habits, nutritional assessment, and fracture risk assessment. Through comprehensive assessment, we understood the causes of osteoporosis in each patient and therefore we could provide personalized health education. After case enrollment, we made regular telephone interviews to track the effectiveness of nursing and health education. Quarterly meetings were held in which we discussed and analyzed cases as well as the unmet thresholds in specific months.

### Results

-, The patients' awareness rate of osteoporosis increase from 76.5% in 2022 to 88.89% in 2023. -, The rate of recurrent fractures in patients with osteoporosis within one year decreased from 27.78% in 2022 to 1.78% in 2023.

#### **Conclusions/lessons learned**

"Hip fracture is the last straw that broke the elderly's body". Through the case management system, we could identify patients' problems systematically and provide personalized health education guidance. Taiwan will soon become a super aged society by 2025, and osteoporosis is inevitably an important public health issue. Through promoting the osteoporosis prevention and treatment system actively, we can reduce the risk of fractures, the disability of the elderly, medical expenses, and family burdens. Ultimately we can achieve a win-win situation between the society and the families.

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### Poster session 2.4: Promoting health of children and young people

**Initiatives of Child Health Schools** 

### GOMYO Mihoko, KATO Tatsuo, SAITOH Fumihiro

### Background and objective

The number of obese children in elementary and junior high schools has nearly tripled over the past 30 years, indicating that sedentary lifestyles and poor dietary habits are impacting the health of children. This trend may be attributed to changes in the environment, such as prolonged working hours in the adult population, making it difficult to maintain healthy habits within households. Additionally, there has been a persistent high rate of child suicides. With the aim of fostering children's awareness of the importance of life and cultivating their ability to live healthy and energetic lives, the "Children's Health School" has been held annually since 1998.

#### Methods/intervention

1. Implementation of a health checklist. 2. Emphasize understanding the basics of the body, such as "how the body works," "nutrition," "where food goes," and "how bones grow larger." 3. Create opportunities for participants to listen to the sounds of the heart to understand the importance of life. 4. Encourage not only children but also parents to participate, fostering the sharing of correct health habits. 5. Conduct surveys to assess changes in attitudes and awareness regarding health and gather feedback.

### Results

1. The event has been held annually, from 1998 to 2019 before the COVID-19 pandemic, totaling 22 times. 2. The number of participants started at 26 in the first event and ranged from a minimum of 15 to a maximum of 40 attendees. 3.

The health habit checklist has shown significant improvement with each iteration. Changes in household habits, such as "children making red, green, and yellow checks at each meal," have been observed. 4. A voice was shared expressing the sensation of feeling 'alive' upon hearing the sound of the heartbeat.

### Conclusions/lessons learned

Children's health habits significantly influence their growth and development. The "Children's Health School" provides a valuable opportunity for children to learn, think about, and practice healthy habits during this critical period. Furthermore, it appears to raise parental awareness, leading to improvements in household lifestyle habits.

Contact: KONISHI Tsuyako Tokyo Health Cooperative Association JAPAN t-konishi@tokyo-health.coop Use a sound and colorful pressure pulse tape book cover to divert children's fear of measuring blood pressure

### TSENG Tzu-Wei, SHIN Yu-Ching, HSU Chu-Yuan, YANG Ya-Hsin, SHEN Yu-Hui

### **Background and objective**

When measuring children's blood pressure in clinical practice, children often resist and fear not to cooperate with the measurement, and will increase the number of nursing hours, so by transforming the blood pressure into a sound and colorful pressure with a book cover, and using music and cartoon patterns to divert children's fear and attention, it can effectively reduce children's fear, and quickly complete blood pressure measurement, reduce nursing hours, and then improve the clinical convenience of nursing staff.

### Methods/intervention

Transforming into a sound and colorful pulse pressure book cover to measure blood pressure, music and cartoon patterns can effectively divert children's fear and attention from blood pressure measurement, which not only saves the time to soothe the child's fear and attention, but also reduces the abnormal value ratio of high blood pressure caused by fear and agitation.

### Results

The child's blood pressure is measured with a sound and colored pressure pulse tape book cover. The average time to measure blood pressure has been reduced from 8 minutes to 4 minutes. The crying of sick children has been reduced from 90% to 40%.

### **Conclusions/lessons learned**

Pediatric caregivers need to spend more hours of care to get the sick children to cooperate with the treatment activities. Measuring blood pressure with a sound and colorful pulse pressure book cover can effectively reduce the crying emotion of the child due to fear and fear, shorten the nursing time of the pediatric nurse to soothe the patient's emotion, and reduce the abnormal value ratio of high blood pressure caused by fear and agitation.

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The association between psychological distress and social relationships among younger adult survivors: cross-sectional survey four

### years after the 2016 Kumamoto Earthquake in Japan

### IDE-OKOCHI Ayako, HE Mu, KANAMORI Yumie, SAMISO Tomonori, KIGUSHI Seiko, TANIGAWA Chiharu, NAKAMURA Satsuki, ISHIKAWA Mako, TAKAMOTO Kayoko

### **Background and objective**

The psychological effects due to disasters can be long-lasting. During the recovery period, disaster survivors might suffer psychological distress due to relocation and the related social changes. Furthermore, younger adults' mental health has been a concern. The purpose of this study is to clarify the mental health status and related factors of the younger adult Kumamoto earthquake survivors, and to consider support measures.

### Methods/intervention

Data on 3,880 people (1,687 men and 2,193 women, mean age = 47.3  $\pm$  12.7), collected by a 2020 survey were analyzed. We considered community participation and having confidants were buffering factors. This study was approved by the Institutional Review Board of Kumamoto University.

### Results

The overall prevalence of psychological distress (K6  $\geq$  10) was 11.8%; by age, it was 7.9% in adolescents (18 - 24 years), 12.5% in young adults (25 – 44 years) and 8.7% in middle aged adults (45 – 64 years). Logistic regression analysis revealed that in the total sample, female gender, public housing, self-rated unhealthy conditions, a lack of community participation, loneliness, reduction in community participation resulting from the coronavirus disease 2019 (COVID-19) pandemic were positively associated with psychological distress. However, a lack of community participation was a risk factor only in the overall and middle-aged samples. Furthermore, older age and having a family member or friend as confidants showed negative association, in the total sample. More precisely, in adolescence, friends only; in young adults, both friends and family; and in middle age, only family was a buffering factor. Among social factors, only loneliness was positively associated psychological distress, regardless of age group.

### **Conclusions/lessons learned**

The municipality, local medical and welfare agencies need to consider support measures according to factors that affected all the younger adult victims and those that varied by age group.

Contact: IDE-OKOCHI Ayako Kumamoto University JAPAN okochi@kumamoto-u.ac.jp The investigate of psychological interventions to help children and adolescents with asthma control ecffect: a network meta-analysis

### PAN Hsiu-Fang, TSENG Tzu-Wei

### **Background and objective**

In children and adolescents with asthma, asthma control is further complicated by the social, psychological and developmental challenges they during this life stage may contribute to psychological distress. Psychological interventions possible to reduce psychological distress, this may to improve behavioral and reduce asthma attacks.

### Methods/intervention

Searched five major bibliographic databases, PubMed, Proquest, Cochrane Library, Medline and CEPS for the the investigate of psychological interventions to help children and adolescents with asthma control ecffect. The search was conducted using the terms "(asthma) AND ((psychological interventions) OR (children)) AND (adolescents)". Delete duplicates and irrelevant paper, leaving 3 paper for further analysis.Using the Joanna Briggs Institute (JBI) evaluation tool. Review, collect and integrate the existing literature and summarize the literature, presenting a literature review with evidence.

#### Results

The results of some studies suggest that psychological interventions could be beneficial for children and adolescents with asthma, particularly to reduce symptoms of anxiety or depression, and than reduce asthma attacks; some studies found decreased the need for medical use or improve quality of life.

### **Conclusions/lessons learned**

The conclusions of underscore the effect of psychological interventions could be well control asthma in children and adolescents.

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### Reducing the Rate of Unintended Reapplications of Peripheral Intravenous Catheters in Children

### TANG Yi-Chen, LIN Chiu-Wen, WU Shiu-Chi, LIU Hui-Hsing

### **Background and objective**

Children's peripheral veins are small and difficult to access, making intravenous drips problematic during movement due to tugging, requiring re-fixation or re-injection. This results in fear, crying, and anxiety in the children, inconsistencies in injection site fixation methods among nurses, and increased frequency of re-fixing IV catheters. This can delay routine treatments and lead to complications like phlebitis requiring surgery, causing distress and complaints from families and even medical disputes. By implementing improvement measures, the aim is to reduce the psychological fear in children and alleviate the physical and emotional exhaustion of their families, thus decreasing the workload of nursing staff.

### Methods/intervention

Use decision matrix analysis and the PDCA cycle were used to continuously drive and enhance the process, aiming to reduce the rate of re-fixation of IV catheters to 3.8%.

### Results

a.Unexpected IV catheter re-taping rate: Before implementation of the project measures was 9.6%, after improvement, it dropped to 2.5%, with the number of errors reduced from 60 to 15. b.Audit of nursing staff's knowledge and correctness in IV catheter care: Improved from 63% before to 100% after the implementation. c.Use of "Pediatric Intravenous Injection Care Instructions" flyers for nursing guidance increased family awareness from 66% before to 98% after, showing significant improvement. d.Monitoring of nursing staff's consistency in executing fixation techniques improved from 63% to 100%.

#### **Conclusions/lessons learned**

The application of a standard procedure for securing pediatric peripheral intravenous catheters, in-service training, routine nursing skill assessments, creation of standard specification fixation boards, and educational posters and flyers has enabled immediate caregiving instructions to be provided to the families of hospitalized children. This approach reduces the anxiety of families caring for hospitalized children, increasing their satisfaction rate from 94% to 99.5%. The program has also been expanded to outpatient injection rooms and emergency departments to enhance overall care quality.

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Constructing a friendly medical environment for pediatrics in emergency department

### YANG Bey-Jing

### **Background and objective**

Children patients have their special medical needs. As an emergency department of medical center in North Taiwan, our hospital leads the other ones to pay attention to children's health promotion and medical rights. To optimize children's medical experiences, we offer childlike space for them to be more relaxed in treatment.

### Methods/intervention

The lovely design of wall, organized treatment flow, health education video of children edition, addition of APP in tablet in front of bed, bedside music, separate blood drawing area, TV channels for children, various types of toys, setting of baby changing station, vending machine of diapers and wipes, exclusive medicine inhaling area, KIOSK setting in clinic room, exclusive ambulance to transport children patients are provided.

### Results

The satisfaction of treatment experience increased 10%. It is reported that children's sense of fear reduce, and that children feel more comfortable and relaxed during treatment. The children patients collaborates well in treatment, which improves the working efficiency and quality of staff.

### **Conclusions/lessons learned**

Children-friendly healthcare' only treat children patients, but also focus on their mental status and emotion for relieving their emotional stress. We hope to use our experience to promote 'Children-friendly healthcare' to more medical units to create a friendly medical environment and to improve the overall quality of children's medical care.

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### Distribution of etiology and dysfunction of children with developmental delay in Taiwan

### LIOU I Hsiu

### Background and objective

Developmental delay is a non-specific neuropsychiatric symptom. It is necessary to first clarify whether the diagnosis is correct and the pathological manifestations and nature.

### Methods/intervention

In the Child Development Multidisciplinary Assessment Center of our hospital, 4,298 children from 2010 to 2023 were evaluated for development. The data were analyzed according to the relevant diseases, underlying etiologies, cause classification, and development retardation categories.

#### Results

Children with developmental delay also have quite proportion of problems with other nervous systems (such as epilepsy) or nonneural organs (such as visual abnormalities, growth retardation, etc.). These diseases can lead to deprivation of hospitalization, perception or learning opportunities, which may be the cause of developmental delay.The causes were divided into three categories: (1) 1568 (34.91%) of neurological causes, (2) 736 (16.39%) of familial causes, and (3)2128 (47.38%) of those without specific causes.Among the neurological causes, the further classification including: 534 (11.89%) of labor brain injuries, 91 (2.03%) of congenital brain malformations, 491 (10.93%) of chromosome or genetic abnormalities, 27 (0.6%) patients with neurocutaneous syndrome, 37 (0.82%) patients with neurodegenerative disease, 335 (7.46%) patients with high-risk familial history, and 183 (4.07%) of other causes.

### **Conclusions/lessons learned**

In the 2010-2023 assessment cases, there were 3,243 (72.21%) language delays, 2,081 (46.34%) cognitive delays, and 2,045 (45.54%) motor delays. Accordingly, children with delayed development have a majority of language and cognitive development delay.

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Improving the completion rate of the timeliness of emergency PRN orders medication administration in the pediatric intensive care unit.

### KE Hsin Ju

### Background and objective

Our unit is a pediatric intensive care unit (PICU), primarily admitting premature infants with unstable vital signs and patients under 18, necessitating frequent emergency medication therapy. Despite emergency medications available in ambulances, many must be administered within 30 minutes after doctors issue emergency PRN ordersorders. However, only 50% of these orders are completed on time. The current process involves nurses calling the pharmacy for medication dispensing times, leading to delays and two medication errors annually. Thus, this prompted the author to improve the timeliness of emergency medication administration aiming to facilitate urgent treatment and prevent errors.

### Methods/intervention

Methods The completion rate of emergency PRN orders medication administration was increased from 50% to 80%. Intervention After reviewing literature and consulting benchmark hospitals, smart medicine cabinets (ADCs) were introduced with the support of hospital authorities. Pharmacists, along with the unit head nurse and senior nurses, expanded the variety and quantity of emergency medications based on unit statistics. A standard procedure for medication retrieval from the ADCs was established by the nursing department. Upon doctors issuing emergency PRN orders, pharmacists must verify them. Once verified, nursing staff can access medications from the ADCs for administration. Pharmacists manage medication stocks in the ADCs, regularly checking expiration dates and adjusting inventory in consultation with the unit head nurse.

### Results

Following the aforementioned intervention, the completion rate of medication administration within 30 minutes increased from 50% to 90%. Pharmacy medication errors causing medical safety incidents decreased from 2 cases annually to 0.

### Conclusions/lessons learned

The introduction of ADCs not only reduces administration time but also reduces medication errors, thereby improving care quality and ensuring optimal patient care in a safe medical environment.

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### Reducing Resistance Behaviors in Pre-schoolers During Medical Procedures

### **CHANG Hsin-Fang**

### **Background and objective**

The majority of pediatrics inpatients are pre-schoolers, between the ages of 3 and 6. They feel scared and fearful when in contact with common clinical medical procedures such as injections, medication administrations, blood draws, examinations, and even surgeries. The typical behaviors associated with this scares and fears include intense crying, screaming, waving, kicking, and other resistant behaviors, which not only cause emotional distress but also affect their future physical and physiological health, as well as their personality development. Additionally, these resistance behaviors may result in procedures failures and necessitate repeat attempts. It can also delay important medical treatment in severe cases, and increase familial worries, strains in the doctor-patient relationship and stress among medical providers during the medical procedures.

### Methods/intervention

Utilizing a systematic literature review and meta-analysis, the Chinese keywords: 學齡前期兒童 (Preschool-aged children), 兒童住院行為 (Children inpatients' behavior), 治療性遊戲 (Therapeutic play) and English keywords: Hospitalized Children, Pediatric Nursing were searched on PubMed, UpToDate, Google Scholar, the Airiti Library, etc. The search ranged from January 2019 to February 2024, resulting in a total of 5 literatures in both Chinese and English. One of the literatures was selected for further analysis through inclusion and exclusion criteria.

### Results

According to the literature search results, it was found that using a doll, a video, or a picture book to demonstrate the children the medical procedure process, allowing them having enjoyment and relaxation in a therapeutic play will create a more friendly environment. This benefits interactions among medical providers, children, and families, helping to distract the children's attention, reduce fears, and achieve child-friendly medical care.

### **Conclusions/lessons learned**

In an unfamiliar medical environment, children often feel fear and insecurity. Medical providers who have communication skills with children and utilize the therapeutic play will reduce resistance behaviors in children, improve the doctor-patient relationship, enhance the quality of medical care, and create a positive and pleasant medical environment.

#### Contact:

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### Significance of Supporting Needy Families at Children's Specialty Clinics

### NAKATA Koji, HASEGAWA Eiko, KAWATA Sanae

### **Background and objective**

The child poverty rate in Japan remains high at about 14%. Society must do more to eliminate children in poverty. However, in many cases, children in poverty do not become apparent. It is important to find and support those children in poverty who do not manifest themselves. When a child is seen by a clinic for an illness, the background of the illness is interviewed, which makes it easier to detect children in poverty. We will examine the support that clinics can provide to children in poverty and test its effectiveness.

### Methods/intervention

To summarize the support for children in poverty that has been provided at our clinic over the past year, and to verify what effect it has had.

### Results

1.Children's Diner (Kodomo syokudo)14 times: Once a month, socialize over play and dinner. Optional: swimming in the pool during summer vacation and Christmas party during winter vacation. About 20 participants each time. 2.6 hikes for children: on Sundays, by train or boat, in the mountains or on islands; about 30 participants 3.Camp 1 time: Summer vacation, swimming in the river and climbing mountains. Two days and one night, about 30 participants 4.Cycling 1 time: spring break. One day Cycling across the Seto Inland Sea: about 30 participants. 5.Food distribution, 24 or more times: Rice, snacks, vegetables, and meat are given during outpatient clinics. 6.Clothing distribution 4 or more times: Clothing is given at the change of seasons.

### **Conclusions/lessons learned**

Each time the needy children participated in the project, they were able to connect with the staff and volunteers. The poor

children became more familiar with the clinic. Prevention of truancy and interruption of medical treatment. By conducting outpatient projects (food distribution, clothing distribution, etc.), we were able to make a broad appeal to society about the need for support for children in poverty.

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Using the health belief model to explore the behavioral intentions of college students regarding vaccination against human papillomavirus - A pilot study

### HSU Yu-Ling, SHIH Whei-Mei

### **Background and objective**

Preventing human papillomavirus (HPV) infection is an effective way to reduce the occurrence of cervical cancer. This study used the health belief model as the theoretical basis to explore factors influencing college students' knowledge, attitude, and vaccination intention towards HPV vaccine.

### Methods/intervention

A cross-sectional survey and purposive sampling method was used. A structured questionnaire was used to collect college students' demographic variables, HPV knowledge, action cues, health beliefs, self-efficacy, and vaccination intentions using Google Form self-administered. Data were analyzed using the SPSS 26 software package for statistical analysis.

### Results

A total of 34 questionnaires were collected. The level of HPV-related knowledge was medium to high (5.18 out of 7 points). The average score of HPV action clues was 4.35 points mainly from schools (91.2%). There was a significant difference between male and female students in "relatives and friends recommend vaccination" (p=.007). There was a significant positive correlation between HPV vaccine behavioral intention and action cues (r=0.67, p<.001), perceived risk (r=0.54, p<.001) and self-efficacy (r=0.41, p<.05). There was a significant negative correlation between intention to act and perceived barriers to HPV vaccine action (r=-0.37, p<.05). Multiple regression analysis showed that HPV action cues (B=0.47, p=.003) and perceived HPV risk (B=0.38, p=.008) are important predictors of behavioral intention to vaccinate against HPV.

### **Conclusions/lessons learned**

This study suggests that improving action cues and conscious risk awareness can help promote college students' willingness to receive the HPV vaccine. The focus of publicity can be on enhancing awareness of the risks of HPV infection and HPV treatment to strengthen the motivation for vaccination. Contact: HSU YU-LING TAIWAN luks2025@gmail.com

Improvement programs to improve pre- and post-abortion care for pregnant adolescents

### TAO Ju-Cheng, CHIANG Shang-Wen, HUANG Tzu-Jung, FANG Mei-Ling, CHEN Lee-Chen

### **Background and objective**

Teenage pregnancy is not only a social problem, but also a social phenomenon. Both during the surgery and during the recovery process, the teenage patients may face emotional stress, physical pain and discomfort. In obstetrics and gynecology clinics, it is common that adolescent girls who have undergone abortion may have many doubts and fears about the abortion pressure. Due to heavy workload, the medical staff may neglect the patient care. The aim of this study is to understand the need of pre- and post-abortion care for pregnant adolescents and to improve the satisfaction.

### Methods/intervention

1. Establish obstetrics and gynecology outpatient abortion nursing care standards. 2. Create pre and post-abortion education and counseling service form. 3. Print out abortion related education flyers and birth control method education manual. 4. Organize abortion related education training courses for nursing staff. 5. Teaching nursing staff to use abortion education and counseling service form. 6. Use role-playing and case discussion as learning methods. 7. Offer contraceptive health education and psychological care.

#### Results

1.The completion rate of abortion nursing, health education and counseling increased from 12% to 90%. 2.The satisfaction with the care needed before and after the abortion increased from 59% to 100% ,and has achieved the project goal.

### **Conclusions/lessons learned**

The experiences of pregnant adolescents who go through unplanned pregnancy are mostly negative, lonely, and lack social support. Providing a counseling mechanism to help them cope with the crisis and their sense of control in their future life is a clinical topic that cannot be ignored and must be taken seriously

### Contact: TAO JU-CHENG Far Eastern Memorial Hospital TAIWAN

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The Evaluation of Hospital Environment Design and Patient Flow Experience Using Virtual Scenarios: A Case Study of a Children's Hospital in Hsinchu, Taiwan

### **CHAO Ching Yung**

### **Background and objective**

The aim is to develop a simulation evaluation platform for hospital environment design using Unity 3D software. Apart from assisting in assessing the feasibility of various design schemes, the platform aims to provide insights into the daily operations of medical radiation technicians and the potential impact on children's cooperation during examinations. By simulating the first-person perspective of patients, the platform offers a preexamination experience with the aim of reducing anxiety or fear and enhancing workflow efficiency.

### Methods/intervention

Virtual scenes of the radiology department were first established based on the relevant information provided. Medical radiation technicians were then invited to verify the realism and fidelity of the virtual scenes. The virtual environment was then utilized to evaluate spatial configuration schemes and themed scenario designs. Additionally, videos simulating the first-person perspective of children were created and evaluated for their efficacy in reducing pre-examination anxiety and fear.

### Results

According to the evaluation results, the average perceived realism of various examination rooms in the virtual environment exceeded 4.3 points among five radiation technicians. This indicates a similarity level ranging from "80% to 100%" compared to real environments. Thus, the virtual environment is deemed suitable for design evaluation and simulated experiences. Furthermore, videos simulating the first-person perspective were created separately for children of three different heights.

### Conclusions/lessons learned

This study has developed a feasible and reasonable virtual platform that effectively assists the children's hospital in evaluating the radiology department's spatial configurations and themed scenario designs. Moreover, it provides simulated preexamination experiences, which contribute to the reduction of children's anxiety and fear. Additionally, exploring applications across different departments could support achieving a "patientand healthcare-centric" design approach.

Contact: TSENG Shih Wei Hsinchu MacKay Memorial Hospital of Taiwan TAIWAN L417@mmh.org.tw Systematic Efforts to Support Children with Developmental Disabilities or Behavioral Issues through Volunteer Initiatives

### TABATA Haruki, SATO Yuiko, FUJII Koichiro

### **Background and objective**

Recently in Japan, there has been growing interest in creating places for children to belong, and providing meals and education about food to impoverished children. That is leading to an increase in activities such as children's cafeterias and volunteer tutoring. Among the children who gather for these activities, there are those with developmental disabilities or behavioral issues, and volunteers often find it challenging to respond to them. We hear concerns about how to interact with these children and whether such children should be excluded. At our institution, a cooperative organization called "Friends Association" is active in the community, operating children's cafeterias, among other activities. To address the challenges faced during these experiences, we organize regular meetings and pediatricians provide support to ensure the smooth continuation of volunteer activities. Based on the evaluation of whether the content of these conferences is meaningful and necessary nationwide, we will present our findings based on our discussions.

### Methods/intervention

We conducted surveys with volunteers post-participation for reflective feedback.

#### Results

We were able to understand the difficulties experienced by volunteers and learn from medical and educational perspectives

### **Conclusions/lessons learned**

The volunteer participants are generally aging, and they often feel a gap and cultural differences in interacting with modern children, along with a gap in perceptions of the concept of developmental disabilities. By deepening the gaps from these starting points, they learned what approaches and supports are effective for each child from medical and educational perspectives. Although immediate behavioral change may not occur, this led to concrete actions, enabling continued support for children with issues without excluding them. Additionally, opportunities for connections with schools and medical institutions were created.

Contact: TABATA Haruki Mimihara General Hospital JAPAN haruki.93@outlook.jp Promotion of Quality of Life in School-aged Children with Allergic Rhinitis symptoms - A Survey of Symptom Severity Effect on Daily Life of Students in an Elementary School in Southern Taiwan

### CHEN Pei-Chi, HUANG Yung-Cheng, KAO Cheng-Chih

### **Background and objective**

Allergic rhinitis is a prevalent problem and a bothersome among school-aged children. Previous studies have shown that allergic rhinitis had negative effects on the quality of life. In addition, air pollution is thought of as an aggravative factor. However, the lack of research studies of the correlation between allergic rhinitis symptoms and their implications on the daily life of children residing in southern Taiwan in which air quality index is usually high that necessitates investigation.

### Methods/intervention

In December 2023, survey questionnaires was distributed among sixth-grade elementary school students in Pingtung County, Taiwan. The severity of symptoms associated with allergic rhinitis and their levels of influence on daily life were collected. By analyzing the acquired survey data, the researchers can develop a symptom-control strategy for promoting children's quality of life accordingly.

### Results

A total of 204 questionnaires data were collected. Analysis revealed that 36.3% were previously diagnosed with allergic diseases such as allergic rhinitis, atopic dermatitis, or asthma. However, up to 78.4% of students suffered from symptoms associated with allergic rhinitis. The severity of sneezing affected all three fields including school performance, daily activity, and sleep and emotion. Runny nose, nasal congestion and itchy nose had notable significant effect on school performance, and sleep and emotion. It was also observed that the degree of severity of the symptoms appeared to be directly correlated to the experiencing of severe complications.

### **Conclusions/lessons learned**

From the survey, the severity of symptoms associated with allergic rhinitis had influenced daily life of school-aged children to some extent. The areas primarily affected were sleep and emotion, followed by school performance, while daily activities appeared as the least influenced.

Contact: CHEN PEI-CHI National Cheng Kung University Hospital TAIWAN Challenges faced by children with medical care needs and their families and the role of local hospitals

### TAKAHASHI Teiko

### **Background and objective**

In Japan, there are currently more than 20,000 children with medical care needs. This number has more than doubled in the past 15 years, and it is not easy to find a medical facility for regular visits in rural areas. We would like to introduce the efforts our hospital in Saitama Prefecture, which has the worst doctor maldistribution index in Japan, is making for local children with medical care and their families as an approach to improve health disparities.

### Methods/intervention

The clinic began providing pediatric home visits in 2014. In cooperation with the corporation's home nursing station, the clinic provides 24/7 support for the health of children with medical care and their families. In April 2022, the hospital accepted the "Kumagaya City Medical Support Center" from Kumagaya City, which led to the establishment of a partnership with the coordinator for children with medical care, etc., and the successful involvement of the government.

#### Results

In October 2022, the first meeting of the "Kumagaya Medical Care Kids Support Cooperation Conference" was held, bringing together the government, education, welfare, medical care, etc. Since then, the conference has been held regularly twice a year. The need for a backup power supply in the event of a disaster was recognized at this meeting, and it was decided that the city budget would be used to provide one starting this fiscal year. The salons have also contributed to the horizontal linkage, such as the holding of salons for caregivers to take a rest and for children with medical care and their siblings to interact with each other, and the implementation of evacuation drills on the assumption of a disaster.

### Conclusions/lessons learned

It is very important to build community cooperation and support systems on a daily basis, and it is necessary to expand communities like ours in other regions as well. It is no exaggeration to say that children with medical care and their families can easily become isolated in the community, and the loss of power supply during a disaster can directly lead to death. In light of this, this initiative, which has led to the expansion of support systems, should be commended and approaches should be continued in the future.

Contact: JAPAN teiko.1918@gmail.com Enhancing Mental Health Services for Children and Adolescents with Mental Illness in Taiwan: A Community-Based Intervention Study from 2015 to 2021

### SHIH Yu-Ju, HSIEH Wen-Yang, HSU Chao-Wei, LI Wen-Chi, TSAI Ching-Hong

### Background and objective

In Taiwan, individuals with mental illness, particularly children and adolescents, face significant stigma and limited resources. The Ministry of Health and Welfare initiated the "Promoting Plan for Overcoming Barriers to Mental Health Care for Individuals with Severe Emotional, Behavioral, and Mental Disabilities" in 2015 to address this issue. The project integrates mental health services into schools and communities, supporting vulnerable youth through outreach services. This study evaluates the effectiveness of the project in improving healthcare services for this demographic.

### Methods/intervention

Professionals from eight hospitals provided community-based mental health services, including outpatient care, case management, education, and training for caregivers and teachers. Data from 432 participants were collected from January 2016 to December 2021.

### Results

The study revealed significant improvements in Children's Global Assessment Scale(C-GAS), Clinical Global Impression-Severity scale (CGI-S), and Clinical Global Impression-Improvement scale(CGI-I) scores(p < 0.001). Achenbach System of Empirically Based Assessment(ASEBA) scores also showed improvement(p < 0.001). These findings indicate that the majority of participants experienced reduced symptoms, improved adaptation, and enhanced psychological and social functioning.

### **Conclusions/lessons learned**

Medical resources for children and adolescents with mental illness are often insufficient. However, the community-based project effectively provided intensive and diverse services, leading to improved emotional and behavioral outcomes. This underscores the importance of community-based mental health services in enhancing healthcare quality and accessibility for marginalized groups, ultimately promoting equality.

### Contact:

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Pharmaceutical Delivery by Home Visitation for Children Undergoing Medical Treatment: Bringing Healthcare and Enabling Educational Opportunities for All Children

### YAHIRO Yumi, KOBAYASHI Noriko, KINOSHITA Mika

### **Background and objective**

Although home support for children undergoing special medical treatment in Japan is being actively promoted, it is still a work in progress. Currently, home visitations for pharmaceutical deliveries are somewhat uncommon but it is an essential part of supporting children with special medical needs while still allowing them to participate in educational activities. To facilitate this, Chidori pharmacy has created a sterile room and clean bench within the pharmacy which allows for the preparation and delivery of intravenous infusions to patients who require 24-hour infusions. This case study examines how Chidori pharmacy was able to help a patient receive medication and still be able to attend elementary school.

### Methods/intervention

Pharmacists provided high-calorie infusions twice a week to an infant suffering from a rare condition called microvillus inclusion disease, which requires 24-hour intravenous nutrition from birth. When the child began elementary school, it became necessary to reduce the weight of the infusions so the child could carry them while at school in a backpack. To address this, we suggested adjusting the contents of the infusion used while at school. After several years of central venous nutrition, the child developed liver cirrhosis and underwent both liver and intestine transplants. Although the child is no longer dependent on intravenous nutrition, post-transplant medications are now essential so we crush tablets, label medications with dates to prevent errors, and continue dispensing and visiting the child to this day.

#### Results

The child is able to attend school while receiving her medication.

### **Conclusions/lessons learned**

With increasing numbers of children requiring medical care, our pharmacy has been able to help facilitate the ability for patients to live at home and still remain active in their communities.

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### Promoting CVC bundle to Improve Central Venous Catheter-Related Bloodstream Infection Rates in PICU

### **HUANG Yen-Wen**

### **Background and objective**

Critically ill pediatric children and premature infants require a variety of intravenous infusions, drug treatments, or total intravenous nutritional infusion when they are unable to eat. Establishing a good intravenous catheter is a very important lifeline for vulnerable children. Therefore, the use of central venous catheter bundle care (CVC bundle care) can reduce bloodstream infections and improve the quality of care.

### Methods/intervention

Since 2022, the infection rate in PICU has increased from 2.18‰ in the first half of the year to 7.64‰ in the second half of the year. Our investigation showed the cause was central venous catheter-related bloodstream infection. Therefore, we promoted the CVC bundle during the placement of central venous catheters to resolve the issue. Because of frequent invasive treatments for critically ill children in pediatrics. It took approximately 15 to 20 minutes to prepare these items as they were stored in different locations.Strategy: Based on the principle of CVC Bundle to streamline and centralize the placement of supplies, a dedicated work cart is designed to reduce the time required to prepare supplies. The standard method of disinfecting tubes was to use cotton sticks containing 75% alcohol and iodine to wipe the needle insertion site. The disinfectant should stay at the site for 2 minutes to take effect. It was found that disinfection via the cotton sticks could not effectively clean the needle. Strategy: Replace the disinfection method of cotton sticks with using sterile alcohol cotton pads to rub and wipe the injection cap for 15 seconds and then inject the drug. This new method is recommended according to the US CDC guidelines for BSI prevention.

### Results

Using the Bundle cart not only shortens the preparation time from 15-20 minutes to 4-6 minutes, but also reduces the risk of bloodstream infection by decreasing the exposure of sterile areas.

### **Conclusions/lessons learned**

The rate of central venous catheter-related bloodstream infection in PICU dropped from 7.64‰ in the third quarter of 2022 to 0.88‰ in 2023. We continue monitoring the infection rate closely.

### Contact:

HUANG Yen-Wen Hsinchu City Limaki Children's Hospital TAIWAN 6685@mmh.org.tw Exploring High School Students' Engagement in an Aging Simulation Program: A Case Study in Central Taiwan

### LIN Ching-Yu, TSAI Ru-Ying

### **Background and objective**

According to statistics, Taiwan will comprisea "super-aged society" by 2025. It is estimated that, by 2025, the proportion of the population aged 65 years and above in Taiwan will reach 20.8%. Therefore, Tungs' Taichung Metro Harbor Hospital in central Taiwan collaborated with a high school and organized a program that offered students an opportunity to experience the lives of the elderly. In this program, students assumed the roles of elderly individuals, received training in caregiving skills for seniors, and contemplated ways to create a safe aging environment.

### Methods/intervention

To improve their consideration for the elderly and help them understand the challenges that seniors face in their daily lives, and the physical, mental, and emotional changes they undergo, students were required to wear simulation equipment in the experiential program, which were designed to simulate the effects of aging. Through these, students experienced deterioration associated with aging. A questionnaire survey was then employed to investigate students' attitudes towards the elderly and their willingness to engage in eldercare services in the future, as well as to assess the outcomes of the activity.

### Results

A knowledge assessment about aging was also conducted. The results indicated that (1) 92.59% of the students recognized that the elderly had slower reaction time to stimuli, which led to general slow movement; (2) 81.48% were aware that the deterioration of sensitivity to high-frequency sounds among the elderly was more evident than deterioration in other aspects; and (3) 66.67% understood that the social abilities of the elderly declined with age.

### **Conclusions/lessons learned**

The results of the study demonstrate that the experiential activity significantly enhanced the students' knowledge and understanding about aging. Through firsthand experience, students leading to greater empathy and willingness to assist the elderly with patience and tolerance.

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## Poster session 2.5: Promoting maternal and newborn health

The Effect of COVID-19 Infection on Pregnancy Outcomes: A Retrospective Analysis

### YEH Ya-Lan, TSENG Yuan-Tsung

### **Background and objective**

COVID-19 has impacted countless lives since its emergence. Pregnant women are considered an at-risk population, but data on how COVID-19 affects pregnancy outcomes is limited. This analysis aimed to compare rates of adverse pregnancy outcomes between COVID-19 positive and COVID-19 negative pregnant patients.

### Methods/intervention

Deidentified patient data was extracted from the TriNet X global health research network on February 6, 2024. Patients were females aged 15-45 with a pregnancy related visit between January 1, 2020 and December 31, 2023. Two cohorts were established: COVID-19 positive (exposed) and COVID-19 negative (unexposed). The cohorts were matched 1:1 based on age, race, comorbidities, and medication history. Adverse pregnancy outcomes included spontaneous abortion (SAB), stillbirth, and premature birth. Hazard ratios (HR) were calculated to compare outcome rates between the matched cohorts.

### Results

The analysis included 10,953 COVID-19 positive and 568,712 COVID-19 negative pregnant patients. The COVID-19 positive cohort had a significantly higher rate of SAB compared to the COVID-19 negative cohort (15.7% vs 13.2%, HR=1.19, 95% CI 1.14-1.23). Stillbirth rates were 0.97% in COVID-19 positive patients and 0.63% in negative patients (HR=1.55, 95% CI 1.23-1.96). Premature birth rates were 17.2% and 12.6% for positive and negative groups respectively (HR=1.37, 95% CI 1.28-1.47).

#### **Conclusions/lessons learned**

This large-scale analysis provides compelling evidence that COVID-19 infection during pregnancy leads to increased likelihood of adverse outcomes including SAB, stillbirth, and premature delivery. The higher hazard ratios observed likely indicate that COVID-19 directly impacts placental and fetal development. More research is still needed to uncover the biological mechanisms behind COVID-19's effect on pregnancy.

### Contact:

TSENG Yuan-Tsung Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation),Taiwan TAIWAN b891040733@yahoo.com.tw The Lived Experience and Care Needs of Pregnant Women of Receiving Influenza Vaccination during the COVID-19 Pandemic

### WU ShuFang, CHOU Fan-Hao

### Background and objective

Although scientific research data support the benefits, safety, and cost-effectiveness of administering influenza vaccines among pregnant women and their fetuses, it still faces the challenge of coverage rates below 50%. The purpose of this study was to understand the lived experience and care needs of Taiwanese pregnant women who faced influenza vaccination.

### Methods/intervention

The study employed purposive sampling with five pregnant women who had not received the influenza vaccine in southern Taiwan. An in-depth interview was used to collect qualitative data on the stress and care needs of pregnant women facing influenza vaccination. Colaizzi's (1978) phenomenological methodology was used for data analysis.

### Results

Three themes emerged from the transcribed verbatim data of participants' experience: Hesitation about the effects of influenza vaccination on the fetus, deciding to give a variety of vaccines during pregnancy, strive to ensure the safety of self and fetus. Three themes for caring needs emerged from the transcribed data: Urgent needs for accurate and diverse information on influenza and its vaccines, health care providers' timely explanation and health education, providing nursing care centered on pregnant women and fetuses.

#### **Conclusions/lessons learned**

Through qualitative research, it was found that besides obstacles in vaccine choice, there are other factors affecting the low influenza vaccination rate among pregnant women in Taiwan. For instance, during the COVID-19 pandemic, there were numerous vaccine recommendations for pregnant women, influencing their choices. It is suggested to provide more detailed and in-depth information on vaccine development and the impact during pregnancy, and strengthen education and guidance for pregnant women regarding influenza infection. This would overcome misconceptions about influenza vaccines among pregnant women and healthcare providers, thereby increasing the vaccination rate among pregnant women and promoting more effective implementation of maternal care policies.

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# Factors Affecting Breastfeeding Knowledge, Attitudes, and Self-Efficacy Among Postpartum Women

# WENG Cing-Ya, CHANG Pei-Chi, HUNG Shan-Ching, KUO Yi-Chun

#### **Background and objective**

This study examined the effectiveness of prenatal education in promoting breastfeeding among pregnant women. Specifically, the objective was to understand the effect of prenatal education on the breastfeeding knowledge, attitudes, and self-efficacy of pregnant women, and to explore the factors contributing to successful breastfeeding.

#### Methods/intervention

A retrospective design was adopted by sourcing data from pregnant women who attended prenatal check-ups at a teaching hospital in Taiwan from May 2023 to April 2024. This study was conducted in two phases. In the first phase (before childbirth), nurses arranged face-to-face interviews with the expectant women by surveying their breastfeeding knowledge, attitudes, and self-efficacy during the first prenatal visit. Moreover, 7 breastfeeding education sessions were completed before childbirth. In the second phase, nurses conducted telephone follow-ups 1 month postpartum to monitor the breastfeeding methods used by the mothers and administered a second round of survey on breastfeeding knowledge, attitudes, and selfefficacy.

#### Results

From May 2023 to April 2024, this study enrolled 255 participants with an average age of 32 years. One month after childbirth, the breastfeeding rate was 80.39%. The prenatal education effectively enhanced the scores related to breastfeeding knowledge, attitudes, and self-efficacy (p < 0.001). Although positive correlations were observed between breastfeeding knowledge, attitudes, and self-efficacy, these factors were not correlated with the breastfeeding rate. Notably, family support emerged as a primary factor that affected breastfeeding among the mothers 1 month postpartum (adjusted odd ratio = 4.523, p < 0.01).

#### Conclusions/lessons learned

Overall, prenatal breastfeeding education was observed to improve the expectant mothers' breastfeeding knowledge, attitudes, and self-efficacy. However, prenatal education alone did not increase the breastfeeding rate. Family support and the establishment of a comfortable, supportive environment are recommended to facilitate and sustain breastfeeding activity.

#### Contact:

LEE Pei Hsuan DITMANSON MEDICAL FOUNDATION CHIA-YI CHRISTIAN HOSPITAL TAIWAN cych13199@gmail.com Enhancing the awareness of neonatal intensive care unit (NICU) nursing staff regarding MARSI and reducing skin injuries in neonates using NCPAP

### HO Chung-Ping, HAUNG Li-Ching, TUNG Lee-Chi, LEE Ping-I

#### **Background and objective**

Medical adhesive products are commonly used for wound dressings and securing tubes. However, incorrect care and removal techniques can increase the incidence of Medical Adhesive-Related Skin Injuries (MARSI). Our unit is a neonatal intensive care ward specializing in preterm infants and those with respiratory distress. Nasal Continuous Positive Airway Pressure (CPAP) is a standard and commonly used method for supporting neonatal respiratory distress. In 2021, the facial MARSI rate with Nasal CPAP was as high as 54.2%. Skin damage not only complicates care but also causes pain during adhesive removal, leading to unstable physiological signs in neonates. After analyzing, we identified the main causes of MARSI as: (1) lack of MARSI-related education and training, (2) absence of medical adhesive products.

#### Methods/intervention

Starting in April 2022, physicians began using the Neonatal Skin Condition Scale (NSCS) to assess neonatal skin conditions upon admission. A survey was conducted among neonatal intensive care unit (NICU) nurses to assess their awareness and care behavior regarding MARSI. Education and training were provided, a skin care protocol was established, and protective nasal skin medical adhesive products were replaced.

#### Results

From May 2022 to February 2023, following the intervention, the skin injury rate for neonates using Nasal CPAP decreased from 54.2% to 14.2%. Nursing staff's skin care skills improved from 61.3% to 98%, MARSI care awareness increased from 55.5% to 91%, and nurses' average satisfaction with the practicality and skin safety of the new nasal silicon skin tape reached 93.3%.

#### **Conclusions/lessons learned**

Increasing awareness of MARSI can effectively reduce skin injuries caused by medical adhesive products in neonates using Nasal CPAP. We plan to collaborate across hospital units to prevent MARSI and minimize skin damage to the lowest extent possible.

Contact: HO CHUN PING Cathy General Hospital TAIWAN ho.ping0811@gmail.com A Comparison of knowledge, attitudes and behavior intention of influenza vaccination during different trimesters

### CHOU Fan-Hao, CHANG Ya-Wen, TSENG Ying-Hua

#### **Background and objective**

Pregnant women who received influenza vaccination could protect themselves and their fetus's health. However, the prenatal vaccine coverage rate has still been low because of their concern. During the possible "double widespread" of COVID-19 and influenza, it is more critical for related issues of influenza vaccination. The purpose of this study was to compare knowledge of influenza and its vaccines, attitudes towards prenatal influenza vaccination, and behavior intention of influenza vaccination during different trimesters.

#### Methods/intervention

A cross-sectional study with a sample of 300 pregnant women was recruited using questionnaires. A convenience sample was recruited from prenatal clinics in southern Taiwan.

#### Results

Our study showed that there were statistically significant differences in knowledge of influenza and its vaccines for three different trimesters. The knowledge of influenza and its vaccines in the second and third trimesters (13.75±3.56 & 13.56±3.55) was higher than that of the first trimester (12.41±3.90). There were no statistically significant differences in attitudes towards prenatal influenza vaccination and behavior intention of influenza vaccination during different trimesters. Logistic regression indicated that attitudes towards prenatal influenza vaccination grenation were the significant predictor of the first trimester. Age, occupation, and attitudes toward prenatal influenza vaccination were significant predictors of the second trimester. Educational level, five years of influenza vaccination experience, and stress were significant predictors of the third trimester.

#### **Conclusions/lessons learned**

The findings can provide evidence-based references for the development of an intervention and promote the behavior intention and coverage rate of influenza vaccination among pregnant women.

Contact: CHOU Fan-Hao Kaohsiung Medical University TAIWAN fanhao@kmu.edu.tw A diverse discharge planning program intervention to enhance the home care capabilities of parents of preterm infants.

### HAUNG Li-Ching, TUNG Lee-Chi, LEE Ping-I

#### **Background and objective**

The birth of premature infants imposes significant stress on parents. After the acute care phase, premature infants may still encounter challenges such as feeding difficulties and oxygen dependency before discharge. It is crucial for parents to be actively involved in preparing for the transition home. In our unit, a Neonatal Intensive Care Unit (NICU), premature infants constituted 42% of the primary care group in 2022. Following discharge, we frequently receive inquiries during the initial days, analyzing reasons such as (1) inconsistent educational content among nursing staff, (2) parents' limited time for learning home care resulting in inadequate knowledge and skill inaccuracy, and (3) reliance on a single learning channel, namely educational handbooks.

#### Methods/intervention

Diversified discharge plan includes education: nursing staff provides consistent caregiving guidance through education and training; demonstration teaching: flexible visiting hours allow parents more time to practice caregiving skills; digital resources: adding instructional videos to mobile phones and creating an interactive digital platform for Q&A; simulated home care: allowing extremely low birth weight premature infants' parents to practice feeding and equipment operation in the NICU for 24 hours before discharge.

#### Results

The correct knowledge rate of parental caregiving guidance increased from 64.9% to 90.6%, and the correct caregiving skills rate increased from 12.1% to 85%. The correct guidance rate of nursing staff on parental caregiving increased from 74.9% to 94.8%. Parental satisfaction with digital resources reached 90%.

#### Conclusions/lessons learned

Diversified discharge planning not only enhances parental caregiving abilities for premature infants but also effectively addresses their special care needs. The simulated home care model has received high acclaim from healthcare professionals, and we aim to extend its application to other critically ill infants in the future.

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# The Experience of Pregnant Women with Poor Sleep Quality: A Qualitative Study

### CHEN Zih-Yu, LIU Mei-Chun

#### **Background and objective**

Background: Up to 38.2-69.6% of pregnant women experience sleep problems. Empirical research results show that poor sleep quality during pregnancy not only increases women's complications during pregnancy risk of disease, and also poses a threat to the health of the fetus. Objective : Understanding the journey of pregnant women experiencing poor sleep quality, and further analyzing the physiological, psychological, and related factors and their applications.

#### Methods/intervention

Methods: The research method used in this study was a qualitative interpretation phenomenon research method. We gathered 9 pregnant women in a medical clinic in a southern Taiwan hospital for one-on-one interviews to determine the cause of the poor sleep quality among pregnant women through a semi-structured interview.

#### Results

Based on the qualitative data analysis, four themes emerged: 1. 「It is common to experience uncomfortable symptoms during pregnancy due to physiological changes - nausea, vomiting, frequent urination, lower back pain, heartburn, foot cramps, breathlessness, and dizziness.」 2. 「experiences Psychological changes leading to negative emotions - anxiety, depression, stress」 3. 「Experiencing changes in sleep quality during pregnancy」 4. 「Actively seeking ways to improve sleep quality.」

#### Conclusions/lessons learned

This study presents empirical methods for improving sleep quality during pregnancy, aiming for better health outcomes for both mothers and babies. Health promotion hospitals and service agencies can adopt social prescription methods, providing support networks, mental health services, and sleep education to assist pregnant women. Health literacy is also crucial, as it offers information and skill training on the importance of sleep, improving sleep environments, and establishing routines. These findings underscore the significance of social prescriptions and health literacy in enhancing sleep quality for pregnant women, guiding healthcare professionals in developing guidelines. Personalized sleep counseling and support during pregnancy stages effectively address common sleep issues, thereby enhancing overall maternal and infant health.

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# Improving the Implementation Rate of Prenatal Breastfeeding Nursing Guidance

### **CHEN Ya-Chin**

#### **Background and objective**

The World Health Organization, in its "Comprehensive Implementation Plan for the Nutrition of Pregnant and Lactating Women and Infants," has set a target value of a 50% exclusive breastfeeding rate for infants under 6 months of age by 2025. Taiwan, in reference to the WHO's goal, actively promotes relevant policies and creates a breastfeeding-friendly environment. Prenatal breastfeeding nursing guidance will influence whether successful breastfeeding can be achieved, and appropriate assistance and guidance can extend the duration and willingness of mothers to breastfeed. The project team audited the completion rate of prenatal clinic nursing staff providing breastfeeding nursing guidance in May and June of 2023, finding it to be only 50%. At the same time, an evaluation of the effectiveness of breastfeeding health education guidance was conducted. The results showed that the accuracy rate of pregnant women's knowledge on breastfeeding was only 73.8%, thus sparking motivation for improvement.

#### Methods/intervention

By utilizing quality control methods for analysis and improvement.Following the 80/20 rule and root cause verification, the key areas identified for improvement were the lack of innovation in health education methods, inconsistency in staff's health education methods, lack of learning motivation among pregnant women, cluttered and excessive health education leaflets, and inconsistency between the order of health education and consultation.

#### Results

After the implementation of the project improvement measures, it was found that the execution rate of prenatal breastfeeding nursing guidance in the obstetrics and gynecology outpatient clinic increased from 50% before the improvement to 90% after. The accuracy rate of pregnant women's knowledge on breastfeeding improved from 73.8% to 95%, effectively enhancing the quality of prenatal breastfeeding health education.

#### Conclusions/lessons learned

The objective of this project was to improve the completion rate of prenatal breastfeeding nursing guidance. Before implementing the project, nursing staff often relied on repeatedly flipping through the maternity handbook, which was prone to omissions. After the project was launched, health education nurses had a standard manual for nursing guidance. Therefore, our unit plans to continue applying these improvement strategies to other outpatient nursing education guidance. During the project implementation, nursing staff reported that providing a complete execution rate required more health education time, leading to prolonged waiting times for pregnant women, which was a resistance to the project's promotion. However, receiving praise and recognition from the evaluators during the 2023 Baby-Friendly Hospital assessment encouraged the unit's colleagues to cooperate more willingly with the implementation.

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Enhance the mother-infant attachment relationship of very low birth weight (VLBW) premature infants

### **CHANG Shuyuan**

#### **Background and objective**

The mother-infant attachment relationship is the basis for infants to establish relationships with others. Besides promoting healthy physical, psychological, and personality development, it can also reduce parental anxiety. However, VLBW premature infants must receive treatments in the NICU soon after birth. Parents may not be able to visit due to special conditions, further impacting the already distant parent-child relationship. This unit is a pediatric intensive care unit, approximately 75% of patients being VLBW premature infants. The average stay is 45.5 days. The Mother-Infant Bonding Inventory (MIBI) is only 65.5, which is lower than the minimum average of 82 reported in the literature. Due to limited visiting hours and frequency, parentchild contact are scarce thus exacerbates negative emotions for parents. Thus, there's a need to increase parent-infant interaction to enhance the attachment relationship and improve the MIBI score. During the hospitalization of VLBW premature infants, the average MIBI score increased from 65.5 to 82.

#### Methods/intervention

With a infant's growth diary, which includes: daily weights record, weekly growth photographs, footprints stamping and encouraging messages from doctors and caregivers. To address special conditions that prevent in-person visits, offer an 30-minute video call for infants and parents per week to offer emotional support to patents, and maintain the mother-infant attachment relationship.

#### Results

After implementation, the MIBI score increased from 65.5 to 82.

#### **Conclusions/lessons learned**

The mother-infant attachment relationship was successfully improved. However, the MIBI only reached the minimum average of 82. During the process, it's found some parents were afraid of contacting infants, which affected the mother-infant attachment relationship. It's hoped that in the future, more parent-child interaction can be achieved and providing electronic growth logs, allowing the relationship between infants and parents to be established and maintain without being affected by any factors, and improve the mother-infant attachment relationship thus achieving the holistic care goals in pediatrics. **Contact:** CHANG shuyuan Hsinchu MacKay Memorial Hospital TAIWAN <u>rty8852@gmail.com</u>

Use of an Integrated Information System to Improve the Completeness Rate of Outpatient Pregnancy Care Guidance for Foreign Pregnant

### CHEN Yi-Hsiu

#### **Background and objective**

Medical institutions are facing increasing challenges for providing health education services to foreign pregnant women, including language barriers, cultural differences and foreign pregnant women's unfamiliarity with the local medical system, etc., which in turn affects the effective transmission and reception of pregnancy care guidance information. This study aims to use integrated information system strategies and technological innovation to improve the completeness of nursing guidance for foreign pregnant women, ensure that this population can obtain correct pregnancy health care knowledge and support, and improve pregnancy safety.

#### Methods/intervention

This study enrolled a total of 68 subjects. This cross-sectional study used purposive sampling to enroll subjects. Based on the on-site observations, this study discovered the following issues: (1) Foreign pregnant women experienced language communication difficulties; (2) The existing nursing guidance leaflets failed to meet the care needs of foreign pregnant women; (3) The number of nursing guidance, replies, and demonstrations is insufficient. The intervention measures to solve these issues included: (1) Using multi-language hardcopy and digital pregnancy care guidance resources; (2) Adjusting the content of pregnancy care guidance; (3) Applying a digital platform system to provide interactive consultation services; (4) Providing professional language training to healthcare professional. Lastly, this study used Pearson's product-moment correlation and stepwise regression analysis to analyze the data.

#### Results

According to the result of analysis, this study could be briefly concluded as the following: (1) the average age of personnel was 32.56years old; (2) the completeness rate outpatient pregnancy care guidance for foreign pregnant women increased from 69% to 89%, which further improved patient satisfaction and medical quality to achieve high-quality holistic healthcare and healthcare quality.

#### Conclusions/lessons learned

Hopefully, the intervention measures in this study may help resolve the challenges faced by foreign pregnant women during pregnancy care guidance. Imperative to provide personalized and culturally and linguistically diverse support to enhance health knowledge and self-management skills of foreign pregnant women to further promote maternal and neonatal health and well-being.

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# Reducing the Time for Pregnant and postpartum women to Undergo Prenatal Check-ups at Outpatient Clinics

### **CHANG Hsiu-Lin**

#### **Background and objective**

The World Health Organization considers maternal health the top priority for improvement. With the current policies in Taiwan, prenatal check-ups can reveal the physiological and psychological changes of pregnant and postpartum women and effectively prevent maternal mortality.Studies have found that the time a pregnant woman spends in outpatient prenatal checkups will affect her willingness to have prenatal check-ups. In order to enable pregnant and postpartum women to attend regular prenatal check-ups during pregnancy, it is imperative to reduce the time of outpatient prenatal check-ups. Hopefully, the reduction of the time can improve the satisfaction of pregnant and postpartum women with regular follow-up visits and prenatal check-ups.

#### Methods/intervention

This study enrolled a total of 124 subjects. This cross-sectional study used purposive sampling to enroll subjects. Based on the on-site observations, this study discovered that following issues: 1. Pregnant and postpartum women were unfamiliar with the registration process; 2. Pregnant and postpartum women needed to spend time waiting for prenatal care nurses and waited too long for ultrasound. The intervention measures to solve these issues included: 1. Producing a registration process reminder poster at the registration area; 2. Producing a QR code for pre-, mid-, and post-pregnancy care guidance; 3. Integrating the outpatient obstetrics registration information system; 4. Reformulating the gynecology and obstetrics procedures. Lastly, this study used Pearson's product-moment correlation and stepwise regression analysis to analyze the data.

#### Results

According to the results of analysis, this study briefly concluded the following: (1) the average age of personnel was 34.89 years old; (2) the waiting time for maternal outpatient check-ups was reduced from 140 minutes to 70 minutes, and the satisfaction rate increased from 69% to 89%. This study further improved patient satisfaction and medical quality to achieve high-quality holistic healthcare and medical quality.

#### Conclusions/lessons learned

High-quality prenatal care services and medical treatment environment can improve medical quality

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Utilizing innovative fixation methods reduces nasal injuries in neonates with non-invasive nasal cannula devices

# LIN Yu-Jo, LAI Pao-Chun, LIN Hsiu-Chun, TING Yung-Tien, YANG Shih-Chen, TSAI Yi-Fam

#### **Background and objective**

In NICUs, nasal CPAP or NIMV are two of the most widely used devices for respiratory support. However, these non-invasive nasal cannula devices frequently cause nasal traumas (20%-100%), such as abrasion and nasal deformity (Imbulana, 2018). Untreated injuries may lead to long-term complications including skin necrosis, septal damage, deformity, and facial defects. This study explores the effect of innovative fixation methods on the reduced rate of nasal injuries in neonates with non-invasive nasal cannula devices.

#### Methods/intervention

The new fixation steps were as follows: 1. Prepare a cotton-filling Ziplock bag as an extra cushion for the neonate's nose. 2.Wrap the Ziplock bag with waterproof isolation fabricto ensure a hygienic outer layer. 3.keep an easy accessfor cotton replacement. 4.both sides of the fabric. 5.Fix the nasal canula devices andthe fabric with Velcro. 6.Check the devices regularly andrecord the episodes of nasal traumas.

#### Results

After implementing innovative fixation methods for non-invasive nasal cannula devices in neonates, the rates of nasal trauma decreased to below 10%, indicating injury prevention. This innovation has provided comfort for neonates, alleviated the workload of adjusting and securing nasal cannulas, and boosted the nursing efficiency. With the waterproof out layer, the device is easy to be cleaned, reusable and low-cost production. The method offers practicality, cost-effectiveness, and adaptability in various sizes, enhancing its utility and customization.

#### **Conclusions/lessons learned**

Utilizing innovative fixation techniques to secure non-invasive nasal cannula devices reduces nasal trauma in premature and neonates requiring respiratory support. This method not only enhances comfort and safety but also reduces nursing workload, and thereby improves overall efficiency of care. Contact: LIN YUJO Taipei City Hospital Renai Branch TAIWAN gua1510@gmail.com

# Improving hypothermia in premature after bathing

### **KUAN Pei-Yun**

#### **Background and objective**

Unit premature daily after bathing, body temperature is too low than 36.5 °C, body temperature continues to be lower than 36.5 °C, oxygen consumption increases, permanent brain function damage; evidence shows that the use of parcel bathing, good bathing quality, premature have a sense of security and comfort, reduce stressful behaviors, promote blood circulation can be premature have a stable sleep and stabilize the body weight gain.

#### Methods/intervention

The analysis was that it took 1~2 hours for the body temperature to return to normal due to the drop in water temperature after leaving the bath water for too long, bathing time of more than 10 minutes, the amount of water placed in the bath water level, insufficient height of the water level, nude bathing of preterm babies, and the mechanism of warmth keeping in the bath. Improve the body temperature of preterm babies after bathing is too low, reduce complications, develop "wrapped bathing technical standards" to develop the ward routine, organize continuing education courses to enhance the awareness of nursing staff, improve the thermostat device for bathing, adjust the foot pedal once, the amount of water is 40 ~ 41 °C, 35CM × 35CM × 20CM full water volume.

#### Results

After the project, the rate of temperature abnormality after bathing of preterm infants was reduced from 68.1% to 0%, and the average body temperature after bathing was 37.1°C. Preterm infants could maintain a body temperature of 36.5°C or more after bathing with a wrap, and it was observed that during the process of bathing with a wrap, the symptoms of hand stretching and restlessness were reduced.

#### **Conclusions/lessons learned**

Maintaining the body temperature of preterm infants is an important but often overlooked issue for nursing staff, and this project actually improved hypothermia after the implementation of parcel bathing, and can therefore be used as a reference for the relevant wards in our hospital; Literature has also shown that reducing the frequency of bathing in preterm infants has no difference in the infection rate and physiological indicators, so we can further explore whether extending the number of bathing intervals can improve the hypothermia situation, which is a direction we can work on in the future. Contact: KUAN Pei-Yun Hsinchu Municipal MacKay Children's Hospital TAIWAN n053@mmh.org.tw

Study on the Effectiveness of Preventing Hypothermia in Newborns within Two Hours after Birth

# CHEN Tzu-An, HUANG Hsiu-Yen, QIU Wei-Ru, CHUO Ying-Hsiang

#### **Background and objective**

Avoiding hypothermia in newborns within two hours of birth reduces the risk of complications and death. Understanding body temperature changes and keeping warm appropriately are essential issues in caring for newborns. Forty-eight newborns were admitted to our hospital nursery in August 2022. A total of 35 had a body temperature <36.5°C within two hours after birth. The incidence of hypothermia was as high as 72.9%, of which hypoglycemia accounted for 14.6% (N=7). Asthma accounted for 8.3% (N=4) of patients transferred to the neonatal intensive care unit. The main reasons include not using an incubator in the delivery room, lack of heating equipment, and not paying attention to keeping the newborns warm during bathing and medical treatment when their body temperature was lower than 36.5°C.

#### Methods/intervention

To reduce the incidence of hypothermia in newborns within two hours after birth through quality improvement activities. Policies and procedures were developed for maintaining newborn body temperature and preventing body heat loss. It was stipulated that, when transferring newborn babies from the labor room to the baby room, caregivers should use an incubator or a small stroller with a warming function. Additional heating equipment and medical supplies were also required during medical treatment. Caregivers should suspend bathing if the newborn's body temperature is  $<36.5^{\circ}$ C before bathing. They should first put the baby in an incubator for observation, and track body temperature changes every half hour. Bathing occurs only until the baby's body temperature is  $\geq$  36.5°C. In addition, education sessions on keeping newborns warm were held. For newborns with new hypothermia, case discussions were conducted during shift handover.

#### Results

The incidence of hypothermia in newborns within two hours after birth dropped from 72.9% before improvement to 33% after improvement (March to April 2023). The incidence of hypoglycemia dropped from 14.6% to 7.3%, and those admitted to the neonatal intensive care unit due to asthma dropped from 8.3% to 3.7%.

#### **Conclusions/lessons learned**

Reducing the incidence of neonatal hypothermia can prevent tissue hypoxia and lower blood sugar caused by hypothermia, help reduce the number of newborns transferred to the neonatal intensive care unit due to asthma, and thereby increase the quality of neonatal care.

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# Application of Team Resource Management in the Risk Management of Postpartum Hemorrhage Care

### WANG Shu-Chen, TSAI Ya-Lun

#### **Background and objective**

According to the Taiwan Birth Injury Relief Annual Report, the analysis of maternal mortality cases in 2018 revealed that 48.1% of these cases are attributed to conditions such as uterine atony, postpartum hemorrhage, and disseminated intravascular coagulation (Ministry of Health and Welfare, 2021). Rapid recognition of signs of postpartum hemorrhage and appropriate intervention are crucial. The goal for healthcare teams is to possess the ability to assess and identify high-risk situations and take appropriate measures.

#### Methods/intervention

This study implemented a combination care checklist for postpartum hemorrhage in team care and conducted regular team meetings. In addition, we enhanced care support equipment, educated usage of uterotonic medication, provided postpartum education handbooks to mothers, and organized educational training. Postpartum hemorrhage was included in the unit's Hazard Vulnerability Analysis (HVA), and team-based scenario simulations were utilized for practicing clinical skills, teamwork, and communication.

#### Results

In 2023, the team's correct handling awareness of cases of postpartum hemorrhage increased from 47.5% to 95.8%. In terms of care execution, the overall correct rate for assessment time, massage techniques, and lochia assessment improved from 77.8% to 100%. The Hazard Vulnerability Analysis (HVA) for postpartum hemorrhage decreased from 56% to 26%. In 2023, two postpartum hemorrhage events occurred, and both were promptly detected and treated following standard procedures, showing the results of effective team care.

#### **Conclusions/lessons learned**

The introduction of comprehensive postpartum hemorrhage care successfully elevated medical personnel's awareness and prevention skills for PPH. Collaborative efforts among mothers, family members, and healthcare teams contributed to early detection and treatment of postpartum hemorrhage.

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# Poster session 2.6: Food, nutrition and diet

Working on the "Sukoshio" Questionnaire: Challenges of Health Promotion Activities in the Community for Salt Reduction

### KITAHARA Takao, OKANO Sachiyo

#### Background and objective

"Sukoshio" is a generic name for efforts by medical and welfare cooperatives throughout Japan to lead a "healthy life with a little salt". Since the mid-1970s, local co-ops have been promoting various efforts to reduce salt intake, and in 2015, MH-Coop registered "SUKOSHIO" as a trademark<sup>®</sup>.

#### Methods/intervention

Subject and Method]In this study, we conducted a questionnaire survey (awareness survey) at our hospital, which is located in Kagawa Prefecture in Shikoku and is a member of the MH-Coop, to its staff, outpatients, and members in the surrounding area.

#### Results

Kagawa Prefecture is a region where salt intake is high at an average of 13g/day.Responses were received from a total of 282 people (96 union members, 43 outpatients, and 143 staff). The correct response rate for the salt intake standard of less than 6.0 g was 45%, 28% were unsure, 51% responded correctly to the Japanese average salt intake of 10.0 g, and about half of the remaining respondents answered that they consume more than that. However, since the percentage of respondents who are engaged in the practice of "Sukoshio" is 27%, the current situation is that although they answered that their salt intake is higher than the standard, they have not put it into practice. The percentage of correct answers for foods with high salt content was 84% for udon noodles and 15% for bread, and 68% for raw vegetables and 18% for fruits as foods that promote salt elimination, giving the impression that there is limited awareness of foods to be aware of in one's diet. The percentage of staff who answered that they knew about "Sukoshio" was 33%, indicating that awareness of the concept was low.

#### Conclusions/lessons learned

Continuous guidance on salt reduction is important, as it is often necessary to change long-standing eating habits. It is also important to provide guidance on how to reduce salt in daily life, including how to read nutrition labels, such as by using low-

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sodium foods. In addition to educating members and outpatients in the community, the next issue to be addressed is how to make the "Sukoshio" initiative known and thoroughly understood by the staff.

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# Hospital Restaurant of Elderly-Friendly and Food Safety

# YU Wei-Ming, CHUNG Jui-Jung, HOU Wen-I, LAI Po-Hung

#### **Background and objective**

Taiwan's elderly population will account for 20.1% of the total population in 2025. The deterioration of physiological functions of the elderly includes difficulty chewing, reduced food intake, poor intestinal function, easy to get sick and poor mobility. In particular, difficulty chewing will be restricted the elderly's daily dietary, resulting in malnutrition. Hence diet health promotion for the elderly is necessary in a super-aged society. The hospital restaurant not only provides meals for adults, but also needs to take care of diet requirement of the elderly. We can help the elderly obtain adequate meal nutrition and become healthier.

#### Methods/intervention

1. We accept the evaluation by the public health bureau based on the Food hygiene self-regulations manual, including personal hygiene and behavior management, prevention of food poisoning, raw materials management and equipment and tools management, to ensure that the meals provided in the hospital restaurant meet hygienic standards. 2. Based on the nutrition manual for the elderly and the texture modified manual, we developed a friendly soft meal box that meets the nutritional requirements of the elderly (easy eat, delicious and nutritious).We have established five features of elderly-friendly soft meal box : Choose soft ingredients that are easy to chew, local and seasonal ingredients that are easy to get, rich and colorful food variety, easy to cook and delicious, and a variety of ingredients combined with good nutrition. We produce promotional posters and online marketing promotions for elderly-friendly soft meal box that are easy to eat, and provide assistive devices for the elderly to eat easily in the hospital restaurant.

#### Results

1. We have become a gold medal restaurant with catering service and hygiene. 2. We received the honor of food safety and elderlyfriendly restaurant. 3. We won first place in the national elderly cuisine competition. 4. Community elders come to the restaurant to buy soft meal every day.

#### **Conclusions/lessons learned**

We are successfully providing delicious soft meal in the community. Delicious soft meal help elders who have difficulty

chewing eat smoothly and obtain balanced nutrition. This experience can be used as a reference for age-friendly hospitals.

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Effect of rice bran supplement on Nonalcoholic fatty liver disease treatment

### YU Hsinting, SU Pei-Yuan

#### Background and objective

This study aims to determine whether a meal replacement containing high dietary fiber and  $\gamma$ -oryzanol (rice bran) can improve dietary compliance for weight control and subsequently ameliorate non-alcoholic fatty liver disease (NAFLD).

#### Methods/intervention

60 patients with moderate NAFLD evidenced by a liver ultrasound index of more than 3 points will be randomly assigned to two groups: a control group and an experimental group. All participants will receive dietary consultations from Registered Dietitians. In addition, individuals in the experimental group will be given one packet of rice bran (20 grams) daily to be consumed as a supplement.

#### Results

A total of 39 subjects(21 males and 18 female) completed followup, 21 people in the rice bran group and 18 people in the control group, with an average age of 44.7 (29-70) years old, BMI is 31 (23.2~42.7). After 3 months of dietary control and tracking, the caloric intake of both groups was significantly reduced. Fat and carbohydrate intake were significantly reduced. BMI was reduced (the rice bran group dropped from 29.7 to 28.5, and the control group from 30.6 to 29.9, both with significant differences), the hepatic steatosis (Controlled Attenuation Parameter score) and stiffness (elastography) measure by FibroScan<sup>®</sup> in the rice bran group dropped from 291 to 256 dB/m, p=0.001, 5.3 to 4.7 kPa, p=0.007, which were significantly lower than those in the control group from 317 to 284 dB/m,p=0.026 and 5.4 to 4.9 kPa,p=0.078, showing that rice bran has some effect on improving hepatic steatosis.

#### Conclusions/lessons learned

Dietitian consultation and 20 grams of rice bran per day can improve metabolic indicators and improve fatty liver. This effect is speculated to be caused by the antioxidant effect of  $\gamma$ -oryzanol and dietary fiber that provides satiety and reduces caloric intake, to achieve weight control and improve fatty liver.

Contact: YU Hsin Ting Changhua Christian Hospital TAIWAN 43070@cch.org.tw The Impact of Glutamine Supplementation on Oral Mucositis Severity in Head and Neck Cancer Patients Undergoing Chemoradiotherapy

### CHAO Jia-Reng, CHIEN Ching-Hui

#### **Background and objective**

Patients with head and neck cancer often develop oral mucositis after undergoing chemoradiation therapy, leading to pain, ulcers, bleeding, inability to eat, and inadequate nutritional intake. Current clinical guidelines emphasize enhanced oral care for cancer patients and offer an increasing selection of nutritional supplements. This article aims to explore whether glutamine can improve oral mucositis caused by concurrent chemoradiation therapy in head and neck cancer patients, thereby enhancing their quality of life.

#### Methods/intervention

Based on the Evidence based nursing PICO method, search keywords were set as follows: Population: head and neck cancer patients, undergoing chemoradiotherapy, Intervention: glutamine, Comparison: standard care, Outcome: oral mucositis. Electronic databases including CINAHL, MEDLINE, Cochrane Library, and Embase were searched using MesH terms and Boolean logic. Inclusion criteria were set for human, adult, head and neck cancer patients from January 1, 2014, to April 30, 2024, while articles focusing solely on chemotherapy or radiotherapy were excluded, and ultimately, three meta-analysis articles were included.

#### Results

Glutamine supplementation did not reduce the incidence of oral mucositis in cancer patients undergoing treatment but could decrease the severity of oral mucositis induced by treatment in head and neck cancer patients and those with other types of cancer. Additional findings indicated significant reductions in the need for tube feeding, opioid analgesic use, rehospitalization due to oral mucositis, and the occurrence of treatment interruption in cancer patients.

#### **Conclusions/lessons learned**

Using an evidence-based medicine approach to gather past research results and extracting high-quality evidence articles can significantly reduce research costs and facilitate the smooth completion of treatment for patients, while also helping to prevent complications and avoid unplanned hospitalizations.

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Nutritional Education Mitigates Hormonal Imbalances in Polycystic Ovarian Syndrome (PCOS) with a normal BMI

## SU Xiao-Han, CHEN Wei-Ling, CHEN Yi-Lin, WU Jing-Hui, HOU Yi-Cheng

#### **Background and objective**

Polycystic Ovaries Syndrome (PCOS) is prevalent among women of reproductive age. Treatment for PCOS typically begins with lifestyle modifications, including dietary adjustments, exercise, and weight management. These changes are beneficial in addressing hormonal imbalances and reinstating regular ovulation. The effective intervention strategies for treating obese PCOS patients have been well established; however, there is a lack of research examining the effects of lifestyle modifications on PCOS patients with a normal body mass index (BMI) and their hormone levels. Therefore, this study aims to investigate the influence of dietary and nutritional education on hormone levels in PCOS patients with a normal BMI.

#### Methods/intervention

8 participants with a BMI within normal range (18.5 to 24 kg/m<sup>2</sup>) were enrolled. Prior to and post intervention, anthropometric measurements (body weight, heightwaist circumference), a 3-day food record, and biochemical data were collected. The biochemical data included luteinizing hormone (LH), follicle-stimulating hormone (FSH), estradiol, progesterone, testosterone, sex hormone-binding globulin (SHBG). The intervention period lasted for 4 weeks, during which participants attended weekly sessions for dietary adjustments and received education on balanced nutrition. Statistical analysis was conducted paired t-tests, with significance set at P<0.05.

#### Results

Testosterone is converted into estrogen through the promotion of FSH, but excessive progesterone inhibits FSH production, thus obstructing the conversion of testosterone to estrogen. Our study found a significant increase in estrogen level (P = 0.039) after intervention. However, no significant differences were observed in the proportions of macronutrients in the diet or other hormone parameters. The improvement of estrogen levels may be attributed to individualized nutritional education, including timed and measured intake, and controlling the consumption of sugar, which may impact hormonal balances in human body.

#### **Conclusions/lessons learned**

Future researches should further explore the relationships between different dietary patterns and hormone changes to construct a more specific intervention strategy for PCOS patients with a normal BMI.

Contact: SU Xiao-Han Taipei Tzu-Chi Hospital TAIWAN jamie131389@gmail.com Skipping breakfast with late-night meals and consuming sugarsweetened beverages are associated with trace or overt proteinuria in young and middle-aged Japanese healthcare workers

### SASAKI Keiya, AZAMI Yasushi

#### Background and objective

Not only overt proteinuria but also trace proteinuria is associated with cardiovascular disease and renal function prognosis. The present study aimed to explore the relationship between trace/overt proteinuria and lifestyle habits, including diet and work habits, in young and middle-aged Japanese healthcare workers.

#### Methods/intervention

In total, 498 employees of our hospital, including 104 men and 394 women, aged <60 years who had undergone health checkups in 2022 were included. Data about their lifestyle habits were obtained using a self-description-style questionnaire. Multivariate logistic regression analysis was performed with trace/overt proteinuria as the dependent variable and sex, age, work style, and lifestyle as the independent variables to estimate multivariate adjusted odds ratios (ORs) and 95% confidence intervals (CIs).

#### Results

The proportions of trace/overt proteinuria in their 20s, 30s, 40s, and 50s were 35.7/9.3%, 26.3/5.9%, 22.4/4.2%, and 21.3/2.8%, respectively. Multivariate logistic regression analysis revealed that trace/overt proteinuria was prevalent in those who skipped breakfast at least 3 days per week and ate dinner within 2 hours of bedtime at least 3 days per week (odds ratio [OR] 4.1, 95% confidence interval [CI] 1.94–8.47), those who skipped breakfast at least 3 days per week and ate dinner at the usual time(OR 1.8, 95% CI 0.99–3.19), those who had breakfast but ate dinner within 2 hours of bedtime at least 3 days per week (OR 1.1, 95% CI 0.65–1.99), and those who frequently consumed sugar-sweetened beverages (OR 1.5, 95% CI 0.94–2.48).

#### **Conclusions/lessons learned**

Skipping breakfast with late-night meals and consuming sugarsweetened beverages are associated with trace or obvious proteinuria. Encouraging healthcare workers to improve their dietary habits is important to reduce the risk of proteinuria.

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# Discussion on the nutritional status of new residents of long-term care institutions

# LIN Yu-Hui, HUANG Zi-Hua, HUANG Ming-Ren, YEN Chia-Chi

#### **Background and objective**

Most of the residents in long-term care institutions are elderly and disabled, making them a high-risk group for malnutrition. Malnutrition is closely related to morbidity and mortality. After institutional residents move in, nutritionist will perform nutritional screening and assessment to identify those at high risk of malnutrition early and provide nutritional intervention to improve malnutrition.

#### Methods/intervention

Looking back to new residents of long-term care institutions from January to December 2023, the institutional nurse will issue a nutritional note, and the nutritionist will visit the residents within 72 hours. Nutritionist use the simple, fast and complete nutritional screening tool "Mini Nutritional Assessment Form" to conduct nutritional screening and assessment of residents to understand the nutritional status of residents and collect basic information of residents, anthropometric measurements, dietary status and other data for analysis.

#### Results

There are 9 new residents, 33.3% male and 66.7% female; the average age is 74.7±10.8 years old, weight 46.2±9.4 kg, BMI 18.9±2.9 kg/m2, 55.6% are underweight . The "Mini Nutritional Assessment Form" found that 33.3% were at risk of malnutrition and 66.7% were malnourished. During the dietary assessment, 50% of the patients were fed by mouth and 50% by tube feeding. 33.3% can eat on their own, and 66.7% cannot eat without assistance.

#### **Conclusions/lessons learned**

New residents of long-term care institutions are at high risk of malnutrition and are malnourished. Through regular nutrition assessments by nutritionist, we can understand the residents' nutrition problems, adjust the residents' diet texture, provide individualized nutrition treatment, and track the effectiveness of nutrition intervention to improve the residents' malnutrition situation , is very important in long-term care practice.

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# Nutrition equity for elderly with sarcopenia: Hong Kong Perspective

### **LEUNG Yuen Ling**

#### **Background and objective**

Sarcopenia, an age-related disease, refers to a progressive decline in skeletal muscle mass and strength. It becomes a global awareness issue due to deteriorated physical functions and increased mortality and healthcare costs. It is estimated to affect more than 50 million people and continue to affect more than 200 million people in the next 15 years. Its prevalence among elderly people in Hong Kong (HONG KONG) in 2014 was 9%, which increased to 29.4% in 2022.

#### Methods/intervention

Factors leading to sarcopenia include aging, physical inactivity, and poor diet. Dietary intake is a crucial modifiable factor in managing sarcopenia. The dietary habits of elderly people in HONG KONG focus on high intake of vegetables and fruits, snack drinks and milk products significant reduction in the risk of sarcopenia. However, their nutritional status is mainly affected by low educational levels, skipping meals due to living alone, and financial constraints that increase the risk of sarcopenia and further lead to nutrition inequity, which is also prevalent in highincome countries like USA.

#### Results

In ensuring nutritional equity to manage and prevent sarcopenia, additional training on nutritional assessment and advice for healthcare providers to provide a personalized nutritional plan for elderly people with special needs is needed. Nutritional education and promotion strategies should be based on different sociodemographic backgrounds, especially educational backgrounds. The focus must be changed to providing general nutritional advice, including total energy intake, to achieve nutrition security for the community. Recommended foods should be matched with preferences, culture, and social needs to promote health and avoid chronic diseases.

#### **Conclusions/lessons learned**

Dietary management is an essential modifiable factor to the problem of sarcopenia, whose prevalence in HONG KONG increased due to low educational level and skipping meals. Ensuring nutritional equity is the core solution to prevent and manage this disease.

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# Changes in salt reduction awareness and salt intake among hospital staff

## KAKIUCHI Sanae, SAITOH Fumihiro, YURI Makoto, KOSHIZAKI Noriko

#### Background and objective

Background The world's average salt intake is 10.9g per day, and most people around the world consume too much salt, but most people are unaware of the amount of salt they are consuming and the risks associated with it. Oizumi Cooperative Hospital HPH Promotion Committee aims to encourage medical staff themselves to think about and put into practice how to deal with salt effectively, and conducts awareness surveys regarding salt reduction and measurements of salt intake through urine from time to time. We found that even though people were eating out less, the use of takeout and instant prepared foods was increasing in a survey conducted during the coronavirus pandemic, and we proposed ``Six Salt Reduction Challenges'' to rethink the way people eat.

#### Methods/intervention

Method • Survey period is from 2018 to 2023 • Target: Oizumi Cooperative Hospital staff • We analyzed the survey results regarding estimated salt intake through occasional urine and awareness of salt reduction.

#### Results

Result The average salt content measured by staff for Staff measured continuously for 6 years of the survey was 9.7g/day. The downward trend of salt intake, which had stagnated in the corona pandemic era, was restored and decreased by 1.1 g compared to the beginning of the study (P < 0.01). Among the staff who have been continuously measuring for six years, the percentage of staff who are working on "reducing salt" has significantly increased compared to that in the coronavirus pandemic in 2021 (P<0.01). A significant difference was also observed compared to staff who did not (P < 0.05)

#### Conclusions/lessons learned

Conclusion The group of employees whose salt intake was measured for six consecutive years had a change in their awareness of reducing salt intake, and their estimated salt intake had decreased.

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Oral Examination of Food Pantry Users and Future Issues

MTSUURA Yoshimi, TONEGAWA Yuko, TOMIOKA Hitomi, ISHIDA Rina

#### **Background and objective**

In Japan, there are various problems such as access to dental treatment, which tends to be postponed even when people have money, and oral literacy issues. This time, we thought that we could improve literacy by checking the oral cavity of people in difficult conditions and teaching them the importance and methods of self-care, so we conducted dental checkups for food pantry users. We will report on the progress.

#### Methods/intervention

(1) Conduct dental checkups and provide health guidance to food pantry users who wish to use the monthly food pantry. (2) Caries risk check and toothbrush instruction were conducted. Period of implementation (1)October 2023 Dental checkups and health guidance (2) February - April 2024 (3 months) RD test and toothbrush guidance

#### Results

Number of patients examined: 19 (4 children) Denture loose, painful to use, painful to hit \*Denture loose, painful to use, painful to hit 3 missing teeth 4 currently under treatment (including interruption) Of the 19 patients, 4 needed early treatment, 2 had collapsed teeth, and we told them that they needed extraction and treatment, but they refused treatment saying, "I don't want to lose this tooth now. 2 were not fit for denture, so we proceeded with treatment, but 1 was still under treatment, and 1 had a large wound but did not want immediate treatment because she wanted to see how it would look. One patient had a large scar but wanted to wait and see. Other small caries and CR dehiscence were observed, but a certain number of patients had regular checkups in one to two years.

#### **Conclusions/lessons learned**

Two patients led to treatment, but two patients with collapsed teeth were not willing to be treated. In addition, many of the patients who did not receive checkups and neglected their dentures complained after their upper and lower teeth had lost their bite points, suggesting a gap in their perception of treatment.

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Interventions for health promotion in the countryside community -Promoting Green Diet

### **HSIEH Pei-Ju**

#### Background and objective

In order to respond to the problem of population aging, strengthen preventive and supportive services, promote the physical and mental health of the elderly in the community, and implement the spirit of aging in place and community creation, a "community care base" is established in accordance with the "Implementation Plan for Establishing a Community Care Base" to provide preventive care (catering services, health promotion activities, etc.). It can be seen that care bases have flourished in various communities and neighborhoods

#### Methods/intervention

"Green Diet" is a simple change in living and eating habits. It promotes the right amount of food, giving priority to local, seasonal and natural ingredients, and bringing your own environmentally friendly tableware, so as to cherish food and reduce leftover food. The program content includes: (implement the plan 6 months) A. Daily dietary guidelines. B. Fivecolor fruits and vegetables. C. Healthy meal plates for the elderly. D. whole-grains. E. Vegetables and fruits. Oils and nuts and seeds. G. Design healthy lowcarb meal. H. Designed muscle-building meal. ١. Immune enhancement courses. J. DASH (Dietary Approaches to Stop Hypertension) diet courses.

#### Results

After 6 months of joint efforts, the course satisfaction survey found that 23 people participated in the elderly questionnaire, with an average age of 73.26±6.03 years old, the female ratio: 52.1%, the male ratio: 47.8%, and 23 people returned the questionnaire. The questionnaire was effectively returned. The rate is 100%, excluding the non-recycling rate of 0%, and the satisfaction rate is 95.1%.

#### **Conclusions/lessons learned**

Cishan Hospital is a public hospital in the community, providing professional manpower and the independent participation of community residents to establish a diverse community care service model to create a healthy environment with green food for the elderly in countryside communities.

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The Improvement of Health Literacy of Diet based on the NEWSTART Healthy Lifestyle Program in Taiwan

# KANG Sheng-Chieh, WANG Chia-Fen, CHUO Ying-Hsiang

#### Background and objective

NEWSTART healthy lifestyle program is based on eight fundamental principles (Nutrition, Exercise, Water, Sunlight, Temperance, Air, Rest and Trust) to help people achieve optimum health. We conduct the program in Taiwan that includes courses in medicine, nutrition, cooking, physical activity, and mental wellness, fostering the development of healthy habits and enhancing health literacy through hands-on learning.

#### Methods/intervention

The program is 6days at Sanyu Health Education Center, Taiwan. The 1st day, participants are introduced to the environment and measured body composition analysis. On the second day, prebiochemical tests are conducted. Based on the results, nutritionists calculate recommended dietary allowance for each participant and provide them with diet cards. Throughout the program, they learn about nutrients and food substitutions. The cafeteria offers vegetarian (no egg, no milk, no sugar, no unrefined oil, high fiber) in a buffet style. They choose their own meals based on the diet cards to learn how to consume the correct types and amounts per meal. The program also provides knowledge of chronic disease prevention, exercise and mental wellness, encouraging them to take daily walks and spend more time outdoors in the campus sun and fresh air. Post-biochemical tests are conducted on the 5th day to demonstrate their progress. The last day schedule is Sun Moon Lake hiking and participants' feedback time. To assess the effectiveness of the program, we analyze pre and post test data and feedback from participants between 2018 and 2023.

#### Results

The total 311 participants (78 male and 232 female) during 2018-2023. The analysis of pre/post measurements shows that BMI were decreased from 24.8 to 24.0, Glucose AC decreased from 99.9 to 94.8 mg/dl, triglyceride (TG) decreased from 136.5 to 108.4 mg/dl, total cholesterol (TC) decreased from 190.9 to 170.2 mg/dl, and LDL-C decreased from 118.9 to 113.8 mg/dl, all were statistical significance (p <0.05). Willingness to change health behaviors is > 90%.

#### **Conclusions/lessons learned**

It shows that NEWSTART Healthy Lifestyle Program improve the BMI, Glucose AC and blood lipids of participants. This program enables participants to experience and learn how to live healthy, fostering habits and enhancing health literacy.

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Oral Frailty Initiatives at a Health Support Pharmacy. The Power to Eat is the Power to Live.

# NISHIDA Naoko, NAKAJIMA Kimiko, YAMAMOTO Moe, HASHIMOTO Kazuyo, HIROTA Noritake, UTSUNOMIYA Reiko

#### **Background and objective**

Suzuran Pharmacy is a certified Health Support Pharmacy working daily on health education or frail prevention for patients and community. Oral frailty is a concept to raise alarm about negative chain effects that may occur if minor oral deterioration is left unchecked or not properly addressed, leading to oral function decline, eating disorder, or physical and mental deterioration. In order to explore how oral frailty prevention can be addressed by a community pharmacy, we attempted to assess oral frailty of pharmacy users.

#### Methods/intervention

Oral frailty status was assessed using the Oral Frailty Checklist during a four-week period from September 18 to October 14, 2023. At the same time, patients' own pill-taking status was also assessed using the PILL 5 or Japanese version of the Swallowing Assessment Tool.

#### Results

During the study period, 42patients, with 39outpatients and 3home patients, were assessed. On the oral frailty assessment score, 7patients or 16.7percent scored 2 or less meaning unlikely to have oral frailty. 11patients or 26.2percent scored 3 meaning possible. 24patients or 57.1percent scored 4 or more meaning highly likely. All results were normal for swallowing status in PILL 5 test.

#### **Conclusions/lessons learned**

The survey results indicated that a large number of our pharmacy users were at high risk for oral flail, suggesting the need for prevention against oral flail at our pharmacy. Our pharmacists should interview about risk factors of oral flail during medication instruction, provide education on prevention, and promote the use of oral health products. Pharmacists should also evaluate the relationship between prescribed medication and oral frailty and, if necessary, collaborate with dentists.

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The nutrition education focus on diet control and exercise could reduce the risk factors and improve metabolic syndrome

### SUN Jung, LIN Shu-Chi, WANG Chia-Fen, CHUO Ying-Hsiang, HUANG Hui-Ting

#### **Background and objective**

The prevalence of Metabolic syndrome (MetS) has risen dramatically, and it also associated with several diseases. MetS consists of five risk factors, which are highly related to diet and exercise. Therefore, this study aimed to investigate the effects of nutrition education and exercise recommendations on preventing MetS.

#### Methods/intervention

The participants engaged in nutrition education program for eight weeks, where they were learned about portions and classification of food to control dietary intake and total calories. The suggested daily calorie intake depends on personal basal metabolic rate (BMR). Dietitian provided corresponding dietary adjustments and recommendations after participants uploaded their dietary records and photos online twice a week. Additionally, they were also advised to achieve 8000 daily steps or exercise for at least 150 minutes per week. The body biochemical data were collected at the beginning and end of the program. Statistical analysis was performed using GraphPad Prism 8.0.

#### Results

Total 57 participants were at average age about  $44.3\pm1.73$  and BMI averaged  $28.9\pm0.61$  (Table 1). The risk factors of MetS, such as fasting glucose (-5.01 $\pm$ 1.54 mg/dL, P=0.002), triglyceride (-14.09 $\pm$ 6.12 mg/dL, P=0.025), systolic/diastolic blood pressure (-5.71 $\pm$ 1.65 mmHg, P=0.011; -4.12 $\pm$ 1.42 mmHg, P=0.005) as well as waist circumference (-3.03 $\pm$ 0.44 cm, P<0.0001) were significantly decreased. However, the HDL reduced (-2.21 $\pm$ 0.83 cm, P=0.01) after this program (Table 2). Furthermore, we found that the percentage of participants with metabolic syndrome were decreased after eight weeks (47.7% vs. 33.3%) (Table 3).

#### **Conclusions/lessons learned**

This study found that dietary control and regular exercise can improve risk factors for metabolic syndrome. However, we also observed that short-term dietary control can lead to a decrease in HDL. Perhaps extending the intervention period or increasing dietary education could address the issue of decreased HDL. In summary, nutrition education focused on identifying food and portion sizes, along with simple daily step recommendations, could have a significant preventive effect on metabolic syndrome.

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# Rationale and Ethics for a Correct Use of Artificial Nutrition

### RUGGERI Federico, BARBERINI Mariano, ROCCHI Patrizia

#### **Background and objective**

Artificial Nutrition (AN) is a medical procedure aiming to feed patients who cannot independently eat in a natural way. In the Western Countries the contemporary growing of available richness and the progressive aging population arise new practical and ethical welfare issues, particularly in the health care system. AN specialists must be deeply involved in this social process to promote a public awareness and an higher knowledge both to care givers and to patients.

#### Methods/intervention

We reviewed all medical records of 204 patients served by our Home Care System during a three years period from 1st January 2013 to 31st December 2016 in a large city and country area Aim: to observe the prevalence of AN, enteral (EN) and parenteral (PN), in a home cared population. To find correlation with patient type, AN indications and outcomes in terms of body weight gain. To disclose and discuss ethical issues related to our findings

#### Results

AN prescription prevalence was 497/million inhabitants (93% EN, 7 % PN). 65 % patients were female and mean age was 80 years old. Medical indication for AN was: 33% dementia, 18% oncological/post surgical, 15% stroke, 12% neuromuscular diseases, 5% Parkinson desease, 2% bowel failure, 14% not clear indication. The malnutrition index was rated severe in 13%, moderate in 25%, mild in 17% of our population. The remaining 45% without malnutrition, however, presented at least one risk factor. The mean nutritional amount was 1158 +/- 392 Kcal/day . A weight gain was observed in only 40% of prescriptions (means 3,9 +/- 3,6 Kg). A positive correlation was found between AN prescription and age> 75 years old, neurological patients and population density. The medical indication for AN had no correlation with weight gain. The observed complication index was 0,5 episodes/patient/years and the re-hospitalization 0,34 patient/year.

#### **Conclusions/lessons learned**

AN prescriptions varies for a wide range of medical diseases. However, outcomes in term of body weight gain are poor and are mainly correlated with older patient with neurological diseases (dementia and stroke) living in a city area. The international and national guidelines establish that a AN support can be commenced in patients that cannot eat, with an intact bowel and a need of nutrition greater than 30 days. Nevertheless, the technical simplicity requested for starting a nutritional support faces the complexity of psychological, religious and ethical believes on the quality of life not completely accounted and investigated by the scientific literature. In example, whether terminal cancer is a clearly accepted contraindication for AN because the outcome is affected by the neoplastic progression more than nutritional deterioration, other medical conditions like persistent vegetative state still bring a strong level of uncertainty both among care givers and the population.

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Incorporation of a texture-adjusted diet in the hospital meal delivery system

### CHANG Ke-Yu, CHEN Mei-Ying

#### **Background and objective**

Taiwan is expected to become a super-aged society by 2025. The percentage of the elderly population will continue to increase, and maintenance of dental and oral health is associated with the nutritional and health status of elderly individuals. Our hospital performed 2035 dietary opinion surveys between 2022 and

2023. The results showed that dental and oral functions were positively correlated with food intake.

#### Methods/intervention

To prevent oral function from limiting food intake in elderly individuals, our hospital provides six texture-adjusted diets to meet the needs of different chewing and swallowing functions. "Boiled diet" is served with ingredients that can be cooked softer but retain their original shape. "Ground diet" consists of items that are processed into a finely chopped texture using a food processor. "Liquid diets" are categorized into a semi-, medium-, and full-liquid diet. These are based on vegetable porridge and are supplemented with finely chopped soy products and meat. The medium-liquid diet is prepared by beating the semi-liquid diet and retains the food in particle form, whereas the full-liquid diet consists of a homogenized fluid. "Pureed diet" is prepared by adding a thickening agent to the full-liquid diet and serves as a transitional diet after nasogastric tube removal until the initiation of oral feeding for swallowing training.In order to provide better understanding to aid with careful selection of the diet patients required, each nursing station posted meal introduction posters. A meal manual is also placed on the bedside table with a complete introduction meal provided.

#### Results

Statistical data on the number of meals showed that textureadjusted meals accounted for 26.8% of the 2022 total meal orders, 27.9% of the 2023 total meal orders, which indicates that the demand for texture-adjusted diets has increased by year. Results of meal interviews showed that texture adjustment could achieve a 65% increase in food intake.

#### **Conclusions/lessons learned**

Provision of a texture-adjusted diet based on patients' oral and dental functions can overcome the challenges of limited chewing and swallowing functions and poor food intake in elderly patients.

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# Poster session 2.7: Physical activity

Effects of stretching and lowintensity resistance exercise on blood glucose levels in diabetic patients : factors with strong influence

# SAKUMA Yu, MORIGUCHI Masami, TAKAHASHI Mikoto, OHNO Marie, NAITO Takashi, OKIMOTO Hisashi

#### **Background and objective**

The effects of low-intensity exercise on postprandial hyperglycemia in diabetic patients have not been studied sufficiently except walking. Therefore, we examined acute effect of stretching and low-intensity resistance exercise at chair sitting position among diabetic patients in this study.

#### Methods/intervention

Subjects are 1,166 diabetic patients who admitted on general hospital and participated in group exercise (average age 62.4 years old). To collect control data, 43 patients were extracted and measured glucose level on the day before the exercise day, confirming that the day before was a rest day without special activity (the rest-day-measured group, average age 69.8 years). Blood glucose levels at around 120 minutes after lunch were measured as pre-exercise value. After that, about 60 minutes exercise session including stretching and low-intensity resistance exercise was executed and blood glucose levels were measured again as post-exercise value.

#### Results

The all subjects' average blood glucose levels decreased significantly from 194.9 mg/dl to 185.4 mg/dl (p<0.001). Explanatory variables influencing post-exercise blood glucose levels included pre-exercise blood glucose, BMI, class of hypoglycemic medication, gender, and season (R2=0.647, p<0.001). The blood glucose levels in the rest-day-measured group elevated from 179.4 mg/dl to 185.5 mg/dl on the rest day (p=0.377) and decreased from 183.9 mg/dl to 176.9 mg/dl on exercise day (p=0.238).

#### **Conclusions/lessons learned**

In the current study, a variety of factors affected post-exercise blood glucose levels. In most of the patients under various conditions, blood glucose after the low-intensity exercise at chair sitting position decreased and it was thought that substantial effect of this exercise is present. Low-intensity exercise suppressed the increase in blood glucose from 120 to 180 minutes after meals in the rest-day-measured group (who were relatively elderly subjects). Contact: SAKUMA Yu Saka General Hospital JAPAN yu-saku8@zmkk.org

Body Composition and Grip Strength Changes (BCGC) after a 12-week Physical Jogging Program for Health Professionals in a Medical Center in southern Taiwan - Pilot Results of the BCGC Program

# SHEN Wen-Chuan, CHU Nain-Feng, WU Der-Min, CHU Chuan-Man, CHEN Hua-Zhang, YIN Yan-Ru

#### **Background and objective**

Physical inactivity may be associated with obesity and many chronic disorders in adults. This study is to evaluate the effects of physical jogging program on body composition and grip strength changes among health professionals in a medical center in southern Taiwan.

#### Methods/intervention

The Body Composition and Grip strength Changes (BCGC) program is a program that encourages health professionals to increase their daily activities. The participants were asked to record their daily steps for 12 weeks. If their steps reached more than 7500 steps/day and 5 days/week for 12 weeks, then it counts as goals achieved. Body composition and grips strength are recorded every week. Body composition was obtained using a segmental body composition analyzer (TBF-410, Tanita Corp., Tokyo, Japan). Grip strength was measured using digital dynamometers (TKK5101).

#### Results

102 female subjects with a mean age of 42 years (from 26 to 58 ages old) participated in this program. Among them, only 15 subjects fail to achieve the target goals (as 7500 steps/day and 5 days/week for 12 weeks) and the successful rate was about 83.3%. The subjects completed this program had greater weight reduction, decreased BMI and waist circumference, and increased grip strength. For example, the waist circumference reduced from 88.1±9.9 cm to 85.6±9.8 cm (p<0.001) and grip strength increased from 31.4±5.7 kg to 32.6±5.1 kg (p<0.001). However, subjects who failed to complete this program also showed this tendency but with mild attenuated results. Furthermore, BMI is the only factor that can predict those who complete this program with OR 1.75 (95% CI 1.09-2.83) for every increase one unit BMI.

#### **Conclusions/lessons learned**

From this pilot program, we found that physical activity programs such as walking and jogging for more than 12 weeks may be associated with more healthy body composition and increased physical ability (grip strength). It is encouraged to promote physical activity programs in hospital for those with related sedentary working condition.

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Effectiveness of a Virtual Exercise Game for Preventing and Treating Arm Lymphedema in Women with Mastectomy: A Study Protocol

### LIN Jong-Ni

#### **Background and objective**

Approximately 20% of the women treated for breast cancer often develop lymphedema in an upper extremity. Lymphedema can cause uncomfortable sensations and decrease range of motion, daily functions, and quality of life. Numerous conventional rehabilitation programs currently exist, but there is a lack of patient compliance as most of the programs are not appealing. This study aims to develop an interesting exercise game called Hitting Hole Bugs game for women with mastectomy to prevent or treat arm lymphedema.

#### Methods/intervention

This randomized pilot study will enroll 60 women with mastectomy from various hospitals in Taiwan. Participants will be assigned to either the intervention group, which participates in the Hitting Hole Bugs game three times a week for 24 weeks or a control group, which receives a booklet on physical activity to maintain their physical activity routine. A skilled informatics technician will develop a web-based game, resembling children's games, where players use hammers to hit objects emerging from holes in various directions on a virtual machine projected onto a wall. The game consists of three scoring levels, determined by the speed of colorful bugs popping up. Scores are tallied at the game's conclusion. Measurements of arm circumference, range of motion (assessed with a goniometer), muscular strength (evaluated using a dynamometer), the International Physical Activity Questionnaire, and disabilities of the arm, shoulder, and hand will be conducted at baseline and at weeks 4, 8, 12, 16, 20, and 24 post-intervention.

#### Results

Unlike other conventional therapy methods, the Hitting Hole Bugs game offers an engaging treatment option for preventing and treating arm lymphedema. It not only helps prevent breast cancer patients from experiencing arm disability but also enhances the range of motion and muscular strength in the affected arm.

#### **Conclusions/lessons learned**

The results of this study will be able to provide valuable insights for developing interventions for patients with lymphedema.

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# Effects of High-Intensity Interval Training and Protein Intervention in Body Composition of Female College Students

# CHANG Wen-I, WANG I-Jing, KUO Shih-Hsien, CHOU Fan-Hao

#### **Background and objective**

The prevalence of overweight and obese people in the world is growing at any age, and will be an additional burden in the health care system. The purpose of this study was to investigate the effectiveness of high-intensity interval training (HIIT) with protein supplement in college female students..

#### Methods/intervention

We used an experimental design with experimental and control groups to evaluate effectiveness of HIIT. The period of HIIT was 4 weeks, 3 times a week. Data were collected before the HIIT began (pre-test) and at the end of HIIT (post-test). 92 participants were recruited, yet, 28 and 29 participants' data were collected successfully in experimental and control groups respectively. All participants tested for physical fitness and body composition, as well as investigated diet habits, physical activity, body shape by Food frequency questionnaires (FFQs), International Physical Activity Questionnaire (IPAQ-L) and the Contour Drawing Rating Scale.

#### Results

The results of this study showed that experimental group had more positive changes than control group in body shape, such as decreased shoulder width (P < 0.000), chest circumference (P = 0.002), and hip circumference (P = 0.031). Experimental group also had increased body composition index, such as protein weight (P = 0.038), skeletal muscle weight (P = 0.022), and decreased body fat weight (P = 0.001), and body fat rate (P = 0.001), visceral fat area (P < 0.000). Experimental group had less body weight (P = 0.022), body mass index (BMI) (P = 0.019) and obesity percentage (P = 0.031) than control group.

### **Conclusions/lessons learned**

HIIT has effectively improvement not only in body shape and body composition but also participants' body image and, enhance, self-confidence.

Contact: KUO Shih-Haien Fooyin University TAIWAN sachemkuo@gmail.com Using applications (APP) to assist employees in spontaneous exercise a hospital in the south Taiwan as an example

### HUNG Shih-Yu, LEE Pei-Hsuan, YANG Hui Fei

#### **Background and objective**

Hospitals are high-pressure employment environments where work often involves dealing with a variety of acute and chronic illnesses. The psychological quality and physical health of medical staff are even more important. According to hospital statistics, only 31% of employees exercise regularly. The World Health Organization points out that "walking" is the easiest activity to implement. Since 2015, our hospital has promoted walking in the hospital and designed 3 walking routes with slogans and calorie labels. With the advancement of technology, the walking APP will be introduced in 2023, hoping to break through environmental restrictions and encourage employees to walk to achieve health promotion effects.

#### Methods/intervention

The project management period is September-October 2023, with 10 people per group. Through the activity design, participants can complete the feat of hiking around the platform within time, and at the same time achieve the goal of averaging 8,000 steps per day. And use questionnaires to understand changes in participants. In addition to using the walking APP function to assist with step counting, a reward mechanism is also used to encourage continuous walking for 30 days. The reward mechanism is as follows: 1. Online walking around the island: Each group arriving at the designated county or city within the time limit can enjoy local delicacies. 2. Online Community interaction: Participants upload walking photos to stimulate morale within the group. 3. Walking competition: You can check the number of walking steps within and between groups every day.

#### Results

A total of 480 employees participated, and each person walked an average of 16,278 steps per day, which translates to approximately 153,718 kilometers. 54% of the participants said they had developed exercise habits, 51% felt that their physical fitness or posture had improved, 29% felt that their lives had become more purposeful. After the event, 87.8% of the participants said they were done, will continue to walk in the future.

#### **Conclusions/lessons learned**

Promoting online walking as a feasible health promotion mechanism within the organization should be paired with interesting and predictable activity plans to help participants experience the benefits of exercise and develop good exercise habits.

# Poster Sessions 2: Thursday, November 7, 2024, 14:25-15:45

### Contact:

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Discussion on using smart walking APP to enhance the effectiveness of walking for the elderly in the Community Care Station

# LIANG Shiow-Ching, WU Chih-Yu, YEN Chia-Chi, HUANG Ming-Jen, CHANG Ko

#### **Background and objective**

Walking is an activity that does not require equipment or special skills. It is a simple and feasible healthy behavior. Community Care Station promote walking activities and plan with smart apps, competitions, incentives and other elements to promote walking behavior among the elderly, enhance their health knowledge and skills, and achieve the goal of delaying disability. Obtain the authorization from the Health 365 APP manufacturer to conduct app teaching and promotion. This article explores the experience of using APP to promote walking in community Care Station, hoping to serve as a reference for future activity design and promotion.

#### Methods/intervention

This article is a Community Care Station in Kaohsiung City,Taiwan,promoting walking activities for a period of 5 months.A questionnaire survey was used, using a five-point scale.The questionnaire content included satisfaction with three major items:walking activities,APP usage,and walking benefits. Descriptive statistics were used to collect sociodemographic data of the research subjects and analyze three major items of satisfaction.

#### Results

A total of 18 people participated, and the questionnaire response rate was 100%.22% were men, 78% were women, 61% were over 71 years old, and 72% were above high school. The satisfaction rate for the walking APP was 81.6%, the satisfaction rate for the walking activity was 80.2%, and the satisfaction rate for the benefits of smart walking was 78.0%. Men are more satisfied than women with incentives and stronghold recognition, while women are more satisfied with explanations to staff. People over 71 years old are more satisfied with staff explanations and encouragement measures. The t-test showed that there was no significant difference between sociodemographics and satisfaction.

#### **Conclusions/lessons learned**

Statistics show that the elderly are satisfied with the activities. There are differences in satisfaction between genders and age groups, the diversity of the elderly population, and the many types of walking apps. The choice of a single app cannot yet meet the needs of the elderly.

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Exploring the Results of Physical Fitness Tests among Healthcare Workers in Taiwan: A Case Study of a Hospital in New Taipei City from 2016 to 2023

# SHYU Rong-Yaun, SHAW Cheng-Yu, WANG Shu-Guei, HUANG Siang-Wei, CHEN Shu-Jun, LI Fu-Ching, HUANG Bin-Han

#### **Background and objective**

Advocation of workplace health promotion enhances health and national competitiveness (MOHW,2023). Research had confirmed the benefits of workplace health promotion including reduce job quitting or sick leaves, aid in work performance and health status, which decrease healthcare insurance expenses. With less stress and better job satisfaction, the company may enhance its value.These benefits extend to families and communities (MOHW,2018). The study was conducted from 2016 to 2023 to understand the relationship of physical fitness of medical workers according to gender, age, and professions, and to explore the relationship with each health fitness indicators, including body mass index (BMI), waist-to-hip ratio (WHR), flexibility (FL), muscular endurance (ME), and cardiovascular endurance(CE).

#### Methods/intervention

The data was collected with a total of 8031 records. After the exclusion of erroneous, missing values, and assorted to individualised dataset, 2769 records were available to analyse the continuous change of one's physical condition. Independent t-test was used to exam the relationship between health fitness indicators and gender. ANOVA test was used to investigate the relationship of the indicators with age groups and professions. Bonferroni test was used for analysing the results among comparison.

#### Results

The age grouped between 20-29 had a better result in all indicators. Obesity in age 40 and above reached nearly 50%. As age increased, weight, BMI, and WHR deteriorate, suggesting a decrease in metabolism. Healthcare institutions should emphasise the importance of health by promoting exercise programs and dietary lessons for employees. ME and CE showed significantly improved after 2021. The hypothesis include wore isolation gown and N95 under huge workload, used stairs over elevators to avoid cluster infection, and increased exercise due to improvement of health awareness during pandemic, therefore ameliorating ME and CE scores.

#### **Conclusions/lessons learned**

Intense stress and high risk environment deteriorates health condition of medical workers over time, yet they should maintain good health for coping an increasing demand of medical services in the future.

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The Effect of Comprehensive Respiratory Exercise Program on Exercise Capacity in Patients with Obstructive Sleep Apnea: Preliminary Results

## ONG Jun-Hui, HUNG Ching-Hsia, LIN Cheng-Yu

#### **Background and objective**

Obstructive sleep apnea (OSA) involves recurrent upper airway collapse during sleep. It leads to an increase in healthcare costs and elevates risks for cardiovascular disease and dementia. OSA patients exhibited a reduction in maximal oxygen consumption (VO2 max). Therefore, this study seeks to evaluate the impact of a comprehensive respiratory exercise program on exercise capacity, respiratory muscle strength (RMS), sleepiness level, and sleep quality in OSA patients.

#### Methods/intervention

OSA participants were randomly assigned to either the comprehensive respiratory exercise programs or the control groups. The intervention group engaged in oropharyngeal exercises, respiratory muscle training, aerobic training, and sleep education for 3 months. They were given a force-sensing resistor device to facilitate home oropharyngeal exercise. This device also allowed therapies to monitor participant's adherence to the exercise. The control group received only sleep education. Polysomnography, exercise capacity, RMS, sleepiness level, and sleep quality were assessed before and after the interventions.

#### Results

Fifteen participants were enrolled in the study. Significant differences between groups were observed in VO2 max, maximum workload during VO2 max, RMS, tongue strength, and endurance, with the intervention group showing greater improvement (p<0.05). No significant differences were noted between groups in polysomnography data and sleepiness level. Notably, there was a significant decrease in stage III sleep (%) in the control group (p<0.05). Compared to the baseline, the intervention group showed an improvement in the VO2 max, RMS, sleep quality, tongue strength, and endurance (p<0.05)

#### Conclusions/lessons learned

After 3 months of a comprehensive respiratory exercise program, participants exhibited significant improvement in exercise capacity, RMS, sleep quality, tongue strength, and endurance.

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The effectiveness of early intervention in patients with delirium in the intensive care unit.

### LIU Peng-Yi, CHEN Shu-Nuan

#### Background and objective

The environmental isolation and poor medical practices in the intensive care unit have a physical and mental impact on patients, leading to the occurrence of delirium in the intensive care unit. Clinically, the incidence rate of delirium caused by the intensive care unit is 40-76%, and it often occurs 24-48 hours after admission to the intensive care unit. The intensive care unit mainly focuses on the patient's acute physiological problems, and often ignores treatment and care of patients with delirium. Early intervention remains a subject of controversy and discussion, and the effectiveness of early intervention varies. The nursing unit wishes to conduct a systematic review and analysis of the literature to explore the effectiveness of early intervention in patients with delirium.

#### Methods/intervention

Through a systematic review, this article used Chinese and English keywords to search databases such as PubMed, Cochrane Library, CINAHL, EMBASE, and Airiti Library. After eliminating duplicate and inconsistent literature, a total of three articles were included to conduct a high-quality literature review. To explore the effect of early mobilization in the treatment of delirium in ICU patients during hospitalization. The implementation period is from March 1 to 31, 2024.

#### Results

From March 1 to March 31, 2024, Included 52 critically ill patients in the ICU, There is no chance of delirium.

#### **Conclusions/lessons learned**

Early mobilization intervention can significantly improve the delirium of patients in the intensive care unit, with a side effect of increasing the patient's neuromuscular strength. However, the brief intervention duration is limited by this article. Early mobilization is expected to be offered in the intensive care unit, given the benefits of early mobilization without harming the patient's body. Implementation improved patient quality.

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Effectiveness of community multicomponent intervention programs on delaying disability in mild dementia cases

# CHIANG Chien-Wen, CHENG Wan-Yun, OU Pei-Tsu, HUANG Shu-Li

#### **Background and objective**

Community dementia service hubs aim to provide continuous care services for dementia patients and caregivers, delaying disability progression and institutionalization. This study investigates the effects of multi-component intervention programs on delaying disability in mild dementia cases.

#### Methods/intervention

The study involved 23 mild dementia cases (CDR 0.5-1), averaging 77.4 years old (±10.1), participating in an 8-month intervention program, five days a week, three hours per session. The intervention comprised cognitive stimulation (e.g., auditory, competitive or cooperative games, memory, and association) and physical training (e.g., elastic ball, resistance ball, mat exercises, rope ladder, etc.). Effectiveness was analyzed using the Wilcoxon sign rank test on pre- and post-intervention data of the IADL (Instrumental Activities of Daily Living) scale and physical fitness.

#### Results

The subjects' total IADL score was 24. Initially, 4 individuals were non-disabled (16-24 points), with 3 remaining so post-test; 11 had mild disability (8-15 points), of which 11 remained so posttest; 8 had severe disability (0-7 points), increasing to 9 post-test. Overall, 21 individual's maintained functionality, with 2 experiencing a decline. There was a trend towards worsening IADL (mean pre-test 10.3  $\pm$  5.1, mean post-test 9.6  $\pm$  4.7, p = .046). Regarding physical fitness, improvements were observed in various measures pre- and post-tests, with statistical significance (p < .05), except for grip strength (R) and left shoulder joint flexibility.

#### **Conclusions/lessons learned**

The study suggests that a community multi-component intervention program can moderately delay disability in mild dementia cases. While there was a trend of declining overall IADL scores, a significant proportion of cases maintained their functionality. Further research is needed to determine if functional decline is directly linked to disease progression.

Contact: YING-YING Lee TAIWAN community@hch.gov.tw Effect of Vivifrail multicomponent intervention on physical performance of older adults with different frailty status: - an example of Taiwan, Hsin-Chu

### LEE Ying-Ying

#### **Background and objective**

Frailty is common among the elderly and is associated with increased rates of falls, disability, hospitalization, and mortality. The Vivifrail Project offers tailored exercise prescriptions based on seniors' physical activity levels to delay frailty onset. Therefore, this study aims to investigate whether implementing Vivifrail Project can improve physiological performance and functional fitness in the elderly.

#### Methods/intervention

The study was conducted on the elderly, categorized into four levels based on Short-form Physical Performance Battery (SPPB) results. Participants will be matched with appropriate Vivifrail exercise prescriptions according to their classification. The exercise program includes mobility/walking, strength training, balance exercises, and stretching routines, conducted three times a week for 3 months, with each session lasting 60 minutes.

#### Results

In this study, a total of 31 participants were enrolled, with an average age of 77.0 years. Following the Vivifrail intervention, scores on the SPPB increased from 10.3±2.6 to 11.0±2.2 (p=.03). Significant improvements were observed in the 4-meter walk test (4.9±3.2 vs 4.4±3.6, p=.04), chair stand test (±3.2 vs 4.4±3.6, p<.001), and 30-second arm curl test for functional fitness (18.1±4.2 vs 22.4±6.8, p<.001). While grip strength for both left and right hands did not reach statistical significance (18.2±5.8 vs 18.5±6.1, p=.65; 18.7±6.3 vs 19.7±6.6, p=.19), marginal improvements were observed in the mean values between preand post-intervention assessments.

#### Conclusions/lessons learned

Taiwan is facing the inevitable arrival of an ultra-aged society, prompting the government to actively promote the Vivifrail Project. It serves as an international reference for community and hospital-based interventions targeting frailty and falls among the elderly. This program offers a simple and safe exercise direction for seniors based on their frailty grading. Findings from this study indicate that it effectively enhances balance, gait, and upper and lower limb strength in the elderly.

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### Poster session 2.8: Mental Health

Experiences in Providing Psychological Counseling Services to Healthcare Professionals During the COVID-19 Pandemic

### LIN Yi-Chun

#### **Background and objective**

During the COVID-19 pandemic, healthcare professionals practicing in hospitals faced significant physical and mental stress. In response, our hospital applied for government initiatives specifically targeting healthcare professionals who experienced emotions or symptoms such as anxiety, depression, unease, distress, or insomnia due to the impact of the pandemic and patient care. We provided free psychological counseling services to assist in improving their mental health.

#### Methods/intervention

We used various communication channels like meetings, emails, and posters to promote counseling services. Staff were encouraged to schedule confidential counseling sessions with psychologists by phone, ensuring accessibility and privacy. Two psychologists provided six free 50-minute sessions each, tailored to individual needs. Participants completed a pre-counseling assessment using the BSRS-5 for objective distress levels. Postcounseling assessments and a satisfaction survey gathered feedback on service quality and participant experiences, analyzing data for impact on mental health and satisfaction.

#### Results

1.BSRS-5 results showed improved mental health among participants. Specific areas like sleep, anxiety, and self-concept were positively affected by counseling, indicating the effectiveness of the intervention. 2.The results of the satisfaction survey also indicate that participants are highly satisfied with the process of psychological counseling services. They also find that psychological counseling has been very helpful to them. Overall, they are very satisfied with this program.

#### **Conclusions/lessons learned**

Our experience underscores the critical role of accessible and proactive psychological support services in safeguarding the mental health and resilience of healthcare professionals during times of crisis. These findings have significant implications for future crisis management strategies and highlight the need for continued investment in mental health resources to support front line workers and enhance overall healthcare system resilience.

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# The Impact of the COVID-19 Pandemic on Hospital Resilience and Coping Strategies

### LAI Fang-Tsu

#### **Background and objective**

In today's healthcare, resilience is crucial for staff mental health, especially amidst the challenges of the COVID-19 pandemic. Our institution conducted six patient safety culture surveys from 2011 to 2022, using pre- and post-pandemic data to inform policy decisions.

#### Methods/intervention

Established in 2009, the TPSCs assist healthcare institutions in monitoring patient safety culture. Our institution conducted six whole-hospital surveys from 2011 to 2022, covering eight dimensions and 46 items, including resilience and work-life balance. The resilience dimension gauged colleagues' perceptions of occupational health and coping abilities, encompassing emotional exhaustion, depersonalization, and personal accomplishment, with 22 items in total.

#### Results

In 2022, the lowest positive response rates were in job satisfaction (41.5%), working conditions (36.2%), and resilience (12.8%). Comparing post-COVID-19 (2022) with pre-pandemic (2019) years, resilience decreased by 4.5%, and work-life balance by 0.2%. Certain units, like anesthesia, operating rooms, and emergency departments, exhibited lower resilience. The nationwide survey by the Taiwan Patient Safety Council also noted declining resilience trends (20.6%, 19.4%, and 15.6% from 2020 to 2022). Significant differences (\*p < 0.05) in positive response scores for 19 items were observed between 2019 and 2022, with resilience being a major concern (9 out of 19). Institutional management prioritizes improvements in resilience, job satisfaction, clinical staffing (adjustments during pandemics), and patient safety culture. The nationwide survey by the Taiwan Patient Safety Council revealed a declining trend in resilience from 2020 to 2022, with figures of 20.6%, 19.4%, and 15.6%. Our institution also experienced decreasing resilience.

#### **Conclusions/lessons learned**

This study shows the link between hospital staff resilience and work-life balance, crucial for mitigating work-related stress. Amid pandemic challenges, support systems need reinforcement, with unit supervisors fostering communication to tackle resilience issues. Institution-wide care strategies must cater to specific units and roles.

#### Contact:

LAI Fang Tsu Tainan Municipal Hospital taa0059@gmail.com An exploration of the process of using the concept of mental rehabilitation to intervene in community art exhibitions in psychiatric day care

### CHEN Shu-Fen, WU Wen-Cheng, HUANG Hui-E

#### **Background and objective**

The important issue of mental rehabilitation is to help patients maintain a stable condition, return to their original lives, and integrate into the community. The purpose of this study is to explore the process of using the concept of mental rehabilitation to intervene in community talent art exhibitions in psychiatric day care.

#### Methods/intervention

A cross-sectional research method from January to June 2023, 98 people who participated in community art exhibitions during day stays at a psychiatric teaching hospital in southern Taiwan were collected. The related processes of participating in community art exhibitions for 6 months included: Art Creation, arrangement, guidance and opening dynamic performances, etc. Data collection was based on direct observation, individual interviews, focus support groups and structured questionnaires.Quantitative data were collected using SPSS25.0 Software analysis, descriptive statistical analysis and crossvalidation.

#### Results

87 valid questionnaires were collected, and the results of the research data analysis showed that there was a significant difference.Compared with passive people, those who actively participated in creation and performance were 80% more likely to adhere to their ideals and work hard to achieve their goals. It is believed that activities increase vitality in life by 92%, and 89% learn to find solutions to problems, and 92% think they have partners and supporters. Participating in activities can make people more energetic. 87% of people felt stable, and 82% believed that their ability to cope with unexpected events had increased.

#### **Conclusions/lessons learned**

Empowerment by the art creation exhibition is a multi-faceted process that guides the community to accept mental illness cases, with the concepts of mental recovery, empowerment and responsibility as normal people.

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# The Illness perception of depressive disorder in college students of Taiwan

### TSAO Tien-Yi, RONG Jiin-Ru

#### **Background and objective**

Depressive disorder is a common mental disorder. Globally, it is estimated that 5% of adults suffer from the disorder. Estimates put the rise in depressive disorders at more than 25% during the first year of COVID-19. Only one in five people with depression seek help, and many more are believed to be untreated. One of the reasons for not receiving treatment is the lack of understanding of depression. The objective in this study is investigate the illness perception of depressive disorder in college students of Taiwan.

#### Methods/intervention

This was a correlational cross-sectional study, data were gathered from colleges student by self-reported questionnaires and descriptive statistics and correlational analyses. A survey by sampling from one colleges of students (N=210). The structural scales included demographic details, the Illness Perception Questionnaire(IPQ).

#### Results

All subjects' average age was 19.5 years. Among them, 64% of the depressive symptoms (14 items) were correctly identified with a 50% accuracy rate. In addition, the main causes of depressive disorder include:1. Family problems or excessive worry, 2. Stress or worry, 3. Overwork and chronic illness or physical impairment such as kidney dialysis and amputation.

#### **Conclusions/lessons learned**

If depression is not actively treated, the symptoms may become more severe and even increase the risk of suicide. The results can be used by nursing educators to design courses on depressive disorder for young people and students. This will raise young people's awareness of depression and help those around them. The study was registered with Institutional Review Board (22MMHIS212e).

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Health promotion through fitness for individuals following severe and persistent mental illness in community

LEE Shu Chun, TENG Teng Naiyu

#### **Background and objective**

The recovery model is widely used in the field of psychiatric rehabilitation, emphasizing that people with mental illness can improve their life and health potential. The Phoenix Cup, a sports competition, is organized by a psychiatric hospital in Taiwan and aims to promote social diversity and tolerance and raise public awareness of mental illness. Exercise is not only about strengthening the body, but also about stimulating the mind. Through sports competition, we can enhance the self-confidence and self-esteem of people with mental illness, demonstrate the results of recovery and the positive impact of sports on mental health.

#### Methods/intervention

The sports events focus on cognition, coordination, and physical fitness, fostering a spirit of active struggle and courage. Regular exercise helps establish healthy lifestyles and habits, improving mental and physical growth. Additionally, interpersonal interactions and group competitions naturally arise, enhancing cooperation and social skills.

#### Results

A total of 655 individuals with mental illness participated in the 2023 Phoenix Cup. Prior to participating, athletes were required to undergo selection processes within their respective counties and cities, followed by team training sessions. The competition included five events where the athletes strived to achieve their best results. Participants reported two main outcomes: improvements in physical fitness and the emotional support and care they received. Through the competition, individuals with mental disabilities learned the importance of regular physical training, teamwork skills, and the value of mutual encouragement and support. Qualitative interviews further revealed that the majority of participants expressed a willingness to continue their physical training and participate in the following year's competition.

#### **Conclusions/lessons learned**

Taiwan's mental health policy supports psychiatric hospitals in organizing sports competitions. These physical activity competitions help individuals with mental illness to prioritize their physical fitness and develop regular healthy habitutation.

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# Associations between depressive symptoms and outcomes in patients with heart failure

### **HUNG Shihyun**

#### **Background and objective**

Heart failure patients have significantly higher levels of depression than the general population, which increases hospitalization rates and mortality. Depression also affects their

self-care post-discharge, making adherence to medical advice difficult, leading to disease deterioration and reduced quality of life. This study investigates the relationship between Patient Health Questionnaire (PHQ-9) depression scores and the clinical characteristics and prognosis of heart failure patients.

#### Methods/intervention

This study included heart failure patients with a left ventricular ejection fraction of less than 40% who were hospitalized in a medical center from January to December 2019. All patients took the PHQ-9 test before discharge. Clinical characteristics and prognosis data were collected, including age, gender, heart failure severity, hospitalization rates, and mortality.

#### Results

The study included 60 patients (44 males and 16 females); 28 were NYHA II and 32 were NYHA III. Results showed a significant correlation between PHQ-9 scores and patients' age, gender, heart failure severity, hospitalization rates, and mortality risk. Female patients and those with NYHA III had higher depression scores (p<0.01), indicating depressive symptoms might negatively impact prognosis.

#### **Conclusions/lessons learned**

It's crucial to consider the psychological state of heart failure patients during treatment and provide appropriate psychological support to improve their quality of life and prognosis. Future research should increase sample size and use more assessment tools to gain comprehensive psychological health information. Early intervention through team-based treatment, medication, dietary control education, rehabilitation, and case manager guidance during hospitalization and regular post-discharge follow-ups can help patients manage their disease, reduce depression, and improve quality of life.

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Identifying the criteria and level of the psychiatric patients' violence risk by applying natural language processing

### CHEN Shing-Chia, WU Jia-Min

#### Background and objective

Social stigma is an important issue for mental illness and psychiatric patients' aggression. To reduce inappropriate management, systematically identifying violence risk and eliminating inequities resulting from differences in psychiatric patients' situational cues, behavioral precursors, and risk factors are necessary. The new trend of artificial intelligence technology is currently lacking in the clinical application of psychiatric patients' violence risk identification. This study aims to apply natural language processing (NLP) to identify the criteria and level of the psychiatric patients' violence risk for clinical services.

#### Methods/intervention

Starting from the aggressive behaviors and related risk factors of patients in two acute psychiatric units of a teaching hospital in northern Taiwan, NLP is applied to analyze the content of abnormal event reports using ChatGPT3.5.

#### Results

The analysis results reveal that there were 66 incidents of violent attacks by inpatients towards others, with 35 cases (53.0%) involving males and 31 cases (47.0%) involving females. The average age was 33.5 years old (standard deviation 13.0). In terms of severity classification, the majority were classified as level three (65.2%), followed by level four (19.7%), then level two (12.1%), and finally level one (3.0%). The average severity level was 3.02 (standard deviation 0.66), indicating a tendency towards more severe cases.

#### **Conclusions/lessons learned**

The results could provide the sharing and applications of psychiatric clinical services for violence prevention.

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# The influence of visual impairment on the prevalence of depression among the elderly

### KUNG Chuan-Yu, WANG Shun-Mu, CHEN Chia-Yu, LI An-Chi, HUANG Hsiu-Ling

#### **Background and objective**

Visual impairment among older adults can profoundly impact their daily routines and social interactions, underscoring the importance of investigating depression in this demographic. This systematic literature review aims to delve into how visual impairment influences depression rates among the elderly.

#### Methods/intervention

Utilizing keywords such as visual impairment, vision loss, blindness, and geriatric depression, literature spanning from January 2000 to December 2023 was systematically searched across databases including PubMed, EMBASE, Cochrane Library, Science Direct, Wiley Online Library, CEPS/CETD, among others. The quality of selected studies was evaluated using the evidence levels proposed by Greenhalgh (1997) and the modified Jadad scale introduced by Oremus et al. (2001). Analysis was conducted using Review Manager 5.3 software.

#### Results

A total of 153 articles were identified through the literature search. Following an initial screening of abstracts, 88 articles were deemed eligible for further review. Upon comprehensive assessment of full texts, 31 articles met the inclusion criteria, excluding those with inaccessible samples or small sample sizes (<100 individuals). Four studies were subjected to analysis and synthesis, yielding an average Jadad quality score of 6.8. The collective sample encompassed 2,237 individuals, among whom 375 exhibited symptoms indicative of depression. Meta-analysis findings indicated a heightened prevalence of depression among visually impaired elderly individuals compared to the general elderly population (14.4-39.3% vs. 8-16%).

#### **Conclusions/lessons learned**

As the global population ages and life expectancy increases, the issue of visual impairment in the elderly is garnering increased attention. Healthcare professionals should prioritize addressing the psychological well-being of visually impaired elderly individuals. The findings from this literature synthesis can serve as a valuable resource for psychological education initiatives targeting this demographic.

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The effect of using meditation mobile app on nurses caring for COVID-19 patients

### TSAI Su-Hui, CHANG Wei-Cheng

#### **Background and objective**

The COVID-19 pandemic has strained healthcare systems and exhausted medical resources. The condition of patients with COVID-19 can be unpredictable, and the number of cases has increased rapidly, pushing the limits of current medical treatments. Various factors contribute to high stress levels among nurses caring for COVID-19 patients. In this situation, we considered that a meditation mobile app could be beneficial for nurses during the COVID-19 pandemic. This study aimed to assess the effect of a mobile meditation application (app) on the mental health and work burnout of nurses caring for COVID-19 patients in Taiwan.

#### Methods/intervention

We conducted a randomized controlled trial at a medical center in North Taiwan. Nurses caring for COVID-19 patients were randomly assigned to the intervention group and the control group. The intervention group received the mobile meditation app for 30 days, while the control group received standard support. The primary outcome was the level of mental health measured using the Brief Symptom Rating Scale (BSRS-5). The secondary outcome was work-related burnout assessed using the Copenhagen Burnout Inventory (CBI), and satisfaction with the mobile app.

#### Results

From February to March 2022, 48 nurses were randomized in this study – 23 in the meditation app group and 25 in the control group. The characteristics, such as gender, age, work experience, etc., of the participants were similar in each group. The primary outcome of mental health was significantly better in the intervention group (mean difference: -2, p<0.05). The secondary outcome of work-related burnout was also lower in the intervention group, but the difference was not statistically significant (mean difference: -2.17, p-value: 0.76). The satisfaction with the mobile app was 92% in the intervention group.

#### **Conclusions/lessons learned**

The meditation mobile app proved to be a valuable tool for enhancing the mental health of nurses during the COVID-19 pandemic. Its ease of access and positive impact make it a worthy tool for promotion in healthcare settings.

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# Mental Health Initiatives for Hospital Employees Amid the COVID-19 Pandemic

### NAKASHI Takahiro, NAGANO Yuri

#### **Background and objective**

The outbreak of the novel coronavirus disease (COVID-19) has raised concerns about its impact on mental health in the workplace. This study aimed to reflect on the mental health status of employees at our hospital during the COVID-19 pandemic, review the measures implemented, and consider appropriate future strategies.

#### Methods/intervention

Since the onset of the COVID-19 pandemic, our hospital has established a healthcare department dedicated to supporting the mental health of staff. This department involves occupational health staff and members of the occupational safety and health committee, promoting information sharing and collaboration with relevant departments. Furthermore, we expanded counseling services provided by clinical psychologists to support employees believed to be experiencing high levels of mental stress. Training sessions targeting managerial staff were also conducted, providing an opportunity to recognize the importance of self-care, inter-employee communication, and support systems.

#### Results

Following the COVID-19 pandemic, our hospital witnessed an increasing trend in staff absences due to mental health issues among staff. However, initiatives such as the healthcare department, promotion of self-care, and training sessions have proven effective. Particularly, the training sessions for

managerial staff received active participation and contributed to a deeper understanding of the need for improved communication and support systems.

#### **Conclusions/lessons learned**

Mental health measures in the workplace during the COVID-19 pandemic are crucial, requiring appropriate interventions. The importance of self-care and establishing support systems for managerial staff is particularly emphasized. It is necessary to continue efforts to maintain and enhance employee health and to implement effective mental health measures.

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Experience of mental health care for health workers at Health Promotion Hospitals (HPH) in Korea: Based mental health screening

# CHU Jieun, KIM Hanna, AN Eunseon, CHOI Changkeun, JOO Yunjung, LEE Eun-Hee, KIM In-One

#### Background and objective

The mental health care of health workers who interact with patients in Health Promotion Hospitals(HPH) is very important in maintaining a healthy hospital environment and providing quality services. Support for worker's mental health care, such as mental health screening, psychological counseling, and stress management can prevent burnout of employees and enhance job satisfaction, and ultimately lead to patient satisfaction.

#### Methods/intervention

The 594 employees of Korea Association of Health Promotion(KAHP) participated programs for mental health screenings from June 12th to June 18th, 2023. The participants received specialized psychological counseling services provided by certified psychiatric counselors according to the mental health screening results. The psychological counseling was conducted non-face-to-face methods through phone calls. The mental health screenings was conducted using 89 items assessing symptoms of depression, suicidal risk, sleep problems, burnout, and other related issues. The results of metal screening were classified into four levels: 'Healthy', 'Moderate', 'Caution', and 'Serious'.

#### Results

Among the 594 participants, 75.8% was healthy state of mind, classified under the 'Healthy' and 'Moderate' levels, 24.2% was identified to be in need of mental health care at the 'Caution' and 'Serious' levels. Psychological counseling services were provided to 26 people who wished for psychological counseling among 144 people who appeared at the levels of 'Caution' and 'Serious'. Seven of the 26 employees (31.8%) who received psychological

counseling showed positive changes during the counseling process. Among 129 employees who participated in the satisfaction survey, 79.1% participants was satisfied with the mental health care service, and 76.7% participants wished to support regular mental health care services.

#### **Conclusions/lessons learned**

Mental health screenings and psychological counseling services had a positive effect on mental health of health workers. HPH will need to operate continuous mental health care for employees who are vulnerable to mental health.

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# The Initiative to Enhance Mental Health Care for Young Pharmacists

### WADA Norihiro, MATSUMOTO Tomoko

#### Background and objective

In Japan, in recent years, pharmacy operations have become more diverse, and the skills required of pharmacists have also become more varied. Since FY2019, our organization has been conducting mental health care training and interviews for new pharmacist employees by requesting outside lecturers with the objectives of "facilitating human relations in pharmacy" and "understanding the meaning of working as a member of society". This report describes the activities that have been undertaken to date.

#### Methods/intervention

The training was commissioned to Ms. Tomoko Matsumoto (KANE Co., Ltd.), a pharmacist who conducts stress management training for medical professionals. From FY2019, new pharmacist employees receive 6 sessions of classroom lectures on the meaning of working as a member of society, knowing oneself, knowing the differences from others, stress management, and the need to maintain motivation, and are interviewed six times per year. In addition, second-year pharmacists are also interviewed six times per year, and third- and fourth-year pharmacists are interviewed four times per year.

#### Results

The turnover rate of pharmacists after 3 years of employment was high at 72.7% for the 4 years prior to FY 2019, but after the introduction of mental health care for pharmacists, the turnover rate of pharmacists after 3 years of employment decreased to 27.3% for the 3 years after FY 2019.

#### **Conclusions/lessons learned**

Since FY 2019, the turnover rate of pharmacists after 3 years of employment has decreased significantly, and we believe that improving mental health care for young pharmacist employees will decrease the turnover rate of young pharmacist employees. In addition, the education of new pharmacists at insurance pharmacy is often On-the-Job Training. Learning about the mindset as a member of society and psychological knowledge in classroom lectures is valuable experiences that can be applied when problems arise in their workplace. In particular, knowing the differences from others will lead to a cycle in which they will be able to provide more empathetic guidance when they take on leadership positions through their experiences, which will strengthen our organization's capability.

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Risk of hospitalization in patients with depression association with sociodemographic status: a retrospective cohort study in Taiwan

### LIN Ming-Hung, LIU Hui-Ping

#### **Background and objective**

Depression is a major public health problem, the incidence of which is increasing and can lead to various physical and emotional problems. The hospitalization risk in patients with depression associated with socioeconomic status (SES) deserves study using large population data. We used insurance claims data of Taiwan to assess the depression incidence and evaluate the risk of hospitalization for depression and other causes.

#### Methods/intervention

We used real-world population data to estimate the sex-specific annual incidence of depression in Taiwan. Females to males incidence rate ratios were calculated by SES. A nested casecontrol analysis was further applied to estimate the hospitalization risk for the depression cohort and compared those hospitalized for depression and other causes by SES. For the diagnostic accuracy of the depression cohort, we required patients to have a record of at least 1 hospital admission or 2 outpatient visits for depression.

#### Results

We identified more men than women with depression newly diagnosed in 2000-2018. Females constantly had higher depression incidence than males both in decreasing trends annually. The depression incidence increased with age and the overall incidence was 1.5 greater for females. However, the hospitalization risk in the depression cohort was higher for male patients with an adjusted odd ratio (aOR) of 1.42 (95% CI=1.42, 95% CI=1.41-1.43) compared to females, and higher for patients of 18-29 years old and the elderly. Males were more likely than females to be hospitalized for depression than for other causes (aOR=1.66, 95% CI=1.63-1.69), with the risk decreasing sharply with age with an aOR of 10.7 (95% CI=10.3-11.1) for patients of 18-29 years old compared with those aged 75+ years. The Kaplab-Meier method estimated cumulative hospital admission rates rose sharply in the first 2 years after the diagnoses of

depression in both sexes and were higher for the association with other causes than with depression.

### **Conclusions/lessons learned**

The risk of developing depression is greater for women than for men and increased with age. However, intervention for reducing hospitalization in depression patients may need to put greater efforts for males and younger ones.

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# Poster session 3.1: Socially disadvantaged groups and minorities health

Boosting Vaccination Among Vulnerable Women in Cilegon City: How Social Media at Rumah Vaksinasi Enhance Engagement and Equity

# PRATIWI Jasmine Ariesta Dwi, RIYANDANI Edo

#### **Background and objective**

Background: Human papillomavirus (HPV) significantly affects Indonesian women, with about 4% carrying high-risk HPV types. Despite Indonesia's enhanced HPV vaccination efforts, disparities and limited public understanding remain, particularly in Cilegon City, Banten Province, Indonesia. Objective: To improve health equity among vulnerable women in Cilegon City by enhancing vaccination services, addressing barriers such as vaccine access, hesitancy, and logistical issues.

#### Methods/intervention

Rumah Vaksinasi Cilegon's ETAM (Education, Training, and Monitoring) strategy utilizes social media, particularly Instagram reels, to educate and engage the community. Training involves equipping selected ambassadors to act as online vaccination advocates, supplemented by online peer groups and collaborations with government bodies for broader reach and reinforcement.

#### Results

Since the start of 2023, Rumah Vaksinasi Cilegon has developed a following of 2,000 on Instagram, with a notable 10% increase in vaccination uptake. A specific Instagram reel reached 542 accounts, significantly boosting engagement.

#### **Conclusions/lessons learned**

Adopting an equity-focused approach in vaccination efforts has enhanced health outcomes and reduced disparities. Key lessons include the importance of cultural sensitivity, addressing social determinants of health, and involving the community in health interventions.

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# A Pilot study of Homeless Care Program Project at a Regional Hospital

# LIAO Miao-Yu, HSIAO Chi-Yi, HSU Ching-Jui

#### Background and objective

Homelessness is a critical social issue globally, stemming from various factors such as unemployment, mental health issues, low education levels, family dysfunction, and substance abuse. As a public hospital, we focus on a community-based, family-centered practice, especially for marginalized populations. In collaboration with the Social Welfare Bureau, we formed a medical team to study homeless individuals to understand their characteristics.

#### Methods/intervention

Our interdisciplinary team, comprising physicians, nurses, social workers, and volunteers, conducted outreach to identify homeless individuals near Taichung Railway Station. We provided essential supply kits and conducted medical assessments, including medical history, lifestyle habits, and physical health parameters. Mental distress was evaluated using the Brief Symptom Rating Scale-5. We offered health education and guidance on accessing medical services, with data collected from Oct. 2021 to Dec. 2022. Disease prevalence rates and substance use were compared with general population statistics of Taiwan.

#### Results

We collected a total of 83 participants, median age of 67.5 yearsold. Past history: Hypertension 45.75%, Diabetes Mellitus 16.87%, Hyperlipidemia 6.02%; Smoking history 34.94%, alcohol consumption 20.49%, betel nut usage 3.61%. Mean Systolic Blood Pressure:146.15 mmHg and 79.52% individuals met Hypertension criteria; Mean blood sugar: 134.53 mg/dL and 60% individuals met prediabetes criteria; Mean triglyceride level was 182.33 mg/dL, and 16.98% were diagnosed with Hyperlipidemia. Mental health scores averaged 1.29. Health education led to more return appointments( p=0.21) and increased social welfare usage( p<0.005) under Chi-Square test. However, social welfare provision didn't boost follow-up appointments.

#### **Conclusions/lessons learned**

Homelesses face significant health challenges, while exhibiting higher rates of smoking, betel nut chewing, hypertension, and prediabetes than the general population. Addressing basic needs like food and shelter is crucial. Health education positively influences social welfare utilization and return appointment rates, highlighting the need for improved service planning and disease prevention strategies.

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# Healthcare Challenges and Interventions for Homeless Individuals

### LI Chingju

#### **Background and objective**

Homelessness significantly impedes access to quality healthcare, negatively impacting the health of these individuals. This study aims to explore the healthcare difficulties faced by approximately 50 homeless individuals referred by social services and to suggest effective strategies to alleviate these issues.

#### Methods/intervention

A comprehensive analysis of healthcare barriers encountered by 50 homeless individuals referred by social services to healthcare facilities was conducted. Data was collected through interviews, medical record reviews, and observations. Interventions included the establishment of specialized healthcare clinics for the homeless, the initiation of transportation assistance programs, and the enhancement of collaboration between social services and healthcare providers.

#### Results

The analysis identified major healthcare challenges among the homeless population, including restricted access to healthcare facilities, discontinuity in medical care, and a high incidence of untreated health conditions. After implementing interventions such as specialized clinics and transportation assistance, a significant improvement in healthcare access and utilization was observed among the homeless participants. Enhanced collaboration between social services and healthcare providers resulted in improved care coordination and support services for this vulnerable group.

#### **Conclusions/lessons learned**

This study emphasizes the need to address healthcare challenges faced by the homeless population through targeted interventions. Key findings include the effectiveness of specialized clinics and transportation assistance programs in improving healthcare access and continuity of care. Furthermore, collaboration between social services and healthcare providers is crucial for providing comprehensive and integrated care to homeless individuals. Ongoing efforts are required to address systemic barriers and ensure equal access to healthcare for the homeless.

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# Cross-sectional IGRA-based screening of latent tuberculosis infection among HIV-uninfected prisoners in Taiwan

### YEN Ting, CHEN Li-Chiu, LAI Chih-Kuan

#### **Background and objective**

Latent tuberculosis infection (LTBI) is asymptomatic and can not spread TB infection to others. However, without adequate treatment, LTBI population have 5-10% lifetime risk to develop active TB as their immune system become debilitated. Prison is notorious for amplifying the transmission of infectious disease including TB, because of poor ventilation, overcrowding, overrepresentation of vulnerable people and limited access to health care.

#### Methods/intervention

Between Feb-Mar 2021, Camillian St. Mary's Hospital Luodong introduced a cross-sectional interferon gamma release assay (IGRA)-based screening program to explore LTBI prevalence among HIV-uninfected inmates in Yilan Prison, located in northeast Taiwan. A total of 2,189 inmates consented to receive interview and blood sample collection for IGRA test. Participants were categorized into 4 groups based on their functional status and prison buildings allocation. Group 1 had best health and capability to provide gardening, cooking, porter or administrative service in prison, and group 4 included frail or disable inmates. We also examined the correlation of IGRA positivity with age, sex, smoking and functional status by logistic regression.

#### Results

Overall, 349 (15.9%) inmates showed IGRA positive results. The LTBI prevalence was similar in men and women (16.0% vs. 14.9%), as well as in smoking and non-smoking inmates (16.0% vs. 15.8%). The prevalence increased with inmate's age (<40 y/o: 9.6%, 40-65y/o: 17.1% & >65y/o: 25.6%) and worsening functional status (best health: 13.2%, health: 14.5%, mild impairment: 18.5% & frailty: 23.1%). In multivariate analysis, old age and poor functional status were significantly associated with IGRA positivity. The adjusted ORs were 3.23 (95% CI: 2.38-4.39) for >65y/o vs. <40y/o and 1.93 (95% CI: 1.45-2.58) for 40-65y/o vs. <40y/o. In comparison to best health group, the AORs were 1.84 (95% CI: 1.22-2.78) for frailty group and 1.59 (95% CI: 1.10-2.29) for mild impairment group.

#### **Conclusions/lessons learned**

In correctional setting, LTBI was highly prevalent among HIVuninfected inmates with old age and poor functional status. IGRA-based screening is an effective technique in detecting LTBI and then enhancing TB control.

Contact: YEN TING Camillian St. Mary's Hospital Loudong TAIWAN smh07525@smh.org.tw Enhancing the Mental Health of the Tsou Indigenous People in Alishan Township: A Case Study of Indigenous Communities in Alishan Township.

# TSENG Shih-Ya, AN Hsin-Yu, HUANG Hsiu-Chen, YANG Hui-Fei, YAO Shiow-Jinq, HUNG Shih-Yu

#### **Background and objective**

The Tsou indigenous people of Alishan Township reside in a remote mountainous region. In their pursuit of education and employment opportunities, they often encounter a social and professional environment dominated by the Han ethnic group. This dynamic can subject them to heightened psychological pressures and persistent stereotyping. Government statistics indicate that intentional self-harm, or suicide, has ranked among the top ten causes of death in Alishan Township over the past five years, underscoring the urgent need to prioritize the mental health of Indigenous communities. Consequently, we aim to enhance their mental well-being through initiatives such as group counseling sessions or informative lectures.

#### Methods/intervention

To address the indigenous people's needs, tribal elders and psychological experts convened expert meetings to evaluate and develop culturally-aligned teaching aids. Subsequently, tailored courses, including group counseling and professional lectures, are conducted in different locations based on the audience. At the same time, community guardian angels are recruited during the courses to train them to recognize and assist with the mental health or spiritual needs of the local indigenous people, thereby enhancing their ability to meet medical needs.

#### Results

Following an expert meeting, it was clear that Indigenous communities lacked awareness of mental health issues, often leading to neglect of their needs. Experts emphasized the importance of increasing mental health awareness among them. Consequently, the focus was on creating nine thematic video teaching aids and conducting sixty-nine group counseling sessions and twenty-six lectures tailored to different age groups. Additionally, 491 community guardian angels were recruited, identifying and assisting two cases in need.

#### **Conclusions/lessons learned**

When offering courses or lectures to ethnic minorities, convene an expert meeting with minority representatives and subject experts. This ensures a focus on their actual needs and cultural appropriateness.

#### Contact:

LEE Pei Hsuan Ditmanson Medical Foundation Chia-Yi Christian Hospital TAIWAN cych13199@gmail.com Socioeconomic and health characteristics of people with alopecia(hair loss) after COVID-19 vaccination in South Korea

## KIM Hyekyeong, KIM Jiye, LEE Jiyoung, LEE Kyeon

#### **Background and objective**

According to the Korea Centers for Disease Control and Prevention, between 2021 and 2023, 1,544 cases of alopecia were recorded among 483,059 reported COVID-19 vaccination cases. Although global and South Korean reports suggest a link between vaccination and alopecia, causal evidence is lacking. This study aimed to identify the patterns of alopecia after COVID-19 vaccination in South Korea and the health-related characteristics and recovery status associated with postvaccination adverse events.

#### Methods/intervention

An online survey was conducted with 225 individuals who experienced alopecia after COVID-19 vaccination and 928 individuals who did not have alopecia as a comparison group. Surveys covered sociodemographic characteristics, experiences of alopecia symptoms, COVID-19-related characteristics, and health-related characteristics such as underlying diseases, health status, lifestyle, and mental health. Logistic regression analyses assessed the recovery and symptom experience controlled by sociodemographic factors.

#### Results

Participants who experienced alopecia showed vulnerability factors such as younger age, lower education and income levels, rural residence, and specific occupations. Many diagnosed with alopecia areata attributed it to vaccine administration (p<0.001). Those with underlying alopecia areata had the highest risk compared to the comparison group (OR=51.06, 95% CI: 21.31-122.37). Moreover, smokers (OR=2.08, 95% CI: 1.24-3.49) and overweight individuals (OR=1.65, 95% CI: 1.07-2.54) had a higher risk of post-vaccination alopecia. Alopecia occurrence was more frequent among those with insufficient sleep duration (p<0.05). Individuals with moderate to severe anxiety disorders also faced a heightened risk (OR=3.59, 95% CI: 2.06-6.25).

#### **Conclusions/lessons learned**

Differences in symptom manifestation and recovery patterns of alopecia after COVID-19 vaccination were identifiable based on individual vulnerability and health status.

Contact: KIM Hyekyeong Ewha Womans University REPUBLIC OF KOREA hkkim@ewha.ac.kr Cognitive appraisal of quality of life among historical trauma survivors: focusing on medical service accessibility and social welfare of Jeju Sasam survivors

### **KIM Jimin**

#### **Background and objective**

The current research focused on state violence survivors, called Jeju April 3rd(known as Jeju Sasam in Korea). Jeju Sasam was one of the representative state violence in modern Korean history. There has been governmental support for Jeju Sasam survivors and bereaved families under Jeju 4.3 Special Law. Exploring the appraisal of aid receivers can contribute to improving the current compensation and social support for survivors. Therefore, this research aims to study the following research questions: In what way do the Jeju Sasam survivors appraise their social welfare service, quality of life and life satisfaction?

#### Methods/intervention

Fifty survivors were interviewed about their traumatic experiences and their post-traumatic experiences in life—the primary research aimed to explore the trauma resilience mechanism among state violence survivors. Thematic and textual analyses were conducted for the current research to explore the survivors' appraisal of their quality of life and social welfare. First, the following themes were extracted apart from the primary whole data set analysis: negative or positive appraisal of their quality of life and social welfare. Then, the textual analysis was conducted to analyse each extracted theme.

#### Results

Through the interview, the survivors described their social welfare(n=24) and quality of life(n=41) positively and negatively. The development of the physical environment, such as electricity, water irrigation and roads, was the main reason the survivors appraised their quality of life improved. Also, the accessibility to medical services and free-of-charge benefits for Jeju Sasam survivors and bereaved families, including clinics and hospitals, was one of the main parts of the survivors' positive appraisal of their quality of life.

#### **Conclusions/lessons learned**

The lesson learned from the current research is that building the proper welfare design is critical to trauma survivors' quality of life. The survivors positively appraised the improved accessibility however, it is still not enough to cover the whole survivor population. Therefore, the accessibility to health services for trauma survivors should develop strategies in various ways in terms of the facility's location and transport options. It is essential in terms of the physical environment of Jeju island and the mobility of the elderly population.

#### Contact:

KIM Jimin Ewha Womans University, REPUBLIC OF KOREA jimin.kim@ewha.ac.kr Lessons Learned from Free and Low-Cost Medical Services, Interventions in Cases of Hardship, and Patient Care for Infectious Diseases in a Day Laborer Town

# ISIKAWA Ai, FUJITUGU Mahiro, MIHARU Matui, IMAGAWA Atuko

#### Background and objective

Hashiba Clinic has been conducting the "Free and Low-Cost Medical Care Program" since 2014. The Free and Low-Cost Medical Care Program is a system that allows designated medical institutions to provide free or low-cost medical services to financially distressed patients. This report discusses the issues with social support and successful cases experienced through the treatment of homeless patients with skin diseases, specifically those infected with body lice.

#### Methods/intervention

A homeless man in his 50s visited the clinic with symptoms of fever, swelling in both legs, and widespread skin disease. He was uninsured and had very little money. The patient expressed a strong desire to remain independent and free, showing a highly negative response to obtaining welfare assistance. As no suitable accommodations were found, he had to return to the streets and continue his treatment as an outpatient. However, there was no improvement in his condition. It was then proposed that he obtain welfare assistance, secure housing, and receive treatment utilizing home nursing services.

#### Results

Ultimately, the patient contacted a facility operated by a religious organization that he had heard of in the past, and they agreed to accept him. The patient was transferred to this facility, and his treatment at our clinic was concluded. Subsequently, people who saw him at soup kitchens reported that his skin condition was healing and that he was able to continue living at the facility.

#### Conclusions/lessons learned

This case highlighted the fragility of social support systems available for homeless individuals with infectious diseases and the difficulties associated with their treatment. The condition in this case produced a very strong odor, leading to social exclusion even within the homeless community. Ultimately, our intervention allowed us to support the patient in a way that enabled him to return to the freedom of street living that he desired.

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# Efforts to reduce the anxiety of foreign patients Undergoing cesarean section - Conduct video creation using the Turkish language

### WATANABE Chinami

#### **Background and objective**

Most of the Kurds residing in City A are Turkish nationals, and it is estimated that there are approximately 2,000 Kurds in the city. Hospital A offers non-discriminatory and equal medical care and has a free and low-cost medical care system, which is why many undocumented foreigners visit the hospital. Therefore, the number of surgeries performed by foreigners in the operating room of Hospital A has increased over the years, most notably 15 cesarean sections, 12 out 15 of which were performed by Kurds. Surgery in an unfamiliar environment in a foreign country is expected to cause anxiety due to the language barrier and the lack of a concrete image of the surgery before the procedure. The staff also found it difficult to explain the anesthesia position. Therefore, with the aim of reducing patient anxiety, we created a video explaining the process from entering the operating room to leaving the room in Turkish. Although there was only one subject, we report here on the subject's response and future improvements.

#### Methods/intervention

Have the patient watch the video created using an ipad during the preoperative visit in the hospital ward. After surgery, conduct a post-operative visit to interview guide that was created and record the interview in the interview guide.

#### Results

Patients responded, "I was relieved that the surgery proceeded as shown in the video, "and "I am glad that this hospital has our best interests in mind." If there is a point for improvement, one respondent commented that he was scared because he did not understand the process during anesthesia. [Consideration] This video was converted from Japanese to Turkish using Google Translate, and the translation was conveyed to the patient without any problems. In addition, the fact that the surgery proceeded as shown in the video is thought to have helped the patient visualize the surgery and feel at ease going into the surgery.

#### **Conclusions/lessons learned**

The flow during anesthesia is not incorporated into the video, but should be carefully considered, as incorporating it may cause some patients to become fearful of the surgery. In addition, we would like to expand the range of responses, such as creating cards so that we can instantly communicate with patients when they make a complaint during surgery.

Contact: JAPAN sogabeast@gmail.com Abnormal Workload Index Changes After Migrant Workers Receive Labor Health Services

# LIN Wei-Chung, CHENG Ming-Fen, YEN Chia-Chi

#### Background and objective

In 2014, the Occupational Safety & Health Council formulated guidelines on the prevention of diseases caused by abnormal workloads. This study investigated the improvement of "Personal burnout" and "Work-related burnout" among the abnormal workload risk indicators of migrant workers after receiving labor health services, so as to reduce abnormal physical and mental loading.

#### Methods/intervention

From January 2022 to December 2023, the labor health service staff of our hospital has provided health service assistance for 36 migrant workers of a SME in the electronic processing industry. The interventions are as follows: 1. Individual health guidance: arrange interpreters for communication, assess their health status, and provide individual health guidance. 2. Diversified health promotion: provide relevant information through company and dormitory bulletin boards, lectures, and social media software. 3. Cross-department cooperation: let human resources, occupational safety and related department heads provide care and guidance during daily work, and work adjustment if necessary. The two abnormal workload indicators: "Personal burnout" and "Work-related burnout" of the Copenhagen Burnout Inventory are used to compare whether personal and work-related burnouts of migrant workers improve after receiving labor health services.

#### Results

The changes of two abnormal workload indicators are analyzed as follows: 1. Work-related burnout 2022: Less than 45 points (mild):69%; 45-60 (moderate):31%; Scores greater than 60 (severe):0%. 2023: Less than 45 points (mild):81%; 45-60 (moderate):19%; Scores greater than 60 (severe):0%. 2. Personal burnout: 2022: Less than 50 points (mild):75%; 50-70 (moderate):25%; Scores greater than 70 (severe):0%. 2023: Less than 50 points (mild):81%; 50-70 (moderate):19%; Scores greater than 70 (severe):0%.

#### **Conclusions/lessons learned**

Abnormal workload indicators in 2023 were improved when compared to 2022.

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Effect analysis of health services received by foreign migrant workers of SMEs in Kaohsiung City

# WANG Tzu-Lin, LIN Wei-Chung, CHANG Ko, HUANG Ming-Ren, YEN Chia-Chi

#### **Background and objective**

In Taiwan, an aging population and a low birth rate have become concerns for economic development. In order to make up for the manpower shortage, Taiwan uses foreign migrant workers to fill the manpower gap. Expatriate migrant workers, who have to work hard to earn their wages, will inevitably suffer from physical discomfort. However, due to cultural and communication barriers, fear of affecting their income and other factors, they may not be willing to seek medical treatment, which will lead to the aggravation of illness. This study analyzed the effects of body mass index (BMI) and metabolic syndrome (MS) on foreign migrant workers of four SMEs in Kaohsiung city before and after receiving labor health services.

#### Methods/intervention

From 2022 to 2023, the medical staff of the Labour Health Service of our Hospital has provided on-site health services to 87 foreign migrant workers in four SMEs, as follows: 1. Include foreign migrant workers in the regular health screening activities of workers through communication with employers. 2. One-onone health interview: Provide individual health guidance in various languages and assist in referral for medical treatment if necessary. 3. Health information: provide health education and promotion articles in various languages, such as dietary approaches to prevent hypertension, hyperlipidemia and hyperglycemia, sports skills, etc. 4. Group lectures: Provide group health education lectures in various languages. 5. After the above measures, conduct annual analysis after the health examination in the following years to understand the improvement effect of the changes in the values of body mass index, metabolic syndrome indicators (waist circumference, blood pressure, fasting blood glucose, triglycerides, high-density lipoprotein).

#### Results

After the implementation of the above improvement measures, the index items have been greatly improved in the analysis, as shown below: 1. Body mass index: Abnormal rate of 47.8% in 2022, reduced to 37.9% in 2023. 2. Waist circumference: Abnormal rate of 43.7% in 2022, reduced to 36.1% in 2023. 3. Systolic blood pressure: Abnormal rate of 21.7% in 2022, reduced to 13.7% in 2023. 4. Diastolic blood pressure: Abnormal rate of 20.9% in 2022, reduced to 12.1% in 2023. 5. Fasting blood glucose: Abnormal rate of 26.1% in 2022, reduced to 11.7% in 2023. 6. Triglycerides: Abnormal rate of 53.9% in 2022, reduced to 38.6% in 2023, 7. High density cholesterol: Abnormal rate of 39.1% in 2022, reduced to 31.5% in 2022, reduced to 30.9% in 2023.

#### Conclusions/lessons learned

In order to continue to implement the spirit of "health promotion hospital", the medical staff of the Labor Health Service of our hospital and the enterprise worked together to promote diversified workplace health management measures for foreign migrant workers, and the results showed that the body mass index, metabolic syndrome and other related indicators have been significantly improved. In the future, we will continue to create a healthy, happy and health-equal working environment for foreign migrant workers, aiming to maintain sustainable implementation of the spirit of healthy workplaces.

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A survey on the actual living status of patients who continuously use Free or Low Cost Medical Care Program

### NAKANO Masahiro, YUKI Yoshie

#### Background and objective

The number of applicants for Free or Low Cost Medical Care Program at Nishiyodo Hospital and Nozato Clinic continues to increase, likewise the inquiries on the program from local business operators and public institutions. Now that more than 10 years have passed since the start of the program, a survey was conducted to revisit the meaning for us to continue the Program and to check the actual living status of program users for further development.

#### Methods/intervention

Survey period. March 2020 to March 2021. Target. Patients who applied to continue the Free or Low Cost Medical Care Program in FY2020 at Nishiyodo Hospital and Nozato Clinic. Method. Survey form to be filled anonymously at the time of application.

#### Results

Survey results. 80percent were solitary or couple. 90percent were 60s or older. 80percent were unemployed. Most were pensioners. 10percent had side income as salary or family support, indicating difficulty to live on pensions alone. Many have used the program for a long time. 70percent for over 2years, and 20percent for over 5years. For accessibility to healthcare, 70percent refrained from seeing a doctor before using the program, while over 90percent of users felt comfortable to make a visit. 70percent improved their health after using the program. However, 40percent had no change in financial situation.

#### **Conclusions/lessons learned**

We realize there are challenges that cannot be solved by healthcare alone, and counseling by medical social worker is essential. Many used to refrain from visiting a hospital due to economic hardship. Japan has a welfare system, but requirements are strict, and many hesitate to apply out of shame. For better health equity, our hospital should enhance the Program.

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# The Experience of Social Work in Taiwan's Psychiatric Emergency Services for Homeless Patients

### **CHANG Wenmin**

#### **Background and objective**

Emergency departments prioritize urgent medical events and assisting those in need. Social workers in these departments play a crucial role in helping homeless patients with medical expenses. This article summarizes the experiences of social work in a psychiatric emergency department in Taipei, Taiwan, and aims to inform national policies for improving homeless services.

#### Methods/intervention

This study uses a case study method, analyzing 17 referrals received in the emergency department from January to December 2022, involving homeless and unidentified patients. It examines their arrival methods and the interventions by emergency department social workers, based on medical and social work records.

#### Results

Homeless patients primarily come to the hospital due to mental confusion and disruptive behavior, often brought in by emergency services. As they arrive without companions and in a state of acute mental instability, obtaining relevant information is challenging. Summarizing, 15 referrals were made by contacting police stations, social welfare centers, homeless shelters, and community leaders to piece together a comprehensive understanding of homeless patients. For those lacking resources, 7 cases were reported to vulnerable families, collaborating with social welfare.

#### **Conclusions/lessons learned**

Homeless patients present challenges for emergency medical teams, exacerbated by societal stigma. Social work interventions primarily involve locating family members, assessing resources, and coordinating with networks. Collaboration with resource networks and project-based approaches are recommended to safeguard the rights of homeless patients.

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# Efforts to protect the right of foreign patients to receive medical treatment

### **KUMAGAI Eri**

#### Background and objective

Saitama cooperative Hospital is located in Kawaguchi City, Saitama Prefecture, Japan. Kawaguchi City and neighboring Warabi City are home to a large Kurdish community of Turkish nationality. There are approximately 2,000 Kurds living in Japan, 1,300 of whom live in Kawaguchi City and Warabi City.The Turkish government has implemented a policy of ethnic assimilation. For this reason, many Kurds apply for refugee status in Japan, but the refugee recognition rate in Japan is almost 0%. When their refugee applications are rejected, many of them are placed in the position of "provisional release," but foreigners on "provisional release" are unable to work and are not registered as residents, so they are unable to fully utilize Japan's social security system. As they are unable to enroll in the public health insurance system and are left uninsured, psychological and economic hurdles in accessing medical care have become a regional issue. For this reason, medical social workers of saitama cooperative hospital have been working to protect the right of Kurdish refugees to receive medical treatment.

#### Methods/intervention

Efforts by social workers (1) Regularly holding study sessions for hospital staff (2) Holding regular meetings with Kurdish support organizations (3) Holding health consultations, food drives, and health classes

#### Results

(1)To share the situation of the Kurds in Kawaguchi city and the issues surrounding Japan's refugee policy with hospital staff, instead of viewing them as uninsured and a nuisance, we can now start thinking about who is really in trouble. (2)We were able to tackle this issue as a regional issue. We were also able to hold a meeting with city administration to discuss concerns between kurds patients and medical institutions (3)We were able to do Direct material assistance, encourage lifestyle changes to prevent the disease from becoming more severe

#### **Conclusions/lessons learned**

In parallel with direct material aidit, it is important to continue to take action such as study sessions or meeting to increase the number of people who understand and will work together this issue,Because this issues must be resolved politically.

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# "Ikimasu-tai": Outreach Activities to Patients Facing Social Difficulties

### **KIDO Yumi, KEYA Kyouko**

#### **Background and objective**

In Japan, the aging population, a comparatively lower number of nuclear families and elderly people living alone have led to a rise in social isolation. Within medical institutions, social support is needed to ensure these people adhere to treatments. This report discusses the success of "Ikimasu-tai" (a voluntary visiting activity to patients' homes) conducted by our clinic, aimed at addressing issues, such as treatment interruption among elderly patients living alone.

#### Methods/intervention

Patients targeted for visits were identified through the following procedure: Clinic staff submitted information about patients exhibiting forgetfulness, missed appointments, or incontinence among those attending the clinic. Based on this information, the necessity and urgency of home visits were assessed, and visits were conducted if deemed necessary.

#### Results

In 2022, there were 70 instances of information submission, leading to 15 home visits. One case concerns a financially struggling male in his 70s, diagnosed with lung cancer, referred to the clinic for chemotherapy. However, he missed his appointment without notice and could not be reached by phone. When "Ikimasu-tai" visited his home, the patient expressed financial concerns as the reason for not seeking treatment. Due to respiratory difficulties and financial constraints, he received social security assistance to undergo hospital treatment without financial burden.

### **Conclusions/lessons learned**

This activity facilitates early detection and intervention in social challenges faced by patients, thereby improving treatment adherence. It also enhances staff awareness of the social determinants of health.

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The Role of Health Checks and Life Counseling in Food Banks

KUMAMOTO Tomoe, KUDOH Taeko, FUJITANI Madoka, KONDOH Osamu, TAKAHASHI Hiroto, SAITOH Fumihiro, YOSHIDA Eri

### Background and objective

In March 2021, our association started distributing food once a month, commonly known as a "food bank," to support individuals facing hardships during the COVID-19 pandemic. Hospitals also support this activity, and the number of users is consistently over 100. From the perspective of SDH, we felt the need to support the health of food bank users. Therefore, the hospital decided that the hospital's social security committee would conduct health checks and lifestyle counseling for the patients.

#### Methods/intervention

For one year, starting in April 2023, hospital staff will measure blood pressure, grip strength, and body fat for food bank users. After the measurement, the staff asked the users about their health and the problems in their lives. The participating staff included doctors, nurses, registered dietitians, medical office workers, and social workers.

#### Results

A total of 47 staff members participated. A total of 11 sessions were held, with 160 people using the event. During the health check, some people had blood pressure above 200, and the doctor recommended receiving medicine immediately, while others had long and dirty nails. The nurse cut their nails and explained the importance of keeping them clean. Someone asked a registered dietitian how to consume protein. In the daily life counseling, some said, "I am having difficulties in living, but it is difficult to consult with the welfare office," and "I am not receiving medical treatment because I am worried about the medical costs."Social workers listened to people who needed to use the social security system. Even if they did not consult on the spot, some people came to the hospital later to consult about their lives.

#### Conclusions/lessons learned

Through health checks, regular involvement of medical professionals improved health literacy, such as participants being able to recognize their own health problems early and receive treatment. The consultation on daily life was an opportunity to introduce the system that medical professionals can use to understand their living conditions. In addition, through this initiative, hospitals have come to be recognized as "local consultation desks in times of trouble."

Contact: KUMAMOTO Tomoe Oizumi seikyou hospital JAPAN oh-msw2@tokyo-health.coop Community social capital and the prevalence of polypharmacy among adults receiving public assistance in Japan: A multilevel cross-sectional study

# KASAHARA Masayuki, KAWACHI Haruna, UENO Keiko, KINO Shiho, KONDO Naoki, IKEDA Shunya, NISHIOKA Daisuke

#### **Background and objective**

Polypharmacy (PP), which increases the risk of adverse health outcomes, is prevalent among the socially vulnerable populations in Japan, including public assistance recipients (PAR). Community social capital (SC) is expected to provide protection against PP; however, no studies have documented its impact on PP among PAR. This study examined the association between community SC and PP prevalence in PAR.

#### Methods/intervention

This cross-sectional study included 6,296 PAR aged  $\geq$ 18 years from an urban city , who were prescribed oral medications for at least 90 days based on medical claim data in the fiscal year 2021. Outcome variables were PP (6–9 medications) and excessive polypharmacy (EPP) ( $\geq$ 10 medications). Explanatory variables were community SC scores (civic participation, social cohesion, and reciprocity) among older adults in 2019. Community SC scores were merged for each residential area of PAR. Adjustment variables were age, sex, living situation, employment, disability, long-term care status, number of visits to medical institutions, comorbidity index, and number of medical institutions in residential areas. Multilevel multinomial logistic regression analysis identified the association between community SC and PP in PAR by age group (18–39, 40–64, and  $\geq$ 65 years).

#### Results

Prevalence of PP, including EPP, by age group was 43.2% (n=114) among 18–39-year-olds, 69.2% (n=1,160) among 40–64-year-olds, and 71.0% (n=3,226) among  $\geq$ 65-year-olds. Among PAR aged 40–64 years, a higher civic participation score was associated with a lower prevalence of EPP (odds ratio [OR]: 0.81; 95% confidence interval [CI]: 0.71, 0.93), and a higher SC score was associated with a higher EPP prevalence (OR: 1.08; 95% CI: 1.00, 1.16). Among PAR aged 18–39 and  $\geq$ 65 years old, a higher civic participation score was associated with lower EPP prevalence.

#### **Conclusions/lessons learned**

Promoting community civic participation through intersectoral community integration with local governments, communities, and healthcare is a potential PP preventive measure among PAR.

#### Contact:

KASAHARA Masayuki International University of Health and Welfare JAPAN 23r3001@g.iuhw.ac.jp The influence of the social determinants of health on the increase of specific IgE in the Japanese patients

### KUBO Kazuhiko

#### **Background and objective**

WHO describes "The social determinants of health (SDH) are the non-medical factors that influence health outcomes." Various factors are reported to affect allergy as SDH out of Japan. We have studied the relation between the poverty and various diseases as a Japan's first Health Promoting Hospital certified by WHO. The number of patients with allergy has increased in the world. In this study, we evaluated the effect of poverty on the serum level of specific IgE. This study was approved by the ethnic committee of our hospital.

#### Methods/intervention

The 426 subjects were recruited and the serum level of specific IgE were tested against 16 kinds of allergens including pollen, house dust mite, fungus and insects by ImmunoCap assay. An economic status was separated to two groups, poverty or non-poverty, by the kind of insurance.

#### Results

The rates of sensitization were significantly lower in the poverty group than that in the non-poverty group about Japanese cedar pollen, cypress pollen and house dust mite. It was significantly higher in the poverty group than in the non-poverty group about the cockroach.

#### **Conclusions/lessons learned**

These results suggest that the poverty may also affect the production of specific IgE in Japan.

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## Poster session 3.2: Promoting healthy behaviour and empowerment

The idea of designing a paper pattern to pattern to enhance "My Healthy meal Plate"

## CHAO Yu-Hsien, LIN Shu-Chi, CHEN Jiyuen-Tieng, CHUO Ying-Hsiang, HUANG Hui-Ting

#### **Background and objective**

Many people often have questions about how and should take their food and meals appropriately. Health Promotion Administration in Taiwan Ministry of Health and Welfare intends to use pattern recognition to further on the concept of designing "My Healthy Meal Plate" for more understandable healthy dietary principles easily. Also, in order to encourage people to select native, original, multiple purposes adequately for better health.

#### Methods/intervention

Recruited cases are about 150 inpatients in Taiwan Adventist Hospital by ordering hospital general meals, and consume more than three meals in a row. For random admissions, the patient admission numbers will be used as odd and even numbers. Odd numbers that dietitians have nutrition education instructions are belonged into intervention group, and even numbers that they do not have nutrition education instructions are control group. Nutrition education intervention group: patients are pleased to be recruited by dietitians when they eat first general meal. Before eating second meal, they fill My Plate health literacy evaluation scale. After eating second meal, dietitians implement nutrition education with picture and food portions about My Health Plate. After illustration ends, each patient is pleased to fill an evaluation scale.

#### Results

There are about 133 involved in this study. They are divided into Group A (intervening group) and Group B (contrast group), Group A has 66 people: 32 males and 34 females; Group B has 67 people: 24 males and 43 females. Distribution of males and females is no significant difference between two groups. Analysis of pre- and post-test dietary questionnaire responses in the intervention group (A) and the control group (B): For" My Meal Plate" pattern proportion , there are two questions. Q1:How many food categories are on "My Meal Plate?" Q2:What is the main points to transmit on "My Meal Plate." It reaches to significant difference of the contrast between pretest, but Posttest between two groups do not reach to significant difference. For" My Meal Plate" oral pithy formula/quantity proportion , there are five questions. Q1:On "My Meal Plate", which two categories of food should have approximately equal portions? Q2: On "My Meal Plate", which categories of food should have a portion size approximately equal to the palm of your hand? Q3: How many cups of dairy products are recommended to be

consumed daily? Q4: What is the recommended serving size of fruits per meal? Q5: Is it recommended that at least one serving of whole grains per day come from unrefined staple foods? Standard pattern utensils proportion , there are two questions. Q1:Which of the following non-vegetarian meal boxes aligns the most with "My Meal Plate"? Q2: Which two categories of food should be placed in the spaces labeled 1 and 2 on the plate to conform to "My Meal Plate"? There is no significant difference of the contrast between pre-test and post-test in Group A and B . Post-test between two groups do not reach to statistic difference

#### **Conclusions/lessons learned**

This study shows that using paper pattern enhance concept of healthy plates can improve patients' health literacy in terms of nutritional knowledge, such as pattern proportions and formulas/amounts, in order to achieve an individual balanced and nutritious diet.

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Promoting patients with diabetes managing themselves using application

## LEE HeyJean, SIM Youngeun, KUK Deungdae, IM Irang, KIM Pumsoo, KIM Mun Jung, CHOI Jisoon, KWON Jinwon, KO Dongkuk

#### **Background and objective**

As of 2020, 16.7% adults aged 30 years or older have diabetes and 30.1% adults aged 65 years or older have diabetes in Korea. Prevalence of diabetes has increased around 1.5 times last 10 years. For men, 50's represent the largest group as 30%. Among diabetes patients, 65.8% are aware of their condition, 61.4% undergoing treatment, only 24.5% have HbA1c under 6.5%. For glycemic control, it's important to make patients practice daily healthy behavior like diet, physical activity and collaboration with company especially for men.

#### Methods/intervention

We try a two month pilot program using application called Healthibuddy with a company. We check weight, body mass index, body composition(fat, muscle), fasting glucose, glycated hemoglobin, blood cholesterol(total, low density lipoprotein, triglyceride, high density lipoprotein). Healthibuddy makes participants to record daily diet and physical activity. It provides lifelog with blood glucose target using continuous glucose monitoring. It also provides individualized report for diet and physical activity solution, weekly status, pre & post comparison.

#### Results

Participants' mean age is 51.17 years and mean duration illness is 9.9 years. Patients have used application 71.67% and blood glucose level within target range is 61.42%. Satisfaction is 4.75 of 5.0, intention to use is 91.67%, and recommendation for acquaintance is 100%. Their changes after pilot program are as follows; weight decrease significantly from 79.73 to 77.37kg, body mass index decrease significantly from 26.65 to 25.61kg/m2, HbA1c decrease from 7.97 to 7.53% and fasting glucose decrease from 140 to 136mg/dl but these are not statistically significant, blood cholesterol changes are not significant either.

#### **Conclusions/lessons learned**

Patients use application helping healthy behavior well even in their work place especially for men. They favor taking lifelog, continuous glucose monitoring, healthy behavior through mission. They also show high satisfaction, strong intention to use and recommendation. Two month pilot shows improvements in weight and body mass index. We may expect positive effects more with prolonged intervention.

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Construction of an Educational Module for the High-Risk Group of Rheumatoid Arthritis-Associated Osteoporosis: Experience Sharing

## KAO Min-Chen, LEE Pei-Hsuan, LAI Pi-Chen, CHEN Wei

#### **Background and objective**

Osteoporosis holds a significant position in global epidemiology. Taiwan ranks highest in Asia for hip fracture incidence and ninth worldwide. Of note, rheumatoid arthritis patients on long-term corticosteroid therapy are at higher risk. This paper aims to share the experience of constructing an educational module tailored for the high-risk group of rheumatoid arthritis-associated osteoporosis.

#### Methods/intervention

This study employed a quantitative research method and collected data from 512 rheumatoid arthritis patients from August 2021 to April 2024. Among them, 271 individuals underwent DEXA bone density measurement and Frax fracture assessment to identify the high-risk group for osteoporotic fractures within the next ten years. The findings revealed that 28% of patients had DEXA bone density below -2.5. Within the next decade, 22% of patients had a total body fracture risk exceeding 10%, 25% had a risk exceeding 20%, and 46% had a risk of hip fracture exceeding 3%.

#### Results

1.Enhancing health literacy: Providing a 3-minute video and pamphlet during outpatient visits for health education. 2.Referral to specialists: Referring 85 severe osteoporosis cases to specialists for diagnosis and treatment. 3.Annual patient education seminars: Hosting three seminars per year to engage patients, encourage participation, and facilitate opinion sharing, with an attendance rate of up to eighty percent per session.

#### **Conclusions/lessons learned**

Rheumatoid arthritis is an autoimmune disease commonly requiring corticosteroid use. Over 75% lack awareness of osteoporosis. From 2021 to April 2024, emphasizing osteoporotic fracture risk increased. Constructing an educational module raised awareness to 80%, aiming to reduce societal and medical costs.

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Establishment of a Patient Association for Rheumatology Patients with New Knowledge

## LAI Pi-Chen, LEE Pei-Hsuan, KAO Min-Chen, CHEN Wei

#### **Background and objective**

Taiwan's aging population presents challenges for rheumatology patients, including muscle atrophy, obesity, and osteoporosis, affecting their quality of life. This study aims to establish a patient association model to enhance patient's awareness and support, offering health education and promoting mutual support among rheumatology patients.

#### Methods/intervention

This study focused on 149 participants aged 40-70 with rheumatoid arthritis, regularly using immunomodulatory drugs. Interdisciplinary collaboration among rheumatologists, family physicians, nutritionists, case managers, and yoga instructors developed six main themes: prevention and treatment of rheumatic disease complications, rheumatic diseases and osteoporosis, advances in medications, home exercises for frozen shoulder, understanding sarcopenia, and Mediterranean diet benefits. Patient association meetings facilitated sharing experiences, building collaborative relationships, and exchanging new knowledge.

#### Results

Patient associations provide support and resources, information and health education explanations from disease managers, improve participants' quality of life and provide psychological support. Across three meetings, participants, with a 90% attendance rate, engaged in disease education, exercises, and accepted dietary advice. This increased disease awareness prompted patients to incorporate activities like jogging and dietary adjustments into their daily routines.

#### **Conclusions/lessons learned**

From the above research, it is found that establishing a new rheumatism patients association can provide support and resources, information and explanations to rheumatism patients, enabling patients to better manage their conditions and improve their quality of life, and have a good impact on the prevention of related diseases. Understand the concept and be willing to improve their diet and increase their exercise frequency.

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Digital Health Literacy Integration: Personalized Health Education and Indigenous Language Health Empowerment for the Future of Rural Health

#### CHU Hui-Ying, CHANG Ching-Yu

#### **Background and objective**

Eastern Taiwan's geographical layout is characterized by its long and narrow shape, with a significant proportion of indigenous people, elderly individuals, and those living alone. To reduce the gap in health literacy, we plan to develop a mobile health education platform tailored to the needs of rural residents and convenient for mobile medical teams. This platform aims to enhance people's abilities in preventive healthcare and health management.

#### Methods/intervention

The "Eastern District Health Education Sharing Platform" is established in collaboration with 17 hospitals and health centers. In addition to Mandarin, Taiwanese, and Hakka, the platform includes various indigenous languages to better meet the needs of local communities. Each year, we continuously improve the platform by increasing the number of educational videos, integrating with appointment systems of Eastern District hospitals, utilizing big data for targeted notifications, providing customized services, and creating interactive sections. This allows people to access health information wherever they go.

#### Results

The platform is utilized for health promotion, volunteer medical tools, home care, and chronic disease management. People can access health information regardless of their location, and medical teams can use this platform's tools for convenient dissemination during outreach activities. Currently, there are 260 videos available, including 50 in various indigenous languages. These videos have been viewed 10,102 times, with

98.82% of users expressing that they found them helpful for their own health, and 99.35% expressing willingness to change habits to improve health.

#### **Conclusions/lessons learned**

Utilizing information and communication technology to bridge the digital divide in rural areas also aligns with the United Nations Sustainable Development Goal 4 on quality education. In the future, integrating AI for customized health services tailored to different ethnic groups will further contribute to health education and healthy lifestyles for mountainous residents. This collaborative effort aims to create a digital health future.

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Explore the significance of using health examination data analysis to improve personal health literate in health promoting: a case-control study of colorectal cancer

## HSIEH Hsiu-Tzu, CHEN Huang-Kuang, LI Wei-De, LIAO Szu-Ting, HUANG Chi-Jung

#### **Background and objective**

In Taiwan, cancer has become one of the top ten causes of death since 1982. Colorectal cancer (CRC) had the highest number of newly diagnosed cases between 1996 and 2020. Early detection of polyps through colonoscopy may reduce the occurrence of CRC. Identifying high-risk cases from the health examination database (HED) and recommending colonoscopy screening would be the first step to prevent CRC.

#### Methods/intervention

The scope of precision health includes pre-disease risk assessment, prevention, and health promotion. We enrolled 15,451 colonoscopy recipients (8,297 males and 7,154 females; average age, 42.5 years) from a center of healthcare management in Taiwan in 2020 and 2021. We built the healthy results, screening frequency, and health recommendations into personal reports and APPs to provide referral, consultation, and healthy diet plans. The community and social media were used to disseminate health information, so that the examinees and the public could understand the significance of colonoscopy screening and practing the health promoting plan.

#### Results

18.3% of 15,451 were hyperplastic polyps, 12.5% were adenoma polyps, and 0.07% were CRC. The average age of 1,929 adenoma-positive cases (64.3% male and 35.7% female) was 47.9 years, while 90% of CRC patients in Taiwan were > 50 years. Further, 18.9% of adenoma-positive cases had metabolic syndrome (MetS), with 35.5% having high fasting glucose ( $\geq$  100 mg/dl) and

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39.5% central obesity (waist  $\geq$ 90 cm for male and  $\geq$ 80 cm for female). In contrast, MetS evaluated the risk (odd ratio, 1.885; 95% confidence interval, 1.715-2.072; P<0.0001) to develop adenoma.

#### **Conclusions/lessons learned**

The colon polyps detected by colonoscopy is an important issue in preventing CRC. The self-paid HED gathered the data of healthy and sub-healthy people, preventing the occurrence or progression of diseases is the major health promotion. The health examination institute can use the results of HED analysis to explore the relationship between disease risk and lifestyle. Providing easier-to-understand health education and action plans for practicing a healthy lifestyle is the first step in developing precision health.

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Research on the important factors influencing family members' choices between returning home or opting for long-term care services.

### HUANG Bai-Chun, HSIEH Ming-Chuan

#### Background and objective

Population aging, declining birth rates, and chronic diseases have led to a continuous increase in the demand for long-term care services. Factors influencing family decision-making regarding subsequent care include the severity of disability, care needs, gender of the caregiver ,closeness, education level, and economic situation. When making decisions, it is important for family members and patients to communicate and negotiate together to ensure that elderly or disabled individuals receives appropriate long-term care

#### Methods/intervention

This study adopts a cross-sectional and structured questionnaire survey to collect the opinions and views of family members when choosing home or long-term care services, and uses SPSS 25.0 statistical software for data analysis.

#### Results

Family members are influenced by multiple factors when choosing a placement for a disabled elderly person. The severity of disability and care needs significantly affect preferences for long-term care services, while a high degree of closeness between caregivers and the individual increases the likelihood of choosing home care. However, family members with higher education tend to consider more comprehensively about longterm care services. Living arrangements also impact family members' choices, with a higher probability of choosing longterm care services when there are no cohabitants.

#### Conclusions/lessons learned

Factors such as the age, educational level, living arrangements, and caregiver identity of family members have a significant impact on the discharge trends of disabled elderly individuals. These results can help enhance family understanding of such decision-making, provide better support and assistance, and also provide policy recommendations for the government and health care institutions to improve long-term care services.

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Analysis of patient engagement strategies in the Friuli Centrale Healthcare University Trust

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#### Background and objective

Patient-centered medicine is a valuable tool for improving the quality and effectiveness of the care process. It brings benefits to all stakeholders: patients and families, healthcare professionals and organizations. This study aimed to assess patient engagement strategies in the Friuli Centrale Healthcare University Trust, Udine (Italy).

#### Methods/intervention

A survey was conducted as a qualitative research method. Patient engagement strategies were investigated in 4 hospitals, in the Addiction and Mental Health Department, in the Prevention Department and in 9 socio-health districts of the Friuli Centrale Healthcare University Trust. 11 questions were included in the survey and it was available to medical directors and care coordinators from November 2023 to January 2024.

#### Results

118 healthcare professionals (60% coordinators, 40% directors) completed the survey. Strenghts identified in the survey included materials used to provide information (brochures 84%, websites 48%, educational videos 10%, workshops 13%), effectiveness of communication with clinicians (ask questions 61%, teach back method 51%, decision aids 35%), active stakeholder participation (patient associations 46%, caregiver associations 17%) and promotion of patient' rights (informed consent 75%, associations 53%). Areas for improvement included tools to increase self-awareness, most of which were not used (76%) and the availability of psychological support in all facilities.

#### Conclusions/lessons learned

Despite the implementation of some strategies, there are still heterogeneity and gaps that need to be addressed, considering

the standard and criteria of the International Network of Health Promoting Hospitals and Health Services (HPH). The analysis of the healthcare organizations' activities allowed to improve actions to promote a model of participatory and patientcentered medicine.

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Health guidance to improve health awareness among nurses in their twenties

## SUGINO Manami, TOMIOKA Yumi, KONISHI Shiho, ISHIMORI Yuka, KOUNO Mizuki

#### **Background and objective**

Ward nurses at our hospital work three shifts and are involved with patients 24 hours a day. Health concerns, such as "Not feeling well because daily routine is disrupted due to night shifts" and "Fear of becoming pre-diabetic due to irregular meal intakes" are sometimes expressed among nursing staff in their twenties. Our hospital implemented a health guidance program aimed at nurses who work night shifts. Our goal is to review their lifestyle habits and improve health awareness in order that nurses can continue working in good health.

#### Methods/intervention

10 ward nurses in their twenties working night shifts with no underlying illnesses were included in our health guidance program conducted between August 2023 and January 2024. We used a goal setting sheet to conduct an interview and listed everyone's health issues and short-term goals. Follow up interviews were performed every two months. Guidance regarding diet and exercise were provided and a questionnaire was used to evaluate the effectiveness of the health guidance.

#### Results

After the health guidance program, 50% of the respondents increased their vegetable intake and 30% began to consider nutritional balance. Before initiation of the program, 40% were not paying attention to their eating habits but this improved to 0% with the help of the program. 30% decreased the number of times they snacked and 20% decreased the frequency of eating out and purchasing prepared foods. 20% of respondents who didn't exercise now have started exercising, and the number of nurses who exercise three or more days a week increased by 30%. Overall, 50% of all respondents started paying attention to their health, with a 78% improvement in goal achievement being observed.

#### **Conclusions/lessons learned**

The health guidance program contributed to raising health awareness and improving lifestyle habits among nurses working night shifts. By providing regular step-by-step interventions and individual guidance, we were able to achieve most of the goals set, maintain positive behavioral changes and motivation. Although this started as a short-term intervention, we plan to introduce a long term program in the future.

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Integrating health literacy enhances healthcare consumers' understanding of healthcare.

### HSUEH Wei Chun, CHUN Chen Bi

#### Background and objective

Surveys indicate that the prevalence of inadequate health literacy is approximately 30% to 50%. The National Health Administration highlights that insufficient health literacy leads to poorer health behaviors and outcomes, such as frequent use of acute medical services and higher healthcare expenditures.

#### Methods/intervention

1.Adding images and QR codes to health education pamphlets enhances readability and accessibility. 2.Providing nursing guidance and organizing healthcare courses. 3.Incorporating health literacy education training into health promotion education courses. 4.Utilize diverse healthcare educational materials such as pamphlets, flashcards, handbooks, models, and videos, and create QR codes for easy access and distribution. 5.Regularly organize activities aimed at enhancing the health literacy of patients or their family members. 6.questionnaire survey is conducted among healthcare consumers to assess the effectiveness of their health literacy. Over a six-month period, 500 questionnaires are distributed, with 480 valid responses collected, resulting in a response rate of 96%.

#### Results

In the year 112, a total of 56 health literacy events were organized. The respondents' health knowledge awareness increased from 83% to 95%, with an overall satisfaction rate of 96%. This demonstrates that health literacy activities have had a significant impact on healthcare consumers' awareness of healthcare and have been highly satisfactory to them.

#### **Conclusions/lessons learned**

This research outcome can serve as a reference for future health education initiatives, aiming to make healthcare seekers more easily access, understand, and apply health information and services. This, in turn, can effectively prevent and manage chronic diseases, increase awareness and attention to health knowledge, and ultimately promote improvements in health behavior.

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The outcomes of pharmacist-led medication integration services in chronic kidney disease patients

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#### **Background and objective**

Chronic kidney disease (CKD) is commonly associated with comorbidities such as hypertension, diabetes, and hyperlipidemia. Therefore, polypharmacy is common in these patients with CKD. It can be expected that CKD patients with polypharmacy often have low medication adherence. Pharmacists play a crucial role in providing medication counseling and medication integration services to patients with CKD to enhance their medication adherence.

#### Methods/intervention

Patients with CKD stages 3B to 5 were enrolled in the study between November 2022 and 2023. Medication adherence was assessed using the Adherence to Refills and Medications Scale (ARMS), and medication counseling and medication integration services were provided. Upon follow-up visits, medication adherence was reassessed using the ARMS scale. A paired t-test will be employed for statistical analysis to compare the total ARMS scale scores before and after the intervention. The integrated medication services included a comprehensive review of all medications (covering traditional Chinese medicine, prescription medications, and health supplements), alongside providing targeted medication education and counseling based on the initial assessment.

#### Results

27 participants (11 males and 16 females) with an average age of 67.3  $\pm$  18 years were included in the study. Before intervention, 11 CKD patients had an ARMS score of 12, while 16 patients had an ARMS score greater than 12. The mean ARMS score before pharmacist intervention was 14  $\pm$  2.4; however, it decreased to 13.1  $\pm$  1.6 after intervention (p=0.0107). The number of patients achieving optimal compliance (ARMS score of 12) increased from 11 to 16 after intervention. Therefore, the number of individuals with an ARMS score of 12 increased by 18.5%. Additionally, 16 patients were initially classified as having poor medication compliance. Among them, 12 patients showed modest improvement in ARMS scores, while two patients remained unchanged, and two patients declined after pharmacist intervention.

#### Conclusions/lessons learned

The ARMS scale helps pharmacists understand the medication compliance of CKD patients and provide medication education, which can improve patients' medication compliance.

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Areca Nut Use and Cessation Behaviors Among Outpatients: Insights from a Hospital-Based

## HUNG Chun-Shan, LI Yu-Ching, CHANG Fu-Sheng

#### Background and objective

Areca nut use is prevalent in Southeast Asia and the Asia Pacific region and is associated with various adverse health outcomes, including oral cancer and cardiovascular diseases. Despite efforts to promote cessation, challenges remain in effectively addressing areca nut addiction.

#### Methods/intervention

Outpatients from Show Chwan Memorial Hospital in Taiwan were recruited for a study evaluating the effectiveness of areca nut cessation classes. Participants completed a questionnaire assessing demographic information, areca nut use patterns, selfawareness after cessation classes, and challenges faced during the cessation process. Cessation classes were conducted, and participants' cessation progress was evaluated based on a scoring system.

#### Results

A total of 80 outpatients participated in the study. Demographic analysis revealed a predominantly middle-aged male population. Participants reported diverse triggers for areca nut usage and faced challenges such as anxiety and discomfort when nothing to chew during cessation attempts. However, age groups did not significantly impact cessation outcomes. Interestingly, participants consuming lower daily quantities of areca nut achieved higher cessation success rate.

#### **Conclusions/lessons learned**

The study highlights the effectiveness of areca nut cessation classes in aiding participants towards cessation, especially among those consuming lower daily quantities. Addressing individual triggers and challenges is essential in cessation efforts, emphasizing the need for tailored interventions in combating areca nut addiction.

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Discussion on factors related to health awareness and delaying the deterioration of renal function in patients with chronic kidney disease

LIN Yu-Jhen, LIOU Miao-Ru, CHAN Shang-Ju

#### **Background and objective**

According to the Society of Nephrology and the Ministry of Health and Welfare, chronic kidney disease ranks first among health insurance spending diseases in 2022, with health insurance premium expenditures of 58.7 billion. In 2022, nephritis nephrotic syndrome and nephropathy will be the 10th leading cause of death in the country. The purpose of this study is to promote "health literacy" and "healthy lifestyle" for patients with chronic kidney disease, and provide treatment and health education measures. To prevent, reduce or delay the deterioration of renal function, thereby improving the healthpromoting behavior of patients with chronic kidney disease, reducing the burden of health insurance and medical care, and achieving a win-win-win goal.

#### Methods/intervention

The research method adopted a cross-sectional research design, questionnaire method, observation method, and purposive sampling method to select 178 patients with stage 3 and 4 chronic kidney disease as the research subjects. The questionnaire is divided into four parts: basic information, personal health status, disability question group, health information, dietary awareness, and medical services. This questionnaire uses a Likert five-point scale. Respondents range from very knowledgeable = 5 to very ignorant = 1 to assess the patient's understanding of their health status. The results of the study found that the average value of 13 of the 23 questions was higher than 3.5, indicating that patients had a moderate perception of their own health status, and the average scores of dietary cognition and medical services were low, so they had a significant impact. Therefore, the following methods and interventions will be carried out: 1. Telephone visits and care. 2. Establish an information system to effectively manage patient information. 3. Integrate the medical treatment process. 4. Continuous care and reminder services for the elderly. 5. Provide services through the social welfare system. 6. Hold symposiums to allow patients to share their experiences.

#### Results

The research results show that health literacy, age, education level, and medical services are related. Our hospital promotes the establishment of a promotion group by the Health Management Center, Administrative Management Team, and Nephrology Department, clearly defines relevant standard operations, holds regular meetings, and invites "mysterious guests" to evaluate medical services and processes. In terms of satisfaction, The overall satisfaction rate in 2022 is 49.5%, In 2023, the satisfaction level of Stage 3b patients will reach 92.05%, and the satisfaction level of Stage 4 patients will reach 94.1%. This shows significant progress in management and intervention, allowing patients to be more proactive and engaged in treatment and follow-up.

#### **Conclusions/lessons learned**

Improving health literacy is increasingly important for patients with chronic kidney disease. It covers educational intervention, smooth medical services, improved social welfare support system, and active participation and support of the government, which are relevant to improving the health awareness of patients with chronic kidney disease. Creating a healthy lifestyle and quality of life may improve their health status and help control diseases and avoid complications. Strengthen the public's awareness of kidney health, establish the concept of kidney health and prevention, actively protect their kidneys, and embrace a better kidney-friendly life.

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# The Initiative aimed at improving the health of local residents

#### HARADA Kazumi, WADA Norihiro

#### **Background and objective**

In Japan, the certification system for health support pharmacy came into effect in April 2016, and pharmacies have been able to submit notifications since October of the same year. The requirements include basic functions, facilities, and equipment as a family pharmacy, as well as the establishment of a collaborative system with medical and nursing care-related multidisciplinary professionals and health support for local residents. Our organization has been holding health lectures for local residents since 2019, and in order to continue our activity, our organization has been working on holding health lectures through Health Support Committee at our organization since November 2020.

#### Methods/intervention

In the beginning, we were in a state of limbo, not knowing what the theme would be or how to hold about health lectures for local residents. Considering that each pharmacy in our organization has different patient age groups and busy times and days of the week, their information was shared and discussed within our committee. We thought that choosing our topics of seasonal interest would make it easier to initiate and generate interest.

#### Results

In FY2020, our organization held 7 health lectures, 12 in FY2021, 15 in FY2022, and 22 in FY2023. In FY2023, there were 3 heat stroke cases, 9 flail cases, 3 dehydration/heat stroke cases, 3 moisturizing cases, 3 constipation cases, and 1 osteoporosis case.

#### **Conclusions/lessons learned**

Initially, we attempted to hold on-demand lectures at all pharmacies in our organization, but decided against it due to the busy times and days of the week that were not available for each pharmacy to hold their lectures at the same time. By creating common movies and converting them into data, same topics could be presented at each pharmacy on a different day and at a different time, thus reducing the time required to prepare lectures. By sharing information at our committee meetings, we can be used to improve next and subsequent health lecture contents. We hope that by having pharmacy users and local residents ask questions about their current health conditions and health-related issues, they will have the opportunity to take a step forward with regard to their health. Contact: WADA Norihiro Sensyuu Medica General Incorporated JAPAN wada@kpg.co.jp

Using self-examination of macular disease to improve self-management in diabetic patients

## TSAI Mei-Yueh, LO Hsin-Yi, HOU Chi-Chun, HUANG Ling-Ting, HSIEH Ming-Chuan, WANG Ching-Hui, WANG Li-Na

#### Background and objective

Diabetic patients are at a higher risk of developing macular degeneration than the general population, with a 25-fold higher risk of blindness. Statistics show that if glycated hemoglobin (HbA1c) levels can be maintained below 7.0%, only 2% of patients experience worsening vision each year. A 1% decrease in HbA1c can reduce the progression of retinal disease by 37%. Therefore, by increasing the use of the simple Amsler grid for self-checks, we hope to raise awareness of macular degeneration among patients, leading to better management of complications and improved blood sugar control.

#### Methods/intervention

To enable early detection of diabetic retinopathy, the case manager utilizes the Amsler grid for assessment. Cases with abnormal findings are referred to ophthalmology for examination and treatment. Implementation strategies include: 1. Posting posters on recognizing diabetic retinopathy. 2. Arranging seminars on rapid self-checks for macular abnormalities and providing brochures for rapid self-checks of macular abnormalities. 3. After obtaining consensus from the team, incorporating the existing health education process to schedule at least one Amsler grid for macular abnormalities and fundus photography examination per year for patients.

#### Results

From January to December 2023, through simple examinations using the Amsler grid, 61 cases of macular abnormalities were discovered. Among them, 23 individuals showed a decrease in HbA1c compared to before, with a self-improvement rate of 37.70%.

#### **Conclusions/lessons learned**

The conclusion drawn from this study is that early detection of abnormalities has an enhancing effect on blood sugar control.

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CHIA WEN Lai Show Chwan Memorial Hospital <a href="https://chiao.com">chiao.com</a> Using cross-team collaboration to integrate the health education information of cardiac surgery to improve patient satisfaction

### **CHENG Ching Lien**

#### **Background and objective**

The health education leaflets and manuals are auxiliary tools for medical staff to provide health education guidance to patients. In addition to enhance the impression of health education. Meanwhile, it offers the function of recording disease progression and any related data. However, health education leaflets need to take patient's degree of understanding, level of education, and visual senses into considerations. In recent years, medical care field has placed great emphasis on health literacy. According to the definition of the American Medical Association (AMA), health literacy is "a combination of skills that encompasses the ability to perform basic reading and numerical tasks required to function in a health care environment." Medical and health information is more complex and difficult than other information on living environment, which may cause patients difficult to understand it especially for those who are without sufficient health knowledge. Therefore, to improve the degree of difficulty of health information and providing readable and easyto-use guidance materials have become an important part of health literacy care measures. At present, patients in the hospital haven't have suggestions or feedback on the content and layout of the cardiac surgery health education manual yet. Besides, due to busy schedule of our nursing stuff, they are unable to assess patient's degree of understanding nor whether if patients have the motivation to read health education manual on their own.

#### Methods/intervention

To gather a total of 12 medical staff including cardiac surgeons, nurses, specialist nurses, extracorporeal circulation specialists, physical therapists, and nutritionists to assemble a team. then integrate and revise all the health education information from admission to discharge into the manual.

#### Results

The results showed that the overall satisfaction rate was 100%. Family members said not only could they understand the overall process of cardiac surgery, but also the follow-up care. The cognitive test of patient showed a correct answer rate 100%.

#### **Conclusions/lessons learned**

Heart surgery is a major surgery, which has a strong impact and pressure on patients and their families. They will have many uneasiness, fears and problems. However, through organized education and guidance, they can not only obtain new knowledge and reduce anxiety, but also have the possibility to promote health furthermore. Overall, to achieving a peaceful state of mind, body and society and restoring health.

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## Asbestos outpatient efforts at Saitama cooperative Hospital

#### **KUMAGAI Eri**

#### **Background and objective**

Saitama cooperative Hospital is located in Kawaguchi City, Saitama Prefecture. Kawaguchi City had a thriving foundry industry, and pneumoconiosis among workers was a major problem. However, in recent years, due to the decline of the foundry industry and the decrease in the number of patients, the ability of hospital staff to treat patients with pneumoconiosis has become a problem. When the Construction Industry Asbestos Benefit Act came into effect in January 2022, the need for diagnosis and social prescription increased. Recognizing the problem that there are few medical institutions that can provide specialized treatment for asbestos damage, the outpatient system was restructured with social workers taking the lead.

#### Methods/intervention

Awareness activities for hospital staff: We hosted an online learning session about "Construction-type Asbestos Benefits Act"with a lawyer as the instructor. Informing patients: Information about the "Construction-type Asbestos Benefits Act" and the consultation desk was published in a newsletter aimed at patients. Supporting social prescribing in asbestos outpatient clinics. Social workers listened in detail to the patient's occupational history and history of asbestos exposure, and assisted the doctor in treatment.

#### Results

By improving the knowledge of staff involved in asbestos outpatient clinics and establishing an outpatient system, it has become possible to encourage patients to visit. Based on the diagnosis, it is now possible to practice social prescription that leads to the use of the relief system.

#### **Conclusions/lessons learned**

Asbestos damage will continue to require assistance for decades to come. However, support systems for asbestos damage are recognized to be complex and difficult for both patients and hospital staff. In order to provide relief to asbestos-affected patients, it is necessary to make the support system known to patients and to support them in the procedures that lead to medical treatment and social prescriptions. At the same time, there is a need to increase the number of hospital staff who can respond by holding regular study sessions for hospital staff and establishing an outpatient system.

Contact: KUMAGAI Eri Saitama cooperative hospital JAPAN eri.vamada.co@gmail.com Analysis of Stroke Symptom Awareness Preparing Sub-regional Health Disparity Project in a city

LEE HeyJean, MOON Jiyoung, CHO EunHee, KIM Jung Min, AN Tae Sook, LEE Jong Min, KIM Eun Cheol, KIM Hyo-Jin, TAK Su-Bin, RYU Ho-Seong, KIM Miyeong, KIM KyoungMi, KIM Hyoju, KIM Mija, KIM Tae-Hoon, PARK Garam, KIM Hyun Ah, JUNG Min Yeong, KO Jang Sung, WANG Ju Eun

#### Background and objective

Stroke symptom awareness is a key to response appropriately transfering patient to stroke center within 3 hours from the onset. Korea Disease Control and Prevention Agency has launched 'Sub-regional Health Disparity Project' which intends to analyze, investigate, and intervene health disparity in local community. T city has started a project to reduce sub-regional disparity in prevention and management of cardiocerebrovascular disease. We analyze stroke symptom awareness in T city.

#### Methods/intervention

Stroke symptom awareness can be evaluated with five symptoms as follows; weakness in one sided arm or leg, slurred speech or incomprehensible conversation, half or diploptic field of vision, dizziness or imbalance, and severe headache. We calculate stroke symptom complete awareness, awareness of each symptom, number of symptom awareness. We also calculate indices according to gender and age.

#### Results

The median of stroke symptom complete awareness is 57.5% among local governments in 2022. Difference of awareness is 19.8% and disparity ratio is 1.91. Complete awareness of Gangwondo is 55.8% and that of T city is 46.2% lower than Gangwondo. The number of symptom awareness is 3.6 items that's lower than Gangwondo. Stroke symptom complete awareness is 38.4% in 20s, 51.9% in 30s, 52.4% in 40s, 54.6% in 50s, 47.6% in 60s, and 32.2% in 70s of T city. Awareness of slurred speech or incomprehensible conversation is the highest as much as 77.6% and that of half or diploptic field of vision is the lowest as much as 64.3%. 70s shows lowest awareness in every symptom. The difference of stroke symptom complete awareness is 12.7%p and disparity ratio is 1.27 among 8 subregions of T city.

#### **Conclusions/lessons learned**

This analysis shows the difference of stroke symptom awareness in regional and sub-regional level. It's necessary to approach 70s and to focus on half or diploptic field of vision and severe headache to raise the awareness in T city. It would be helpful to develop the ways customized to youngsters and to older adults. Contact: LEE HeyJean Kangwon National University Hospital REPUBLIC OF KOREA vishue@gmail.com

Effectiveness of Intermittent Scanning Continuous Glucose Monitoring on Blood Glucose and Dietary Control in Patients with Diabetes: A Pilot Study

#### SHIH Ming Chuan, LIN Kuan Pin

#### **Background and objective**

By using intermittent scanning continuous blood glucose monitoring, patients can keep tracking of blood sugar changes anytime, discussing the change of diet and blood sugar during the interactive process, and improving self-blood sugar management abilities to achieve the goal of blood sugar control.

#### Methods/intervention

An quasi-experimental research and purposive sampling conducted on patients with type 2 diabetes from the metabolism outpatient department. The inclusion criteria were insulin treatment for three months, HbA1c levels > 7.5%, being able to speak Chinese or Minnan, and being able to operate a smartphone. Data were collected including HbA1c, fasting and postprandia blood glucose, dietary self-monitoring checklists, and blood glucose records. Pair t-tests were utilized for the data analysis.

#### Results

Overall, HbA1c decreased by 4.8%, fasting blood sugar decreased by 13.8 mg/dl, and postprandial blood sugar decreased by 24.6 mg/dl. Meanwhile, the scores of the dietary self-monitoring checklist increased from 60 to 100. All indicators achieved statistically significant differences (p < 0.05).

#### **Conclusions/lessons learned**

This study found that using of continuous blood glucose monitoring can reduce blood sugar and improve ability of diet self-monitor in DM patients. The health professionals can recommend DM patients adopt continuous blood glucose monitoring to achieve the control of dietary and blood glucose.

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## Enhancing patient autonomy through informed consent in contemporary healthcare

### **LIN Fang Miao**

#### Background and objective

The importance of informed consent in medical decision-making has been elevated by advances in medical technology and individual autonomy. This study examines the application and challenges of informed consent in modern practice, emphasizing the need to respect patient autonomy. Enhancing the informed consent process ensures that patients make informed decisions, promoting a harmonious doctor-patient relationship, and safeguarding patient rights.

#### Methods/intervention

This research investigates informed consent in clinical practice through literature review and case analysis. It suggests methods to improve patient comprehension and decision-making. The review covers relevant laws, medical ethics, and the origins of informed consent. Case analysis examines patient and family perceptions during decision-making. Effective communication and emotional support from healthcare providers can reduce stress and improve patient understanding and participation.

#### Results

The research finds that patients and families experience significant stress discussing treatment options, even with adequate medical information, impacting decision-making, especially in critical situations. Emotional support, effective communication, and strengthening the doctor-patient relationship reduce anxiety and help patients make truly informed decisions through a comprehensive understanding of medical information.

#### **Conclusions/lessons learned**

Informed consent enhances the doctor-patient relationship and protects patient rights. Healthcare professionals should provide adequate information and address patients' emotional stress. Promoting patient understanding and involvement in decisionmaking requires effective communication and emotional support. This ensures patients make informed and appropriate healthcare decisions after fully understanding their treatment options.

Contact: LIN Fang Miao National Taiwan University Hospital TAIWAN fangmiao@ntuh.gov.tw Discussion on experience in dealing with cardiovascular symptoms of menopause

### CHUANG Chia-Ling, LIN Mei-Hsiang

#### **Background and objective**

Menopause is a necessary stage for every woman. Due to hormonal changes, there will be some physical and mental symptoms.Symptoms include: palpitations, chest tightness, night sweats, hot flashes, insomnia, vaginal dryness, headaches, joint pain, fatigue and anxiety. Among these symptoms, cardiovascular and systolic symptoms are one of the most troublesome symptoms for menopausal women. 80% of women will experience this, and these symptoms will last for nearly a year. Sometimes the frequency of symptoms increases with age (Kara L., al 2018). Use descriptive phenomenological methods and semi-structured questionnaire interviews to understand menopausal women's experience in dealing with cardiovascular symptoms.

#### Methods/intervention

The researcher conducted in-depth interviews with five menopausal women using an interview guide, and the social worker supervisor introduced the interviewees to the researcher for a meeting. Arrange an interview time with the interviewee and arrange a separate space. At the beginning, introduce yourself and inform the interviewee in detail about the purpose of the research. After the interviewe agrees and fills out the interview consent form, the interview will begin to be recorded. Use the computer word dictation system to record each word. Transcribed into interviews.

#### Results

There are 3 themes and 11 sub-themes in the verbatim analysis of the study. Experience of symptom discomfort, symptoms triggering other physical and psychological discomfort reactions, and the adoption of multiple coping strategies. These cardiovascular symptoms may disrupt sleep and affect mood and work. , attention and social activities, research indicates that 1/4 of women need treatment. The results of this study show that the cardiovascular symptoms are consistent with the literature.

#### **Conclusions/lessons learned**

In addition, the multi-response strategy adopted by myself can provide a reference for clinical nurses to implement interventional measures to improve the discomfort of cardiovascular symptoms during menopause.

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## Optimizing Teamwork to Reduce STEMI Door to Balloon Time

## YANG Yi-Chun, WEI Chih-Wei, WU Bao-Tzung

#### Background and objective

The guideline suggests that a Door to Balloon Time (D2B)  $\leq$  90 minutes for STEMI patients can reduce myocardial ischemia and mortality rates. Our hospital's achievement rates in 2021 Q1 (66.7%) and Q2 (73.1%) both fell below the benchmark of 75%. Analysis indicates delayed notification from the emergency department to the cardiology team as the primary cause, with completion and interpretation time of EKG being critical. Therefore, the team's objective is to optimize communication between the emergency department and cardiology teams to enhance D2B effectiveness.

#### Methods/intervention

Through benchmark learning and interdisciplinary team discussions, we established an Emergency Department and Cardiology LINE group on July 27, 2021, to facilitate real-time EKG interpretation and communication. The Cardiology Case Manager utilizes digitization to objectively analyze the D2B time at various stages. In the case of abnormal instances, information meetings are conducted to verify reasons, and the involved personnel fill out details. Additionally, proposals for review are presented at the monthly quality meetings.

#### Results

Average EKG completion time decreased from 8.2 minutes in 2021 to 4.8 minutes in 2022, maintaining at 5.9 minutes in 2023.
 D2B average time decreased from 90.0 minutes in 2021 to 83.5 minutes in 2022, continuing to decrease to 81.9 minutes in 2023.
 D2B achievement rate ≤ 90 minutes increased from 71.3% in 2021 to 75.4% in 2022, further optimizing to 83.6% in 2023.

#### **Conclusions/lessons learned**

"Time is muscle" affects the degree of heart injury every second. Through team LINE group communication, not only real-time EKG interpretation improves D2B effectiveness, but also serves as a platform for teaching and feedback between doctors from different specialties, allowing patients to gain Safer, more timely and more accurate medical care also enhances the emotional and tacit understanding among the team.

Contact: YANG Yi-Chun Tungs' Taichung MetroHarbor Hospital milky521208@gmail.com Effect of Covid-19 Pandemic Prevention Education Board Game Program to Students.

## WU Chia-Shan, CHEN Mei-Fang, LIN Shih-Ling, FANG Wen-Chih

#### **Background and objective**

In recent years, the incidence of the emerging infectious disease COVID-19 has increased, the implementation of campus epidemic prevention education is an important strategy to reduce the threat of COVID-19 effectively in campuses. This study aims to develop a COVID-19 epidemic prevention education board game that assists students' learning, and explore its effect on students' epidemic prevention knowledge, attitudes, and self-reported learning satisfaction.

#### Methods/intervention

The COVID-19 epidemic prevention education board game developed in this research will be implemented in college students in southern Taiwan. This study adopts a pre-test-post-test experimental research design. In addition to the original epidemic prevention education publicity, the four-weeks board game intervention of COVID-19 epidemic prevention education was added, and the effectiveness was evaluated based on students' epidemic prevention knowledge, attitude and self-reported learning satisfaction.

#### Results

The study recruited 46 nursing students, average age 15.8 years. The pre-test students' epidemic prevention knowledge response rate were  $63.91\%\pm10.00$ , post-test response rate were  $69.86\%\pm9.08$ , reaching a significant difference (t=-2.938, p=.005). The pre-test epidemic prevention attitudes average scores were  $3.81\pm0.56$ , post-test scores were  $3.99\pm0.51$ , reaching a significant difference (t=-2.40, p=.021). The pre-test self-reported learning satisfaction scores were  $39.59\pm9.87$ , posttest scores were  $47.43\pm6.42$ , reaching a significant difference.

#### Conclusions/lessons learned

The results of this study can understand the impact of COVID-19 epidemic prevention education board game's teaching activities on the positive effectiveness of students' knowledge and attitude of epidemic prevention. The developed teaching aids can also be used as a reference for the design of future health promotion activities, so that students are willing to learn, and improve the effectiveness of health education.

#### Contact:

WU Chia-shan National Tainan Junior College of Nursing TAIWAN <u>chiashan@ntin.edu.tw</u> Application of Integrated Healthcare to the Care of Patients in Wards of Division of Gastroenterology and Hepatology

### SU Ching-Kan

#### **Background and objective**

Nursing is integral to the medical team, facilitating crossdisciplinary communication and patient-centered care. Implementing problem-solving, case discussions, and Shared Decision Making (SDM) enhances cooperation among healthcare professionals, ensuring patients receive optimal care to promote their health

#### Methods/intervention

During hospitalization, if a patient's condition changes, or if there are contentious medical administrative issues, treatment doubts, communication gaps within the team, or healthcare complaints, integrated healthcare is initiated. Each specialty provides relevant care. Patients on multiple medications are referred to pharmacists for guidance. Significant weight loss triggers referral to a nutritionist. Social workers assist those facing financial or familial challenges. Case managers plan postdischarge care, involving patients, families, and professionals, ensuring continuity and home care when needed. Cancer patients receive comprehensive support services. This integrated approach ensures high-quality patient care and health promotion

#### Results

In 2023, statistical data indicated that 85 patients were referred to nutritionists, 58 to pharmacists, and 14 to social workers. Additionally, 394 patients engaged in discharge preparation plans, with 115 referred for screening of four types of cancer. Moreover, overall inpatient satisfaction reached 91.3%. The Adenoma Detection Rate (ADR) for colorectal adenomatous polyps was 52.4%.

#### **Conclusions/lessons learned**

With the implementation of integrated healthcare, in the process of caring for patients, the medical team is able to cooperate with each other and jointly formulate a care plan, which can provide patients with high-quality care in five aspects (whole person, whole family, whole process, whole team and whole community) to promote patient health

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A scoping review on the physical and psychological impact of the COVID-**19 pandemic on environmental** services workers within healthcare environments

### KOH Ye Kai Nicholas, NG Qin Xiang

#### **Background and objective**

During the recent Coronavirus Disease 2019 pandemic (COVID-19), the demand for thorough cleaning and environmental sanitation in healthcare settings spiked, resulting in a greater need for environmental services personnel, including housekeeping and janitorial staff. Despite existing research on healthcare workers' experiences during COVID-19, the challenges faced by environmental services staff have received less attention. This review seeks to explore the physical and psychological impact of the pandemic on these key workers within healthcare settings.

#### Methods/intervention

Following the Arksey and O'Malley framework and PRISMA-ScR guidelines, a comprehensive search strategy was developed with the assistance of a medical information specialist. Keywords related to environmental services workers and COVID-19 guided searches in OVID Medline, Embase, CINAHL, and the Cochrane Database, up to January 31, 2024.

#### Results

A total of 25 studies, mainly cross-sectional in nature, were reviewed. It was found that environmental services staff had a higher COVID-19 seroprevalence than peers in non-healthcare settings and experienced notable psychological stress. Nevertheless, prior training and outbreak experience offered some benefits.

#### **Conclusions/lessons learned**

Environmental services staff faced significant stress and infection risks during COVID-19, highlighting the need for enhanced support within healthcare systems.

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Promote the detection and treatment of latent tuberculosis infection in correctional institutions to prevent and control the risk of clustering of tuberculosis

## LAI Li Na, LIN Yi Chen, CHIANG Chu-Yu, LEE Chi-Hsueh

#### **Background and objective**

To prevent the risk of tuberculosis outbreaks in correctional facilities in the future, since 2021, Chang Bing Show Chwan Memorial Hospital has been cooperating with national policies to provide latent tuberculosis infection (LTBI) testing and treatment services for inmates in a large correctional facility in central Taiwan.

#### Methods/intervention

The hospital established an LTBI service team and collaborated with the local Health Bureau and a major correctional facility in central Taiwan to encourage inmate involvement in screening and treatment services. The initiatives undertaken include: (1) organizing health education seminars for inmates and obtaining consent from those willing to participate, (2) conducting Interferon-Gamma Release Assay (IGRA) blood tests, (3) performing chest X-ray examinations for individuals testing positive for LTBI, (4) assessing and initiating LTBI treatment, (5) providing case management and support, and (6) implementing directly observed preventive therapy for inmates.

#### Results

From 2021 to 2023, among the inmates served, the IGRA positivity rate was 10.2%. Among them, 135 individuals completed treatment, with the treatment completion rate increasing from 66% in 2021 to 85.18% in 2023. During this period, the completion rates for IGRA testing and treatment for LTBI in HIV-infected individuals were both 100%.

#### **Conclusions/lessons learned**

Over the past three years, our hospital has collaborated across departments to establish a comprehensive mechanism for the detection and treatment of LTBI. Concurrently, to reduce the risk of tuberculosis outbreaks among inmates, we have shared this experience with Tainan Municipal Hospital and expanded our services to another correctional facility in 2024.

### Contact: HSU Jason Chang Bing Show Chwan Memorial Hospital TAIWAN

Factors Associated with Willingness to Receive Coronavirus Disease Vaccination during the Pandemic: A Nationwide Survey in Taiwan

## WENG Shih-Han, YEN Yung-Feng, CHENG Feng-Shiang, CHOU Yi-Chang, HU Hsiao-Yun

#### **Background and objective**

Vaccination is the most important preventive measure to protect people from coronavirus disease 2019 (COVID-19). Governments worldwide have prioritized their vaccination policy against COVID-19. However, there is a lack of relevant research on Taiwanese attitudes and considerations toward COVID-19 vaccination. This study aimed to investigate the cognition, preventive behaviors, and attitudes toward COVID-19 vaccines that influence people's willingness to get vaccinated in Taiwan.

#### Methods/intervention

From October 1 to 31, 2021, a computer-assisted telephone interview system was used to randomly select Taiwanese people to investigate their COVID-19 preventive behaviors, knowledge, and willingness to be vaccinated.

#### Results

We included 2,000 participants of whom 96.45% showed vaccination willingness. The overall mean age and knowledge scores were 48.6 years and 5.78, respectively. Nearly 90% of participants chose to wear masks, and 80% chose to be vaccinated to prevent COVID-19. Compared with the non-willing vaccination participants, those with younger ages, higher incomes, and higher knowledge scores regarding masks and vaccination were more likely to be vaccinated. Furthermore, apprehensions about vaccine side effects and negative news about COVID-19 vaccines were the major reasons for vaccination hesitancy.

#### **Conclusions/lessons learned**

To improve people's willingness to get vaccinated, the government should strive to deliver correct knowledge and refute inappropriate negative information about COVID-19 vaccination. Moreover, recommendation by physicians was an important factor for older individuals to decide on receiving the COVID-19 vaccine, and policies could be implemented from this aspect.

Contact: WENG Shih-Han Taipei City Hospital TAIWAN A4391@tpech.gov.tw Establishment of an Intelligent Emergency Management System for Chemical disasters and Mass Casualty Events

## HSIAO Ju-Yin, YANG Chun-Yi, WANG Hsueh-Ching

#### **Background and objective**

Our hospital, located in an industrial zone with 1,478 factories nearby, faces 1-2 toxicological incidents or mass casualty events annually. Previous incidents revealed challenges in timely ambulance message reception, accessing toxic substance information, and manpower deployment. To enhance efficiency of handling emergency toxic and mass casualty incidents, we employed intelligent methods and information systems, aiming to: extend preparation time by 50%, reduce query time for substances and antidotes by 50%, maintain balanced medical staff ratios with a 100% alert rate, shorten equipment inventory time by 50%, achieve 0% equipment expiration, and ensure 100% compliance with equipment standards, aiming for zero staff safety incidents.

#### Methods/intervention

From Sep 2022 to May 2023, in collaboration with fire departments and vendors, we integrated response procedures into an intelligent system. We introduced an ambulance notification system, established antidote databases, an information platform, a manpower positioning system, and equipment management platforms.

#### Results

The results are as follows:Preparation time increased by 266% (from 3 minutes to 8 minutes), query time reduced by 90% (from 5 minutes to 0.5 minutes), achieving 100% alert rate for staff ratios, inventory time decreased by 86% (from 52 minutes to 7 minutes), expiration rate reduced to 0%, compliance rate reached 100%, and zero staff safety incidents. Drill participation satisfaction was 97.4%.

#### **Conclusions/lessons learned**

Through the implementation of intelligent systems, we have achieved lean management, focusing on pre-preparation, manpower utilization, and protective equipment management. This has improved disaster response efficiency, reduced costs, simplified workflow, and enhanced both patient care and staff safety.

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An exploration of the resilience of nurse practitioner (NP) during COVID-19

## TSAI Tsai-Ling, YANG Ching-Miao, HSU Chen-Yuan

#### **Background and objective**

Since Coronavirus disease (COVID-19) in December 2019, the resilience of nurse practitioner (NP) should really be noted. The purpose of this study was to explore the resilience of NP.

#### Methods/intervention

It adopted a cross-sectional research design in a medical center in central China and collected 142 valid questionnaires. Survey "Basic Information Questionnaire" and "Chinese Version of Connor-Davidson Resilience Scale". The statistical software SPSS Statistics 28 was used for data archiving and one-way ANOVA.

#### Results

This result found that the religious beliefs of NP during the epidemic reached the statistically significant level of p<.05 in the meaning/purpose aspect of resilience (p=0.03).

#### **Conclusions/lessons learned**

It is hoped that the results of this study can provide relevant information on the resilience of NP and establish reference materials.

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## Enhancing Preparedness Integrity of COVID-19 Dedicated Intensive Care Unit Emergency Supplies

## HUANG Shiou-Feng, CHEN An-Ting, JHENG Cing-Wun, JHAN Hong-Ci

#### **Background and objective**

Amidst the pandemic, healthcare institutions swiftly activated dedicated units to accommodate critical COVID-19 patients in 2022. A temporary nursing team comprising 26 intensive care unit (ICU) and 18 general ward nurses from 13 different specialties was assembled. Unfamiliarity with the new working environment resulted in prolonged preparation of emergency supplies and extra exchanges of isolation protective attire for missing items before accessing negative-pressure isolation rooms. Augmenting the burden on the medical team is frequently found. This study aimed to improve the integrity of emergency supply preparedness and smooth swiftly plan of

equipment setup with efficient trainings for medical teams in the future.

#### Methods/intervention

By creating layouts of medical supplies in preparation rooms, enlarging cabinet drawer labels and illustrations, healthcare personnel were swiftly familiarized with the placement of supplies. Three types of supplies packages were well-prepared for emergencies marked with an individual color. A defined area was setup for all relative supplies and equipment of endoscopy. Demonstrations and educational training were conducted regarding consistent inventory lists, usage, replenishment schedules for colorful package and endoscopy area.

#### Results

The preparation time for all materials of one treatment is decreased from 18'41" to 2'11". The integrity of material preparedness is increased from 36.6% to 100%.

#### **Conclusions/lessons learned**

Standardizing operational procedures, enhancing labeling, colorcoding, and centralized management of material can facilitate rapid and comprehensive completion of preparation tasks, following a short preparation time and safe treatment process.

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Exploring the Psychological Burden and Work Exhaustion of Healthcare Workers in COVID-19 Dedicated ward: A Qualitative Study

## HUANG Shiou-Feng, WEN Tzu-Ning, LEE En-Pe, LIN Jainn-Jim, LAI Shen-Hao

#### **Background and objective**

In pandemics, many healthcare workers were required to support the provisionally established wards. However, due to the highly contagious nature of diseases like COVID-19, they may experience a wave of resignations due to fear, a shortage of medical capacity. This study aims to explore the psychological burden and work exhaustion of healthcare workers in COVID-19 dedicated wards to identify underlying issues through interviews.

#### Methods/intervention

This study adopts a qualitative research design with purposive sampling. A total of 15 healthcare personnel with experience in caring COVID-19 patients were interviewed using a semistructured questionnaire method. Individual interviews lasted approximately 15-20 minutes with a questionnaire of 5 questions. The interview recordings were transcribed into textual documents and analyzed using content analysis.

#### Results

The interviewees included physicians (26.7%) and nursing staff (73.3%), they came from various specialties including surgery (53.3%), internal medicine (20%), and pediatrics (26.7%), with an average work experience of 6.5 years. Most interviewees were single (73.3%) and lived without family (60%). The average daily working hours increased from 8 to 10.5 hours, and the average daily sleep duration increased from 7.8 to 8.3 hours. Results found 6 major relative themes: fear of the disease, concern from family members, relentless work environment, uncertainty about readiness, feeling helpless in patients' care, and suffocation by protective equipment.

#### **Conclusions/lessons learned**

Based on data analysis, the psychological burden and work exhaustion of healthcare workers in COVID-19 dedicated wards are high due to 6 major themes. Implement early intervention measures and assistance are suggested to prevent resignation of healthcare workers.

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Comparing the Measles Immunity Status of the General Public and Frequent Travelers in Taiwan: Learning from Public Health Crises

## LI Kunhong, KOR Chew-Teng, HUNG Mingling

#### **Background and objective**

Our Travel Medicine Clinic collected all cases from 2017 to 2022 who tested Anti-measles virus IgG, a total of 178 cases, in order to understand the antibody positivity rate of this special group. We also collected a total of 16,170 cases who came to our hospital for health checkup from 2014 to 2022, in order to understand the immune status of the general public and compare the similarities and differences with the travel medicine clinic group.

#### Methods/intervention

We use multiple regression analysis to study the relationship between antibody positivity and factors such as gender and age. T-test and F-test were performed. In order to understand the interaction between antibody positivity rate and age, age is analyzed in two ways: continuous and categorical. The odds ratio is the result of the regression analysis.

#### Results

The majority of participants are primarily engaged in travel, accounting for 62.9%, followed with studying abroad (19.1%) and working (13.5%). The Asia-Pacific region boasts the largest sample size. The positive rates are very close in both groups, indicating no statistically significant difference. For each additional year of age, the odds ratio is 1.08 (Cl 1.07 to 1.09). Comparing to age less than 30, the odds ratio for ages 30 to 40 is 7.72 (Cl 5.52 to 10.94), and for ages 40 and above is 8.06 (Cl 6.42 to 10.53). As age increases, so does the prevalence of antimeasles virus IgG positivity. This trend occurs in both groups.

#### **Conclusions/lessons learned**

According to the vaccination recommendations of the Taiwan ACIP, adults born after 1981 who plan to travel to measlesendemic areas are advised to consult a physician and receive a dose of the MMR vaccine before traveling. However, our study found that individuals under the age of 30 have significantly lower antibodies compared to other age groups, hence it is recommended that Taiwanese adults should directly receive the MMR vaccine at their own expense.

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Report on radiation dose measurement efforts continued by medical co-op members after the Great East Japan Earthquake

## KAYAMORI Keiko, KIMURA Sanae, SUKA Naoyo

#### **Background and objective**

On March 11, 2011, the Great East Japan Earthquake caused the accident at the Fukushima Daiichi Nuclear Power Plant. Medical Co-op Saitama, in response to the concerns of local residents, purchased radiation measuring instruments at the corporation, lent them to each branch, and started the initiative to measure radiation doses. The present-day significance of this initiative and the direction of its activities will be clarified.

#### Methods/intervention

We measured radiation levels regularly. From the aggregated records, we clarified the number of measurement points, trends in measurement values, locations with high measurement values ( $\mu$ Sv/h) and their measurement values by year.

#### Results

The highest measured values were recorded in 2011, immediately after the accident, and the highest number of locations with results exceeding the high value standard was 23 in 2012, followed by 21 in 2011, and 20 in 2013. 2014 saw a sharp decrease in the number of locations with results exceeding the

high value standard to 2, and in 2015 the number of locations with results exceeding the high value standard dropped to 0. However, efforts to measure radiation levels have continued since then.

#### **Conclusions/lessons learned**

It was found that even Saitama Prefecture, about 200 km away from the Fukushima Daiichi Nuclear Power Plant, was hit by high levels of radiation. Through this measurement effort, we have learned the horror of radiation that threatens human health and lives, and have developed and continued our activities to achieve "zero nuclear weapons and zero nuclear power plants. In Japan, an earthquake-prone country, operating aging nuclear power plants is considered to be ignoring the risks and not a sustainable energy measure. Today, when the government policy is not to measure radiation levels in various areas and the safety of treated water and agricultural and marine products from the Fukushima Daiichi Nuclear Power Plant is being widely advertised, we believe that continuing to measure radiation levels at each branch of the Medical Co-op Saitama is a necessary movement as a human rights movement to protect the rights of the local residents.

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## Assessing COVID-19 health literacy, preparedness and associated factors among institutional caregivers for people with intellectual disabilitie

#### LIN Jin-Ding, LIN Lan-Ping, KAO Yuen-Wen

#### Background and objective

As Taiwan has become a super-aged society, care institutions for people with disabilities, where most residents are from vulnerable groups, must implement measures against emerging infectious diseases. This study analyzed COVID-19 health literacy, preparedness and associated factors of caregivers in institutions for people with intellectual disabilities.

#### Methods/intervention

Purposive sampling was employed to select 382 caregivers from eight care institutions for people with intellectual disabilities. A structured questionnaire, the COVID-19 Health Literacy Assessment Scale, was used as the measurement instrument. The scale is a self-designed questionnaire comprising 21 items on health literacy and COVID-19 prevention policies. The questionnaire responses were analyzed using SPSS 23.0 through descriptive and inferential statistical analyses.

#### Results

The participants had a mean COVID-19 health literacy score of 88.8  $\pm$  8.9 (range: 63–105). There was a significant correlation between the three dimensions of COVID-19 health literacy, namely 'ability to obtain COVID-19-related information,' 'ability to understand COVID-19-related information,' and 'ability to

distinguish and apply COVID-19-related information.' Multiple logistic regression analysis of the relationships between the demographic variables and COVID-19 health literacy revealed 'monthly service hours' as a significantly correlated factor. Participants who worked less than 160 h per month had higher COVID-19 health literacy than those who worked 160 h or more monthly (OR=1.922; 95% CI=1.183–3.122).

#### **Conclusions/lessons learned**

This study recommends that institutions for people with intellectual disabilities establish comprehensive pandemic prevention policies according to the level of health literacy among staff members to effectively improve their health literacy and response strategies, reduce health risks of caregivers and patients, and ensure health and well-being in the institutional community.

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The Role of Positive Vaccine Beliefs in Mitigating Mental Stress Among Healthcare Professionals during the COVID-19 Pandemic - An Observational Investigation

### LIN Yu Yin, CHO Shih-Feng, HO Chi-Kung

#### **Background and objective**

The COVID-19 pandemic is related to a higher risk of mood disorder in frontline healthcare professionals. This study aims to investigate burnout and mood disorder, as well as the impact of massive vaccination at a medical center during a prolonged COVID-19 pandemic.

#### Methods/intervention

This retrospective study analyzed the results of an online questionnaire survey including burnout status and mood disorders from 2020 to 2022. The factors related to mood moderate/severe disorders and the impact of the vaccine belief were also explored.

#### Results

The healthcare professionals continued to experience critical levels of personal and work-related burnout, as well as mood disorders. Notably, the percentage of individuals with moderate/severe mood disorders gradually decreased. Multivariate analysis revealed a positive vaccine belief was associated with a lower risk of moderate/severe mood disorders.Age older than 50 was linked to a positive belief. In the 2022 cohort, working as nurses was the independent factor related to a less positive belief.

#### **Conclusions/lessons learned**

A positive vaccine belief may mitigate pandemic-related mental distress. Further interventions to enhance the belief combined with other supporting measures are important in a long fight against the pandemic.

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## Improving COVID-19 Response: Training Strategies for Clinical Nursing Staff in a General Ward Setting

#### LIN Hsin Yi

#### **Background and objective**

The COVID-19 pandemic posed significant challenges for hospitals in Taiwan, particularly in managing outbreaks within general wards. This study aimed to improve staff preparedness and safety through training strategies amid the pandemic.

#### Methods/intervention

Plan for nursing staff to participate in education and training on caring for COVID-19 patients, including 1. Respiratory infectious disease awareness testing, 2. N95 respirator fit testing, and 3. Proper donning and doffing of protective equipment. In addition, before entering the ward for clinical operations, leaders will help confirm the integrity of protective equipment.

#### Results

Pre-training scores indicated a lack of preparedness among staff, with notable improvements observed post-training: awareness scores increased from 65.0 to 92.0 points, N95 fit test scores improved from 50.0 to 100.0 points, and proficiency in donning and doffing PPE increased from 60.0 to 100.0 points. Despite admitting 114 COVID-19 patients, effective measures reduced cross-infections, with a waiting time for transfer to isolation wards ranging from 1 to 3 days. Among the 28 nursing staff in the unit, 16 were diagnosed with COVID-19 due to caring for patients, and 8 of them had never suffered from COVID-19.

#### **Conclusions/lessons learned**

The study underscores the importance of staff training and safety in pandemic response. Enhanced knowledge and skills in respiratory infectious diseases and proper PPE usage are crucial for mitigating risks. Leadership oversight and preparedness are vital for ensuring staff safety and patient care. The findings emphasize the need for hospitals to prioritize education, training, and adequate resources to address emergencies effectively. Contact: LIN Hsin Yi China Medical University Hospital TAIWAN n10938@mail.cmuh.org.tw

## Poster session 3.4: Improving care of people with multiple health problems and comorbidity II

Use analgesics immediately after returning to the room after gynecological laparoscopy to encourage patients to get out of bed as soon as possible

### TSENG Tzu-Wei, HUNG Hsiang-Ying

#### **Background and objective**

Laparoscopic surgery for gynaecological diseases has been trusted by patients for its ability to reduce surgical time and safety considerations. Postoperative pain is unavoidable, and when the pain cannot be improved, it will not only affect the patient's quality of life, affect his sleep and recovery, increase the occurrence of comorbidities, prolong the length of hospital stay, and indirectly affect the patient's satisfaction with medical treatment.

#### Methods/intervention

Laparoscopic surgery for gynecological diseases, and the use of two analgesics at the same time immediately after returning to the ward after surgery, can reduce the pain of the patient, shorten the pain and discomfort of the patient, that is, promote the patient to get out of bed and move around early, reduce the occurrence of comorbidities, shorten the length of hospitalization, and indirectly improve the patient satisfaction.

#### Results

Statistics show that laparoscopic surgeries for gynecological diseases were performed from January to December 2023. An analgesic was given immediately after returning to the ward. The rate of patients getting out of bed on the day of surgery was 67%. Two analgesics were started from January to April 2024. After the combined use of both drugs, the rate of patients getting out of bed on the day of surgery was 90%.

#### Conclusions/lessons learned

After surgery, when the effect of analgesics does not meet expectations, it will affect the patient's recovery status and increase the occurrence of comorbidities, prolong the patient's hospital stay, and indirectly reduce the patient's satisfaction with medical treatment. Immediately after the operation, the combination of two analgesics can be used to achieve good analgesic effect, which can effectively promote patients to get out of bed early, reduce the occurrence of comorbidities, and improve the satisfaction of medical treatment.

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Investigating the Relations Between Frail Status and Risk of Sudden Cardiac Death in Hemodialysis Patients: A Prospective Cohort Study

## CHEN Chiu-Hui, MENG Shih-Wei, WU Chih-Cheng

#### **Background and objective**

Background: Cardiovascular diseases are the leading causes of death among patients on hemodialysis. Frailty is a multidimensional syndrome linked to adverse outcome in hemodialysis patients. Nonetheless, the relation between frailty and cardiovascular mortality has been rarely addressed in this population. We aimed to investigate the relevance of frailty on cardiovascular death in hemodialysis patients. Objectives: Exploring the relationship between frailty syndrome and cardiovascular disease mortality, and the potential for preventing sudden death.

#### Methods/intervention

Methods: Patients undergoing hemodialysis were prospectively enrolled from January 2018. The presence of five frailty phenotypes was determined at enrollment, using the modified Fried's criteria. Data regarding death due to cardiovascular causes were collected by review of medical records at 3-month intervals through December 31, 2021. A Cox regression model was used to estimate the associations between baseline factors and cardiovascular death during follow-up.

#### Results

Results: The patients' mean age was 66 years, 52% were women, and 39% had a history of cardiovascular disease at enrolment. Among these participants, 34.3% were classified as frail. Frail phenotype was associated with aging, diabetes, cardiovascular disease, atrial fibrillation, and low fluid removal during hemodialysis. Over a median follow-up of 1,187 days, 309 patients died and 188 of them were due to cardiovascular diseases. As determined by Cox regression analysis, frail patients had 2.24 times higher risk of cardiovascular death than non-frail patients (hazard ratio [HR], 2.24, 95% confidence interval [CI], 1.70-2.97, P<0.001), and the association remained significant (HR, 1.62, 95% CI, 1.20-2.19, P=0.002) after multivariate adjustment. In the patients died of cardiovascular diseases, 104 patients died due to sudden cardiac death (7.4%, HR 3.18, 95% CI, 2.11-4.81, P<0.001).

#### Conclusions/lessons learned

Conclusion: The frail phenotype is common in Taiwanese hemodialysis patients and is associated with an increased risk of cardiovascular death, especially sudden cardiac death.

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Exploring Effectiveness of Yoga can reduce the symptoms of cancerrelated fatigue in chemotherapy patients

### HSIEH Yi-Chen

#### **Background and objective**

The objective of this study was to examine Yoga therapy is useful to reduce cancer-related fatigue (CRF) in patients undergoing chemotherapy by using evidence-based methods.

#### Methods/intervention

This study established keywords and were combined synonyms with PICO and Medical Subject Headings term, with Boolean logic principles to systematically search for the research evidence. We searched the Airiti Library (Chinese Electronic Periodical Service) , PubMed, medline, and Cochrane Library for systematic review and meta-analysis investigating. Finally, there was 2 systematic review and meta-analysis article included in this study.

#### Results

1. Meagan O'Neill et al. (2020) used 24 trials were included; yoga demonstrated statistically significant improvements in QOL over non-PA (SMD-0.27 [-0.46;-0.07]) but not PA (SMD 0.04 [-0.22;+0.31]) comparators. 2.Shu-Ming Chen et al. (2011)used a systematic review method for 10 years. All 11 studies supported the ability of yoga to ameliorate anxiety, depression and fatigue significantly and enhance quality of sleep and daily life in cancer patients.

#### **Conclusions/lessons learned**

Yoga demonstrated statistically significant improvements in CRF.In addition to supervised and self-practicing strategies, were associated with increased patient adherence and improved CRF. In the future, hope patients may be able to have a greater willingness and channel to recognize and perform yoga to reduce cancer-related fatigue (CRF)

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Reduce the incidence of pressure injuries in cancer patients using noninvasive positive pressure ventilators

## HUANG Hsiao-Chi, LIN Ya-Ching, LIN Su-Zhen

#### **Background and objective**

Pressure injury is a significant and prevalent health issue in clinical care. Patients in hospital wards may experience pain and pressure iniury from prolonged wear of noninvasive masks, it can increase the risk of wound infection. After conducting root cause analysis, it was determined that effectively and correctly implementing preventive measures can significantly reduce the incidence of facial pressure injuries, thereby enhancing patient comfort and life satisfaction.

#### Methods/intervention

We collected cases of cancer patients who used Noninvasive positive pressure ventilation(NIPPV) during hospitalization in the ward in 2022. A total of 25 patients were included in the study, of whom 5 experienced pressure injuries at the bridge of the nose, resulting in an incidence rate of 20%. RCA revealed: (1) Nurses didn't provide family education. (2) No timing for pressure relief methods after placing masks. (3) No correct application of pressure-relieving dressings. Starting from Jan. 2023, the prevention of pressure injuries will be included as one of the quality monitoring projects. Improvement measures will be implemented as follows: (1) Provide education and training: Teach patients and their families decompression methods for mask use. (2) Clean the patient's face every 2 hours before reapplying the mask. (3) Select suitable silicone foam dressings. (4) Audit nurse practitioners to ensure they correctly assess the tightness of masks when fitting patients.

#### Results

(1) In 2023, the facial tightness test audit of each nurse achieved a 100% accuracy rate (20/20). (2) Patients who used NIPPV and received silicone foam experienced zero incidence of pressure injuries. (3) After providing health education guidance to family members, nurse practitioners achieved a satisfaction rate of 100% (15/15). From the above findings, not only did it reduce the incidence of patient pressure injuries, but it also improved overall nursing quality.

#### **Conclusions/lessons learned**

It is confirmed that the effective and correct implementation of preventive measures can significantly reduce the incidence of facial pressure injuries, increase patient satisfaction, and reduce infection rates. It is hoped that sharing this experience will provide nurses with valuable insights for patient care.

Contact: HUANG Hsiao-Chi NTUH Hsin-Chu Branch TAIWAN hchuang@hch.gov.tw Effectiveness of an ice roller on pruritus, comfort, and mood in patients receiving hemodialysis: A pilot study

### LIN Jong-Ni, CHEN Chiu-Feng

#### Background and objective

Chronic pruritus commonly affects the well-being of hemodialysis patients. Traditional treatments provide limited relief. This study aimed to assess the efficacy of a new ice roller in alleviating pruritus and improving both comfort and mood in this patient population.

#### Methods/intervention

This experimental study employed a two-arm parallel group design. Sixty hemodialysis patients experiencing pruritus (5D-Itch Scale score > 5) for over four weeks in Taiwan were recruited through convenient sampling. Participants were randomly allocated to either the intervention group, which used an ice roller for seven days, or the control group, which received no anti-pruritus treatment. The ice roller prototype resembles an ordinary household lint roller, consisting of a soft roller body with a cylindrical shape attached to a central spindle, along with a roller grip that is 12 cm long. Measurement instruments comprised the 5D-Itch Scale, General Comfort Questionnaire, Profile of Mood State, and feedback form. Data analysis employed analysis of covariance, t-tests, and partial Eta2 ( $\eta$ 2p).

#### Results

The participants included 38 men and 22 women, with a mean age of 62.77(SD = 10.60). Use of the ice roller led to a significant reduction in overall pruritus (p < 0.05;  $\eta 2p = 0.09$ ) and distribution of pruritus across bodily areas (p = 0.03;  $\eta 2p = 0.08$ ). There were no statistically significant differences in comfort and mood between the experimental and control groups at the study endpoint. The qualitative data indicated that most participants appreciated the cooling sensation provided by the ice roller, but some noted the limitations of the roller design and texture.

#### Conclusions/lessons learned

The ice roller demonstrates potential in reducing pruritus and its related problems among hemodialysis patients. It could complement existing anti-pruritus therapies following further refinement of the device.

#### Contact:

LIN Jong-Ni Da-Yeh University TAIWAN t648546@mail.dyu.edu.tw Facial Injuries from Oral Cancer Treatment: Impacts on Quality of Life and Strategies for Comprehensive Care

## CHANG Li-Chen, TUNG Chun-Liang, CHEN Tzu-Chun, FANG Yi-Chun, HUNG Tsui-Lian, LIN Yuan-Wei

#### **Background and objective**

The National Health Administration of Taiwan highlights the fishing, construction engineering, and passenger automobile industries as having the highest incidence of oral cancer cases. This study aims to investigate the facial injuries stemming from oral cancer treatment and their impact on patients' lives.

#### Methods/intervention

Using qualitative research and purposive sampling, this study was conducted at a regional teaching hospital's oral surgery department in southern Taiwan. Each participant underwent one or two interviews lasting 50 to 70 minutes, with audio transcripts transcribed for analysis.

#### Results

Of the 11 participants (9 males, 2 females), various impacts of facial injuries were observed:

- Swallowing Function Impairment: Electrotherapy led to difficulties in oral chewing, mouth opening, and swallowing solid foods.
- 2. Speaking Function Impairment: Unclear speech caused communication challenges and psychological distress.
- Social Function Impairment: The altered appearance attracted unwanted attention, leading to reduced participation in social activities.
- 4. Employment Impact: Participants expressed disappointment at job loss post-cancer treatment.

#### **Conclusions/lessons learned**

The findings highlight the significant influence of facial injuries on participants' lives, affecting aspects like swallowing, speech, social interactions, and employment opportunities. This emphasizes the necessity of addressing not just the physical aspects but also the broader quality-of-life impacts of facial injuries. Effective interventions and support systems are crucial, necessitating collaboration among healthcare providers, policymakers, advocacy groups, and community stakeholders to address these challenges comprehensively.

Contact: CHANG Li-Chen Chia-Yi Christian Hospital TAIWAN cych03109@gmail.com Prevalence of Metabolic Syndrome among Residents in Islands of Ongjin County, Korea: Using NCEP-ATP III, IDF, JIS Definitions

## KWON Eunjoo, NOH Dongwon, CHO Seon, LEE Yun-Hui, KIM Young-Sung, LEE Eun-Hee, KIM In-One

#### **Background and objective**

Metabolic syndrome(MetS) is a cluster of chronic disease risk factors, which increase cardiovascular mortality. The prevalence of MetS has increased in Korea. Residents in geographically vulnerable areas such as islands may be exposed to noncommunicable diseases due to limited access to healthcare. Ongjin County consists of a group of islands in the West Sea, Korea, close to the Northern Limit Line. This study aimed to investigate the prevalence of MetS using 3 different definitions among residents of Ongjin County, Korea.

#### Methods/intervention

This cross-sectional study comprised 6,219 residents (age $\geq$ 20 years) in islands Ongjing County who underwent a the health checkup at healthcare center in Incheon, Korea in 2020 and 2023. MetS was defined by the National Cholesterol Education Program's Adults Treatment Panel III (NCEP-ATP III), the International Diabetes Federation (IDF), and the Joint Interim Statement (JIS). Measured data on anthropometrics, blood pressure, and metabolic variables was used to classify the participants into the MetS categories.

#### Results

The prevalence of MetS was 29.2%, 28.9% by NCEP-ATPII, 32.5%, 32.0% by IDF, and 39.5%, 40.5% by JIS in 2020 and 2023, respectively. In 3 definitions, the prevalence of MetS in females is higher than in males in 2020 and 2023(p<0.001). The MetS prevalence increased with age in 2020 and 2023, by 3 definitions(p<0.01). The proportion of  $\leq 2$  MetS components by NCEP-ATPIII was higher than IDF/JIS, and the percentage of  $\geq 3$  components of MetS in IDF/JIS was higher than NCEP-ATPIII.

#### **Conclusions/lessons learned**

The prevalence of MetS among residents varied based on 3 definitions of MetS in Ongjin County, Korea. The highest prevalence of MetS was observed with JIS while lowest prevalence was observed by NCEP-ATPII definition. The prevalence of MetS by JIS among residents in Ongjin County was higher than the overall prevalence of MetS in South Korea. It is necessary to conduct longitudinal studies on the prevalence and lifestyle related risk factors of MetS in Ongjin County, Korea.

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## From Illness to Deep Self-Reflection: The Psychological Dynamics of Life Reevaluation in Cancer Patients

### LIN Yuan-Wei

#### **Background and objective**

During the course of cancer treatment, patients face spiritual challenges, and different religions have varying doctrines and beliefs regarding life, death, illness, treatment, and dying. This study aims to explore how religious beliefs affect the lived experiences of cancer patients post-diagnosis and their perceptions of life values and meanings.

#### Methods/intervention

This study employed a qualitative research approach, conducting in-depth interviews with twenty-one cancer patients using a semi-structured interview guide. The interviews were fully recorded, and the transcripts were used as the textual data for analysis.

#### Results

1.Practicing religious beliefs: Participants highlighted religion's impact on impermanence, releasing attachments, pain, and karma. They stressed treating pain as illusory, releasing attachments, and approaching challenges calmly.2.Personal growth and reflection: Participants shared experiences of illness, contemplation of death, and reevaluation of priorities, discussing self-reflection, overcoming challenges, and transforming adversity. 3.Evolving perspectives on disease and life: Participants adapted their views on cancer and life, focusing on accepting pain, releasing fear, finding peace, and embracing faith's power.

#### **Conclusions/lessons learned**

In summary, participants highlighted the significant impact of religious beliefs on coping with illness, emphasizing acceptance, detachment, and calmness. Their experiences underscored personal growth and reflection, leading to reevaluated priorities. Overall, these insights contribute to understanding how religious beliefs and personal growth influence individuals' responses to illness and life challenges.

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## Increasing cervical cancer screening rate among nursing staff in their twenties

## MAKI Naomi, IKEDA Kumi, IMAOKA Chika, OGAWA Yoshimi, ENDOU Mami, KANOU Yuna, OMURA Ikumi

#### Background and objective

Regular screening is effective for early detection of cervical cancer and screening once every two years from age 20 is recommended. However, in 2023, the cervical cancer screening rate among our nursing staff in their twenties was 0%. To understand the reason for this low rate and promote the awareness for screening, we carried out a questionnaire survey among our nursing staff.

#### Methods/intervention

A questionnaire survey was conducted on 54 nursing staff in their twenties at our hospital Between September 2023 and March 2024. After providing the staff with a pamphlet containing information about cervical cancer screening, we evaluated their response regarding willingness to undergo screening.

#### Results

43 (80%) out of 54 eligible nursing staff responded to the survey. From the survey, 47% of nursing staff answered they had previously undergone cervical cancer screening, with 14% stating they receive screening regularly. The most common reasons for undergoing screening were "for prevention", "currently seeing a gynecologist" and "receiving a free coupon for screening" while the most common reasons for not receiving screening was "not having enough time" and "too expensive". Most were not aware of the current state of cancer screening among nursing staff. After reading the information pamphlet, 53% of nursing staff indicated willingness to undergo cancer screening, with 5 reservations made for this year.

#### Conclusions/lessons learned

Providing information raised awareness of cervical cancer screening and increased motivation to undergo screening. However, due to short observation period, it is difficult to evaluate long time impact of our activities. Regular promotion of the awareness regarding cervical cancer screening is important to reduce the prevalence of this disease among young women in our society.

Contact: JAPAN renkei@hiroshimairyo.or.jp A Preliminary Study on Enhancing the Effectiveness of Insulin Injection Using the Concept of Health Literacy: A Case of Newly Diagnosed Type 2 Diabetes

## CHEN Jo-Fan, CHANG Hao-Chih, CHEN Yueh-Hao, HSU Yi-Chen

#### **Background and objective**

The 2019 Taiwan Diabetes Annual Report indicated that the prevalence of diabetes has exceeded 11%, amounting to 2.3 million people. The majority of cases are type 2 diabetes. Actively controlling blood sugar can delay complications, and insulin therapy is a primary goal. To enhance the understanding of insulin among newly diagnosed type 2 diabetes patients, efforts have been made to dispel fears and facilitate psychological adjustment through hands-on needle experience.

#### Methods/intervention

From May to November 2022, the event "Are You Controlling Your Blood Sugar? It's Actually Not Scary at All" was held to encourage newly diagnosed type 2 diabetes patients to accept insulin therapy. The event utilized shared decision-making (SDM) to explain the benefits of treatment and employed interactive learning models such as injection scenario simulations, technical demonstrations, hands-on needle experience, and experience sharing.

#### Results

A total of 30 participants attended, including 19 men, with men making up 63.3%. Of these, 25 participants were over 55 years old, accounting for 83.3%. Approximately 29.9% refused insulin due to fear of injection pain, while 63.4% decided to start using insulin, and 6.7% were undecided. Additionally, 53.4% were concerned that without insulin, they would not achieve their blood sugar control goals. The medical team, through the use of SDM and sharing experiences from model patients, increased participants' confidence, reduced fear of insulin injections, and facilitated hands-on insulin trial experiences. Demonstration teaching enabled participants to correctly complete the injection process.

#### **Conclusions/lessons learned**

Complications arising from poor blood sugar control can impact both the physical and mental well-being of patients, affecting their daily quality of life. The patients' understanding of the disease, family support systems, and doctor-patient relationships continuously influence whether they can successfully maintain injection behavior. Using the concept of health literacy to assess psychological preparedness and acceptance of insulin injections helps establish a fundamental.

#### Contact:

CHEN Jo-Fan Kaohsiung Municipal Siaogang Hospital TAIWAN renee4088@gmail.com Using AI information to improve health education and care for diabetes and chronic kidney disease

### CHEN Chin Yun, CHEN Bi-Chun

#### **Background and objective**

The main risk factors leading to kidney disease are hyperglycemia, hypertension, and hyperlipidemia. According to statistics from the Taiwan Kidney Disease Annual Report 2022, more than 90,000 people are on hemodialysis, and 40% have diabetes in the year before dialysis. Diabetes care has evolved from simple care in the past. Blood sugar control has been upgraded to organ protection and comorbidity prevention. International research has found that early formulation of treatment goals and a complete care plan in the early stages of diabetic nephropathy may reduce the risk of renal function deterioration by 61% in the long term.

#### Methods/intervention

1.Cooperate with the diabetes and early-stage chronic kidney disease pilot project of the National Health Service of the Ministry of Health and Welfare.2.Establish a risk prediction mechanism and develop a precise, patient-centered chronic disease care model by establishing a "case registration and tracking system".3.Establish an interdisciplinary care team for diabetes and chronic kidney disease.4.Statistically analyze the results of comorbid care.

#### Results

In 2022, the care rate for diabetic patients with chronic kidney disease in the hospital was 0.77%. In 2023, the care rate was 22.22%, and the patient satisfaction rate was 98%. The data shows that the care rate in 2022 was higher than the previous year. The results show that with AI wisdom After the introduction and implementation, the care rate has been significantly improved, which is helpful for the care of co-morbidities.

#### Conclusions/lessons learned

The study found that through database construction and the introduction of artificial intelligence, analyzing the risk of comorbidities in diabetic patients at different time points during the course of the disease can more effectively assist doctors and patients in making drug selections, in addition to adjusting lifestyles, you should actively cooperate with medical advice, use drug treatment with proven kidney protection, regularly assess risk factors every 3 to 6 months, and track kidney health.

#### Contact:

CHEN CHIN YUN Kaohsiung Municipal United Hospital TAIWAN IvIv2890@yahoo.com.tw Feasibility of AMBER Care Bundle in Identifying Palliative Care Needs in ICU Patients

## YANG Xiang-Mao, LAI Wei-Shu, LEUNG Pak-On, CHENG Hsiao-Tsun, YEH Yen-Ching, CHIANG Chia-Yu, CHEN Nai-Yu

#### **Background and objective**

The AMBER care bundle (Assessment, Management, Best Practice, Engagement, Recovery Uncertain) offers a systematic approach to addressing complex needs and uncertain recovery. This study evaluates the feasibility of using the AMBER care bundle to identify palliative care needs among ICU patients with uncertain recovery.

#### Methods/intervention

A mixed-methods feasibility trial was conducted in two ICUs. One ICU implemented the AMBER care bundle based on systematic review, while the other served as a control. Data included recruitment, patient characteristics, and outcomes measured by Australia-modified Karnofsky Performance Status (AKPS), howRwe questionnaire, and Symptom Assessment Scale (SAS). Qualitative feedback was collected and analyzed using content analysis. Descriptive statistics, independent, and paired t-tests were employed to analyze group differences in outcomes.

#### Results

A total of 39 participants (26 in the experimental arm and 13 in the control arm) were recruited, with an attrition rate of 17.95%. Despite the homogeneity of patient demographics, the experimental arm exhibited improvement in symptom control, though not statistically significant. Palliative care rates were higher in the experimental arm. Focus groups emphasized the importance of assessment consistency and staff education.

#### **Conclusions/lessons learned**

The AMBER care bundle positively impacts care quality and symptom management in uncertain illness situations, emphasizing the need for continued utilization.

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Exploring the Knowledge and Willingness of Taiwanese People towards Advance Care Planning

## FANG Hsiu-Chun, SU Mei-Chen, HUNG Yi-Pin, TSAI Yen-Ping

#### Background and objective

According to the Ministry of Health and Welfare in 2023, the coverage rate of signing Advance Decision (AD) documents in Taiwan is less than 1% of the adult population. Previous studies most focus on elderly or cancer patients or their family members. This study aims to investigate the knowledge and willingness to sign AD documents among Taiwanese people, providing valuable insights for relevant authorities to promote Advance Care Planning (ACP).

#### Methods/intervention

A cross-sectional design was applied in this study, utilizing an online survey method to investigate demographic information, knowledge of ACP, and the willingness to sign AD documents among adults aged 18 and above from various regions across Taiwan. SPSS version 26.0 software was used to compile and analyze the research data.

#### Results

A total of 1,068 community members participated in the study, with an average age of 48.63±15.19 years, and 59.3% were female. 70% were familiar with ACP, and the most common reason for not choosing ACP was a perceived lack of necessity. Predictors of willingness to sign AD documents included age, gender, marital status, residence, education level, reasons influencing ACP choices (cost, time, Opinions of family members and it should not be necessary), self-perceived health conditions, ACP knowledge, and ACP attitudes (R2 = 42.4%, p < .001).

#### **Conclusions/lessons learned**

Encouraging early discussions with family members or significant others through cost incentives or engaging promotional materials could help increase public awareness and facilitate meaningful expressions of end-of-life care preferences.

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The effectiveness of using diabetes health education programs to reduce the incidence of early kidney disease

#### CHEN Chi Chin, CHEN Bi-Chun

#### Background and objective

Hyperglycemia causes damage to the small blood vessels in the kidneys, affects kidney function, and then causes diabetic nephropathy. Considering that diabetes and chronic kidney disease have many common risk factors and overlapping causal relationships in care, the Diabetes Health Education Quality Care Plan is used to provide diabetes and chronic kidney disease. Knowledge about the mutual influence of kidney diseases can help patients achieve ideal diabetes control goals and reduce the incidence of early-stage chronic kidney disease. Cases whose main medical diagnosis was diabetes twice in the last 90 days were enrolled in the "Diabetes Health Education Quality Care Plan", which combines a cross-team cooperation model among doctors, health teachers and nutritionists. Patients undergo relevant examinations and examinations regularly every three months. Test tracking, use motivational interviewing skills during follow-up visits with value trend changes and health education tools (for example: CGM trend chart, glomerular filtration rate traffic light chart, food traffic light chart, food model, exercise video, game card, etc.) By using it, patients can enhance their disease awareness and improve their self-care abilities.

#### Results

From January 2019 to December 2012, a total of 2,705 people with diabetes were admitted to care. After regular follow-up and intervention of health education guidance, three indicators including HbA1C control <7%, blood pressure control <140/90mmHg and LDL control <100mg/dl The control standard increased from 26.7% to 37.3%, and the incidence of early chronic kidney disease dropped from 7.89% to 0.78%.

#### **Conclusions/lessons learned**

Through a cross-team cooperation model, our hospital allows patients to receive integrated care from doctors, health teachers, and nutritionists in one visit. We use test values, chart comparisons, videos, interactive games and other health education tools to enhance patient care. It can improve patients' disease awareness and self-care ability, thereby improving patients' HbA1C, blood pressure and LDL control status, and reducing the occurrence of early chronic kidney disease.

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## A Multidisciplinary Collaboration Care Model for Oral Health in Home Medical Care Cases in Taiwan

## CHIANG Kun-Yuan, KO Yu-Wen, SHIH Chien-Chih, YEN Yu-Fen, CHENG Hsiang-Ju

#### **Background and objective**

Home medical care provides comprehensive healthcare services for individuals with disabilities. Home medical care cases have a high risk of oral health problems. The causes of oral health problems may include patients' poor adherence to oral hygiene practices, caregivers' neglect of the importance of oral cleaning, and challenges in regularly visiting dental clinics. Poor oral health may not only affect physical health but also lead to aspiration pneumonia. Accordingly, paying attention to oral health care and connecting with other resources to enhance it in home medical care cases is significantly necessary.

#### Methods/intervention

In Taiwan, a special medical service project involves dentists providing dental home visit services that require referrals. This project creates an opportunity to develop a multidisciplinary collaboration model to meet the healthcare needs of home medical care cases. In this model, oral health assessments are completed during regular home care visits, and referrals to dental home visits are made with patient consent. Individualized treatments and oral hygiene instructions are provided by dentists with special care dentistry training. The outcomes can be followed up by the home care team.

#### Results

Our home medical care team has referred more than 100 cases and provided over 200 combined visits with the dentist since our first visit in 2017. Initial assessments and treatments are conducted by dentists who visit patients at home. Further treatment could be referred to other specialties, such as oral surgery for complicated tooth extractions or prosthodontics for denture fabrication. After treatments, home care nurses keep following up on oral hygiene status during each visit.

#### **Conclusions/lessons learned**

Multidisciplinary cooperation has shown that connecting home medical care teams with dentists for home visits can help prevent complications and improve the quality of life for patients with severe disabilities and their families by proactively providing professional home care services.

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Effect of the AADE7 Self-Care Behaviors in Improving Blood Sugar and Comorbidity of Patients with Diabetes

## LIAO Feng-Ching, HSU Wei-Yi, WEN Chen-Yu

#### Background and objective

Diabetes elevates triglyceride and low-density lipoprotein levels, and it reduces the level of high-density lipoprotein, which plays a protective role for the heart.Poorly managed diabetes and its complications can have considerable effects on the health of Taiwanese people. Therefore, patients with diabetes should take appropriate medication early and maintain a healthy lifestyle to manage their blood sugar levels, thereby reducing their risk of complications and improving their quality of life.

#### Methods/intervention

This study adopted a quasi-experimental design with purposive sampling and performed a paired t-test to compare the differences before and after an intervention. The research participants were 80 patients diagnosed with type 2 diabetes who were willing to undergo the intervention (health education). Each participant received health education on AADE7 self-care behaviors at least once and were followed up for 3 months.The participants were recruited between January 2023 and December 2023.

#### Results

Between January 2023 and December 2023, an intervention in the form of diet education was introduced to the 80 participants.Of these participants, 42 were male, 38 were female.The HbA1c of the participants before and after the intervention was 7.50% ± 8% and 7.32% ± 8%, respectively (p = 0.1834). The low-density lipoprotein level of the participants before and after the intervention was  $83.6 \pm 1 \text{ mg/dL}$  and  $87.1 \pm 2 \text{ mg/dL}$ , respectively (p = 0.2493). The triglyceride level of the participants before and after the intervention was  $196 \pm 1 \text{ mg/dL}$ and  $178 \pm 2 \text{ mg/dL}$ , respectively (p = 0.4834). The results revealed that the intervention (i.e., health education on self-care behaviors for patients with diabetes) did not significantly affect the low-density lipoprotein level of the participants but significantly improved their HbA1c and triglyceride levels.

#### **Conclusions/lessons learned**

Providing health education to patients with diabetes undergoing intensive therapy, along with consistent follow-up on and management of their status, can improve their self-care behaviors, thereby helping them to manage their HbA1c level and preventing or delaying the onset of various complications of diabetes.

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## Hopelessness in Peritoneal Dialysis Patients with Rare Diseases: The Role of Spiritual Care

### **KUO Chia Yu**

#### **Background and objective**

The patient is a 76-year-old female recently diagnosed with aHUS (atypical Hemolytic Uremic Syndrome), resulting in acute kidney injury. She is about to commence long-term peritoneal dialysis treatment, filled with hopelessness towards the upcoming therapy and the anticipated physical and psychological changes.

#### Methods/intervention

For this patient, we employed comprehensive care interventions, including physiological, psychological, and spiritual support. In terms of spiritual care, we provided psychological counseling, religious companionship, and emotional support to help the patient find inner peace and strength during difficult times.

#### Results

Through comprehensive care interventions, the patient gradually accepted the reality of her illness and started facing the challenges of treatment and life positively. She gradually regained confidence in the future and learned to alleviate pain and anxiety through spiritual practices.

#### **Conclusions/lessons learned**

This case highlights the importance of the spiritual dimension in comprehensive care for patients with rare diseases. While physiological treatment is crucial, psychological and spiritual support are equally indispensable. By providing comprehensive care, we can help patients develop a positive mindset to better cope with the challenges of illness and treatment.

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## Care Experience for a Newly Diagnosed Pancreatic Cancer Patient Facing Impending Death Threat

### LIAO Huai Lin

#### Background and objective

Background: This narrative explores the journey of a 40-year-old man facing a terminal diagnosis of pancreatic cancer. His discomfort and fear of impending death, coupled with the anguish of separation from his family, weigh heavily on him. Meanwhile, his loved ones grapple with the impending loss, feeling overwhelmed by grief and uncertainty. Purpose: To provide compassionate care to help the patient and family members navigate the challenges of illness and impending loss.

#### Methods/intervention

Methods: By fostering open communication and understanding the patient's needs, a supportive environment is created. Respect for the patient's religious beliefs is upheld through the provision of soothing Buddhist music and the presence of religious symbols. Emotional support is extended through opportunities for the patient and his wife to connect with their unborn child. Practical gestures, such as preserving the patient's hair and nails, serve as meaningful mementos for the family.

#### Results

Results: Through compassionate care and facilitated discussions, the patient finds solace and meaning in his life. Family members are encouraged to express their emotions and find closure. Comfort measures, including positioning techniques and aromatherapy, alleviate the patient's physical discomfort.

#### **Conclusions/lessons learned**

Conclusion: While medical care often focuses on physical symptoms, addressing emotional and spiritual needs is equally crucial, especially in end-of-life situations. By embracing a holistic approach and leveraging interdisciplinary support,

patients and families can find comfort and dignity amidst challenging circumstances. Training in emotional support and spirituality assessment is recommended for healthcare providers to better accompany patients through their journey of illness and healing.

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The correlation between gargling with honey water and 0.9% saline solution and quality of life in head and neck cancer patients.

### HSIEH Shu-Hua, HSIEH Ya-Lun, HSU Jui-Feng, LIN Ming-Hui

#### Background and objective

Chemotherapy often induces complications in cancer patients. Among them, oral mucositis as a side effect can lead to impaired oral function and integrity, difficulty in chewing and speaking, resulting in pain, changes in nutritional status, local infections, and even affecting their quality of life.

#### Methods/intervention

This study adopts a case-crossover study design, where each case serves as both the experimental and control group at different times. Participants undergo interventions with honey water and 0.9% saline solution gargling at three different time points: before intervention (prior to chemotherapy initiation), during intervention (after the first intervention), and after intervention (after the second intervention). The Taiwanese Chinese version of the EORTC QLQ-H&N35 quality of life questionnaire is used to assess changes in their functional status and symptom impact.

#### Results

According to the Pearson correlation results, there is a positive correlation between the World Health Organization (WHO) Oral Mucosal Assessment and the Oral Assessment Guide (OAG) at all stages. Similarly, there is also a positive correlation between quality of life scores and both WHO and OAG, indicating that as oral mucositis worsens, it affects quality of life. Additionally, from the trend charts of OAG and quality of life, it is evident that both groups show a downward trend at all four measurement points, with the honey group exhibiting a slightly more pronounced downward trend compared to the 0.9% saline solution group.

#### Conclusions/lessons learned

Clinical nursing staff are advised to provide patients with relevant care and preventive measures to reduce the occurrence and severity of oral mucositis, thereby enhancing patients' quality of life.

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The effectiveness of comprehensive scientific weight loss health management model in metabolic syndrome groups - Taiwan experience

## YANG Yu-Chun, LEI Tsun-Hsiang, PAI Chenni

#### Background and objective

The World Health Organization points out that "obesity is a chronic disease." Obese people are more than three times more likely to develop diabetes, metabolic syndrome and dyslipidemia than those with a healthy posture. Our hospital's metabolic team combines professional medicine, dietary nutrition, and physical fitness guidance to customize an individual weight loss plan and achieve weight loss goals using a safe, healthy, and effortless approach.

#### Methods/intervention

A five-week metabolic syndrome group control class with a total of 12 professional courses. and followed for three months. Professional doctors, case managers, nutritionists and sports coaches work together to conduct consultations to find the factors leading to obesity. Scientific data analysis is used to evaluate a weight loss plan suitable for individuals, and then case managers and nutritionists understand the diet. At the same time, it is combined with weight loss drug consultation, exercise guidance, etc. to establish a personal weight loss health management model.

#### Results

After 12 courses and followed for three months, the 19 participants lost a total of 78 kilograms, with an average weight loss of 4.1 kilograms per person. About 23.5% of people lost 3 to 4% of their body weight, and about 58.8% of people lost 5% of their body weight. The decrease in BMI in the physical control class: 5.81%. The total body fat reduction is 51.7%, and the average body fat reduction per person is 2.7%.

#### **Conclusions/lessons learned**

The medical professional team combines professional medicine, diet and nutrition, and physical fitness guidance, uses scientific data analysis to evaluate a weight loss plan suitable for individuals, and uses a safe, healthy and effortless model to customize a comprehensive management of healthy weight loss model to not only improve their health Knowledge and skills to effectively achieve weight control goals.

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## Poster session 3.5: Dementiafriendly healthcare

Effects of aroma-essential oils on sleep quality in patients with dementia: A systematic literature reviews.

### LO Hsueh-Chin, WANG Jing-Jy

#### **Background and objective**

Background: People with dementia often suffer from sleep disturbance, which accelerate the progression of the disease. Aromatherapy has illustrated effectiveness on behavioral and psychological symptoms of dementia. However, there is limited evidence indicating its potential benefit on sleep in patients with dementia. Our aim is to conduct a systematic review on the effectiveness of aromatherapy on sleep in patients with dementia.

#### Methods/intervention

Methods: Five databases, Medline, The Cochrane Library, Web of Science, Embase and Airiti Library, were searched to identify studies on aromatherapy (I) for sleep disturbance (O) of people with dementia (P). Data extraction and assessments of risk of bias were conducted independently by two reviews. The study was conducted following PRISMA guidelines, and the overall quality of the included studies were assessed by the appropriate Joanna Briggs Quality Appraisal Tool.

#### Results

Results: The search result identified 1678 studies, and 36 articles were assessed for full text review. Exclusion criteria encompassed studies unrelated to dementia, those lacking fulltext articles, those not primarily examining aromatherapy or sleep, studies involving non-human subjects, and those failing to meet the criteria for inclusion as research studies. One RCTs and two Quasi-Experimental studies were included. For Evidence quality, one study is classified as 1c while the other two are graded as 2d, representing moderate-quality evidence. The three studies demonstrate that aromatherapy may enhance the sleep quality of patients with dementia. Findings indicated that utilizing a nebulizer to inhale essential oils for at least one hour per day over consecutive 12 weeks, or inhaling continuously for 14 hours a day for 20 days, or massaging the face and hands with essential oils before bed for two weeks may improve the sleep quality of patients.

#### **Conclusions/lessons learned**

Conclusion: Inhalation of aromatherapy has been shown to effectively alleviate sleep disturbances in patients with dementia.

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## A Qualitative Inquiry of the Criminal Proceedings of Offenders with Dementia Disorders

### LIN Zijing

#### **Background and objective**

Premise: Dementia International reports growth of one new person with dementia every 3 seconds. The Taiwan Ombudsman's Office's 2018 "Survey Report on Human Rights Protection for People with Intellectual Disabilities in China" states that criminal cases involving people with dementia have increased from 94 to 368, a nearly four-fold surge. Article 13 (1) of the United Nations Convention on the Rights of Persons with Physical and Mental Disabilities (CRPD) states that "States Parties shall ensure to persons with physical and mental disabilities effective access to justice on an equal basis with others, etc." Therefore, the purpose of this study is to examine the experiences of families of people with dementia who are in conflict with the law in facing criminal proceedings and the current status of related social support networks.

#### Methods/intervention

Methods: Literature review, secondary data research and semistructured qualitative interviews were used

#### Results

Results: From the secondary database and interviews, it was found that most of the crimes committed by the mentally retarded were in the area of daily life activities, mainly in the form of burglary and in convenience stores, which are the easiest places to commit crimes. The criminalization of the mentally retarded is a double pressure on the family members who are the caregivers of the mentally retarded

#### **Conclusions/lessons learned**

Recommendation: It is recommended that the prosecutor's discretion be adjusted to rule directly that the defendant receive medical evaluation and disposition first. The court should establish a similar green channel to accept cases in a simple and strict manner, so as to shorten the suffering of the dementia patients waiting for legal judgment at home. The medical profession should popularize the implementation of a comprehensive assessment of the elderly and the inclusion of dementia scale screening, so as to screen and intervene as soon as possible.

Contact: ZI JING Lin Taipei Tzu Chi Hospital TAIWAN zijing0403@gmail.com Exploring the Behavioral and Psychological Symptoms of Dementia: A Comprehensive Study in the Elderly Population

### LAI Yun Hsin, LIAO Miao-Yu

#### **Background and objective**

Dementia, characterized by cognitive decline and behavioral symptoms, poses significant challenges globally, with increasing prevalence and associated costs. Taiwan faces a notable rise in dementia prevalence among the elderly, highlighting the urgency for comprehensive research. This study aims to investigate behavioral and psychological symptoms of dementia in the local elderly population, quantifying their frequency and severity to enhance understanding of prevalent behavioral patterns.

#### Methods/intervention

Data collection took place at a regional hospital in AD 2023, utilizing the Clinical Dementia Rating (CDR) and Neuropsychiatric Inventory (NPI) to evaluate dementia status and associated symptoms. Using the Neuropsychiatric Inventory Questionnaire (NPIQ), the study evaluated 12 common behavioral symptoms, scoring each for presence, frequency, and severity. Symptom distribution characteristics were analyzed using weighted averages and descriptive statistics.

#### Results

Forty elderly participants, predominantly female (92.5%) with a mean age of 80.0  $\pm$  8.0 years, exhibited mild dementia (median and mean CDR scores both at 1 point). Depression/dysphoria and sleep disturbances were the most prevalent symptoms, with rates of 60.0% and 85.0%, respectively. Sleep disturbances posed the highest risk, followed by depression. The average NPIQ symptom score was 2.75  $\pm$  1.45, with mean frequency and severity scores of 5.2  $\pm$  3.92 and 3.65  $\pm$  2.71, respectively.

#### **Conclusions/lessons learned**

The study underscores the high frequency and severity of dementia symptoms, particularly depression and sleep disturbances, among elderly individuals with mild dementia. Addressing these symptoms could significantly improve patients' quality of life. Early diagnosis, non-pharmacological interventions, community support, caregiver education, and further research are essential in mitigating the medical, economic, and caregiving burdens associated with dementia management, warranting validation through additional research considering sample limitations and regional variations.

#### Contact:

LAI Yun Hsin Taichung hospital ministry of health and welfare TAIWAN spichy6538@gmail.com Exploring the Effectiveness of Dementia-friendly Medical Care --Taking a psychiatric teaching hospital in southern Taiwan as an example

## CHEN Shu-Fen, WU Wen-Cheng, CHEN Yi-Jun

#### **Background and objective**

Taiwan's population is aging and the prevalence of dementia continues to rise.Early treatment of dementia can delay disability.The purpose of this study is to explore the effectiveness of interventional medical care services using dementia-friendly programs in psychiatric hospitals.

#### Methods/intervention

A cross-sectional research method was used to collect data from January to December 2023 at a psychiatric hospital involved in a dementia-friendly medical plan; data collection was based on work records, case interviews, project meeting minutes, and focus support groups. The plan includes: improvement of dementia-friendly care environment space, dementia-friendly treatment process and improvement of staff care plan. Evaluate the content of quantitative tools: medical treatment experience, service satisfaction, psychological emotions, sense of being valued, and attitude towards problems, etc. The reliability and validity of the questionnaire reaches 95% confidence interval; quantitative data are analyzed with descriptive statistics using SPSS25.0 statistical software. analyze.

#### Results

The hospital will provide medical convenience and accessibility, improve the medical environment in 17 dementia-friendly areas, Conducted 57 dementia-friendly education and care and relief programs for staff and volunteers.; and provide elderly-friendly and convenient medical services. The number of patients is more than 1,000 per month, and the number of people with dementia receiving friendly care services to delay functional deterioration is approximately 1,100 per month. The Dementia Care Center provides professional friendly services and community capacity, serving 560 people diagnosed with dementia within one year. The family-friendly care plan for employees with dementia completed assessment and support of physical and mental stress load for 422 employees in one year.

#### **Conclusions/lessons learned**

Dementia-friendly care case managers make monthly phone calls for consultation and provide appropriate long-term care resources according to the conditions of the dementia family; plans are planned according to the different conditions of the cases. Only a care model can meet the needs of patients and their families, improve the accessibility of medical care, reduce the care burden of dementia families, promote the delay of disability, improve the quality of life and reduce the cost of care. Contact: SHU-FEN Chen Jianan Psychiatric Center TAIWAN newfreda813@gmail.com

## Sing Around Therapy Project for Elder with Mild Dementia

## LIOU Huoy-In, WANG Yen-Chun, HUNG Yun-Hsiug

#### Background and objective

Taiwan's elder population hits 4.20 million, about 18.1% of the total population in 2023. On average, one out of every ten people belongs to the aging group. There're about 7.8% of the dementia elderly inTaoyuan. Dementia Prevention is the importent issue in community.

#### Methods/intervention

The purpose of this study is to application of a Sing Around Therapy for mild dementia elderly to increase the physical & psychological function. Running started from 04/01/2023 and be finished at 8/31/2023. Main target: those aged over 65 interested in Sing Around Therapy in the elderly(AD-8 >2). We are expected to hold a total of 12-week training session on Sing Around Therapy. 28 mild dementia elders were included. Before and after the class, we conducted checkup on their body functions (temperature, pulse, respiration & blood pressure) & do the pretest and posttest on their ADL,IADL & AD-8 to evaluate their physical & psychological function.We used the point card system to promote attendance.

#### Results

Attendance rate: 92%, After intervention, 8 of temperature, pulse, respiration & blood pressure for the elderly has declined significantly, All participants were no significant differences in Activities of Daily Living (ADL) &Instrumental Activities of Daily Living (IADL) ,also psychological and cognitive function(AD-8) before and after treatment with no significant difference.

#### **Conclusions/lessons learned**

Research reveals the following (1)Progress an Sing Around Therapy program on mild dementia elderly is helpful on improving the body function of dementia. (2)The operation programs of Sing Around Therapy on mild dementia are developed from the research are contributory on promoting of dementia education into Taiwan's elder educations.

Contact: LIOU Huoy-in Taiwan Landseed Hospital TAIWAN hil7667@gmail.com Investigation on the Factors of Failed Dementia Referrals in a Regional Teaching Hospital in Southern Taiwan

## HONG Yu-Ping, HUANG Wan-Ting, SHIH Chia-Lung, HOU Jung-Ying, CHANG Li-Chen, CHEN Cheng-Ren, LIU Chung-Hsien

#### **Background and objective**

Dementia affects the brain, impairing memory, thinking, and behavior. There are various types of dementia, each significantly impacting an individual's quality of life. Finding the right care setting is crucial for dementia patients. However, not all dementia patients can accept the suggested appropriate care setting. This study aims to investigate the factors influencing patients' reluctance to accept recommended care settings.

#### Methods/intervention

From 2019 to 2024, patient data was collected from a Southern Taiwan regional teaching hospital's Dementia Integration Center. We recommended dementia care settings, including a dementia base, a long-term care center, and a family caregiver support center, based on the patient's needs. Reasons for nonacceptance of these recommendations were also recorded.

#### Results

Of 617 dementia patients recommended for specific care settings, only half accepted. Of these, 323, 220, and 74 were referred to a dementia base, long-term care center, and family caregiver support center, respectively. However, only 180, 97, and 29 patients respectively accepted these. For the dementia base, refusals were due to outright rejection (49%), lack of transportation (11%), quota limitations (6%), and time constraints (5%). For the long-term care center, reasons included family's expectations not met (18%), extra charges (17%), family disapproval (17%), and direct refusal (11%). For the family caregiver support center, 62% declined because it didn't meet their family's expectations.

#### **Conclusions/lessons learned**

In this study, we explore the factors that contribute to patients' hesitation in accepting recommended care settings. Our results suggest that enhancing these aspects could align more closely with the expectations of patients' families. Ultimately, such improvements could lead to a higher acceptance rate of recommended care settings amongst patients.

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## Efforts to prevent social isolation: Reflections from local community activities

### **OHMORI Hiroyuki**

#### **Background and objective**

In Japan's hyper-aging society, various challenges have become complexed social issues. These include self-neglect, the 8050 problem (where parents in their 80s care for their children in their 50s), and hoarding useless items. It's suggested that these problems worsen as the connections between individuals and society diminish. Our center serves as a public comprehensive counseling institution in the community, offering consultations and support to help elderly residents continue living in their neighborhoods. Drawing from our experience in local community activities, we aim to examine the necessary challenges for fostering connections.

#### Methods/intervention

Excluding individual support, we conducted community activities 238times from April 2023 to March 2024. Based on reports from activities related to community networking, we examined the identified challenges within our center.

#### Results

While welfare volunteers and neighborhood associations play a role in monitoring isolation, challenges arise due to aging of these parties and a short of people to replace them. Creating naturally connected environments within the community, such as dementia cafes and children's cafeterias, is necessary. Consultation services for preventing isolation need to proactively reach out to individuals in their living environments. Elderly individuals living alone who don't seek connections often face difficulties, resulting in community mutual assistance. Consequently, reports indicate that welfare volunteers and members of neighborhood associations are also isolated due to the voluntary burden they carry. Fostering connections among supporters, such as through multi-agency and multi-professional networks, is necessary not only for addressing complex cases but also for preventing supporter isolation.

#### **Conclusions/lessons learned**

Community networking is essential for preventing isolation, benefiting both residents and supporters.

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Exploration of Factors Related to the Public's Knowledge, Attitudes, and Behavioral Intentions Towards Dementia Care

## TSENG Shiuan-Yu, WANG Shun-Mu, CHEN Chia-Yu, HUANG Hsiu-Ling

#### Background and objective

On average, one person is diagnosed with dementia every 3 seconds globally. As the population affected by dementia continues to rise, caregiving has become a critical health issue worldwide. Therefore, this study aims to explore factors related to the public's knowledge, attitudes, and behavioral intentions towards dementia care.

#### Methods/intervention

A cross-sectional research design was employed to recruit 351 respondents 20–60 years of age who lived in southern Taiwan. The questionnaire explored the respondents' demographic data; their knowledge, attitude, and views on patient care; and their willingness to care for patients. The collected data were analyzed using descriptive statistics, independent sample t-tests, analysis of variance, Pearson's correlation coefficient analysis, and multiple regression analysis.

#### Results

The respondents exhibited a moderate-to-high level of care knowledge, positively correlated with care attitude but negatively correlated with views on patient care. Care attitude was positively correlated with views on patient care and willingness to care for patients. Analyzing the predictive power of care knowledge, attitude, and opinions on patient care on willingness to care for patients revealed a positive correlation between care attitude and willingness and a negative correlation between views on patient care and willingness.

#### **Conclusions/lessons learned**

Associations exist between the knowledge, attitude, and behavioral intention regarding dementia. Therefore, health education for dementia should be strengthened so that patients receive adequate care while retaining their dignity.

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Promote the protection action for patient safety of dementia patients and their family members in the community

#### **CHEN Yi Ching**

#### Background and objective

Protecting patient safety is the responsibility of every medical staff, but without the participation of patients and their families, when they return to the community, they may often be readmitted to the hospital due to risks such as falls, consuming medical resources. Therefore, this study goes deep into the

community to convey the importance of medical and patient safety, hoping to improve the public's awareness and attitude towards patient safety, and actions will be taken and implemented in life.

#### Methods/intervention

A structured questionnaire was used to investigate the 191 Family members of dementia patients in 2023, The action strategies to guide family members to become patient safety guardians include:1. Gathering Family members of dementia patients thoughts on Patient Safety;2. Arrange time for community education;3. Deepen of patient safety guardians to learn through case share and videos;4. Design situational simulation cases based on past events;5. Use brainstorming in groups to encourage ideas: What can I do to keep my family safe?;6. Give feedback and exchange in the process, and Confirm the learning effect of the dementia family protection safety action.

#### Results

The research results found that among 191 community members, the overall satisfaction with the action strategies of patient safety guardians reached 93.7%, 96.5% of them understand the importance of patient safety protection, and 97.8/% of the public will take patient safety protection actions to ensure the safety of family members with dementia.

#### **Conclusions/lessons learned**

Patient safety guardians can promote community people's aware for safe care, establish a home safety protection network as early as possible, reduce the risk of injury to patients with dementia, and further reduce people's medical expenses.

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Community-based Dementia Service Stations-The Effectiveness of Hand Exercise and Muscle Strength by Making Grip Ball with Five Senses Satisfaction for dementia patients

#### WU Ya-Ting, TU Ying- Hsiu, WU Huei-Jen

#### **Background and objective**

A rapidly growing literature strongly suggests that grip strength and memory function are both related to neurotransmission, and every 5 kilograms decreasing in grip strength increases the risk of severe memory impairment by 18%. We design Five Senses Satisfying Grip Ball (FSSGB) made of natural tea leaves and pure cotton texture is for better grip and comfortable. It improve fine motor performance(open,pinch,grip)in ADL. Through five senses experience, the FSSGB can stimulate thinking.

#### Methods/intervention

1.We used JAMAR® Dynamometer to assess hand grip strength. 2.Individual hand muscle training: in FSSGB making process, it utilizes five sensory stimuli (vision: recognizing the tea leaves and the dried tea leaves, hearing: listening to the crisp sound of the dried tea leaves, taste: brewing method to taste, etc., olfactory: smelling the tea aroma, and tactile: touching the dried tea leaves and texture) 3.Group Grip Training : FSSGB, elastic ball, elastic band, emphasizing key hand posture "tension", "pinch", "grip", with individual and bimanual hand training. 4. Both training were one hour in every week, for 12 consecutive weeks.

#### Results

15 dementia cases completed the study . The mean improvement score of grip strength, were 0.21 (from 12.1 to 12.31kg) and 0.85 (from 12.94 to 13.79kg) for dominant and non-dominant hand, and 0.53 (from 12.52 to 13.05) for bilateral hands, which with a rate of progress of  $(0.53/12.52)\times100\% = 4.23\%$ .

#### **Conclusions/lessons learned**

The results indicated that training emphasizing 3 key hand strength (tension power, pinch and grip) applied in both FSSGB training and group hand strength training, can raise hand grip strength. Therefore, it might improve hand motor function in ADL.It is recommended that community bases cooperate with interprofessional teams such as physical therapists and occupational therapists to discuss and design FSSGB hand movement training. It is hoped that early hand movement training can enable patients with dementia to improve their health and quality of life.

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Analysis of the Effectiveness of Multicomponent Intervention Programs Preventing and Delaying Disabilities and Dementia for the Elderly - An Example of a Community Hospital in Southern Taiwan

## SHIAO Fen-Yu, HU Yu-Wen, SHIAO Fen-Yu, YEH Tzu-Ching

#### **Background and objective**

Taiwan's population is rapidly aging and will soon become the super-aged society by 2025. In order to meet the demands of long-term care needs, the government has expanded the number of service categories and items. Hence active aging and health promotion to prevent disability and delay dementia for the elderly has become the utmost urgent task.

#### Methods/intervention

This study retrospectively analyzes the effectiveness of a 12week compound course conducted by the "Veterans General Hospital Tainan Branch Comprehensive Senior LOHAS Center" for seniors with frailty risk over 65 years old in community care centers, and veterans' homes in Tainan City in 2023. The course lasts 12 weeks per session/2 hours per week. The course content includes four modules: cognitive improvement, nutrition education, physical fitness, and medical education. A comprehensive geriatric assessment was conducted before and after the implementation, which included basic information, the Short Portable Mental State Questionnaire (SPMSQ), Geriatric Depression Scale (GDS-5), Hand Grip Strength, and the 6-meter walking speed (WS). Frailty was defined using the Cardiovascular Health Study Definition (CHS) index (≥3 as frailty and 1-2 as frailty risk).

#### Results

Total of 123 cases were received (average age 72.6 years old, female accounted for 59%). After intervention, 12 cases progress in cognitive function test (9.7%, P<.05), cases reaching the normal scale of depression test increase up to 7.4%(P<.05), 14 cases show improvement in frailty (11.4%, P<.05), the improvement of hand grip strength test (male 4%, female 5.4%), and 9 cases improve in the 6-meter walking speed (7%, P<.05).

#### Conclusions/lessons learned

Our research affirms the positive effects of the 12 weeks comprehensive intervention to prevent and delay disability and dementia in community based elders.

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## Awareness Dissemination in the Dementia Community Led by Nurses Practitioner

#### YU ShuMin, LIU Chien Liang, LIN Naiyu

#### **Background and objective**

Through the professional knowledge and skills of Nurses Practitioners, from the hospital to the community, to dissemination dementia-friendly community publicity and promotion in the community, and then to develop holistic health care.

#### Methods/intervention

Nurses Practitioners designed and implemented dementia community awareness promotion activities, and cooperated with community shops, Non-Governmental organizations(NGO), and 12 district health centers in Taipei City to improve community residents' awareness of dementia and create a dementia-friendly community.

#### Results

From 107 years to the present, we have recruited 16,603 people who are willing to become dementia-friendly angels in the community through lectures or activities; recognize the concept of dementia-friendly and become dementia-friendly organizations reached 637, Including the National Palace Museum, the National Symphony Orchestra and many other art and cultural organizations and museums; the community's awareness of dementia reach 29,927.

#### **Conclusions/lessons learned**

Nurses Practitioners not only perform medical services in the hospital, but we can extend our professional knowledge to the community through multiple means, and extend the vision of Nurses Practitioners from the hospital to the community.

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## Embracing Happiness through Gardening: A Case Study of an Elderly Female Nursing Home Resident with Lewy Body Dementia

#### YANG Hsinju

#### Background and objective

As the mental health issues of the elderly population has been receiving increasing attention, studies are conducted to explore the benefits of the natural environment in enhancing the physical and mental wellbeing and sense of happiness. The study examined the effects of gardening-related activities as an intervention on an 84-year-old female elderly nursing home resident with Lewy Body Dementia, focusing on how experiencing nature, engaging in gardening activities, and immersing in therapeutic landscapes help promote her sense of happiness/wellbeing.

#### Methods/intervention

The case study found its participant in an elderly female nursing home resident with Lewy Body Dementia. In the business of fruit and vegetable wholesale in earlier years, the participants demonstrated a fondness for nature and showed no significant physical impairment. with The intervention covered gardening activities like tending and watering garden vegetables, immersing in therapeutic landscapes, practicing hydroponic seeding and propagation, potting and nurturing plants, and harvesting vegetables. The intervention lasted a total of 20 weeks, four to five days a week, two sessions per day, one morning and one after, each lasting for 20~30 minutes. The effectiveness of the intervention was assessed using a Well-being of Older People measure and a self-designed semi-structured interview.

#### Results

Research results revealed an overall wellbeing score of 37 points for the participant (with the prefect score reading 45 points), and seven main themes emerged from observations and the semistructured interview, including: 1. Experiencing the invigorating sensation of active muscles and agile bones; 2. Increasing opportunities for social interactions; (3). Establishing connections through positive affective communication; (4). Creating anticipation and hope associated with life's growth; (5). Enhancing sense of achievement and self-confidence; (6). Finding comfort and solace in new sources; and (7). Generating a sense of belonging through companion support.

#### **Conclusions/lessons learned**

A key to promoting mental health among the elderly lies in providing support for healthy aging. As suggested by the case study, experiencing nature, participating in gardening activities, and immersing in therapeutic landscapes can effectively promote the physical and mental wellbeing of the elderly.

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## Caring Burden of Family Caregivers for Dementia Patients - an example of Taiwan, HsinChu

## LEE Ying-Ying, LAI Hsiu-Yun, CHENG Wan-Yun, OU Pei-Tsu, CHIANG Chien-Wen

#### **Background and objective**

Dementia population has increased year by year. Caregivers of patients with dementia have experienced heavy load of care burden. In 2018, Taiwan has been starting the Dementia Care Policy 2.0 by passing the 2018-2025 Taiwan Dementia Plan. Because behavioral and psychological problems are highly prevalent among dementia clients which will cause sufferings for their family caregivers, how to reduce the load of their burden have become an important issue.

#### Methods/intervention

A convenience sample of family caregivers with dementia patients were surveyed using by Caregiver Burden Inventory(CBI) and compared before and after the subjects were provided intervention. This program provide a professional counseling, care skills, support groups, relief course (aromatherapy, yoga, boxer, painting) and respite care to family caregivers as appropriate.

#### Results

13 caregivers were selected for the study. Average care time is 20 months. The majority of dementia clients were diagnosed as mild dementia(76.9%). CBI score reduced from 29.1 to 27.3.Results showed the scores near or above 36 indicates a greater need for respite and other services. The time

dependency items was the most significant stress faced by participants. The highest scoring items are "I have to watch him/her constantly", "He/She is dependent on me". This result shows that the caregiver does not have his own time. Caregivers are sure the burden are good for the dementia knowledge and the help and support among members, and they also praise the site, time and content of the group.

#### **Conclusions/lessons learned**

The CBI proved to be an effective multidimensional tool for evaluating the impact of burden on many aspects of caregivers' lives. Clinicians are urged to assess regularly the degree of care burden in family caregivers to find out early. Our finding suggested that health professionals should first provide home care system and social resource link to shares care time and responsibilities. Caregiver hope "Someone could take care of the patient, so you can take a rest" or "Someone will assist, so you can have time to manage other thing"

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Effect of the Dementia-Friendly Friends Strategy Intervention on University Students' Cognition of Dementia Care

## CHEN Shu-Lin, TSAI Hsin-Yu, YU Hui-Hsu, LIN Mei-Ling

#### Background and objective

Dementia is not only a disease of the elderly, but has gradually affected younger people in recent years. However, dementia is a combination of multiple symptoms. In addition to physical discomfort, amnesia, and even mental symptoms, once it occurs in young people, it is very difficult for the patient and the family. It is an unbearable burden. Therefore, how to let more people better understand the situation of dementia cases is a very important issue.

#### Methods/intervention

The research method adopted purposive sampling, and from April to August 2023, 30 university students who volunteered to participate in the Dementia-Friendly Friends activities were selected. 1. Conduct pre- and post-study assessments: 20question dementia cognitive pre-test and post-test. 2. Watch dementia case care videos once a week for 4 weeks. 3. Recruiting volunteers to sign up for Dementia-Friendly Friends. 4. Participate in the dementia care base service activities for 2 weeks. 5. Group sharing and video recording to share ideas on dementia case care courses.

#### Results

A total of 30 students participated in this study. 1. The average score of dementia cognitive assessment was 55 before learning

and 86 after learning, results show an improvement of 31 points. 2. Completed the registration of 30 Dementia-Friendly Friends. 3. Active participation in dementia-friendly services increased by 35%. 4. Share 5 videos and 12 groups of friendly dialogues with dementia patients on their care experience at the dementia base.

#### **Conclusions/lessons learned**

The Dementia-Friendly Friends Cognition Course requires more people to participate, and it must be rooted in young people, be friendly to the fears of mild or confirmed dementia cases, and create more Dementia-Friendly Friends to help people with dementia and their care. Let people with dementia and their caregivers feel comfortable entering the community.

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## Poster session 3.6: Interventions for health promotion in the local community and for the population served

Improving medical care in Pingxi, a remote district with the highest aging rate in Taiwan

## LIAO Chen-Kai, LEE Jia-Fu, SHYU Rong-Yaun

#### **Background and objective**

People live in remote areas pay for the same health insurance, but the convenience of seeking medical treatment is much worse! Pingxi District not only has the highest aging rate in Taiwan, but the disabilities proportion is very high. To achieve the goal of medical equality, the objective of medical team was to improve Pingxi's medical utilization.

#### Methods/intervention

The medical team combines the resources of the public health center, all chiefs of villages, long-term care in Pingxi, and the Social Affairs Bureau to understand the individual conditions of the patients and their families to provide joint care. Every Wednesday morning, the physician and Tzu Chi volunteers go to the homes of patients with limited mobility or even bedridden for treatment. After the pharmacist prepares the medicines for home medical treatment, Tzu Chi volunteers take the hospital car to deliver medicines to patients' houses during outpatient hours to solve the problem of inconvenience for them to go out. In the afternoon, the medical team starts the clinic at the public health center. Due to the increase of patients, the medical team moved to the larger venue and the medical equipment was expanded to improve the medical quality. Furthermore, Tzu Chi International Medical Association holds a large-scale free clinic every two months in Pingxi.

#### Results

The number of medical visits per year before 2021 was less than 200, even 100. It reached 441 and 1893 in 2022 and 2023 after medical team's efforts. The medical utilization rate in Pingxi increased significantly.

#### Conclusions/lessons learned

It improves health equity in remote areas. Tzu Chi volunteers have the lofty spirit of serving people enthusiastically without asking for return. The team chats with patients and their families to understand their personalities and difficulties in daily life, and provide advice and help so that patients feel like they are treated sincerely. At the same time, with the cooperation of above units, health care becomes holistic medicine. Giving full play to the spirit of charitable medical care is the focus of providing rural medical care.

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Improvement plan using diverse strategies to reduce community hospitals' chronic illness ward fall incidence rate

### CHEN Tzu-Chi, YEN Kuei-Hua

#### **Background and objective**

Taiwan's patient safety goal for 2023 is to prevent patient falls and reduce the severity of injuries. In our ward, there were a total of 10 patient falls in 2021, with an occurrence rate of 0.08%, exceeding the threshold of 0.05%. One patient experienced repeated falls, with the second fall resulting in a laceration requiring sutures, leading to increased healthcare expenses. Therefore, a dedicated improvement project team was established to reduce the fall occurrence rate from 0.08% to 0.05% and decrease the injury rate from 33% to 8%, ultimately enhancing the quality of care.

#### Methods/intervention

1. Establishment of a multidisciplinary fall prevention service team : - Nurse - Physicians 、 specialized nurses Rehabilitation department - Dietitians - Social workers, discharge planning nurses Using a LINE group for swift notifications enables each specialized member to promptly assess patients. 2. Conducting group education on fall prevention for patients and caregivers. 3. Improvement and maintenance of environmental equipment: -Procurement of new commode chairs with wheels. -Smart mattresses. -Human-centric lighting fixtures.

#### Results

From May 2022 to June 2023, there were a total of 2 reported falls. The fall occurrence rate decreased from the previous rate of 0.08% to 0.02%, which is below the threshold. Additionally, the fall injury rate improved from 33% to 0% after the implementation of improvement measures.

#### **Conclusions/lessons learned**

To enhance patient safety awareness, patients and caregivers are instructed on the correct methods for getting in and out of bed, walking, and climbing stairs. Fall prevention measures are effectively implemented. Due to the impact of COVID-19, QR codes with video links are used, allowing patients to continue rehabilitation exercises at home by following the videos. This helps improve muscle strength and practice correct transfer techniques for fall prevention.

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Health Examination Center: Expansion of health promotion activities in the hospital and in the community and challenges

## KOIKE Akio, NAGO Genki, WATANABE Miyo

#### **Background and objective**

Since joining HPH in 2013, we considered future activities using examples of smoking cessation, efforts to address the asbestos problem, and health checkups for atomic bomb survivors.

#### Methods/intervention

We considered future activities using examples such as smoking cessation activities for staff in hospitals, smoking cessation activities in the community, efforts to address asbestos problems in the prefecture with the Saitama Construction Association, cooperation in health prevention activities, and health checkups for atomic bomb survivors.

#### Results

Smoking cessation outpatient clinic: A smoking cessation team was formed with a multidisciplinary team and conducted elearning for staff and smoking cessation consultations at local health plazas and mothers' classes. The smoking rate among staff was 14,0% in 2011, which decreased to 6,5% in 2022. Smoke prevention classes were also held for children in the community.Tackling pneumoconiosis and asbestos issues: We opened an outpatient clinic for pneumoconiosis and asbestos in 2005. The pneumoconiosis health checkup is conducted at related offices in all prefectures of Saitama Prefecture. The incidence of pleural plaques was 6.4% in 2021. Health checkups for A-bomb survivors: We have been conducting medical examinations for A-bomb survivors in Hiroshima and Nagasaki for some time and the number is now 43 per year.

#### Conclusions/lessons learned

Anti-smoking movement: Staff are decreasing. Aim for 0% further. We would like to consider expanding smoke prevention classes in the community. Pneumoconiosis and asbestos outpatient clinics: The government's relief system for asbestos victims is expanding, and we want to increase the number of people who receive secondary health checkups. The number of A-bomb survivors' health checkups is declining . I would like to promote and think about how we can provide appropriate support as a whole.

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## Support for Elderly Individuals Living Alone: Practical Report by the Voluntary Civic Group "Tomono-kai"

### **MATSUO Toshihiro**

#### Background and objective

Japan is facing numerous issues concerning the health and wellbeing of its super-aging society. In particular, the lack of support for elderly individuals living alone, who comprise 25% of the elderly population, is a pressing concern. Incidents of these individuals dying alone and remaining undiscovered for extended periods (referred to as "lonely deaths") are increasing, highlighting the societal challenge of supporting this group. "Tomono-kai" is a voluntary community organization that collaborates with Chidoribashi Hospital to perform health promotion in the community. There are 35,000 member households active across 14 areas in the region. We reported the results of our activities aimed at reducing isolation among elderly individuals.

#### Methods/intervention

We reported on the outcomes of lunch meetings and activities regularly organized by Tomono-kai in support of elderly individuals living alone in Area A.

#### Results

Area A has a high concentration of elderly individuals living alone, leading to a high incidence of lonely deaths. Tomono-kai holds lunch meetings twice a month in this area specifically for this group. These meetings provide an opportunity for participants to enjoy lunch together and have a pleasant time. Tomono-kai volunteers take turns in organizing and preparing meals. They incorporate seasonal dishes and create an environment conducive to enjoyable conversation during meals. Occasionally, lectures on medication by pharmacists are organized, providing valuable learning opportunities. In addition, special New Year's meals (known as "osechi dishes") are delivered to ensure that these people do not feel lonely during the New Year period. These meals are also prepared by Tomonokai volunteers who excel in cooking.

#### **Conclusions/lessons learned**

Feedback from participating members includes comments such as "the food was delicious," "it's nice to see more familiar faces," and "I'm happy that something like this exists in our community." The lunch meetings and activities reduced isolation among elderly individuals living alone and enhanced their sense of purpose.

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The effectiveness of using logic model for weight management among obese older adults in a community in northern Taiwan

### CHEN YaFang, CHEN Sung-Yun, LIN MeiLing, CHEN Shu-Nuen, LIU TsuiYao

#### Background and objective

According to an analysis by Taiwan's Ministry of Health and Welfare, the overweight and obesity rate among people over 65 years old is 58.3%. Our hospital is a healthy community and agefriendly environment in northern Taiwan and our staff includes weight management nurses. This study arm to conduct an effectiveness analysis on weight management among obese older adults in the community by using logic model.

#### Methods/intervention

The study period is from August 2023 to April 2024. The following strategies are used to intervene in the obese older adults over 65 years old with a BMI greater than 27kg /m2 who come to the study hospital. "Input", our hospital combines village office to conduct analysis of manpower, materials and resources. "Action", by conducting power walking classes, invite successful people to share their success experiences, families encouraging each other to lose weight, rewards will be given for participating in the complete course, fill out a diet diary and have a 30-minute weekly consultation with the participate from a hospital nutritionist. "As a result", changing elders' perceptions of obesity and improving health behaviors. "Long-term results", BMI and waist circumference were measured every 2 months for a total of 6 months. And explore the relevant influencing factors of this study.

#### Results

A total of 30 older adults were admitted, with an average age of 65.8 years old and average class attendance rate is 85.7%. According to the results, it was found that the elderly's understanding of the importance of exercise to physical health increased from 60% to 100%, they exercised at least 3 times a week and the overall course satisfaction is 95%. The waist circumference was reduced by an average of 4.5 cm (p=0.02), the weight was reduced by an average of 3.3 kg (p<0.01), and it was found that support and companionship of family members were the major success factors.

#### Conclusions/lessons learned

The study results show that the use of logic model can achieve significant results in weight control among obese older adults and can prevent chronic diseases caused by obesity.

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PFAS contamination is a "life and human rights issue" - What we learned from PFAS blood tests and outpatient consultation efforts for 791 people in 30 Santama municipalities

### KUSAJIMA Kenji, AOKI Katuaki, MIYAGI Chouji, NANJO Yoshihiro, HASUIKE Yasuhiko

#### **Background and objective**

Our efforts were centered around the Nishitama Association for the Removal of Yokota Air Base after the PFAS problem became clear in Okinawa and high concentrations of PFAS were detected in well water near Yokota Air Base in the Tama area. It all started when a ``study session to learn about PFOS and PFOA contamination" was held with Professor Emeritus Akio Koizumi of Kyoto University as a lecturer. During the subsequent coronavirus pandemic, we held online study groups to form the "Society to Clarify PFAS Contamination in the Tama Area" in 2022, with three parties including local residents, Kyoto University experts, and local medical institutions. We have been working together to clarify the reality of pollution. In order to address the health concerns of local residents, we have opened Japan's first PFAS consultation outpatient clinic and are conducting learning and awareness activities using a PFAS guidebook.

#### Methods/intervention

With the cooperation of Associate Professor Koji Harada of Kyoto University, blood tests were conducted on 791 people in 30 Santama municipalities from November 2022 to June 2023 at 18 clinics to collect blood samples for 4PFAS and biochemical tests, as well as residence history, We investigated work history, living history, medical history, etc. Those who wished to attend were asked to visit the PFAS consultation outpatient clinic, where an abdominal ultrasound and thyroid-stimulating hormone (TSH) test were performed.

#### Results

PFAS was detected in almost everyone, and 46% of the people exceeded the total value of 20ng/ml (US standard) of 4 PFAS, which can cause health damage, especially 92.9% in Kokubunji City and 74.4% in Tachikawa City. The actual situation of

contamination has become clear. Approximately 80 people visit the PFAS consultation outpatient clinic, but we are responding to the health risks pointed out in the National Academies of Sciences, Engineering, and Medicine's "Guidance on PFAS Exposure, Testing, and Clinical Follow-up (2022 Edition)." It became clear that it was necessary.

#### **Conclusions/lessons learned**

PFAS contamination, often referred to as a new form of pollution, is a social factor that affects everyone's health and cannot be ignored. Both medical responses and societal prescriptions are required to address this issue. Specifically, on the medical front, there's a need for systems that allow anyone to undergo testing at any time, health follow-ups, and the development of excretion-promoting agents. On the societal level, measures based on the "precautionary principle" and the development of decontamination technologies are necessary. Additionally, there's a call for fostering environmental science and obligating companies to fulfill their social responsibilities.

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Improving health inequalities in Indigenous Tribes: Take Nansan Village, Alishan Township, Chiayi County, Taiwan as an example

### WANG Cheng-Wei, AN Xin-Yu, YANG Hui-Fei

#### **Background and objective**

Since 2018, the Ministry of Health and Welfare has promoted the "Strategic Action Plan for Improving Health Inequality in Hometowns". Among the establishment of healthy tribes on tribe construction is to promote appropriate health literacy and medical services under the bottom-up framework. The purpose of this article is to present the current status of health and medical service promotion in Nansan Village, Alishan Township.

#### Methods/intervention

This article focuses on the people of the three southern villages (Shanmei Village, Xinmei Village, and Chashan Village). Taking the health promotion of chronic diseases from 2020 to 2023 as an example, the first intervention in early detection is to set up one-village-one health station to provide free blood pressure measurements. By improving health literacy, we connect local nurses, nutritionists, etc. and open different themes of classes. For the development of a healthy diet, we combine tribal eateries and develops healthy dishes. Finally, to stay healthy and fit, we work with family physicians, tribal aerobic teachers, and rehabilitation specialists to hold weight-loss classes.

#### Results

From 2020 to 2023, a total of 3 health stations were established, and a total of 976 people used blood pressure measurements. A total of 87 health literacy courses were held, involving 3064 people. As for healthy eating, we developed 3 healthy dishes, which were purchased by a total of 58 people. For a healthy body, a total of 3 tribal weight loss classes were held, and a total of 132.3 kg of weight was lost before and after.

#### **Conclusions/lessons learned**

Chiayi Christian Hospital has been deeply involved in Nansan Village, Alishan Township all year round, and through different health and medical service contents, it has shortened the medical care gap and improved the health inequalities among the TSOU people.

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Addressing Health Inequalities in Chiayi City: Analyzing Community Health Needs to Develop Health Promotion Strategies

### LIN Hsiang-Min, HUANG Wan-Ting, HUNG Shih-Yu, WENG Cheng-Chieh

#### **Background and objective**

Smoking, betel nut chewing, alcohol consumption, improper dietary habits, and insufficient exercise can all lead to health problems. To understand the health status of community residents in Chiayi City, this study utilized health questionnaires to analyze health issues in each districts. The results of these health needs assessments were then provided to nursing personnel at health stations to develop tailored health promotion strategies.

#### Methods/intervention

The study focused on health screening participants from a hospital in Chiayi City from 2021 to 2023. The health questionnaire included items such as age, gender, smoking, betel nut chewing, alcohol consumption, dietary habits, and exercise routines. Participants were divided into nine major districts: Dongnanmen, Gongyuan, Xinnan, Beimen, Bazhang, Beizhen, Changrong, Beixing, and Zhuyuan. A total of 9,928 data entries were analyzed using statistical software.

#### Results

Descriptive statistics revealed the following: the average age of respondents was  $56.7 \pm 12.4$  years, with females accounting for 66.2% of the sample. Compared to the other eight districts, residents in Beixing Joint Districts had the highest rates of smoking, consuming sugary drinks, and lack of exercise. Residents in Changrong Joint Districts had the highest rates of betel nut chewing and skipping breakfast. Residents in Bazhang Joint Districts had the highest rates of support Districts had the highest rates of skipping breakfast and consuming sugary drinks. Residents in Zhuyuan Joint Districts had the highest rate of alcohol consumption. Conversely,

residents in Xinnan, Dongnanmen, and Gongyuan Major districts exhibited relatively healthier behaviors.

#### **Conclusions/lessons learned**

In conclusion, since the health issues vary across districts, it is recommended that health station nurses develop health promotion strategies tailored to the specific needs of each district to reduce health disparities among the districts.

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Bridging Multigenerational Communities: The Role of 'Yomise Street Community Center' as a Hub

### ONO Fumie, YAMADA Wakako, MOTEGI Hideko, AKAMATSU Michie, NAKANO Nobuo

#### **Background and objective**

Since March 2016, "Yomise Street Community Center" has been operated as a gathering place for the local community. However, over the past four years, the spread of the coronavirus has necessitated various restrictions on activities. Despite these circumstances, to ensure a sense of community and to support families struggling with child-rearing amidst these challenges, we have actively organized various group activities, free tutoring sessions, and children's cafeterias.

#### Methods/intervention

- 1. Eight community meetings are held to facilitate daily interaction among participants.
- 2. With financial support from Taito Ward, free tutoring sessions are held twice a week.
- With financial support from Taito Ward, a children's cafeteria is held twice a month, distributing lunches to support families with young children facing financial difficulties.
- 4. With financial support from Taito Ward, a food pantry is held monthly.

#### Results

- 1. Community meetings: A total of 135 meetings were held annually, with 651 local residents participating.
- Free tutoring sessions: 75 sessions were held annually, providing learning support to a total of 121 children.
- Children's cafeteria: 23 sessions were held annually, distributing lunches to a total of 1,706 children.
- Food pantry: 12 sessions were held annually, distributing food to a total of 549 households.

#### Conclusions/lessons learned

1 • Participating in community meetings provides a sense of belonging and serves as a form of "watchful care" within the

neighborhood. 2 • Initiatives such as children's cafeterias and food pantries not only offer support to those facing financial difficulties but also foster intergenerational conversations, contributing to a sense of security in raising children within the community. 3 • Establishing gathering places like "Yomise Street lkoi no le" (a community space) where multiple generations can connect and build relationships is essential for creating a neighborhood where residents feel secure and can continue to live comfortably

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# Constructing the Effectiveness of Community End-of-Life Promotion Based on the Legal Framework

#### LIU Hsu-Hua, HUNG Hsiang-Lien

#### **Background and objective**

Since January 6, 2019, Taiwan has implemented Asia's first Patient Autonomy Act, which assists people in signing advance decisions (ADs) through Advance Care Planning (ACP) and helps them arrange the medical care they wish to receive in the future. However, there is a huge gap between urban and rural areas, so our goal is to promote of end-of-life (EoL) care in rural areas and to provide a reference for the future community outreach model.

#### Methods/intervention

We designed an education and extension curriculum on the decision-making process from "long-term care" to "EoL care", and integrated the "Hospice Palliative Care Act" and the "Patient Right to Autonomy Act". This module was used to educate and promote the North Coast community, rural areas, medical institutions, universities, etc. We evaluate the difference in the understanding of the pros and cons of receiving life-sustaining medical care and the understanding of medical autonomy before and after using the teaching materials.

#### Results

We surveyed 42 participants and revealed that the lower the education level of the audience, the lower acceptance rates for signing Do Not Resuscitate (DNR) and AD forms. Although 40% of the participants had never heard of AD-related information, 100% of them signed the DNR and AD after the course. Our education program and module significantly changed the participants' attitudes and behavior.

#### Conclusions/lessons learned

Through the design of easy-to-understand promotional materials that cover the connotation of Taiwan's EoL legal system, the community can effectively enhance peoples' awareness of death. This could allow the people to have a dignified and highquality end, and be able to say goodbye with under their own decisions.

### Poster Sessions 3: Friday, November 8, 2024, 10:45-12:15

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Using Quality Control Circle method to explore the community and health promotion activities of residents in long-term care institutions

### LIANG Shiow-Ching, LI You-Jun, YEN Chia-Chi, HUANG Ming-Jen, CHANG Ko

#### **Background and objective**

In Taiwan,1.2% of the elderly live in long-term care institutions.Long-term care institutions focus on physical care and assistance with daily living, neglecting activities and social arrangements, which may accelerate the physical degeneration of the elderly.Therefore, the management of activities within the organization is important.This article explores the Quality Control Circle(QCC) method to improve the participation rate of residents in long-term care institutions.Members include caregivers, nurses, social workers, nutritionists and social groups outside the hospital.They use cross-agency and cross-team cooperation and combine diverse perspectives to organize a variety of community activities in order to increase activity participation rates.

#### Methods/intervention

The program runs from September 2023 to February 2024, targeting 15 people with a Barthel Index of 20 or above. For the 5W (What, Who, Where, When, How), conduct essential factor analysis, true cause verification, and primary and secondary factor analysis. Active publicity, incentive measures, feedback mechanisms, and residents' preferences are the main factors that influence activity participation. Formulate strategies such as broadcast promotions, event participation rate rankings, and current feedback as improvement measures.

#### Results

After selecting the strategy, a total of 10 activities were carried out, and the activity participation rate of residents increased from 64.1% to 76.0%, with a growth rate of 18.56%. The self-evaluation of team members shows that communication, coordination and team spirit have shown the greatest improvement.

#### **Conclusions/lessons learned**

This plan uses the QCC method to comprehensively examine community activities for residents of long-term care institutions, uses the team's diverse perspectives and systematic methods to identify key factors and strategies, and constructs standard operating procedures for activity management to ensure the quality of institutional services.

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Diverse Relationships Built by a Community Food Bank: The Role of "TSUNAGARI"

### KUDO Taeko, INOUE Husako, KATORI Mieko, YABE Youko, INOUE Satoshi, SAITOH Humihiro

#### Background and objective

A food bank was created by Co-op members to support the community. It has provided aid for three years. This project built diverse relationships, called "TSUNAGARI" in Japanese. We report our findings here.

#### Methods/intervention

Period of project: March 2021 to March 2024 Frequency: Once a month and emergency requests. Target: People whose income was reduced due to the COVID-19 disaster, pensioners, economically disadvantaged, etc. Project Publicity: Co-op member newsletters, Co-op hospital, counseling agencies, etc. Amount provided: A total of 3,500 meals . Supplies provided: Rice (6,240kg), canned food, retort pouches, noodles, bread, vegetables, fruits, etc. Supply packages last about 10 days. Funding: Approximately 1.5 million yen from CO-OP Kyosai and 2.5 million yen from Co-op members.

#### Results

Recruitment of staff relied on personal connections; 720 people offered to participate. Staff members used their existing expertise. Co-op members also provided supplies and donations. Food bank users included non-regular workers, the elderly, single parents, welfare recipients, and foreign people. Users got to know each other. One commented, "It's good to come here and talk to everyone." Some young users became staff members.Local people with disabilities and volunteer groups supported the project. Staff members lobbied for free or discounted supplies from public institutions, stores, and local farmers. Staff from the Co-op hospital obtained grants and provided counselling, space, and supplies.

#### Conclusions/lessons learned

Along with nutritional support, the food bank built five types of TSUNAGARI: (1) among Co-op members; (2) among users; (3) from aid recipients to aid providers; (4) the community and public institutions; and (5) in hospitals. Each relationship expanded and was strengthened.

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# 73 Years After Taking Over Calling for Health in the Community

### **FURUSAWA Y K**

#### **Background and objective**

In 1951, Dr. Junzo Okuyama started the Chiba Kensei Hospital Health Friends Association, which said, "It is important to raise the knowledge of each person's health for the health of the community, and we will establish a health club for early detection and treatment." We are working as a "life consultation center" that delivers health to the community and is close to the problems of the community.

#### Methods/intervention

Now that healthy life expectancy is extending, there are many elderly people in the community who do not go to the hospital except for health checkups. At the Association of Friends, we provide opportunities for healthy people to think about their bodies through public lectures and stories. We went to the home of a local member and asked the hospital staff, "How are you?" We call on people to feel free to visit us, and we are sending out messages that the Association of Friends is working closely with the community.

#### Results

For most elderly people who do not have access to the Internet, the monthly newsletter "Friends of the Association" plays an important role in connecting the community, hospitals, and friendship associations. In October last year, I received a phone call from the Society of Friends. "Please help me, my sister can't make it," I felt uneasy at the thin voice on the end of the phone, and immediately headed home. My sister was fine, but she was acting strangely when I called, so I contacted the hospital and called an ambulance. I had atrial fibrillation and was one step away from a myocardial infarction. I felt better, and later asked, "Why did you contact the Society of Friends?" When I asked, he said, "I always have a copy of the Friendship Association at hand, and I can tell you how kind I am."

#### **Conclusions/lessons learned**

There are many cases like the previous one. Everyone Mr./Ms. say, "I thought I could do something about it if I told the Society of Friends." I feel that this is because the activities that have been connected for a long time have taken root in the community. We further deliver health to the community, convey sincerity to others, and wonder how the slightly nosy neighbors are doing, which is the custom of Japan and the role of the Association of Friends.

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# Practical report of a diabetes support group from the perspective of health promotion

### OKAWA Kikuko, AZAMI Yasushi, YAMASHITA Ayumi

#### **Background and objective**

Minori Kai, a diabetes support group established in 1966, has been actively working to strengthen patients' social connections among them as well as with medical staff to prevent loneliness and social isolation, and to reinforce their health literacy from the perspective of health promotion. We confirm the meaning of the patient support group of today, and additionally clarify its role during COVID-19 pandemic.

#### Methods/intervention

Search procedure We conducted quantitative analysis of data collected from a questionnaire-based survey of members in 2018, moreover, we performed qualitative analysis based on it. We also investigated the state (e.g. clinical features, event participation frequency) of all the members in 2023, with further analysis of newly joined ones after the COVID-19 pandemic.

#### Results

(1) As of June 2023, the numbers of male and female members were 107 and 79, respectively. The mean ages of these were 68.5  $\pm$  11.1 and 72.7  $\pm$  11.1 years, respectively. The distribution ratios of both sex regarding the method of treatment did not differ significantly. The sex ratio of members was the same as that of the entire diabetic outpatients. The high event-participation rate of men showed a feature that our activity is easy for them to join in. (2) Health literacy level among members who read the entire monthly magazines of Japan Association for Diabetes Education and Care, compared to those who do not or do less, was significantly higher. (3) No positive correlation was observed between health literacy level and event participation frequency; both are independently important for health promotion. (4) Qualitative data analysis targeting members who were isolated from the regional society due to various reasons revealed that they find a place of their own in the group. (5) During the COVID-19 pandemic, new members living alone accounted for a larger percentage than those who became members before the pandemic.

#### **Conclusions/lessons learned**

Our research on health literacy and social connection of members showed that the patient support group plays an important role in their health promotion.

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# Pharmaceutical care for homecare patients in Taiwan.

### **CHANG Yi-Ting**

#### **Background and objective**

With the aging of the population in Taiwan, the demand for longterm care is rapidly increasing. The field of pharmaceutical care has extended from hospitals and pharmacies to the community and home. Therefore, this study is to analyze the home visits conducted by pharmacists from a teaching hospital.

#### Methods/intervention

Analyzes home visit records by pharmacists from 2020 to 2022, including gender, age, medical device presence and types, case activities, and medication usage to assess the effectiveness of pharmaceutical care, data collection includes the achievement rate of therapy interventions and analysis of medication counseling and health education.

#### Results

The number of visits from 2020 to 2022 were 120, 93, and 63, respectively. The proportion of newly admitted cases to the number of visits in those years were 50.0%, 64.52%, and 60.32%, respectively. Analysis of visit case types revealed a relatively high proportion of women at 65.22%, with an average age of 83.9±13.4 years, and 56.52% of cases using tubes. The main types of tubes were nasogastric tubes and urinary catheters, while 52.9% of cases were long-term bedridden patients. The average number of drug items used was 8.9±3.7. The intervention rates for drug treatment issues were 69, 48, and 31, respectively, with most involving untreated conditions or diseases. In the analysis of medication guidance and health education projects, the majority of cases were those who did not know the precautions for medication use.

#### **Conclusions/lessons learned**

Pharmacist intervention in home visits can effectively identify medication therapy problems, particularly for elderly individuals, long-term bedridden patients, and those using multiple medications. Due to the peak of the COVID-19 pandemic, home visits were suspended from May to Aug to focus on delivering medications to confirmed patients. Additionally, the primary source of case referrals for the home visit model established by the research hospital is from home care nursing cases, leading to a higher proportion of cases with medical devices.

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# Community diagnosis for heatstroke prevention

### ISHIBASHI Kaoru, YUKI Yoshie

#### Background and objective

Yodogawa Workers Welfare Association researches heatstroke status every summer. Heatstroke and social isolation have become serious issues. Community diagnosis for heatstroke prevention identified the community's characteristics, issues, social resources and use of public system, and countermeasures were discussed with local organizations and government.

#### Methods/intervention

A multidisciplinary team was formed and invited City government, Fire Department, medical institutions and welfare facilities. After presentations from Doctor on Community Diagnosis, Fire Department on emergency call cases, and local government on prevention efforts, the situation, challenges and countermeasures were discussed.

#### Results

Actual status in local community were learned, issues were pointed out, and agreed on more need for collaboration effort. Proposals were made for specific measures, including unique ideas to increase the number of cool public oasis spots.

#### **Conclusions/lessons learned**

We keep close contact with the local government. Also, we registered with the Osaka Cool Oasis Project and added 4 more cooling oasis spots. It is important to prepare cooling oasis spots and utilize community resources for the group vulnerable to heatstroke or tend to be socially isolated. Knowing and establishing close personal relationships with government officers, multiple institutions and community people allow us to make intervention on the community people that we could not reach by a single medical institution.

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# Enhancing Pap smear Screening Rate among Community Women by Using the Theory of Planned Behavior

### TAI Chih Ying, HUANG Yue Yun, LI Kuo Jen

#### Background and objective

This study aims to utilize the Theory of Planned Behavior to investigate why community women are hesitant to participate in Pap smear screening. The primary goal is to increase Pap smear screening rates within the community, considering the significant reduction in cervical cancer incidence and mortality rates through large-scale screening.

#### Methods/intervention

A survey based on Theory of Planned Behavior studied Pap smear screening factors. 69.44% cited "lack of understanding of cervical cancer prevention". Screening averaged 18.61 minutes due to manual forms. In response, the study organized promotional

#### Results

Through the application of the Theory of Planned Behavior and community engagement activities, there was a noticeable increase in cervical cancer awareness among community women. The percentage of respondents citing "lack of understanding of preventive measures for cervical cancer" decreased significantly from 69.44% to 30.35%. Additionally, the average screening time per person decreased from 18.61 minutes to 16.26 minutes, leading to a substantial improvement in the community's Pap smear screening rate from 59.7% to 73.4%.

#### **Conclusions/lessons learned**

Using Theory of Planned Behavior, the study found reasons for women's reluctance to Pap smear. Interactive health promotion and streamlined screening improved awareness, reduced wait times, and enhanced acceptance for screening, aligning with health promotion goals.

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Analysis of the Effectiveness of Video and Onsite Weight Management Classes in the Workplace: A Case Study from a Hospital in Taipei

### HSIAI Wei-Ling, HUANG Lu-Chiu, SHIH Hsiu-Chen

#### **Background and objective**

Excessive body weight and obesity raise the risk of disease. To support the working population in weight management and promote overall health, the institution holds an annual eighthour onsite workplace weight management class. The curriculum covers traditional Chinese medicine, nutrition, psychology, and aerobic exercise. Due to the pandemic, the 2022 program shifted to video sessions, but in 2023, onsite classes resumed as the situation improved. The objective is to assess the effectiveness of different teaching methods on weight management to guide future course planning.

#### Methods/intervention

A descriptive research design using purposive sampling studied obese individuals aged 20 to 64 (BMI ≥24 kg/m<sup>2</sup>, excluding pregnant women) in 2022-2023. 58 participated in video sessions, and 40 in onsite classes. Surveys, based on Taipei City Health Bureau's Healthy Weight Control Service Project, assessed "Cognitive Survey", "Control Attitude", "Control Behavior", and "Satisfaction" before and after the course. 39 valid questionnaires were collected from video classes and 37 from onsite, with a 77.5% response rate.

#### Results

Of those who fully engaged in both video and onsite courses and completed pre- and post-test questionnaires, 39 participated in video sessions and 37 in onsite sessions. Survey results showed higher cognitive improvement in video courses compared to onsite, with similar satisfaction levels. 67% of participants in video courses and 76% in onsite courses achieved BMI reduction; those reaching BMI below 24 kg/m<sup>2</sup> were 13% in video courses and 16% in onsite courses.

#### **Conclusions/lessons learned**

The study shows onsite courses are more effective than video courses in reducing BMI. Future weight management classes should adopt a hybrid approach, integrating both video and onsite sessions. This could involve combining video sessions for health cognition with onsite aerobic exercises to enhance peer motivation. Such a diverse approach can improve knowledge and behavioral practices for achieving weight management goals. These findings are valuable for organizing workplace weight management activities in the future.

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# Community Health Promotion Initiative Starting from Hospital Restaurant

#### HOU Wen-I, LAI Po-Hung, CHUNG Jui-Jung

#### Background and objective

Taiwan's elderly population is expected to reach 20.1% by 2025, leading to challenges in nutrition due to changes in oral health and taste. Hospital cafeterias can collaborate with community health events to educate seniors about healthy eating, preventing malnutrition and disability. Incorporating suitable textures and balanced nutrition in meals can combat frailty. Furthermore, featuring local artists in hospital restaurants can create a health-focused and artistic ambiance, promoting physical and mental well-being while supporting community health initiatives.

#### Methods/intervention

1. The hospital regularly organizes health promotion events in its restaurant, linking with professional medical staff. Examples include Vegetarian Diet Workshops for Liver Disease, Sugar

Control Clubs, Elderly-Friendly Community Dining, and Workshops on Diet for Chronic Disease Prevention and Management. 2. You've developed an elderly-friendly soft meal box based on nutrition and texture modification guidelines. It includes soft, easy-to-chew ingredients, locally sourced seasonal items, a variety of rich and colorful foods, easy cooking methods, and a balance of nutrition. Your promotions highlight the box's ease of eating and provide assistive devices for elderly diners in hospital restaurants 3. Offering seasonal delicacies for occasions like Father's Day, Mother's Day, Mid-Autumn Festival, and Chinese New Year, the hospital restaurant creates creatively designed, delicious, and healthy meals suitable for both the community and elderly patrons. Utilizing thoughtful selections, precise knife skills, cooking techniques, and seasoning, the restaurant ensures a joyful and nutritious dining experience.

#### Results

1. The hospital restaurant hosts over 10 health promotion events annually. 2. We have become a gold medal restaurant with catering service and hygiene. 3. We received the honor of food safety and elderly-friendly restaurant. 4. Hospital restaurant's revenue grows by 6%.

#### **Conclusions/lessons learned**

Hospital restaurant's community health promotion activities can enhance public health awareness, promote a positive image of the cafeteria, increase customer base and revenue. This experience can serve as a reference for age-friendly hospitals.

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Outcome of a non-profit organization established jointly by a medical institution and local residents

### **TOSHIHIKO Ishizuka**

#### **Background and objective**

Japan has one of the world's oldest populations. It established a long-term care insurance system in 2000, and hospitals and clinics of the Japan Federation of Democratic Medical Institutions have since operated joint organizations with staff, patients, and local residents. Some aspects of these organizations still need to be considered. Here, we report on improvements made to patient transport services and the handling of volunteers.

#### Methods/intervention

A joint organization and Friends of Health established a nonprofit organization (NPO) and introduced two practices to support older patients: a patient transport and a "flat-rate" service. The former transports older and physically disabled people to and from hospitals and shops, for example, and costs half the price of taxis. The latter is a paid volunteer service, i.e., for each 30 minutes, users pay 500 yen and receive services not covered by long-term care insurance, e.g., cleaning, meal preparation, and dog walking, and volunteers receive 400 yen. We analyzed these services.

#### Results

The patient transport service reduced the cost and increased the rate of hospital visits; specifically, it was linked to more than 10,000 visits/year. The provision of compensation to volunteers increased their motivation. The NPO's action goals are to support (1) health promotion activities, (2) mutual aid activities and community networking, (3) movements to realize demands towards national and local governments, (4) movements to protect the environment and peace, and (5) activities to develop hospitals and clinics. The two practices studied here contributed to achieving action goal (1).

#### **Conclusions/lessons learned**

Medical institutions engaged in health promotion services must support not only medical and nursing care services, but also activities to "create a community where everyone can live in peace." The NPO activities described here help older people and caregivers meet this objective.

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Integrating medical and community resources: Constructing Taiwan's age-friendly care and health promotion model

### CHOU Chia Ni

#### Background and objective

Taiwan is predicted to become an aging society by 2025. To identify a means of reducing the risks associated with societal aging and to achieve sustainability, the current study developed a hospital-led model for integrating older-adult-friendly services that combines community and public sector resources to provide comprehensive older adult care services.

#### Methods/intervention

This study employed empirical research methods and focused on a central regional hospital in Taiwan. It evaluated the implementation of age-friendly community services as well as the promotion of the Senior Fitness Test (SFT), community outreach, educational courses for older adults, and older adult experiences at the hospital between 2020 and 2023. This study investigated these methods' effects on the physical and mental health and quality of life of older adults to assist with the development of a healthier and more older-adult-friendly society.

#### Results

During the study period, the hospital organized 10 community screenings, assessing the health of 1,591 older individuals. Results showed 49% had abnormal blood lipid levels, 40.72% had abnormal blood pressure, and 24.9% had irregular blood sugar levels. Physical fitness tests involved 1,613 participants across 32 sessions, revealing 87% had poor lower limb muscle strength, 82% had unstable walking balance, and 80.2% had inadequate cardiopulmonary function. The hospital collaborated with the government to arrange 244 health literacy lectures, 320 physical fitness courses, and 621 disability prevention courses, engaging 8,319 older adults. With a 96.5% satisfaction rate, the courses led to a 16.8% improvement in lower limb muscle strength, 7.6% in walking balance, and 6.75% in cardiopulmonary function. Additionally, 12 older adult simulation activities were conducted involving high school and college students. 75% reported a change in their impression of older adults, with 68% willing to participate in future service programs.

#### **Conclusions/lessons learned**

Promoting older adult care involves diverse community screening and assessment to understand their physical status. This data enhances older adults' participation in educational and physical activities, improving their physical function and quality of life. Integrating community and public resources fosters agefriendliness, transforming public attitudes toward older adults. This increases community willingness to invest in supportive environments, benefiting older adults.

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# Initiatives that involved walking around the city in search of connection with the local community

### **OGAWA Kousuke**

#### **Background and objective**

The former Kawaguchi Clinic is located across the road from Nursery School A, and in front of it is the school route to Elementary School B, making it a place where the younger generation lives. However, many of the clinic's patients are in their 70's, and there are very few younger people using the clinic, making it difficult to promote the use of the clinic. This time, as a result of the on-site rebuilding, a business planning meeting was established, mainly consisting of young staff members.

#### Methods/intervention

The concept of the clinic is "Let's live together, including the entire community and family." In order to put this concept into practice, we believed that it was important to know the local area and build connections with it, so we conducted a town walk in the area surrounding the clinic (within 1km radius). As the first step we visited the Social Welfare Council. Here, we explained the concept and discussed what we could do together in the local community space (named Komite NAKAMACHI) created on the first floor of the clinic. The next day, we visited Volunteer Center C, which was introduced to us by the social association, and shared information on both sides. Afterwards, we visited nursery school A, elementary school B, public bath, post office, craft beer factory, etc. around the clinic

#### Results

C Volunteer Center held an event sponsored by the Social Welfare Council, where people used NAKAMACHI for welfare consultations. In addition, we held a clinic usage committee with local people, clinic staff, and union members who have been connected during this time. Together, events were held at NAKAMACHI, and parents and children from nursery schools and elementary school, students visited, making it possible to promote the clinic's existence and concept to the younger generation.

#### **Conclusions/lessons learned**

Through this construction campaign, various efforts have been made. By walking around the area surrounding the clinic and meeting face-to-face, we were able to strengthen local connections and strengthen local social capital. We would like to continue working with local residents to create a community center where people can visit, not only in the clinic, but even if they are not sick or in trouble.

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## What Types of Social Participation Affect Healthy Life Expectancy?

### SAITOH Fumihiro, KANEKO Makoto, HARA Hotaka, MOTOMURA Takako, MARUYAMA Kumiko, OKAMOTO Yumiko, YOSHIDA Eri, TSUGIMATSU Taiga, INOUE Teruhiro, KURIBAYASHI Hisako, IMAI Kouichi, KONDO Katsunori

#### **Background and objective**

At the 2023 HPH Conference, we reported significant improvements in healthy life expectancy among participants of "Han-kai," a form of social participation conducted by facilities affiliated with the Japanese Health and Welfare Co-operative Federation. This study aims to investigate further which specific aspects of "Han-kai" contribute to these outcomes.

#### Methods/intervention

We utilized the data from surveys conducted in 2018 and 2022 among individuals aged 65 and over. We focused on a composite outcome of the need for support or care, institutionalization, hospitalization, and mortality. We compared "Han-kai" participants to non-participants, treating participation as the primary exposure. Participating in a "Han-kai" is defined as a group of three or more residents gathering for meetings at least three times a year. We performed logistic regression analysis using twelve variables: years of involvement, age, gender, living status, employment, educational status, subjective financial distress, income, comorbidity, smoking, Geriatric Depression Scale scores, and the 2018 support/nursing care need assessment scores.

#### Results

The analysis included 2,457 respondents, with "Han-kai" participation categorized into educational (363 participants), exercise (736), chatting (842), hobby (278) types. We calculated the odds ratios for these four types against non-participants. The odds ratios for the respective types of "Han-kai" were: educational at 0.47(95%CI:0.15-1.48), exercise at 0.37 (95%CI:0.13-1.10), chatting at 0.32 (95%CI:0.11-0.93), hobby at 0.08 (95%CI:0.004–0.47).

#### **Conclusions/lessons learned**

Among the five types of "Han-kai", hobby, chatting, and mixed gatherings had statistically significant reductions in the composite outcome. The impact on healthy life expectancy was huge for hobby and mixed types compared with other types of Han-kai, and the impact varied depending on the content of social participation.

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## Challenge from the field of homevisit nursing - Conducting a questionnaire on difficult cases

### YOKOYAMA Arisato, EIGA Chiharu, AIHARA Midori, YOSHIOKA Misan

#### **Background and objective**

Visitors to the station and their families often have problems related to SDH. (The following are referred to as difficult cases.) We want to fulfill the desire to live in a familiar neighborhood in any condition. And they are engaged in activities to enrich the quality of life of the person. I wanted to know how other offices think about difficult cases and engage in nursing activities. In addition, we clarified what people living in the community are looking for in home-visit nursing, and decided to use it as a source of inspiration for future activities.

#### Methods/intervention

We requested a questionnaire survey by mail from the Regional Comprehensive Support Center and the Visiting Nursing Station in City A, and verified the results.

#### Results

In a paper questionnaire, all home-visit nursing stations and community comprehensive support centers responded that the most difficult cases were those of the staff. Difficult cases often result in refusal to use the service. Nurses are there to support people's lives, building relationships of trust, and supporting their lives. When asked what kind of work they thought homevisit nursing was, many respondents said that it supports their mental health. Among the services that I thought were necessary, there were many services that enriched the quality of life.

#### **Conclusions/lessons learned**

Services that enrich QOL are part of social prescription. The results of this questionnaire showed that the subjects in difficult cases need social prescription. Nurses at other offices are assessing from the perspective of SDH and finding various issues. Through daily home-visit nursing, she sometimes becomes a jack-of-all-trades and a supporter of life. As their lives improve, they also realize the need to connect with their communities. The health view of the medical co-op Saitama is "You can live more motivated today and tomorrow than yesterday." Social prescribing is also part of the job. For this reason, we are also practicing services (community activities) that connect to the local community. One example is a lively community exchange meeting and a remembrance meeting. The study proves that the station's social prescribing is meaningful. I would like to continue to work so that the subjects of difficult cases can live with enthusiasm.

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Promoting Social Prescribing in Hospitals: Interprofessional Collaboration

### SHIONOZAKI Moyuru, IDE Miyuki, YUI Takayuki, MIYASHITA Naoki, KIMURA Miharu, MUROI Hayato, UTOTANI Shota, KOMATSU Hirokazu

#### **Background and objective**

Social prescribing empowers healthcare professionals to refer individuals to a variety of local and non-clinical services. Despite our hospital's long-standing active involvement in community activities, social prescribing has not been widely implemented. To facilitate social prescribing, we have established volunteer teams of healthcare professionals within the hospital.

#### Methods/intervention

Our team comprises healthcare professionals from both within and outside the hospital. We regularly conduct seminars at the hospital, focusing on inter-professional collaborative practices and social prescribing with the aim to enhance interdisciplinary collaboration and broaden the framework of social prescribing. We are also implementing cross-sector partnerships with community comprehensive support centers to understand local community activities and disseminate this information within the hospital.

#### Results

Through our seminars, we have strengthened inter-professional collaborative practice and increased awareness of social prescribing frameworks within the hospital, thereby fostering greater interest in social prescribing. In addition, we have provided referrals for community activities to patients receiving outpatient care at the hospital.

#### **Conclusions/lessons learned**

By strengthening interprofessional collaborative practices both within and outside the hospital, we have been able to enhance the awareness of social prescribing within the hospital and translate this awareness into tangible social prescribing activities.

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To Explore the General Situation of Medical Care for Acute Myocardial Infarction Patients in a Regional Hospital in Central Taiwan

### LIANG Ming-Fen, YANG Yi-Chun, WU Bao-Tzung

#### **Background and objective**

Acute myocardial infarction (AMI) occurs due to coronary artery obstruction, requiring urgent medical treatment to minimize myocardial damage. Following discharge, lifestyle modifications, medication therapy, and regular follow-up are necessary to reduce readmission and mortality rates. This study aims to investigate the subsequent medical records of patients hospitalized for AMI.

#### Methods/intervention

This study is a prospective observational research, utilizing medical records or phone follow-ups to observe AMI patients' medical records six and twelve months post-hospitalization and discharge. The enrollment period for our hospital spans from April 1, 2022, to March 18, 2024.

#### Results

The study total 200 cases of AMI, STEMI 33.5%, NSTEMI 66.5%.Male 81.5%, average age of 63.2 years,BMI 26.0 kg/m2, waist circumference 93.1 cm, and smoking history 75.0%. Upon admission, the most prevalent symptom was chest pain 57.9%, 5% Sudden death and 5.8% asymptomatic. 39.0% of patients were admitted with complications, primarily including Acute Pulmonary Edema, Cardiogenic Shock, and Arrhythmia. The rate of normal cardiac function during hospitalization, 6 and 12 months after discharge increased from 44.3% to 66.1% and then to 71.8% (F=17.927,p<0.000). The average HbA1C decreased 6.9±1.7% from to 6.7±1.3% ,continuing to 6.6±1.1%(F=5.837,p<0.007). LDL levels decreased from an average of  $103.4\pm40.9 \text{ mg/dl}$  to  $86.2\pm33.3 \text{ mg/dl}$ , persisting to  $79.6\pm25.4 \text{ mg/dl}$  (F=30.734, p<0.000).

#### Conclusions/lessons learned

Continued monitoring of patients' cardiac function and risk factor assessments post-discharge revealed data consistently superior to the inpatient period. This improvement suggests advancements in medical interventions and the care team's effectiveness. However, it underscores that complications resulting from delayed medical attention can pose a greater threat to patients. Therefore, actively promoting the concept of seeking prompt medical care for AMI symptoms remains crucial.

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Survey activity for prevention heatstroke 2023 in Osaka.

### YOSHIE Yuuki, NAOKI Matsumoto, MISATO Tanaka, NAOMI Ito, TADUKO Nishiguti, REIKO Utsunomiya, TOSHIYUKI Matsumoto, SATOSHI Kondo, KENJI Nakamura

#### **Background and objective**

High temperature, main cause of heatstroke, is equal for everyone. But social inequality exists in measures against heatstroke, such as ability to expenditure for air conditioner and high electricity cost, physical ability to go outside to cool place, literacy for heatstroke prevention. Osaka Federation of Democratic Medical Institution has been implemented visiting activities for prevention heatstroke every summer from 2004. Our staffs had visited subjects in their homes, asked if there was anything to need help or problem, and handed over fans and water. But it was not thought that our activities were effective. The purpose of this new survey is to extract factors that can be used for.

#### Methods/intervention

Subjects are residents who are considered to be at high risk. The mail survey was conducted. The questionnaire consisted in-room comfort, implementing measures that recommend by the government, forgetfulness, number of meals a day, financial difficulty, and so on. Our staffs visited subjects, measured room temperature, handed over the questionnaire and asked them to fill out and send it back.

#### Results

804 people responded. Naturally, room temperature was lower for those who used air conditioner frequently, while it was higher those who kept the room well ventilated. Compared to people who ate three or more meals a day, those who ate two, those who ate once, those who had days when they didn't eat had higher room temperature, in that order. As financial difficulty

#### **Conclusions/lessons learned**

Financial difficulty, number of meals a day and forgetfulness were thought to be related to poor heatstroke prevention measures in terms of the environment and behavior. This survey is conducted every year, and the results of this year's survey will be used to refine the questionnaire for next summer.

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Study on the Contribution of "Tomono-Kai" Activities to Health: The Significance of Participating in Community Activities as Contributor

### ISHIKURA Shintaro, OONO Mariko, KUWAHARA Kazuko, AZAMI Yasushi

#### **Background and objective**

Public Corporation Ishikawa—Kinikyo is working on promoting community health in collaboration with a community organization called "Tomonokai".The results of a past survey of members have shown that participation in "Tomonokai" contributes to better health.However, due to the wide range of activities, it was difficult to capture the specific factors contributing to health through quantitative surveys.Hence, we decided to collect and analyze qualitative data through an interview method.

#### Methods/intervention

A semi-structured interview consisting of five questions was conducted with a member (Ms.N, in her 70s) who holds an operational position as a "Sewa-nin" within the organization. We analyzed the collected data to reveal how "Tomono-kai" activities contribute to health by using the qualitative analysis method known as Steps for Coding and Theorization (SCAT).

#### Results

We gave objectivity to the language records obtained through interviews with word-level analysis and by conceptualizing them through repetitive rephrasing.By reconstructing the conceptualized words, it became evident that working as a contributor to community's health promotion as a "Sewanin" of "Tomono-kai", one can make connections with members with an appropriate sense of distance with them which eventually contributes to one's own health.

#### Conclusions/lessons learned

This study suggests that expanding people's connections and making acquaintances through "Tomonokai" contributes to better health. Further accumulation of case studies will reveal the essence of medical staff's involvement in "Tomonokai".

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Nordic walking to promote exercise habits in the local community

### KUMON Kazunori, TANAKA Hiroki, YUKI Yoshie

#### Background and objective

Japan is aging and more people live alone, including our inpatients. They hardly go out in hot summer or cold winter or after Covid 19. We are concerned that frailty cases aggravated physically and mentally and increased. As physical exercise has benefits, creating opportunities to go out and join physical activity should contribute to community health.

#### Methods/intervention

Nordic walking club was formed to advocate physical activity and to improve walking ability. Nordic Walking Day events were organized for hospital staff or Rehabilitation Department and publicity of the activity. Associations club could continue as it became popular through trials and chatting and empowered by seminars, leader training and making guidelines. For staff, it was still in working hour and the idea of Active Rest was not well received. Rehabilitation Department could continue with few as reminded in morning meetings and viewed as a part of publicity work.

#### Results

Hospital Health Friends Association formed a club. The activity was regularized for the association, staff and Rehabilitation Department. The Association trained leaders and still continues by themselves. Staff event was suspended in half year as participation decreased. Rehabilitation Department still continues using the promenade near the hospital.

#### **Conclusions/lessons learned**

Nordic Walking with two poles attracts attention and has good publicity effect. Active Rest was not welcomed by working staff maybe because they already had enough physical activity. Those who had few chance for physical activity saw this a good opportunity and continued. Next, we will promote it to member clinics and collaborate with local government for community wide activity.

Contact: MEDA Motomotoya Nishiyodo Hospital JAPAN nyd-maeda@yodokyo.or.jp Nishiyodogawa Food Bank, the role of Health Promoting Hospital observed from survey data

### MAEDA Motoya, KAGEYU Koichi, YUKI Yoshie

#### **Background and objective**

In Japan, over 11 million or 21.4 percent of workers are categorized as poor, mainly non regular employees. The child poverty rate is 11.5 percent. 1.29 million or 14.5 percent of students receive schooling fund. 35 percent of single person and 23 percent of households have no savings. Since the pandemic, economic hardship and social isolation has escalated. Food Bank was organized as means to provide for socially vulnerable people to rebuild their life and improve health gap in community.

#### Methods/intervention

Nishiyodo Hospital called on local organizations, companies and local government for collaboration and Food Bank was held 11 times from June 2020 to December 2023 with 4218 users. We conducted a survey on financial and health status and received responses from 2340 people.

#### Results

In the survey, we learned the gender, age group, concerns and specific health and mental status of the group. The mental problems included anxiety, insomnia, irritated feeling, no motivation, and no interest on hobbies. Eventually 67 accepted individual consultation, including 5 persons linked to social welfare service and 3 persons to free or low cost medical care.

#### **Conclusions/lessons learned**

When a Health Promoting Hospital supports Food Bank, not only supplies but also health services or required social support can be provided, gaining trust from the local community and leading to further consultation. Such outreach activity highlights the role of Health Promoting Hospital it is playing in the community. Health Promoting Hospital can further develop health promotion in the community by calling on local organizations and enhance collaboration.

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Improve the Palliative Care Cognition and Attitude of Primary Caregivers in-Home Care

LIEN Chien-Pei, HUANG Hsiu-Yen, HSIA Tzu-Hui, CHUNG Yu-Ing, CHUO Ying-Hsiang

#### **Background and objective**

Taiwan implemented the Patient Right to Autonomy Act in 2023. The Act allows patients aged 18 and above to make medical decisions in advance through the Advance Care Planning (ACP) and Advance Directive (AD). This project aims to promote palliative care concepts to non-cancer terminal patients through ACP and AD. Once patients face specific clinical conditions, they can receive palliative care services according to their wishes. Palliative care is an essential part of today's aging society. This project aims to improve the awareness and attitude of the primary caregivers of home care cases to wards palliative care to avoid falling into decision-making difficulties in the terminal stage of the disease.

#### Methods/intervention

The study used the structured questionnaire to investigate the primary caregivers' cognition and attitude for palliative care. There were two cross-sectional surveys (before intervention - September 2022; and after intervention - February 2023). Interventional including discussing the key points of independent information on palliative care and advance care with palliative specialists. We searched for health education information on palliative care and ACP based on caregivers' needs and used the APP to plan interactive health education information content and monitor their learning.

#### Results

A total of 34 primary caregivers completed pre-and post-test questionnaires. The primary caregiver's needs for palliative care include a lack of palliative care knowledge, not knowing where to find palliative care information, and not knowing how to talk about death with relatives and friends. The primary caregiver's awareness of palliative care and ACP significantly increased from 2.95 (±0.51) to 3.70 (±0.46). The primary caregiver's knowledge and attitude towards palliative care showed a significant positive correlation, and they had a positive attitude towards ACP and AD.

#### **Conclusions/lessons learned**

Promoting the concept and spirit of palliative care can help home patients and primary caregivers have something to follow when facing terminal medical decisions. The core spirit of palliative care can be achieved by assisting them in making their own AD as early as possible and accepting palliative care services according to their wishes.

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# Enhancing Healthcare Access for Remote Indigenous Communities through Community Health Nursing

### LI Meiyi

#### **Background and objective**

In remote indigenous communities, healthcare access is often hindered by inadequate transportation and limited resources. To address this issue, we initiated a project focused on community health nursing to provide comprehensive healthcare services. Our objective, based on data collected from 100 residents, was to enhance their awareness of medical knowledge to improve overall health outcomes.

#### Methods/intervention

To achieve our objectives, we conducted initial data collection to understand residents' health conditions and needs. Subsequently, we implemented health education activities such as lectures, medical knowledge dissemination, and lifestyle guidance. Additionally, we established a community health nursing team comprising professionals who regularly visited residents to provide basic health checks and consultations.

#### Results

After implementation, we observed a significant improvement in residents' understanding of medical knowledge. They exhibited increased awareness of preventive healthcare, acquired skills in managing chronic diseases, and demonstrated proactive healthcare-seeking behaviors. Furthermore, visits by the community health nursing team facilitated residents' access to medical resources, ensuring timely treatment and support.

#### **Conclusions/lessons learned**

The community health nursing approach successfully raised healthcare awareness among indigenous residents, resulting in increased healthcare service utilization. Addressing cultural differences and community-specific conditions proved crucial for aligning with residents' needs. Effective communication channels and sustained community involvement were pivotal for project success.

Contact: LI MEIYI China Medical University Hospital TAIWAN a64878@gmail.com Community Holistic Health Management - Constructing Multidisciplinary Assessment Information System

### LAI Wan-Zhen, LI Yu-Meng, LU Ying-Wen, HUNG Ta-Chuan, CHAN Hsin-Lung, LEE Mei-Yu

#### Background and objective

Establishing appropriate multidisciplinary assessment scales to enhance the effectiveness of health promotion among the community, for grasping the physical and mental health status of the community residents.Establishing appropriate multidisciplinary assessment scales to enhance the effectiveness of health promotion among the community, for grasping the physical and mental health status of the community residents.

#### Methods/intervention

The results of multidisciplinary assessment and consultation can provide the following purpose for professional team as: 1.Collaborate with cross-team medical professionals discussing suitable multidisciplinary assessment scales. 2.Confirming appropriate cut-off points for high-risk groups based on assessment results. 3.Establishing high-risk case reminders. 4.Developing a referral process for high-risk individuals. Seven scales as CFS(Clinical Frailty Scale),ICOPE(Integrated care for older people,AD8(AD-8 questionnaire),SPPB(Short Physical Performance Battery),MNA-SF(Mini Nutritional Assessment Short Form) and ARMS(Adherence to Refills and Medications Scale).

#### Results

From January 2023 to April 2024, the results assessment scales were : 1.63 people (2.3%) had a CFS score >4. 2.90 people (60.4%) required reevaluation on the ICOPE scale. 3.31 people (20.6%) had changes with an AD8 score  $\geq$  2. 4.27 people (21%) had a SPPB score <10. 5.23 people (9.7%) had an MNA-SF score <12. 6.43 people (79.6%) had an ARMS score >12. Fall prevention, exercise guidance, dietary guidance, medication guidance and outpatient referrals were provided;32 people were referred to neurology and psychiatry outpatient clinics.

#### **Conclusions/lessons learned**

Utilizing effective assessment results not only allows for understand of the health status of community residents in each district but also serves as a reference basis for determining the timing and measures for future health promotion programs and professional team interventions.

Contact: LU Ying Wen MacKay Memorial Hospital Tamsui Branch TAIWAN cindylu69010@gmail.com International Patient Center - 20 Years of Experience in Taiwan

### CHAN Mark, WADA Noemi, CHU Jennifer, CHANG Joanna, YU Amy, CHEN May, HSU Kay, KIYOKAWA Yukiko, CHAN Sienna, CHAN Lila

#### **Background and objective**

Jen-Ai Hospital – Dali launched the "International Patient Center" (IPC) project in September 2003, serving the small international community in Taichung. Over the past 20 years, IPC has expanded its services to accommodate the needs of the international communities. This paper will share the 20 years' experience of Jen-Ai Hospital – Dali, in their efforts to care for these communities and how they were able to promote its health equity strategy.

#### Methods/intervention

In the beginning, IPC provided free interpretations in English; however, at the request of these international patients, translations in 20+ languages can now be arranged through bilingual volunteers. The team provided exceptional care for these patients; took part in various activities organized by these international communities; implemented several projects (including Japanese, Indonesian, and Vietnamese Medical Services); etc. to cater to the growing needs of the international communities to ensure health equity at the hospital.

#### Results

To date, Jen-Ai Hospital IPC has assisted more than 141,200+ patient visits from 35,200+ international patients. Of special interest is that these patients have come from 120+ different nationalities, which makes Jen-Ai Hospital - Dali with the distinction of having the most number of international patients with different nationalities in Taiwan. Good word of mouth amongst international patients has helped IPC earn a stellar reputation for providing health equity at the hospital.

#### **Conclusions/lessons learned**

IPC has proven to be extremely successful in promoting its health equity strategy at a local hospital in Taiwan, by providing various services to these international patients, who in turn recommended other foreigners. IPC services should be made available to all foreigners living in every city around the world, to reduce health inequalities for the international community by removing language barriers in a foreign country - these skills include providing various communication skills in many different languages.

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# Poster session 3.7: Innovation in health care and health promotion

Innovative Health Information Dissemination: "Medical Safety Go Go Go" Podcast and Its Impact on Health Literacy in Taiwan

### HUNG Hui-Ching, CHAN LIAO Ming-I, PENG An-Na, YU Hsien-Mei, CHIU Ya-Yi

#### **Background and objective**

With Health Promoting Hospitals (HPH) gaining global prominence, integrating health promotion into an organization's culture becomes crucial. To increase public health literacy, the Taiwan Patient Safety Culture Club established a weekly podcast, titled "Medical Safety Go Go Go" in March 2021. This study explores the podcast's impact on HPH-focused health promotion, specifically regarding patient safety in Taiwan.

#### Methods/intervention

We analyzed the content, audience, and influence of the podcast. Hosted by a non-profit patient safety advocacy group, the program employs a conversational interview format. Each episode features 1-2 invited guests who are experts in the field of medical safety. Alongside a well-known patient safety blogger as a co-host, the podcast producer facilitates discussions on trending medical safety issues. By using straightforward language to explain complex medical safety topics, our podcast strives to improve public understanding and participation.

#### Results

During 42 weeks of broadcasting amidst the COVID-19 pandemic, a total of 41 episodes were aired with an average duration of 39 minutes each, reaching 5,200 listeners, and fostering discussions and attention to various trending medical safety topics in Taiwan. The podcast invited 37 guests, including 2 episodes featuring interviews from an expert at The Johns Hopkins Hospital, overcoming time differences through overseas calls.

#### **Conclusions/lessons learned**

"Medical Safety Go Go Go" plays a vital role in HPH health promotion by facilitating education and discussion on medical safety. By linking with social media platforms such as blogs and Facebook, the program enhances health literacy among hospitals and the public in Taiwan.

Contact: HUNG Huei - Ching Jen - Ai Hospital, Taichung TAIWAN tammyhhcg@gmail.com The effectiveness of mHealth interventions using a 'mobile healthcare in community health centers' app

### LEE Jiyoung, KIM Royoung, KWON Mijeong, KIM Hyekyeong

#### **Background and objective**

After the COVID-19 situation, the effectiveness of mHealth intervention was verified, the importance of digital health strategies to ensure health equity is more emphasized. The purpose of this study is to explore the difference in effectiveness of mHealth intervention by regions in Korea.

#### Methods/intervention

We examined the health status and service log of mobile healthcare app users. We analyzed pre-post differences by region for metabolic syndrome(MetS) factors. 5 MetS criteria factors were analyzed using a F-test to compare the variances of two samples from normal populations and used qq-plot to visualize whether a variable is approximately normal or not. Then we conducted a paired t-test to determine if there is a significant difference between two related groups. Service log was measured using the average of the data recorded. A multiple comparison analysis was conducted to determine the differences in app users between regions using these six variables. Bartlett's test was used to check whether the variance between groups was equal, followed by a one-way ANOVA and multiple comparisons using Tukey's HSD test.

#### Results

An analysis of regional pre-post intervention changes in Metabolic Syndrome (MetS) factors found significant improvements in all regions. Small-medium cities showed the greatest overall improvement, particularly in fasting blood sugar, systolic blood pressure, triglycerides, and HDL cholesterol. Mobile health engagement also varied by region. Compared to rural areas, small-medium cities had the greatest difference in activity and blood sugar monitoring. Food and exercise diary use showed the highest difference between small-medium and large cities.

#### **Conclusions/lessons learned**

We found the regional differences in the improvement of MetS risk factors and service logs among mobile healthcare users. These results emphasize the need for subsequent studies to address regional inequities in app-based health interventions and advance health equity.

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# Digital Health Innovation of Preventive Pediatric Health Care

### CHIANG I-Hsuan, CHEN Yi-Chun, HSIAO Jen-Liang

#### **Background and objective**

Approximately 93 million children aged 14 and under worldwide suffer from moderate to severe developmental delays or disabilities (UNICEF, 2019). In Taiwan, to improve child healthcare, subsidies are provided for children under 7, offering seven health education sessions to caregivers. However, many hospitals still use paper-based methods for pediatric care, causing operational challenges. Thus, we propose optimizing pediatric healthcare to be electronic, paperless, and mobileenabled for efficiency.

#### Methods/intervention

First, we assessed children's healthcare procedures to identify records for electronic conversion. We developed an electronic consent system integrated with the Health IC card to provide accessible electronic records during consultations. Collaborating with the pediatric department, we streamlined workflows. Finally, following pediatrician advice and WHO standards, we created the Taiwan Children and Adolescent Growth Chart, offering precise data through a growth curve system.

#### Results

1.From 2022 to 2024, digitizing children's healthcare records saved 9,754 sheets of paper, NTD\$31,100 in printing costs, and reduced carbon emissions by 143,172 kg. 2.In 2023, waiting times for children's healthcare significantly improved. With 2,386 individuals served, waiting time decreased from 11,930 to 2,386 minutes, saving 20 working days. 3.Post-implementation, identified child health issues increased from 2 in 2021 to 5 in 2023, highlighting early detection during preventive care and timely treatment referrals.

#### **Conclusions/lessons learned**

We've enhanced children's preventive healthcare workflows with innovative digital methods, adopting electronic systems and forms to improve data integrity, accuracy, efficiency, and medical quality, while advancing digitization, paperless operations, and mobile capabilities.

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eHealth literacy and technology acceptance among middle-aged and older adults with chronic disease in rural Taiwan: a cross-sectional correlation study

### TSOU Chi-Jung, CHAO Li-Fen, LIN Tin-Kwang

#### **Background and objective**

Electronic health (eHealth) systems are a valuable resource to facilitate healthcare delivery for patients residing in settings with suboptimal access to healthcare services. Few studies examining usage behaviors and the factors associated with eHealth literacy and acceptance have been conducted amongst middle-age and older adult populations. The aim of this study was to investigate factors associated with eHealth literacy and eHealth technology acceptance as well as usage of a patient portal amongst middle age and older adults residing in a rural community.

#### Methods/intervention

A cross-sectional study was conducted between March 2021and July 2021, using convenience sampling to recruit middle-age and older adults with chronic disease from outpatient clinic of a regional teaching hospital located in southern Taiwan. Following outcomes were included: socio-demographics, patient portal usage, eHealth Literacy Scale and eHealth Technology Acceptance questionnaire. Descriptive statistics, ANOVA and multivariate logistic regression were were used to examine relationships between the main variables as predictors of eHealth technology acceptance.

#### Results

A total of 120 eligible participants were ultimately enrolled and completed all data collection measures. Only 55% (n=66) of participants had used the patient portal. Educational level, monthly income, number of smart products owned, internet connection, eHealth literacy and eHealth Technology Acceptance showed an association with patient portal usage (p<.001). The multiple linear regression analysis showed eHealth literacy was the strongest predictor to participants' eHealth technology acceptance ( $\beta$ =.54, p<.001). While other factors including age, higher educational level, and monthly income were not significantly associated with eHealth Technology Acceptance.

#### **Conclusions/lessons learned**

Marginalized older adults face challenges with eHealth literacy and demonstrate lower technology acceptance. Ensuring that diverse older adult populations are prepared to use eHealth resources is critical.

Contact: TSOU CHI-JUNG TAIWAN w071013@mail.cgust.edu.tw Exploring the Impact of White Noise Intervention on Sleep Quality in Adult Intensive Care Patients: An Evidence-Based Approach

### WENG Chia-Wei, CHU Yi-Tsen, CHEN Chiou-Ping, LIN Yu-Han

#### **Background and objective**

Environmental noise in Intensive Care Units (ICUs) profoundly affects patient well-being, with half reporting sleep disturbances. White noise is posited as a simple, cost-effective remedy, though its efficacy for ICU patients remains uncertain. This investigation seeks to determine if white noise can mitigate ICU noise, thereby improving sleep quality.

#### Methods/intervention

Adhering to the Joanna Briggs Institute (JBI, 2020) standards, we employed keywords like "adult Intensive Care Unit," "white noise," and "sleep" across databases including Airiti Library, CINAHL, Cochrane Library, Embase, and PubMed. Selection focused on Clinical Controlled Trials (CCT) and randomized controlled trials (RCT), with duplicates and non-relevant studies excluded. Three studies met the inclusion criteria, comprising one RCT and two quasi-experimental studies, each rigorously assessed for methodological integrity using JBI checklists.

#### Results

Analysis incorporated three studies: one RCT and two CCTs. Afshar et al. (2016), a quasi-experimental study with Level III evidence, revealed that patients exposed to white noise had significantly better sleep quality in the ICU (P<.001). Stanchina et al. (2005), also quasi-experimental and Level III, found that white noise interventions increased the arousal threshold during sleep, notably reducing awakenings (P<.004). Wei et al. (2021) in a Level I evidence RCT, however, noted no significant impact of white noise on total sleep duration, number of awakenings, or overall sleep quality during the hospital stay.

#### **Conclusions/lessons learned**

Reviewing three studies on white noise and sleep quality produces varied outcomes: two report benefits, one finds no significant impact, possibly due to the stress of illness and hospitalization. White noise stands out as a viable, low-cost strategy to lessen ICU noise disturbances, potentially improving sleep quality. Nevertheless, the limited research calls for more robust studies to reinforce these conclusions and substantiate white noise as an effective method to enhance sleep quality in ICU settings.

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Using creative prompt boards with human figures to improve the accuracy of injection sites for diabetic patients in home care

### CHU Yu-Ting, WANG Yun-Rong, LIN Ai-Lun, CHAO Su-Chu, LIN Sin-Wun

#### **Background and objective**

In Taiwan, the proportion of diabetic population is as high as 11%. In the pharmacological treatment, insulin plays a crucial role. During home care processes, it was observed that diabetic patients often fail to rotate their injection sites correctly, leading to subcutaneous fat hypertrophy and poor blood sugar control. In addition to mastering correct insulin injection techniques, proper rotation of injection sites is crucial. To ensure that patients and their families correctly administer insulin injections at different sites, a design featuring a human figure diagram to indicate the correct rotation of injection sites for each injection was developed. This aims to reduce the ineffective insulin absorption caused by repeated injections in the same area, enhance blood sugar control, and improve the quality of home care.

#### Methods/intervention

Innovative Design Process: 1.Create a "Human Figure Injection Reminder Board" with marked injection sites.2.Place the board next to the insulin syringe. When administering injections, use thumbtacks to mark the injection site according to the positions indicated on the human figure diagram, facilitating the rotation of injection sites.3.Home care nurses evaluate the effectiveness of patient usage.

#### Results

Through the creative design of "human figure injection prompt boards" in home care, the accuracy of insulin injection sites for diabetic patients has been effectively improved. After 3 months of implementation, the accuracy of injection sites for 6 patients increased from 50% to 100%, with a satisfaction rate of 100%.

#### **Conclusions/lessons learned**

Diabetic patients undergoing insulin therapy need to possess relevant injection skills to correctly manage self-care, which plays a crucial role in diabetes care. Home care nurses utilize creativity to control patients' blood sugar levels, thereby enhancing their quality of life and providing valuable care references.

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# Text mining analysis for dissemination of 2020 HPH standards

### YAMAHARA Hideo

#### **Background and objective**

The 2020 HPH standards are said to reflect a wide range of new areas of policy, practice, and evidence for broad application of the HPH vision. a self-assessment questionnaire was also developed based on the 2020 HPH standards, and the hospital also conducted a self-assessment questionnaire. However, the hospital's HPH committee commented that there were many items in the standards and that some of the terms were unfamiliar to them. Therefore, we analyzed the 2020 HPH standards, on which the self-assessment questionnaire was based, using text mining in order to reduce barriers to learning about health promotion for medical staff and to link this to specific health promotion practices.

#### Methods/intervention

The 2020 HPH standards were analyzed using a user-local text mining tool (https://textmining.userlocal.jp/). There are no conflicts of interest in this study.

#### Results

Word occurrence frequency and its score, co-occurrence network, co-occurrence count, 2-D map, dependency analysis, and hierarchical clustering were calculated and created by text mining analysis. Below are the words with the highest word occurrence frequency scores and co-occurrence counts. The word with the highest co-occurrence word frequency score was "HPH" with 109.67 for Criterion 1, health promotion with 27.69, 49.84, and 85.16 for Criteria 2, 4, and 5, respectively, and patient with 70.27 for Criterion 3. The number of co-occurrences was 8 for HPH and vision for Criterion 1, 4 for social and group for Criterion 2, 10 each for patient and patient and patient and provision for Criterion 3, 7 for health and environment for Criterion 4, and 8 for health and determinant for Criterion 5.

#### Conclusions/lessons learned

We think that the use of text mining to numerically show words with high word frequency scores and to visually show similar networks of word occurrence patterns and two-dimensional maps will aid in the understanding of the 2020 HPH standards. Future tasks include explaining the above results to medical staff to help them understand the 2020 HPH standards and to make it easier for them to respond to the self-assessment questionnaire.

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Exploring the Efficacy of Enhancing Chronic Kidney Disease Education with AI-Powered Digital Nursing Voice Assistants

#### LEE Shu-Yen, SU Ching-Kan

#### **Background and objective**

In the AI era, digital entities, employing "human-like AI," reshape service delivery, engaging us in real-life scenarios. The COVID-19 crisis exacerbates the global nursing shortage, underscoring the need for ITALY support to relieve nurses' burden. This study utilizes AI to create nursing guidance videos and digital nursing voice assistants emulating human expressions. enhancing chronic kidney disease education, there's scarce literature on generative AI in this realm, necessitating further exploration of AI's potential.

#### Methods/intervention

This study is a pilot randomized trial targeting patients newly diagnosed with chronic kidney disease who are conscious and able to communicate effectively. It aims to recruit 30 participants and randomly assign them to either the experimental or control group. The experimental group receives AI-generated digital nursing voice assistant-executed educational videos 24 hours after admission, while the control group continues to receive conventional education, including nurses verbally providing QR codes for accessing educational materials in PDF format. Both groups complete knowledge scales before and after education, with satisfaction surveys conducted before discharge.

#### Results

The experimental group scored 96 points on knowledge of "daily care and precautions for chronic kidney disease," while the control group scored 88 points. Satisfaction rates were 96.6% in the experimental group and 86.8% in the control group. Algenerated digital nursing voice assistants significantly enhance knowledge and satisfaction.

#### **Conclusions/lessons learned**

Al-powered digital nursing voice assistants play a vital role in health promotion hospitals, enhancing chronic kidney disease patients' knowledge and satisfaction with personalized education, bridging nursing education gaps, and improving healthcare quality and efficiency.

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Enhancing Emergency Patients and Caregivers' Satisfaction with Discharge Nursing Instruction Using Chatbot

### CHENG Jui-Hsien, WANG Yu-Jing

#### Background and objective

Addressing the swift digital transformation, this study explores the utilization of "chatbot" for integrating nursing instruction for emergency department (ED) discharge patients (e.g., wound care) into an informational nursing discharge framework. This aims to enhance discharge self-care knowledge and skills among patients or caregivers, boosting their learning satisfaction and effectiveness

#### Methods/intervention

This study conducted a survey from January to December 2023, focuses on patients and caregivers discharged from the ED of a regional teaching hospital in Taipei. It investigates their engagement with "chatbot" for learning relevant self-care practices and their usage patterns. The study assesses participants' perceived cognitive educational impact and satisfaction with diversified learning.

#### Results

The study assessed ED discharged patients and caregivers (N=51247). Satisfaction with diversified learning was measured using the Likert Scale, covering aspects such as convenience and instructional value. Findings reveal high levels of agreement on the ease of use (89.7%), cost-effectiveness (96.4%), and enhanced learning convenience (98.4%) associated with chatbot utilization. Regarding the effectiveness of the actual instruction, a significant majority affirmed that chatbot aided understanding of discharge instructions (94.6%), facilitated two-way interaction (97.4%), and captured patients' perspectives and emotions effectively (95.2%).

#### **Conclusions/lessons learned**

The results of this study indicate that the application of chatbot as a tool for nursing instruction can enhance the convenience and accessibility of nursing instruction and promote environmental sustainability, while also breaking away from the traditional paper-based model of nursing instruction. Through various learning methods, patients can continue to learn and apply information flexibly, which is essential for their transition from discharge to recovery.

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# Exploring the Effectiveness of Implementing Technological Health Management Apps

### CHEN Ya Chu, TSAI Hui Hua, LIU Jia Yu

#### **Background and objective**

With the rapid development of information and the widespread use of mobile devices, smartphones have become an essential tool for everyone. Downloading health-related applications (APPS) to engage in health awareness services and activities has become a model and trend in recent years.

#### Methods/intervention

In early 2023, our institution introduced a health management app that allows users to record various aspects of their daily lives (such as steps, heart rate, weight, blood pressure, blood sugar, and sleep), maintains a health calendar (linked to personal medical records for access to appointments and test results), checks annual health examination records, makes activity reservations, receives push notifications for health tips and event announcements, and more. We conducted educational training sessions to explain how to use the app and encourage staffs to download it. The Occupational Health and Safety Office is responsible for maintaining all data and ensuring timely updates to facilitate easy access and viewing.

#### Results

After six months of implementation, a satisfaction survey was conducted, with a total of 306 questionnaires collected, out of which 269 were deemed valid. The statistics revealed that 93.3% of the users had downloaded and used the health app. Regarding user experience, 92.2% found the interface design clear and simple. The most frequently used features were accessing health examination reports (75.1%), registering for activities (32.0%), participating in surveys (29.0%), and recording daily activities such as steps and weight (22.7%). The overall satisfaction with the health app was reported at 88.0%.

#### **Conclusions/lessons learned**

Technology-driven health management app not only offers personalized and convenient services, allowing easy recording and tracking of personal health information, providing educational resources on health topics, but also facilitates various health promotion activities. These apps attract employees' attention to focus on their health, thereby enhancing participation in health initiatives.

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# Poster session 3.8: Pioneering sustainable and inclusive healthcare practices

Guidance for climate resilient and health promoting hospitals and health services

### METZLER Birgit, RONGE-TOLORAYA Andreas, EDER Julia

#### **Background and objective**

The negative impacts of climate change on health and the healthcare system are becoming increasingly evident. The healthcare sector, accounting for nearly seven percent of Austria's CO2 emissions, exacerbates climate change while being affected by its consequences. To meet these challenges, healthcare facilities must adopt climate-protective measures and adapt to changing conditions. Recent studies show a lack of expertise, information, and support in healthcare facilities regarding climate protection and adaptation. A project launched in 2023, in cooperation with the Austrian Network of Health Promoting Hospitals and Health Services, confirmed the need for support in implementing climate protection and adaption measures. This led to the question of how to support the development of health promoting and climate resilient healthcare facilities.

#### Methods/intervention

A team at the Austrian National Public Health Institute will develop standards and guidelines based on international HPH network developments and other models. The aim is to support healthcare facilities in introducing climate-friendly practices. The methodology includes exploratory research and analysis of existing quality criteria and instruments, uniting them in a set of standards and implementation guidelines for climate-friendly hospitals and health services. These will be refined with an expert panel, piloted in various healthcare facilities, and revised based on practical insights.

#### Results

An agreement with WHO/Euro has been reached to develop international standards and guidelines as an activity of the WHO Collaborating Centre for Health Promotion in Hospitals and Healthcare at the Austrian National Public Health Institute until 2026. Funding through the Austrian Health Promotion Agenda enables cooperation with the Austrian HPH Network to define a standard set adapted to the Austrian context, supporting the introduction of climate-friendly practices. Exploratory research and analysis of related quality criteria and instruments have been conducted, leading to an initial definition of possible dimensions and sub-dimensions of the standards.

#### **Conclusions/lessons learned**

Integrating climate-friendly practices into all aspects of healthcare can reduce its environmental impact, improve health outcomes, and contribute to broader sustainable development goals. Climate-friendly approaches yield significant health, economic, and social co-benefits.

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# Use 5S management to reduce medical waste costs

### SHEN Hu-Hui, LI Mei-Fang, CHUANG Min Chi

#### **Background and objective**

The hospital is a hospital certified by Joint Commission International. Our current medical waste management system is to dispose of ampoule and vail as medical waste after use. The nursing staff at the nursing station will use medical waste sharps collection buckets (yellow biomedical waste mark), collect ampoule and Vail, and found problems include: Cleaning staff can easily mistake it for infectious waste (yellow biomedical waste mark) 2. Personnel need to manually remove the biomedical waste mark. 3. The sharps collection bucket is a onetime use and the cost is high. The statistical cost from January to June 2023 is as high as NT\$65,348.

#### Methods/intervention

2023/05/01-05/31 The Nursing Department cooperated with the division of general affairs team to formulate: 1. Ampoule and Vail should be collected in glass collection buckets (blue biomedical waste mark) for recycling. 2. After the medicine glass collection bucket of the work vehicle is eighty-full, pour it into the medicine glass recovery bucket of the sewage room. 3. A special medicine glass recycling bin is added to the waste room, which can be recycled by cleaning staff. Recycled ampoule and vail are provided for recycling and reuse.

#### Results

Results after improvement: 1. The cost of medical waste disposal was reduced by 1,657 yuan/month. 2. The cost of yellow sharps collection bucket is reduced by 3,777 yuan/month. 3. One-year cost reduction of 65,208 yuan/year. Feedback from the nursing station 1. Cleaning staff can easily identify waste and recycle it. 2. Glass collection buckets (marked with blue biomedical waste) are reused. 3. Reduce the cost of medical waste disposal fees.

#### **Conclusions/lessons learned**

ESG (environment; social; governance) governance is an issue that must be paid attention to. Nursing cannot stay out of this drastically changing environment. How can medical professionals reduce energy consumption at work and adopt sustainable practices to contribute to environmental protection.

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# The Effectiveness of Recycling and Reusing Reverse Osmosis Filtered Water in Dialysis Treatment.

### **TSENG Chang-Wei**

#### **Background and objective**

Hospitals utilize reverse osmosis (RO) to remove impurities, pollutants, bacteria, and other contaminants from water, producing purified water for use in hemodialysis. The wastewater generated after filtration, while unsuitable for consumption, is otherwise similar to tap water. The quality of RO wastewater is typically quite good, making direct discharge wasteful and environmentally impactful. Hence, consideration is given to recycling and reusing it to reduce waste and environmental impact.

#### Methods/intervention

The New Taipei City Hospital (NTCH) requires 15 tons of purified water daily, generating 25 tons of discharge water. Annually, 9,125 tons of water are wasted. Recycling this water could meet the daily needs of 121,600 people and save NT\$160,000. Excess recycled water is used for municipal irrigation. NTCH has five tanks storing 8 tons each, totaling 40 tons per cycle. The dialysis center's daily discharge of 25 tons fits within this capacity. NTCH also switched from natural gas boilers to energy-saving heat pumps, reducing water waste and operating costs.

#### Results

After 2 years of operation and installation of water meters to record water inflow and recycled water volume, an average annual saving of 1,000 m3 of recycled water for hot water usage (approx. saving NT\$20,000 in water fees) and 29,124 m3/year of natural gas (approx. saving NT\$320,000) was achieved, with an additional electricity consumption of 60,000 kWh/year (approx. costing NT\$170,000). Hence, the annual savings in fuel energy and water fees amount to approximately NT\$170,000. The municipal district incurs a monthly water fee of NT\$5,500 from the Taipei Water Company for watering trees and cleaning roads, resulting in annual savings of NT\$66,000.

#### **Conclusions/lessons learned**

Since 2021, we has been recycling heated water for bathing in patient rooms, and starting in 2024, it has signed a memorandum of cooperation with the municipal district to provide recycled water for sidewalk tree irrigation and road cleaning.

#### Contact:

TSENG Chang-Wei New Taipei City Hospital TAIWAN au4099@ntpc.gov.tw Born for the People, Unlimited Sustainability, taking an ESG Best Health Hospital in Southern Taiwan as an Example

### CHEN Li-Huei, CHANG Ko, HUANG Ming-Ren, YEN Chia-Chi

#### **Background and objective**

In response to climate change, President Tsai Ing-wen declared "net-zero emissions by 2050" in 2021, and 2022 was the first year of promoting ESG in our hospital. With the vision of "The Best ESG Community Hospital in Taiwan", we respond to net-zero carbon emission and climate action, protect the health and safety of patients.

#### Methods/intervention

Our hospital has set up the "ESG Hospital Governance and Sustainability Committee" to promote the sustainable development of our business. Conduct significance analysis with reference to GRI Standards on two aspects of the degree of concern of stakeholders and the impact of the issue on environment, economy and society. Ten important stakeholders were established, namely employees, patients and their families, partners (suppliers, outsourcers/contractors), community residents, medical practitioners, authorities, public opinion representatives and municipal governments, media, interns and their schools, and volunteers and donors.

#### Results

There were 192 valid responses. Major issues of concern to stakeholders have been studied and analyzed, and a total of 11 issues are the major concerns to stakeholders: 1.The hospital governance part consists of six items, namely, safety maintenance of patients' personal information, medical service quality, medical staff's service attitude, fair treatment of patients, honest management: compliance with regulations and no acceptance of hongbao, and attention to risk management. 2.In the social part, there are four items, which are the staff welfare, talent cultivation and retention, response to the opinions of patients and their families, and the compliance with personnel and labor regulations. 3.In the environment section, stakeholders were more concerned about the air quality of the hospital.

#### **Conclusions/lessons learned**

"Hospital governance" is the most concerned issue of the stakeholders, its concern level is higher than other environmental and social issues. In order to gradually realize the goal of becoming the "Best ESG Health Hospital in Taiwan", the hospital will continue to strive to improve ESG related activities, improve the governance direction.

Contact: CHEN Li-Huei Kaohsiung Municipal Min-Sheng Hospital TAIWAN lifa0520@gmail.com Sustainable Practices in Emergency Departments: Reducing Paper Usage

### LIU Chih-Ju, HUNG Yu-Ping, YANG Chun-Yi, HSUEH Chiung-Fang, CHEN Yung-Hung, LIU Yao-Hua

#### **Background and objective**

In our hospital, the emergency department (ED) sees approximately 5188 patients monthly, each requiring an average of 12 A4 paper sheets for medical records. This amounts to 15,564 sheets weekly, weighing 77.8 kilograms, causing environmental harm. Excessive paper types (62%), unmanaged inventory (27%), and human errors (11%) contribute to this waste. Aiming to reduce carbon emissions and improve staff efficiency and satisfaction, we set a target to decrease paper weight by 40%.

#### Methods/intervention

1.Reduced Usage: •Conducted ESG courses to raise awareness among 32 staff members. •Introduced 48 electronic medical record types, cutting paper usage by 8,200 sheets weekly. •Continued development of electronic forms. 2.Minimized Waste: •Provided training on electronic systems and printer usage for 35 staff members. •Implemented paper request guidelines and storage management. •Posted reminders to print less and formed an environmental team for audits.

#### Results

1.Reduced paper usage from 77.8 to 18 kilograms weekly, achieving a 77% decrease. 2.Potential annual reduction of 10,336.8 kilograms of paper carbon emissions. 3.Average paper medical records per patient decreased from 12 to 2.7. 4.Staff satisfaction increased from 52% to 95.7%, with electronic forms being highly rated at 98%.

#### **Conclusions/lessons learned**

With increasing environmental consciousness, energy conservation and carbon reduction are now actionable imperatives. Yet, extensive paper usage in ED burdens staff and harms the environment. Moving forward, digitalization will further enhance efficiency and quality of care in emergency departments.

Contact: LIU CHIH JU TAIWAN

Promoting Sustainability Effectively by Providing a Plant-Based Low-Carbon Diets for Hospital Employees

WANG Chyi-Wen, YU Ya-Ting, CHEN Hui-Chuen, CHEN Pey-Rong

#### **Background and objective**

The greenhouse effect drives climate change, making the reduction of greenhouse gas emissions a crucial issue. Dietitians in hospitals can play a vital role in carbon reduction by adjusting the meals provided for staff and fostering an eco-friendly eating environment around the hospital. To enhance health promotion and sustainability, this project aimed to promote the consumption of Low-carbon meals and improve hospital employees' knowledge about energy conservation and carbon reduction by providing plant-based Low-carbon diets weekly in our hospital.

#### Methods/intervention

Dietitians designed balanced meals with more plant-based foods, a few eggs and dairy products, and no meats. The option of low-carbon diets was provided to hospital employees twice a week starting from March 2024. An online questionnaire was used to survey employees' attitudes toward the provision of Low-carbon diets, their willingness to repurchase low-carbon meals, and their knowledge about carbon emissions. After completing the questionnaire, correct answers regarding carbon emissions were provided as feedback to the participants.

#### Results

A total of 796 meals were served from March 12 to April 12, 2024. One hundred twelve employees finished the questionnaires. Meal satisfaction was rated at 8.8 out of 10. Ninety-two percent of employees were willing to repurchase the low-carbon meal boxes, and 95% supported the initiative. Fifty-three percent of employees answered all questions of knowledge about carbon emissions correctly.

#### Conclusions/lessons learned

Implementing plant-based Low-carbon meal initiatives is a good approach to foster eco-friendly practices and enhance health promotion efforts. It garnered a high meal satisfaction rate and employee support. Furthermore, the initiative of plant-based diets is an effective way to promote sustainability.

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Green Resilience, Digital Optimization of Patient Safety Notification Process

### CHEN Li-Huei, YAN Hui-Ling, CHANG Ko, HUANG Ming-Ren, YEN Chia-Chi

#### **Background and objective**

In order to strengthen the staff's concept of prevention of abnormal patient safety events, reduce the occurrence of medical disputes and controversial events, and improve patient safety. The United Nations has also proposed the concept of Net Zero emissions. In the face of the trend of net zero carbon emission by 2050, it is more important for medical institutions to actively participate in climate action and provide environmentally friendly workplaces and work processes.

#### Methods/intervention

Our hospital has set up the "Medical Quality and Patient Safety Committee" to encourage staff to implement the reporting of abnormal patient safety events. Since 2023, the hospital has been promoting the patient safety notification system to fully adopt a "paperless" system by filling in and reviewing the form online, and proactively send notifications for signature. The hospital also provides rewards for patient safety notification, will be awarded to anyone who reports a case, with a view to shaping the hospital's culture of positively reporting patient safety issues.

#### Results

In 2023, the growth rate of abnormal event notification of our hospital increased by 28.33% compared with 2022, and the notification time & efficiency increased by 58.24%. 2023, the carbon reduction related to digital patient safety notification conducted within our hospital is 0.154574 tons of carbon dioxide emission. The paperless and digital operation of our hospital's patient safety abnormal event notification not only improves the quality of notification, but also reduces the cost of the hospital, actively promotes sustainable operation and moves towards zero greenhouse gas emissions.

#### **Conclusions/lessons learned**

The digital and paperless patient safety notification system embodies the social responsibility obligations of medical institutions, and implements the two main aspects of ESG: environmental protection and social responsibility. Realizing the carbon emission reduction intention and striving to achieve the goal of net zero emissions by 2050.

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Promote hospital ESG, implement energy-saving and water-saving management

### CHEN Mei-Ling, CHANG Ko, HUANG Ming-Ren, YEN Chia-Chi

#### Background and objective

Our hospital has been awarded the Healthy Hospital certification. We attach great importance to energy conservation, carbon emission reduction, environmental friendliness and social responsibility, and has been committed to promoting ESG in recent years, with the vision of becoming the "Taiwan ESG Best Community Hospital".

#### Methods/intervention

Our hospital set up an ESG Hospital Governance and Sustainability Committee to improve the hospital's implementation of ESG quality through regular meetings to discuss. Relevant solutions were proposed: 1. Install a new type of air-conditioned ice water cooler with high energy efficiency. 2. Turn off the lights for 1.5 hours per day in non-essential areas during working days. 3 For water usage of the hospital, install RO recycling system to provide daily use non-edible water. 4. Install RO recovery system within the hospital, including the hemodialysis room. 5. During the period of water shortage, reduce the amount of water of washing tables in the toilets within the hospital to save water. 6. Strengthen maintenance of pipe leakage. 7. Broadcast energy and water saving propaganda in the hospital every day to avoid wasting.

#### Results

Through multi-strategy promotion of ESG policy and building a reminder mechanism, the results of this study showed that the water consumption of the hospital was effectively reduced by 10.08%, and the related carbon emission was reduced by 0.706 tons per year. The electricity consumption of the hospital was effectively reduced by 10.94%, while the related carbon emissions were reduced by 310.563 tons/year, and the total carbon emissions of the hospital generated by water & power usage were reduced by 10.94%.

#### **Conclusions/lessons learned**

The results of this study found that through ESG practice, our hospital can achieve sustainable development and improve service quality, brings a positive influence on the entire environment, society and corporate governance and also enabling the entire medical institution to move towards a healthier and sustainable future, becoming a "sustainable and low-carbon happy hospital".

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# Considering Osaka PFAS pollution and health through voluntary blood testing

#### **NAGASE Fumio**

#### **Background and objective**

The Stockholm Convention on Persistent Pollutants (POPs) significantly restricted three types of PFAS: PFOS in 2009, PFOA in 2019, and PFHxS in 2022. In November 2023, the WHO International Agency for Research on Cancer (IRAC) reevaluated PFAS as a substance that is "carcinogenic to humans" (1) and PFOS as a "possibly carcinogenic to humans" (2A), and called for stronger measures. In Japan, the manufacture and use of PFOS was prohibited in principle in 2010, and PFOA in 2021, and in 2020 the government set a provisional target value (50ng/L) for the total value of (PFOS + PFOA) in water. However, even now, high levels of contamination exceeding the provisional target

values have been revealed, causing health concerns. Our city Osaka, in particular, is one of the most highly contaminated areas in Japan. The Japanese government has refused to conduct a full-scale epidemiological survey, claiming that there is "no scientific knowledge of the health effects." Therefore, our organization and Min-Iren's medical institutions and residents' groups launched the "Osaka PFAS Contamination and Health Consideration Group" and conducted voluntary blood tests with the cooperation of Kyoto University.

#### Methods/intervention

From September to December 2023, voluntary blood tests and surveys of 4PFAS (PFOS, PFOA, PFHxS, PFNA) + biochemical tests were conducted on 1,193 people, including residents living near Company D, Japan's largest PFOA manufacturing company, at 49 venues.

#### Results

According to the analysis by Associate Professor Koji Harada of the Graduate School of Environmental Medicine, Kyoto University, although the analysis is still in progress, 93% of the blood concentrations of test subjects living nearby Company D were in the range of 2 to 20 ng/ml, as total value of the 4 PFASs, which may have adverse health effects in highly sensitive groups according to the clinical guidelines of the US National Academy of Sciences. And 41% were 20ng/ml or higher, which is the level that requires evaluation of carcinogenicity such as kidney cancer, thyroid abnormalities, and lipid abnormalities, and the effects of PFOA in particular were seen frequently.

#### **Conclusions/lessons learned**

Regulation of PFAS is being rapidly promoted internationally. The European Union (EU) has announced a policy to eliminate all types of PFAS. Under the Biden administration, the United States has imposed strong restrictions of PFOS<4ng/ml and PFOA<4ng/ml. However, the Japanese government's action for restriction is lagging behind. PFASs, which have been pointed out as harmful to the human body and the environment, require stronger restrictions based on the "precautionary principle" after the lessons learned from Minamata disease and asbestos pollution. We believe that the evidence demonstrated by residents through this epidemiological survey gives an opportunity to advocate for a change in policy.

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Digitization of paper: an important step towards realizing the goal of sustainable development

LEE Chi-Hsueh, LEE Wen-Chin, LU Chia-Wen, YEN David Hung-Tsang, CHEN Yi-Chun

#### **Background and objective**

Paper waste not only burdens the environment, but is also closely related to the Sustainable Development Goals (SDGs). We first analyzed the adverse environmental impacts of paper waste, including deforestation, energy consumption and carbon emissions. Reducing paper waste is closely linked to several of the SDGs, particularly Goal 12 (responsible consumption and production) and Goal 13 (climate action). Therefore, reducing paper waste not only helps protect the environment, but also promotes the realization of sustainable development goals.

#### Methods/intervention

According to statistics, the documents in the nursing department are complicated and have many items. Based on the 80/20 rule, we listed a total of 7 paper-based approval items that are used the most. Depending on the approval frequency and the number of units, a total of 4,660 sheets of paper can be saved in a year. This year, a total of 14 digital forms for electronic medical records have been added, which is expected to save another 20,300 sheets of paper a year.

#### Results

According to information from the Construction Department of the Ministry of the Interior, approximately 0.6 trees need to be cut down to produce one box of paper, and 4.99 trees need to be cut down in one year. The Department of Forestry, Environment and Resources of National Taiwan University stated that every additional tree on the earth can reduce 12 kgs of carbon dioxide per year. Cutting down 4.99 less trees will increase carbon emissions by 59.9 kgs per year. In addition, the approval time for paper submissions has been reduced from the original 118,400 minutes to 51,456 minutes, which can save NT\$278,925 in salary per year. This not only meets the requirements of the SDGs, but also saves waste of manpower and time.

#### **Conclusions/lessons learned**

Reducing paper waste is closely related to Goal 12 (Responsible Consumption and Production) and Goal 13 (Climate Action) of the SDGs. Reducing paper waste not only helps protect the environment, but also promotes sustainable development. accomplish.

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# Raise awareness of ESG among hospital staff

### YANG Hui-Ling, CHANG Ko, HUANG Ming-Ren, YEN Chia-Chi

#### **Background and objective**

In recent years, issues sustainable development have been paid more and more attention. As an institution with great social responsibility, hospitals are of great importance to the cognition and practice of ESG (environment, society and governance). Our hospital started to promote the ESG policy in 2022. From 2023/11/16 to 2023/11/24, we conducted a pre-test survey on employees' awareness of ESG issues. The results showed that employees' awareness of ESG was about 58.8%, indicating that their awareness of ESG concept was still insufficient.

#### Methods/intervention

Our hospital adapts three strategies to enhance employees' awareness of ESG:1.Resource integration: integration of internal and external resources, such as improving internal equipment resources and innovation promotion policies. 2.Policy advocacy: Organize employee health promotion activities combined with ESG policies.3.Training plan: Planning hospital ESG related courses.

#### Results

As of 2024/2/23, a total of 2 health promotion activities were held with ESG publicity activities added.The overall survey 93% agreed that the activities were in line with the ESG policy of our hospital.ESG-related education and training courses were implemented. And regarding the "Energy saving, carbon reduction and environmental protection" broadcast made during lunch break, 98.4% of our staff believed that their awareness of ESG was enhanced.Three months after the implementation of the test, the results showed that employees' awareness of ESG increased to 75%, indicating that employees' awareness of ESG was effectively improved.

#### **Conclusions/lessons learned**

The results of this study found that the hospital's positive ESG promotion strategy can help improve the staff's awareness. It is suggested that when hospital develops ESG strategy in the future, it shall take the ESG as an important consideration part, as staffs' understanding level of ESG is conducive to the common development of sustainable management.

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A medical organization that has broken down the barriers to Minamata Disease (Methylmercury Toxicosis) treatment and research in Japan by the government and the medical community for half a century

TAKAOKA Shigeru, FUJINO Tadashi, SHIGEOKA Shin-Ichi

#### **Background and objective**

More than 500,000 residents of Minamata City in southwestern Japan were exposed to methylmercury from contaminated wastewater discharged from a chemical factory in the city from 1932 to 1968. In 1956, the disease became known as Minamata disease, and the wastewater continued to be discharged until 1968, even after the cause was discovered in 1959. In 1965, a large number of cases of the same disease occurred in Niigata, and in 1968, the government recognized methylmercury as the cause of the disease and stopped discharging wastewater. In the end, however, many patients were ignored, and after that, research on Minamata disease almost ceased, with only less than 2,000 patients certified as having Minamata disease.

#### Methods/intervention

After 1970, a group of volunteer doctors began examining residents of the Minamata area; a clinic was opened in 1974, which became a hospital in 1978, and epidemiological studies were conducted. The disease was first diagnosed in 1974, and a hospital was established in 1978.

#### Results

Symptoms of Minamata disease range from mild to severe. It is thought that this is due to the plasticity of the central nervous system, but the onset of the disease is delayed when exposure is reduced, and the disease often develops in old age. Our medical institution has diagnosed and treated patients, and while in 1968 it was estimated that only 100 patients were affected, a court decision recognizing our institution's research led to the recognition of over 15,000 victims in 1986 and 69,000 victims in 2012.

#### **Conclusions/lessons learned**

However, local studies have not yet been conducted and trials continue, but the government and medical personnel do not properly understand the characteristics and diagnosis of toxicology, which has led to wrong verdicts in the courts.

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Discussion on the Effectiveness of Kidney Disease Prevention and Health Care for the Elderly in Response to Climate Change

### YU Ju-Min, HUANG Hsiu-Yen, YEA Shu-Ming, CHUO Ying-Hsiang

#### Background and objective

Extreme weather poses a serious threat to human health. According to the Global Climate Risk Index 2021, Taiwan ranks 36th worldwide in exposure to weather-related threats. Facing increasingly frequent extreme climate disasters, how to respond to climate change has become a critical issue in health care. Objective: To strengthen the protection of vulnerable groups and promote public awareness of extreme weather risks to health, a health literacy program using video clips was introduced to promote the awareness of climate disaster prevention and relevant responsive mechanisms. The researchers collected data in a regional hospital in northern Taiwan.

#### Methods/intervention

A series of multimedia situated teaching video clips on kidney disease prevention and health care for the elderly in response to climate change was produced based on health literacy concepts. By using QR codes, smartphones, tablet computers, electronic billboards, and group health education, people visiting the hospital to seek medical services received health knowledge related to climate change prevention and response mechanisms. Cases accepted were patients who came to the hospital for outpatient treatment. Individual groups of patients received quizzes before and after watching videos to assess learning outcomes.

#### Results

From May to October 2023, the learning outcomes of outpatients (N=34) before and after the intervention significantly improved from 81.2 points to 94.8 points (p<0.01). The cognitive usefulness and satisfaction of multimedia-situated teaching video clips are  $4.54\pm0.59$ .

#### **Conclusions/lessons learned**

The use of multimedia-situated teaching video clips can improve the learning effectiveness of vulnerable groups in coping with climate change. Afterward, the video clips were posted on the hospital's official website so that the public could immediately learn how to respond to climate change-related health knowledge according to their needs.

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Digitizing Hospital Administrative Forms: A Human Factors Approach for Efficiency, User Satisfaction, and Environmental Impact

### LIEN Chi-Hsun, HUANG Nine-Yin, WU Jia-Min, WANG Ping-Jen, HSU Hung-Yi

#### **Background and objective**

With the rise of digitization and environmental awareness, there has been a shift towards designing hospital administrative form information systems to replace traditional paper-based methods. This study uses human factors engineering methods to establish a user-friendly system that meets user needs and interface design, reducing inefficiency and usability difficulties.

#### Methods/intervention

In 2021, we established a cross-discipline project team, and users resisted digitizing administrative medical forms. To address this challenge, we devised a 6-stage progressive implementation plan: (1)Simplifying form fields to reduce cognitive load. (2)Establishing unified standard formats and processes to enhance operational efficiency. (3)Streamlining processes and steps. (4)Designing user-friendly interfaces to improve satisfaction and adoption rates. (5)Providing education, training, and advocacy to boost confidence and acceptance of the new system. (6)Collecting user feedback for system optimization. Through these measures, we aim to effectively overcome barriers to digitization and successfully transition administrative paper forms into digital format.

#### Results

Implemented measures successfully improved process efficiency, reducing processing time for each form by 3-10 working days on average. Furthermore, it enabled precise tracking of form approval progress, reducing the form loss rate to 0%. In addition to enhancing operational efficiency, paper usage decreased by approximately 72,000 sheets per year, resulting in savings of 443.5 kilograms of carbon dioxide emissions and reducing the carbon footprint. Simultaneously, we saved approximately 48 standard black toner cartridges, reducing 428.8 kilograms of carbon dioxide emissions. These results demonstrate that transforming digitized forms enhances efficiency, reduces costs, and positively impacts the environment, aligning with ESG principles.

#### **Conclusions/lessons learned**

Through human factors engineering, streamlining processes and enhancing efficiency have achieved sustainable development goals in environmental, social, and governance (ESG). Healthcare professionals can have more time for health promotion activities and reduce staff workload.

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# Efforts to Create an LGBTQ Friendly Hospital

### KUBOTA Yukako, NISHIYAMA Atsushi, INOKUCHI Seiji, KAWAMATA Etsuji, HASHIMOTO Tsukasa, KOBAYASHI Saki

#### Background and objective

LGBTQs is a general term for sexual minority parties. For example, lesbian, gay, bisexual, transgender, queer, questioning, and others. LGBTQs are reported to exist at a rate of 1.6-10.0%. LGBTQs are more likely to be exposed to various health risks such as sexually transmitted diseases, mental illness, and substance dependence. On the other hand, LGBTQs tend to avoid seeking medical care due to painful experiences caused by ignorance or neglect of medical personnel.

#### Methods/intervention

A project team was formed within the Health Promoting Hospital (HPH) Promotion Committee in our hospital. The team examined and implemented what initiatives were required to become an LGBTQs-friendly hospital, referring to the efforts of other hospitals.

#### Results

Project teams learned basic knowledge about LGBTQs using literature and materials. We have developed and distributed a behavioral guideline for employees that describes how to deal with LGBTQs persons. And we made a document to hospital users that clearly states that our employees do not discriminate based on gender identity or sexual orientation. We have conducted regular study sessions to educate our staff. In addition, we are planning workshops for staff.

#### **Conclusions/lessons learned**

We were able to take our first steps from making a commitment and staff education for LGBTQs persons. We were able to work on raising awareness of LGBTQs among our staff. Issues related to LGBTQs are highly individualized and complex. We need to continue to learn more and improve our systems.

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# Health Effects of Kanemi Oil Disease on the Next and Subsequent Generations

### FUJINO Tadashi, TAKEDA Reiko, HAYAKAWA Jungo, HASHIZUME Yoshiyuki

#### **Background and objective**

The Kanemi Oil Syndrome case, which caused a cluster of cases in various parts of western Japan with systemic skin symptoms, was officially confirmed in October 1968 and was thought to be caused by PCBs contaminated in the manufacturing process, but in 2000 the main cause was found to be dioxins (PCDF, coplanar PCBs). It is believed to have affected succeeding generations that were not directly exposed, but the actual situation has not been investigated in detail.

#### Methods/intervention

The study subjects were 10 children and 3 grandchildren from 3 families (mothers A, B, and father C) who were interviewed and examined, including dental x-rays.

#### Results

Ms. A was born in 1957, was exposed to the disease since 1965, and suffered from many serious health problems, but she died without certification. 23-year-old Ms. A had eight pregnancies after marriage, four miscarriages and stillbirths, and all four children were born with abnormal deliveries. Ms. B and Mr. C were certified as having Kanemi oil syndrome, while Mr. C's wife, who was not certified, was diagnosed as having Kanemi oil syndrome due to multiple disabilities. Dental radiographs were performed on seven of the succeeding generations, and congenital absence of teeth was found in three of four (75%) of the next generation and in one of three (33%) of the third generations.

#### **Conclusions/lessons learned**

In the oil disease diagnostic criteria, dental abnormalities (delayed eruption of permanent teeth) due to direct exposure in childhood are considered a reference finding. It is possible that this health effect may have affected the next or subsequent generations. In addition, all five of Ms. B's children (including one undiagnosed) and two of his grandchildren had nosebleeds in childhood, and all five children and one grandchild had been formally diagnosed with Glanzmann thrombasthenia in the past. Because of the compensation issues involved, those directly exposed have also not been adequately observed and certified for their health. Moreover, these health problems have occurred across generations. Thrombasthenia is a disease of autosomal latent (recessive) inheritance and is considered an unusual genetic effect.

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# Report on efforts supported by our physical therapists for nursing care prevention projects in Chichibu City

### **OOTA** Kazunari

#### **Background and objective**

In 2016, Chichibu City, Saitama Prefecture started a preventive care project for the elderly. At our hospital, physical therapists (PTs) serve as advisors for the health exercise program ``Chichibu Potekuma-kun'' and support activities to popularize ``health exercise''. This time, our hospital's PT will report on the content and results of health prevention activities conducted outside the hospital.

#### Methods/intervention

1. City staff will introduce the activity to the local community (neighborhood association, etc.). We are inviting the participation of nursing care prevention supporters who will play a central role in our activities. 2. The city will hold a "nursing care prevention supporter training course." The PT becomes the instructor and provides guidance on the content of the exercises and how to manage the group. 3. Those who complete the

program will become "nursing care prevention supporters" and will form a resident-led gymnastics group and begin health exercises once a week in areas where preparations have been made. 4. For the first three months, a PT will visit regularly to support physical fitness measurements and provide advice to participants. Physical fitness measurements (eyes-open one-leg standing test, 30-second chair stand-up test, Timed up and go test (hereinafter referred to as TUG)) will be conducted twice, once at the start of the activity and again 3 months later.

#### Results

The average values of 226 people who took two physical fitness measurements were compared. The one-leg standing test with eyes open improved from 31.8 seconds to 40.8 seconds for the right leg and from 32.5 seconds to 38.4 seconds for the left leg. In addition, the 30-second chair stand-up test went from 19.5 times to 21.4 times, and the TUG went from 7.1 seconds to 6.7 seconds, showing improvements in all tests. A T-test determined that there was a significant difference between standing on one leg on the left leg and standing on a chair for 30 seconds.

#### **Conclusions/lessons learned**

Significant changes were observed in the function of the nondominant leg and the standing movement using it. We believe that by incorporating exercise habits and socializing once a week, we were able to maintain and improve physical function.

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