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Applying the Multi-methods Approach to Enhance the Ability of Cardiopulmonary Resuscitation Among General Pediatric Nurses

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Outlines

- **Background**
 - Pediatric resuscitations occur rarely
 - Nurses are the frontline to judge whether the resuscitation activates
 - BLS does not meet the real clinical circumstances
- **Methods (15 pediatric nurses and 3 junior pediatric residencies)**
 - Lecture
 - Interactive software educational instrument
 - High-fidelity simulation training
 - Debriefing workshop
 - Tooltips
- **Result**
- **Relevance to HPH**



Unexpected Cardiac Arrests

0.9%

Incidence of Children

60%

ROSC

20%

Survived to discharge



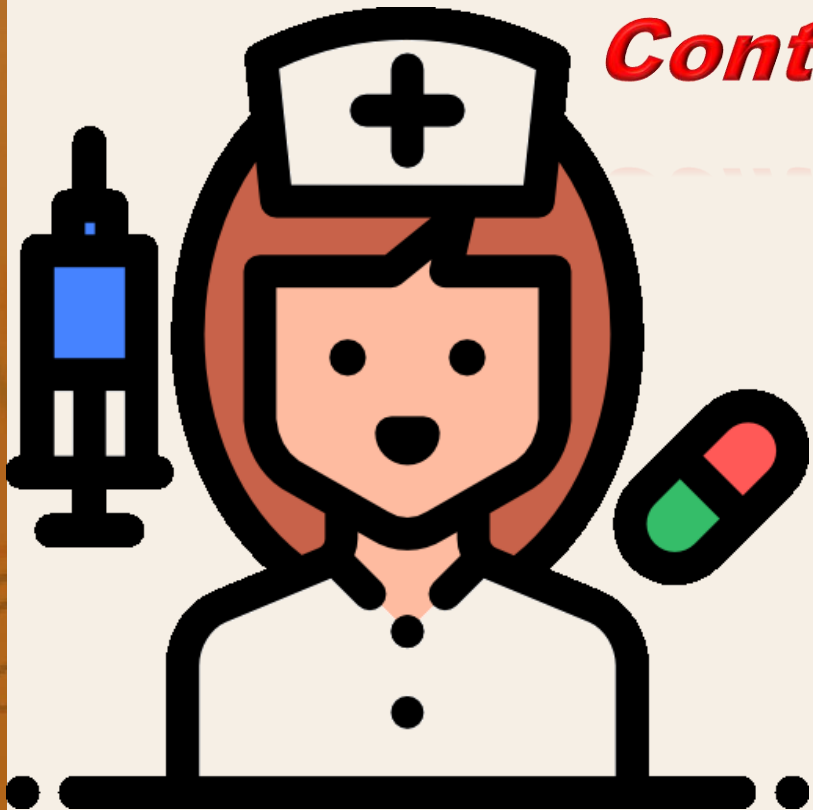


Patient-
Condition

Self-competence

Teamwork

Contextualized Competence?



Methods



Lecture



ECG interactive software

Ability of CPR

Debriefing workshop

High-fidelity simulation training



Scenarios

表四 兒童急救情境模擬教案

情境故事
<p>教案一 大夜班兩位護理師上班，凌晨5點巡房做治療時，到17-1床吳小弟6個月診斷DCM的嬰兒。二日前因咳嗽、吐、呼吸喘、血氧只維持90-92%被診斷支氣管肺炎住院，使用氧氣帳治療，今日大夜護理師要給 bricanyl 噴霧治療時發現嬰兒在氧氣帳裡平躺著，臉上和脖子、領子皆有吐奶痕跡，觸碰身體時感覺皮膚冰冷，沒有呼吸，沒有反應；父親則是在陪病椅上睡覺。</p>
<p>教案二 8歲先天性心臟病女童，行過多次心臟手術，二尖瓣裝有機械瓣膜，平常皆服用 Aspirin 及 Coumadin，INR 維持在 2-3，但多次因為機械瓣膜 dysfunction 打 TPA，今日因呼吸喘，精神倦入院治療，下午3點多突然問家屬按鈴女童叫不醒，四肢末梢冰冷。</p>
<p>教案三 15歲女生因 SLE 合併腎衰竭，高血鉀住加護病房洗腎，放置中心靜脈導管及雙腔導管，但仍全身水腫，無法下床活動，因病情穩定轉回兒科病房。右股有中心靜脈導管，少尿，固定週二、五進行血液透析，使用 O2 3L/min，今日與家人一同外出檢查後返回病房，白班兩位護理師移床時，病人突然大叫一聲就沒意識。</p>



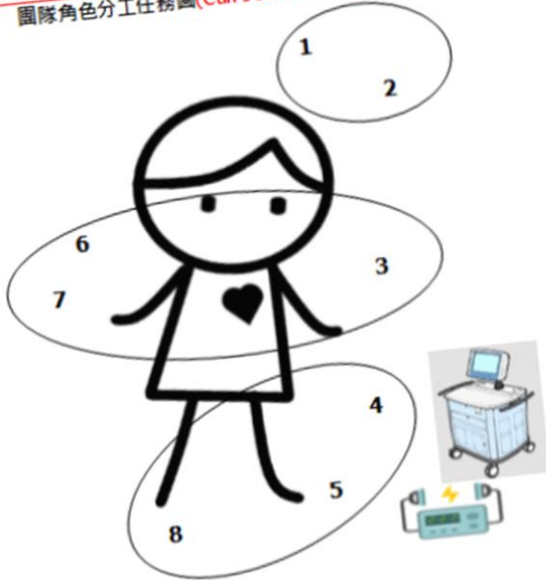
Tooltips

Guideline for Roles in Resuscitation

Call 9595- state pediatric cardiac arrest and location

- ✓ Leader/airway
- ✓ Suction
- ✓ Chest compression
- ✓ Medication administration
- ✓ IV access/ Blood Collection
- ✓ Scribe

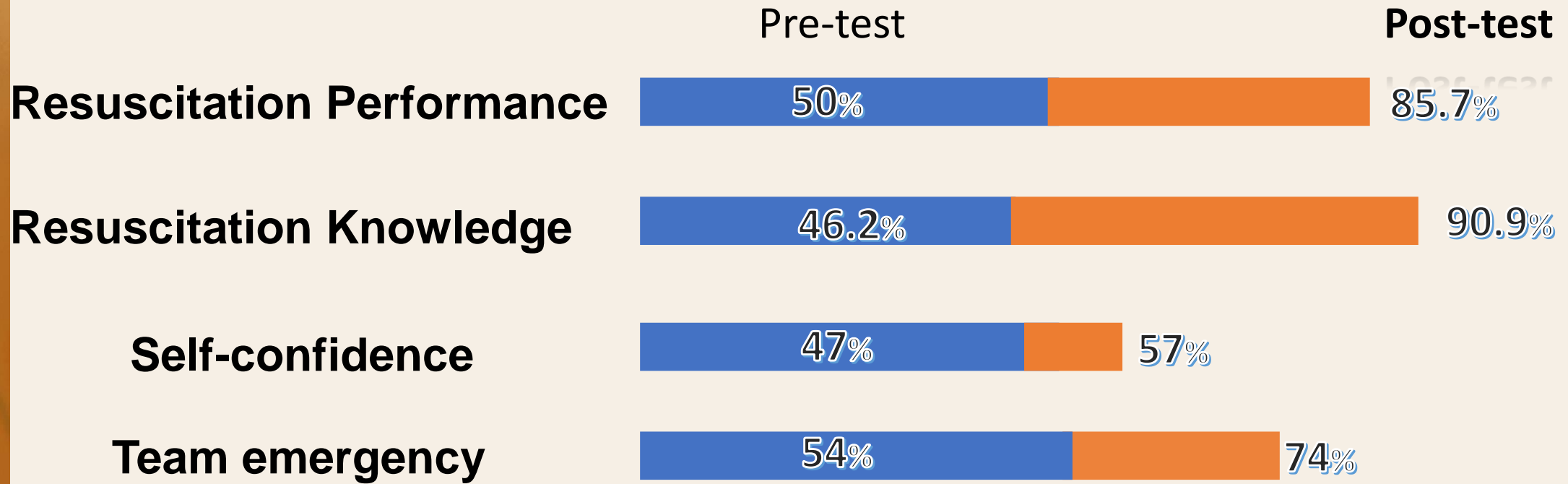
團隊角色分工任務圖(Call 9595—兒童急救及位置)



人員編號	工作分配內容
1 leader/airway	插管、換氣輔助
2 抽痰	換氣輔助、給氧、抽痰
3 壓胸/護理師	確定 IV 管路、給藥、電擊板、確定脈搏
4 急救車	給藥、備藥、紀錄
5 小組 Leader	指揮
6 壓胸	壓胸
7 侵入性處理	On line、抽 ABG
8 資料管理	紀錄、病歷負責



Results



Relevance to HPH

- **Pediatric resuscitation is a source of heightened stress**
- **Nurses face complex problems and reduced staffing during night shifts. Stress during resuscitation is often found to be associated with reduced performance.**
- **Interventions in this study increased nurses' resuscitation skills, knowledge, and self-confidence**
- **To rapidly react to medical problems, healthcare policy should be modified appropriately and promptly for resuscitation interdisciplinary training strategies in the times of COVID-19**

