

# Fall Prevention Strategies for Hospitalized Patients with Dementia, Cognitive Impairment, or Delirium

Li-Chin Chen; Chien-Min Chen; Hsi-Yu Yu ; Yi-Jun Zhou ; Ying-Chao Lin ; Pao-Yu Chuang ; Jih-Shuin Jerng  
 Department of Geriatric Medicine ; Department of Internal Medicine ; Department of Surgery ;  
 Department of Nursing ; Department of Information Technology ; Center for Quality Management  
**National Taiwan University Hospital**



## Background & Objective

Most inpatient falls are linked to **cognitive impairment and insufficient supervision**. Patients with dementia, cognitive impairment, or delirium face heightened fall risks due to impaired judgment, disorientation, and wandering. Hospital reviews show that most inpatient falls are linked to cognitive deficits and insufficient supervision — especially during night shifts.

**This project aimed to:**

- ▶ Identify key contributing factors to inpatient falls
- ▶ Set clear improvement priorities
- ▶ Develop feasible, sustainable fall-prevention strategies focused on high-risk patient identification and strengthened caregiver education



## Methods / Intervention

A multidisciplinary team analyzed fall incidents and identified key contributing factors. Based on findings, two targeted strategies were implemented to improve patient safety and reduce fall risk.

### Strategy 1: Automated High-Risk Patient Identification

Integrated into the **Electronic Medical Record (EMR)**

System automatically screens patients using nursing assessment criteria:

- Cognitive impairment
- Limited mobility
- Absence of caregiver support

Generates **visual alerts** for high-risk patients  
 Triggers **real-time care team notifications**

- ✓ Enhances early detection and enables proactive intervention

These strategies enhance early risk detection, improve communication, and strengthen patient safety outcomes.

Clinical Workflow Process



### Strategy 2: Standardized Caregiver Education

Structured education covering:

- Supervision responsibilities
- Fall risk awareness
- Handover communication
- Behavior monitoring

**QR-linked educational materials** provided at discharge for easy access

- ✓ Improves caregiver engagement and continuity of care

## Results

Both interventions were successfully implemented, yielding measurable improvements across all domains:

- ▶ **High-risk identification** increased substantially through EMR-integrated alerts
- ▶ **Caregiver competence** improved: education frequency, understanding, and compliance all rose
- ▶ **Fall incidents declined** improving care consistency and overall quality
- ▶ **Safety culture strengthened** through visual cues and systematic team awareness

### Patient Education Material — Fall & Wandering Prevention

#### Health Education on Fall and Wandering Prevention (Multilingual Version: Chinese / English / Vietnamese)

#### Fall Prevention & Wandering Prevention Education

#### 1. Companionship and Communication

Do not allow patients to move alone; **provide continuous supervision**. Stay with the patient at all times and keep them within sight. Even if the patient says, "I can do it myself," **assistance is still required**.

#### 2. Environmental and Equipment Safety

Keep **bed rails raised** for protection

Ensure the patient wears **non-slip footwear**

To prevent nighttime falls, **do not get out of bed without assistance**

Keep the floor **dry and free of hazards**

#### 3. Handling Abnormal Situations

If the patient becomes restless or repeatedly attempts to get out of bed or leave the room

Please **inform the nursing staff immediately** to discuss appropriate safety measures

**Important Reminder**

**Your companionship, attentive care, and proactive assistance are the best protection for the patient.**  
 Thank you for your cooperation! **National Taiwan University Hospital cares about you.**



### Step 1: EMR-Integrated Screening System — Screenshots

### Step 2: EMR System Alert & Physician Order Entry — High-Risk Wandering Care Protocol

Once a high-risk patient is confirmed by the physician, please proceed with order entry (multiple selections allowed).

- ✓ Inform family that 24-hour accompaniment is required.
- ✓ Hold a family meeting. ✓ Refer to a social worker.
- ✓ Provide caregiver education on fall prevention, dementia signs, and wandering prevention; refer as needed.

## Conclusions / Lessons Learned

- ▶ **Cognitive impairment** is a major driver of inpatient falls; caregiver vigilance strongly influences outcomes
- ▶ **Simple, sustainable measures** empower caregivers as safety partners
- ▶ **System alerts & visual cues** enhance team awareness and build a sustainable safety culture
- ▶ **Environmental safety** improvements complement education for comprehensive fall prevention
- ▶ **Outcome**



*"Simple and sustainable measures — high-risk identification and standardized caregiver education — can empower caregivers as partners in safety and reduce fall risk"*