Operational Management

Analysis of patient fall prevention process in a psychiatric geriatric ward of a public hospital

Executive summary

This report analyses the fall prevention process in the psychiatric geriatric ward of a public hospital, where patient falls are a significant safety concern. The ward has put substantial efforts into fall risk prevention, including mandatory risk assessments, staff training, and environmental modifications. Nonetheless, fall rates remain higher than in other hospital wards. Contributing factors include cognitive impairments, mobility issues, and inadequate environmental safety. The process analysis offers recommendations for improvements such as increasing the frequency of staff training and patient education, optimising the use of real-time electronic patient records, improving environmental safety through additional handrails, better lighting, and using data for continuous quality improvement.

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Introduction

The hospital is a public healthcare facility in Hong Kong. It is an acute general hospital that provides a wide range of services, including 24-hour accident and emergency service, outpatient, inpatient, day-patient and community care services. At present, it provides nearly 1,600 beds serving approximately 660,000 people. A committed team of over 6,000 healthcare professionals works collaboratively to deliver high-quality care to patients. I currently work as a nurse in the psychiatric geriatric ward which is under the department of Psychiatry. The department has a multidisciplinary team of 39 full-time medical staff, 147 nursing staff, and 92 supporting staff who provide quality and comprehensive care. The Department of Psychiatry at the hospital offers specialised in-patient services across two acute informal wards (one for each gender). The in-patient psychiatric ward has 80 beds, including 56 beds for adults, 16 beds for the elderly and eight beds for children and adolescent patients.

The psychiatric geriatric ward provides services to elderly patients with different mental health needs, from dementia to depression and those with severe mental illnesses who have grown old. The ward plays a crucial role in the hospital as it aims to provide and coordinate comprehensive psychiatric care for this vulnerable population. Given the increasing ageing population in Hong Kong, mental health [redacted] are often not adequately trained to address their complex needs (Gaba et al., 2023). Consequently, geriatric patients in the acute setting with mental health problems may go untreated, which emphasises the importance of the psychiatric geriatric ward in the hospital complex needs of these patients are met.

The department staff and leaders have put significant efforts into implementing safety strategies aimed at reducing preventable harm to geriatric psychiatric patients. Research indicates that enhancing patient safety in such a setting is crucial in ensuring holistic patient care (Turner et al., 2020). This assignment is an operational

analysis of the patient fall prevention process in the psychiatric, geriatric ward in order to offer recommendations for quality improvement to reduce patient falls.

Problem/ opportunity statement

The World Health Organization (WHO) describes falls as an event that results in a person coming to rest inadvertently on the ground or other lower level (WHO, 2021). Falls are a significant issue within psychiatric geriatric wards, particularly given the [redacted] falls globally, which makes it the second leading cause of unintentional injury death (WHO, 2021). Although most falls are not fatal, approximately 37.3 million falls worldwide are severe enough to require medical attention. The World Health Organization further notes that older people aged 60 years and above suffer the greatest number of fatal falls.

In the period 2022/2023, falls in the psychiatric geriatric ward accounted for 30% of all injury episodes that occurred over a period of one year. The female psychiatric geriatric ward reported a higher proportion of fall-related injuries at 42.1%, while in the male ward, it was 29%. This incidence of falls is considerably higher than in other [redacted] inadequate support equipment, such as side rails for patients as they get in and out of bed, to durable medical equipment, such as walkers, canes, and lifting devices. Additionally, the environmental restrictions in mental health units, which are intended to safeguard patients, can inadvertently pose risks. For instance, wired alarms for chairs and beds, side rails, and corded call systems may create hazards for both patients and staff.

Currently, the psychiatric geriatric ward has made several efforts to enhance the safety of the environment and mitigate fall risks. One significant measure is the

implementation of routine fall risk assessments. All patients undergo a comprehensive fall risk assessment upon admission and regularly throughout their stay. The interval of the assessment is not always standardized and nurses can reassess the patient in different intervals depending on factors such as cognitive function and mobility status (Phelan et al., 2015). The nurse manager organises [redacted]

Furthermore, regular multidisciplinary team meetings are held to review fall incidents and develop individualised care plans for high-risk patients. Despite these efforts, the psychiatric geriatric ward is experiencing a slightly higher incidence of falls than other wards. Thus, this assignment will identify the gaps in current fall prevention processes and recommend evidence-based strategies to enhance patient safety and quality of care in the psychiatric geriatric ward.

Strategic context

Enhancing patient safety through fall prevention aligns with the strategic direction of the hospital, which aims to transform the facility into a community-oriented, smart, and caring tertiary hospital of the 21st century. Research indicates that effective fall prevention strategies improve patient safety, contribute to better health outcomes, [redacted] Hospital Authority to promote health and prevent avoidable injuries.

The hospital's strategic emphasis on rehabilitation services further supports the need for effective fall prevention. As these services become an integral part of the patient care plan throughout their stay, ensuring a safe environment is crucial for facilitating smooth transitions between different levels of care. The ward enhances the

rehabilitation process by preventing falls, thereby supporting the hospital's goal of reducing avoidable hospitalisations and promoting recovery in various settings, including ambulatory and in-patient care.

Additionally, the hospital is continuously undergoing significant redevelopment to update its facilities and adopt modern healthcare delivery models. Some of the [redacted] deliver world-class, evidence-based healthcare. This effort will support the hospital's role as a major training center for healthcare professionals, fostering a culture of excellence and continuous improvement.

Process analysis

Since there are various patient fall prevention processes, I will focus on the fall prevention process, specifically during toileting in the psychiatric geriatric ward of a public hospital. The current process has various stages, beginning with the patient's admission and proceeding through risk assessment, intervention, and ongoing monitoring. To assess this process and identify areas for improvement, I utilised three key operational management tools: Risk Assessment, Total Quality Management, and the Plan-[redacted] reducing fall risks.

Risk Assessment

The risk assessment tool is one of the operational management tools that can be used to assess the process. It follows a six-step approach to provide a comprehensive framework to identify and mitigate potential risks effectively (Gov.UK, no date; You *et al.*, 2022). The first step in risk assessment is the identification of hazards. Several hazards are present in the psychiatric geriatric ward, which could contribute to patient falls. As discussed earlier, these hazards include gait instability, cognitive impairments, medications (particularly sedatives that increase drowsiness), slippery floors, poor lighting, inadequate handrails, and improperly arranged furniture that can obstruct the patient's movement. Another significant hazard is the failure to

use the call bell system, either because patients forget or are unaware of how to use it properly.

The second step is to answer the Who, Where, When, What, and How of the risk scenario. In this case, falls primarily affect elderly patients with cognitive impairments

The third step involves assessing risk. Upon admission, each patient undergoes a fall risk assessment using tools like the Morse Fall Scale, which evaluates multiple factors contributing to fall risk. For instance, a gait instability score of 10 or more

The fourth step in the risk assessment process is to implement control measures. After conducting the initial risk assessment and identifying the risks, the nursing team implement immediate controls to mitigate those risk. For patients identified as high-risk, a toileting care plan is put into place for the first 24 hours of admission. This plan

Monitoring is the fifth step and is crucial in maintaining patient safety. After 24 hours, the nurses conduct a reassessment. If the patient still struggles with mobility or fails to understand the importance of using the call bell, the plan is escalated to an assisted toileting care plan. This involves setting a toileting schedule that accommodates the patient's habits, placing visual reminders, such as a sign on the bedside, to remind patients to ask for assistance and encouraging family members or carer to help during toileting when appropriate. Finally, in the review step, the fall prevention process is reviewed regularly, focusing on high-risk patients to ensure

they receive adequate supervision. Adjustments to care plans are made based on patient progress, with particular attention paid to patients who still exhibit unsafe behaviours, such as forgetting to use the call bell.

In addition to the six-step risk assessment approach, I will use a Risk Grading Matrix to rank the identified hazards based on both their severity **and** likelihood of [redacted] ratings are: 1 (Minor, no injury), 2 (Moderate, minor injuries, no hospitalisation), 3 (Significant, outpatient treatment needed), 4 (Major, hospitalisation required), and 5 (Catastrophic, permanent disability or death).

Hazard	Likelihood	Severity	Risk Rating	Comments/Actions Needed
Gait Instability	5 (Almost Certain)	4 (Major)	Critical (Red)	Immediate interventions: close monitoring, assisted toileting, and physical therapy.
Cognitive Impairments	4 (Likely)	3 (Moderate)	High (Orange)	Implement regular reminders and visual bedside signs for assistance.
Failure to Use Call Bell	3 (Possible)	4 (Major)	High (Orange)	Increase patient education on call bell usage; ensure continuous monitoring.
Slippery Bathroom Floors	3 (Possible)	4 (Major)	High (Orange)	Conduct regular rounding; install non-slip mats immediately.

Hazard	Likelihood	Severity	Risk Rating	Comments/Actions Needed
Poor Lighting at Night	4 (Likely)	3 (Moderate)	High (Orange)	Enhance lighting in high-risk areas, especially near bathrooms.
Inadequate Handrails/Furniture Obstruction	3 (Possible)	4 (Major)	High (Orange)	Reorganise furniture layout and install adequate handrails urgently.

Total Quality Management

Total Quality Management (TQM) offers a structured framework for improving the quality of care within healthcare organisations. In the context of fall prevention in a psychiatric geriatric ward, TQM can be used to ensure patient safety through a combination of patient-centered care, process optimisation, and continuous improvement (Hidayah et al., 2022; Alzoubi *et al.*, 2019). In my organisation, the [redacted] patients with a high fall risk receive immediate support, such as regular toileting assistance and closer monitoring to reduce the chance of falling. Another aspect of customer focus is involving patients and their families in the care plan. This approach empowers patients by educating them about safety precautions and brings families or carer into the process as a support system.

Employee involvement is critical in TQM. In the ward, all staff members play a role in achieving organisational goals. The medical team, nurses and allied health professionals are empowered through proper training on fall risk assessment. The training is not frequent and can be conducted once a year. Research supports the need for an ongoing process to ensure staff members are equipped to respond to

[redacted]

TQM emphasises the optimisation and control of processes to achieve better quality outcomes (Fraihat et al., 2023). In fall prevention, managing the process of risk assessment, intervention, and monitoring ensures that each step is effective and contributes to minimising falls. The use of standardised tools, such as the Morse Fall [redacted] challenge in the assessment is that patient conditions can change within the 24-hour reassessment period mandated for nurses. In a few cases in the ward, we have had instances where patients who were initially assessed as low-risk experienced sudden changes in their health status.

TQM emphasises the importance of data in making informed decisions (Hidayah et al., 2022). My department uses an electronic patient record system to collect, [redacted] stimulated the use of predictive models that can incorporate multiple fall predictor variables that are automatically obtained from the electronic system to predict risks and create automated alerts (Cho *et al.*, 2021).

Plan-Do-Study-Act (PDSA) Cycle

The Plan-Do-Study-Act (PDSA) cycle provides a framework within which to test and implement improvements in the fall prevention process within the psychiatric geriatric ward. This method enables the department to test solutions on a small scale, evaluate their effectiveness, and refine the intervention (Reed et al., 2016; Taylor et al., 2013). The first step is to identify the specific problems that lead to falls during

toileting and develop a clear plan to address them. Some of the problems that have been pointed out include delays in documenting patient fall risks and incidents, manual data entry and environmental factors. The quality improvement project can [redacted] handles and patient education (Luk et al., 2015). The staff will also be trained on what they will be expected to do differently with regards to the data entry process as well as the other safety measure. The third action plan “Study” will be implemented after 3 months. In this phase, data from the pilot program will be collected and analysed. The fall incident data will be reviewed to assess whether the changes have led to a measurable reduction in falls during toileting. Additionally, feedback from nursing staff regarding the effectiveness of the real-time data entry and environmental safety measures will be gathered.

In the final phase of the cycle which is the “Act” phase, the department will analyze the results and decide the next steps. If the pilot program shows a reduction in falls [redacted] the electronic record system effectively, further training sessions may be scheduled. If the implementation of environmental improvements demonstrates significant success in preventing falls, these safety measures could be standardised across other wards. Continuous monitoring will be essential to ensure that any new risks are promptly identified and addressed.

Recommendations

Enhance Staff Training on Fall Prevention:

- Increase the frequency of staff training from once a year to biannual sessions. These sessions should focus on the latest fall prevention strategies and emphasise cognitive impairment, gait instability, and environmental risks.

- Incorporate simulation-based training, allowing staff to practice responses to fall risks in a controlled setting.

Optimise the Use of the Electronic patient record system:

- Implement real-time data entry for fall risk assessments and incidents directly into the EPR system, minimising delays and improving accuracy in tracking patient risks. This would allow for immediate adjustments to care plans.

[redacted]

I**mprove Environmental Safety**:

- Increase the number of non-slip mats and handrails in the bathrooms. Ensure proper lighting is maintained, especially during nighttime hours.

[redacted]

Increase Patient and Family Involvement:

- Educate patients and their families about fall risks and prevention strategies during admission. Providing informational materials and demonstrating safe use of assistive devices can empower patients and their families to participate actively in fall prevention efforts.

Utilise Data for Continuous Quality Improvement:

- Regularly analyse fall incident data, focusing on patterns such as time of day, location, and patient demographics. Use this data to guide targeted interventions and improvements in fall prevention strategies.

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