



Letter to the Editor

Individual Environmental Assessment Is Required to Identify Fall Risk Factors

Sanny Zi Lung Choo¹, Nadzirah Rosli¹, *Shyh Poh Teo¹

¹Department of Internal Medicine, Raja Isteri Pengiran Anak Saleha Hospital, Brunei Darussalam

ISSN 2663-8851/Copyright © 2021, Asian Association for Frailty and Sarcopenia and Taiwan Association for Integrated Care. Published by Full Universe Integrated Marketing Limited.

To the Editor,

Falls among hospital inpatients are common, with fall rates ranging from 3 to 14 per 1000 bed days, and 3 to 20% of inpatients falling at least once during their admission.^{1,2} Inpatient falls are associated with injuries, with 10 to 25% resulting in lacerations or fractures.³ Most falls have identifiable risk factors, including weakness, unsteady gait or medications; management of these risk factors significantly reduces falls. Due to their complex nature, an optimal approach requires interdisciplinary collaboration, proactive interventions especially physical activity, systematic assessment and management of fall risk factors, attention to co-existing medical conditions and environmental inspection to reduce hazards.^{3,4} Findings from an individual patient environment audit of older medical inpatients in Raja Isteri Pengiran Anak Saleha (RIPAS) Hospital, a tertiary hospital in Brunei Darussalam are described; which identified aspects for improvement in environmental falls risk factors.

The audit was performed using the Queensland Health Individual Environment Checklist, produced by The Victorian Quality Council Safety and Quality in Health.⁵ This checklist evaluates various aspects of a patient's bedside that increase risk of falls. Aspects assessed are bed and bedside fixtures, furniture including chairs, accessibility of call bells, night lights and mobility aids, and overall environment in terms of clutter and fall hazards. Older people aged 65 years and older admitted to the medical wards in RIPAS Hospital were included. Bed-bound or immobile patients were excluded. Data was entered and analysed using Microsoft Excel.

There were 30 patients with median age 74 years (Range 65 to 83 years). 13 (43%) were male and 17 (57%) female. All beds had firm, supportive mattresses and functioning locks on castors. However, some beds were not low enough, that 7 (23%) could not touch the floor with their feet when the bed was at its lowest. Bedside tables and lockers were wheeled with a braking system, which were not secure enough to support a patient if they leaned against them. 14 (47%) did not have bedside lockers, tables or mobility aids within easy reach, which may result in undue turning or twisting. There were 22 (73%) patients who did not have easy access to call-bells or night-lights. None were shown how to operate them. While 14 (47%) required mobility aids or a wheelchair to mobilise, 6 (43%) claimed they were not shown how to

***Correspondence**

Dr. Shyh Poh Teo
 Department of Internal
 Medicine, Raja Isteri Pengiran
 Anak Saleha Hospital, Brunei
 Darussalam

E-mail:
shyhpoh.teo@moh.gov.bn

Received 28 May 2020
 Accepted 1 July 2020

Keywords

Falls, hospital

use them properly. The overall bedside environment for 4 (13%) were cluttered. There were no cords or loose wiring on the floor. Figure 1 illustrates several fall hazards identified.

In conclusion, auditing individual patient environment in hospitals may identify areas of improvement to reduce falls risk. In our case, it was important to ensure hospital furniture is sturdy enough in case patients lean on them and frequently checking ease of access to call-bells, night lights, walking aids and locker belongings.

Figure 1. Fall hazards identified from individual environmental assessment audit.



1. Rubenstein LZ. Falls in Older People: Epidemiology, Risk Factors and Strategies for Prevention. *Age Ageing*. 2006;**35**(Suppl 2):ii37-41.
2. Mahoney J. Immobility and Falls in the Acute Care Setting. *Clin Ger Med*. 1998;**14**:699-72.
3. Wu S, Keeler E, Rubenstein L, Maglione M, Shekelle P. A Cost-Effectiveness Analysis of a Proposed National Falls Prevention Program. *Clin Geriatr Med*. 2010;**26**:751-66.
4. Boushon B, Nielsen G, Quigley P, Rutherford P, Taylor J, Shannon D, Rita S. *How-to Guide: Reducing Patient Injuries from Falls*. Cambridge, MA: Institute for Healthcare Improvement; 2012. Available at www.ihl.org
5. The Victorian Quality Council Safety and Quality in Health. *Minimising the Risk of Falls & Fall-Related Injuries. Guidelines for Acute, Sub-Acute and Residential Care Settings Tools Supplement*. Melbourne, Australia: Victorian Government Department of Human Services; 2004.

CONFLICTS OF INTEREST

The authors have no conflicts of interests to declare.

REFERENCES