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PRESSURE INJURY PREVENTION AUDIT FOR GERIATRICS AND PALLIATIVE INPATIENTS IN RIPAS HOSPITAL (RESEARCH LETTER)

Short Running Title: *Pressure Injury Prevention Audit*

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ABSTRACT:

Pressure injuries are areas of localised damage to skin and underlying tissue, usually over bony prominences. Pressure injuries are painful, worsen quality of life, increases hospital length of stay and risk of morbidity and mortality. In Raja Isteri Pengiran Anak Saleha (RIPAS) Hospital, there were previous concerns regarding pressure injuries, prompting service initiatives to improve prevention measures. However, after the COVID-19 pandemic, these concerns recurred warranting an audit of pressure injury prevention measures. The audit of routine pressure injury prevention forms in Geriatrics and Palliative Medicine inpatients was performed for 2 weeks. The completion rate of forms was 89.8% and 50% for Geriatrics and Palliative patients respectively. Among the Geriatrics and Palliative inpatients, one-third had pressure injuries before admission, while one-eighth developed them in hospital. The most prevalent risk factors were limited mobility, reduced physical activity and malnutrition. Wound charts and advice for barrier creams were performed in only two-thirds of the patients with pressure injuries. There was a high prevalence of risk factors to develop pressure injuries in Geriatric and Palliative Medicine inpatients. However, while pressure injury risk assessment is considered routine for inpatients, especially older people, there was a poor compliance rate of completing pressure injury risk assessment forms, particularly among palliative patients.

Keywords: Braden Scale, inpatients, pressure ulcer, prevalence, risk assessment

INTRODUCTION:

Pressure injuries are areas of localised damage to skin and underlying tissue, usually over bony prominences. Pressure injuries are painful, worsen quality of life, increases hospital length of stay and risk of morbidity and mortality [1]. In

Brunei, the main tertiary hospital is Raja Isteri Pengiran Anak Saleha (RIPAS) Hospital, which has 1260 beds. The Geriatrics and Palliative Medicine specialty in the hospital manages a large number of dependent patients. In 2015, a descriptive study of Geriatrics patients found

that two-thirds had severe functional impairment, with almost half being bedbound or transfers only, hence were high risk of developing pressure injuries [2]. An audit of medical inpatients at that time found a prevalence of pressure injuries of 20.4%, with a poor compliance rate of completing risk assessment forms of 39.1% [3]. There was also a reported case of a pressure injury complicated by hip osteomyelitis at that time [4], prompting service initiatives to improve pressure injury prevention [1].

During the COVID-19 pandemic, there was a resurgence in pressure injuries, with an observed increase in dependent older people admitted from the community with Stage 4 pressure injuries complicated by osteomyelitis [5]. While this may be a consequence of social restrictions, an audit of pressure injury prevention measures in hospitals and the community was warranted [6]. This paper describes an audit of pressure injury prevention measures for inpatients admitted under Geriatrics and Palliative Medicine in RIPAS Hospital.

METHODOLOGY:

The prospective audit was conducted for a period of 2 weeks, from 27th May 2024 to 9th June 2024. Pressure injury risk assessment forms for patients under Geriatrics and Palliative Medicine on 27th May 2024 and subsequent admissions to the service up to 9th June 2024 were evaluated. Data collected included patient

demographics such as age and gender, Braden Scale risk factors, details of pressure injuries (if any) and preventive measures used. Forms were completed by the staff nurses for Geriatrics and Palliative Medicine and collected at the end of the audit period by the charge nurse. Forms completed after the audit period were excluded. Data was entered into Microsoft Excel and analysed using descriptive statistics.

RESULTS:

There were 53 forms for 59 Geriatrics patients and 9 forms for 18 Palliative patients, equating to a response rate of 89.8% and 50% respectively. Among the total of 62 patients with pressure injury assessment forms, there were 21 (33.9%) males and 41 (66.1%) females. The median age was 79.5 years (range 44 to 98 years). There were 29.0% (18/62) who had pressure injuries before admission to hospital, 12.9% (8/62) developed pressure injuries in hospital, 46.8% (29/62) who did not have pressure injuries, while 11.3% (7/62) did not have this assessment documented on admission. The most common site for pressure injuries were sacrum and heels in 35.5% (22/62) and 8.1% (5/62) patients respectively. In terms of documenting risk factors as per the Braden Scale, this was not done in 59.7% (32/62) patients.

The prevalence of risk factors among the 25 patients with completed forms were as follows: limited sensory perception in 16 (64%), moisture in 15 (60%), reduced physical activity in 18

(72%), limited mobility in 24 (96%), poor nutrition in 21 (84%) and friction or shear problems in 16 (64%). Among the 27 patients with pressure injuries, the primary team doctor was informed in 19 (70.4%), two hourly turns advised in 22 (81.5%), pressure relieving mattress provided in 21 (77.8%), barrier cream advised in 18 (66.7%), nutritional assessment performed in 20 (74.1%), wound chart started in 18 (66.7%), wound management plan provided in 21 (77.8%), and patient and/or family were informed of pressure injury and prevention approaches in 20 (74.1%).

DISCUSSION:

This was an audit of a group of vulnerable patients at high risk of developing pressure injuries. Risk factors for pressure injuries were prevalent in these patients, especially reduced physical activity and mobility as well as malnutrition. The completion rate of pressure injury prevention forms should be improved, particularly among palliative patients. This will require further quality improvement actions to be performed, including an enquiry regarding barriers and enablers to optimize pressure injury-based practices. A systematic review found that staff and patient education, interprofessional communication and human resources should be considered as possible areas requiring intervention to improve pressure injury care [7]. Education and training programmes with provision of evidence-based

bundles of care for pressure injury prevention are also recommended [8].

In terms of interventions, having a wound chart and use of barrier creams was only performed in two-thirds of the patients, while two-hourly turns and the use of pressure relieving mattresses could also be improved. An observational study of medical and surgical wards in China found that surgical wards were better than medical wards at applying barrier creams, pressure relieving surfaces, regular turns and nutritional support [9]. While most pressure injury prevention practices should be improved for Geriatric and Palliative Medicine patients, it would be worthwhile assessing patients across all medical and surgical wards in RIPAS hospital.

The main limitation in this study is the small number of patients limited to two specialties, which were not segregated to specific wards. However, there was adequate information to indicate a need to improve on pressure injury prevention measures across the hospital.

CONCLUSION:

There was a high prevalence of risk factors to develop pressure injuries in Geriatric and Palliative Medicine inpatients. However, while pressure injury risk assessment is considered routine for inpatients, especially older people, there was a poor compliance rate of completing pressure injury risk assessment forms, particularly among palliative patients.

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