

## Multi-component Interventions to Prevent and Manage Pressure Injuries in Hospital

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## **Abstract:**

Pressure injuries are areas of localised damage to skin and underlying tissue, usually over bony prominences. They are associated with pain, prolonged hospitalisation, poor quality of life, increased morbidity and risk of mortality.

An audit of pressure injury risk assessment forms on medical wards identified poor compliance with pressure injury prevention and increased prevalence of pressure injuries among patients, from 1.6% in 2011 to 20.4% in 2015. A study exploring nurses knowledge and practices on wound assessment identified more than half of the participants had limited knowledge, confirmed in an audit of nursing documentation of wound progress. Interventions to reduce risk of pressure injuries and improve management of pressure injuries require a comprehensive and multidisciplinary approach. The framework used to achieve this are outlined.

Multicomponent interventions involving development of care practices using a team approach include standardising pressure injury documentation and continuous education. The TaPIE (TAilored Pressure Injury Education) intervention for nurses and caregivers on reducing pressure injury is currently being undertaken. Nurse-led wound management utilising the TIME approach and monthly wound case conference improved ward-based management of pressure injuries. Community follow-up by home based nurses of complex wounds is facilitated by tele-assessment through electronic digital images shared with clinicians if there are uncertainties in management.

## **Keywords:**

Pressure injuries; prevention; education; wounds

# Definition: Pressure Injury

- Areas of localised damage to skin and underlying tissue
- Usually over bony prominences
- Associated with<sup>1,2</sup>:
  - Pain
  - Prolonged hospitalisation
  - Poor quality of life
  - Increased morbidity
  - Increased risk of mortality

# Background: Local Data

- Poor compliance with pressure injury prevention
- Increased prevalence of pressure injuries in hospital<sup>3</sup> - 1.6% (2011) to 20.4% (2015)
- Limited knowledge of wound assessment
- Audit: Poor documentation of wound progress<sup>4</sup>
- Case: Osteomyelitis - complication of pressure injury<sup>5</sup>
- **Comprehensive and multidisciplinary intervention**

# Framework

- **Prevention / Risk Reduction**
  - Education of risk factors and assessment
  - Equipment for pressure risk reduction
  - Team approach to optimise mobility and function
- **Management of Pressure Injuries**
  - Education of wound management with peer support
  - Improve access to support or advice regarding wounds
  - Continuum of care: Inpatient to community

# Multi-disciplinary Team Approach

- Identify relevant stakeholders
- Management / Leadership Support
- Quality Improvement / Risk Management
- Wound expertise – Doctors / Nurses
- Physiotherapy, Occupational Therapy, Dietitian
- Service Providers – Dressings, Equipment
- **All Medical Staff Play a Role in Prevention!**

# Tailored Pressure Injury Education (TaPIE)

- Nursing Staff: Pieper Pressure Ulcer Knowledge Test
- Competency based structured educational intervention
- Flipped classroom approach
- Demonstrate application of knowledge
- Similar approach for caregivers

**TaPIE Study = Work in Progress**

# Nurse-Led Wound Management

- Wound bed assessment and preparation (TIME)
  - T: Tissue
  - I: Infection / Inflammation
  - M: Moisture
  - E: Edge of wound / Epidermal advancement
- Selection of appropriate dressings
- Follow-up until complete wound healing
- Education of ward nursing staff

# Wound Case Conference

- Once a month
- Multidisciplinary representation regarding complex wound assessment and management
- Geriatrics Nurses
- Home Based Nurses
- External Opinion: Podiatry, Surgery, Physicians
- Planning for wound care team in future

# Tele-Assessment

- WhatsApp used to share images
- Input from Geriatrician
- Option of seeking input from other specialties
  - Orthopedics, Surgical, Dermatology, Plastics, Podiatry
- Access to electronic clinical records
- Output: Comprehensive wound management plan
- Avoid transfer to hospital for assessment

# Discussion

- Pressure injuries are a significant issue affecting immobile patients in RIPAS Hospital
- Interventions For:
  - Reduce risk of pressure injuries
  - Improve management of pressure injuries
- Comprehensive approach and teamwork required
- Emphasis on educational interventions and support

# Conclusion

1. Multi-disciplinary Team Approach
2. Tailored Pressure Injury Education (TaPIE)
3. Nurse-led wound management – TIME
4. Wound case Conference
5. Tele-assessment

# References

1. Allman RM. Pressure ulcer prevalence, incidence, risk factors and impact. *Clinics Geriatr Med* 1997;13(3):421-36.
2. Gorecki C, Brown JM, Nelson EA, Briggs M, Schoonhoven L, Dealey C, et al. Impact of pressure ulcers on quality of life in older patients: a systematic review. *J Am Geriatr Soc* 2009;57:1175-83. DOI: 10.1111/j.1532-5415.2009.02307.x
3. Kula M, Teo SP. Prevalence and risk factor assessments of pressure ulcers among medical inpatients in RIPAS hospital. *Brunei Int Med J* 2018;14:151-156.
4. Suhai K. Exploring nurses' knowledge and practices on wound assessment in a tertiary referral hospital in Brunei Darussalam. Masters of Nursing Science (Acute Care Nursing) [thesis]. University of Adelaide;2014.
5. Onn LV, Teo SP. Hip osteomyelitis secondary to pressure injury: a case report. *Asian J Gerontol Geriatr* 2019;14(1). DOI: 10.12809/ajgg-2018-300-cr  
[http://ajgg.org/image/module/early\\_online\\_release/2018-300-CR.pdf](http://ajgg.org/image/module/early_online_release/2018-300-CR.pdf)