Unavoidable Yet Under-recognised?

Prevalence of Kennedy Terminal Ulcers in a Major Teaching Hospital

PCNA Conference June 2026

Grace Edwards

Dr Caroline Phelan

SLHD EOL Image – Sarah Clarke

Acknowledgement of Country

Artwork:

Ngurang Dali Mana Burudi — a place to get better

The map was created by our Aboriginal Health staff telling the story of a cultural pathway for our community to gain better access to healthcare.

Artwork by Aboriginal artist Lee Hampton utilising our story.

What is a Kennedy Ulcer?

- First coined by Karen Lou Kennedy in 1989
- Kennedy Ulcer (KU) is an end-stage skin failure showing sudden onset and rapid progression in terminal patients.
- KU is a clinical marker indicating the dying process and often precedes death within days to weeks.

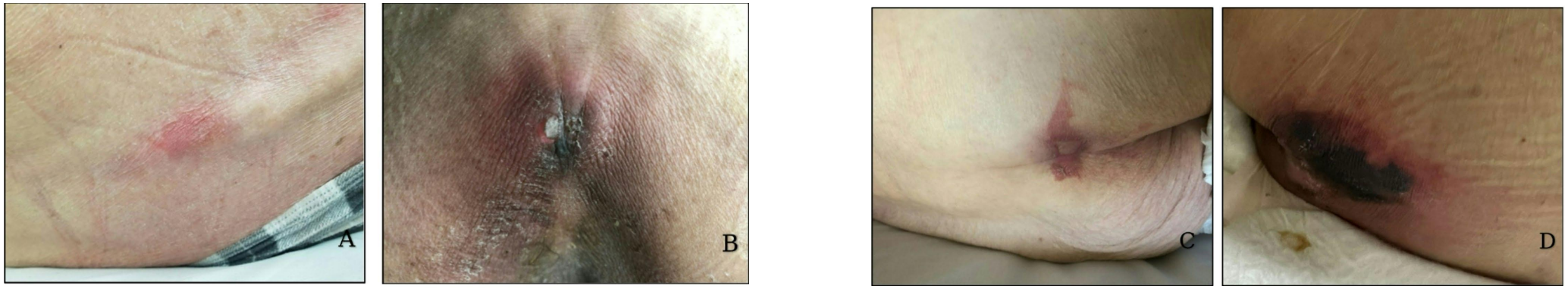


Fig. 2 EOL wound photographs. **2A**: Lumbar spine striation; **2B**: Coccyx bilateral butterfly shape; **2C**: Coccyx bilateral butterfly shape with blister; **2D**: Sacro-coccygeal-lumbar horseshoe shape with striations (Latimer et al., 2025)

Why know about skin failure at EOL?

34%
Prevalence at hospice admission

52%
Affected at some point during stay

51%
New injuries in last 10 days of life

- Shift in care goals
- No validated assessment tool has existed
- Family distress and guilt

- Healthcare associated penalties with EOL wounds being classified as pressure injuries

Flinders University

What does the research tell us?

- Injuries in the last week of life are universally non-healing
- Challenges with recognition
- Objection with mechanism of action
- Risk of misuse
- Extremely variable prevalence

Flinders University

Aims

1. To understand the prevalence of KTUs in the adult population in an Australian tertiary and quaternary referral hospital.
2. To improve understanding and identification of KTUs by healthcare staff.

Methodology

Retrospective chart review

Eligible cases were assessed using the End-of-Life Wound Assessment Tool (Latimer et al., 2023)

Inclusion Criteria	Exclusion Criteria
• Deceased patients between 01/01/2024 - 30/06/2024 • >18 years • Development of a pressure injury within 7 days of death	• < 18 years • Deaths on arrival

Table 3. END-OF-LIFE WOUND ASSESSMENT TOOL

END-OF-LIFE WOUND ASSESSMENT TOOL

Patient Identification:

END-OF-LIFE WOUND DEFINITION: a sudden unavoidable skin injury that rapidly develops in some individuals at end of life. These include Skin Changes A Life's End (SCALE), Kennedy terminal ulcer, and Trombley-Brennan terminal tissue injury.

Instructions: Use this assessment tool if you suspect the skin injury is an end-of-life wound and ***NOT*** a pressure injury.

Section 1: SCREENING	Yes	No
1. Patient has been assessed by healthcare professional/s as ***dying?*** "Dying" is the terminal phase of life, where death is imminent and likely to occur in the following days, weeks, or months.		
2. Patient has been receiving ***regular pressure injury prevention strategies (eg, regular repositioning, support surfaces, nutrition, wheelchair cushions)?*** "Regular repositioning" is defined as patient body position changes (eg, 1-4 hourly) as determined by healthcare professional/s in collaboration with the patient/family.		
3. Patient has ***suddenly developed*** skin discoloration/injury/blister in the previous 24 hours of this assessment?		

Proceed to Section 2 if you answer **'Yes' to ALL THREE** screening questions.

Section 2: ASSESSMENT

Wound characteristics	Wound descriptors	Yes	No
Location(s)	Coccyx, sacrum, or buttock (unilateral or bilateral), leg, heel, arm, shoulder, thoracic and lumbar spine, or other body locations		
Appearance (any combination)	• Bruise-like appearance (skin intact) • Similar to Stage 2-4 pressure injury (skin not intact)		
Shape(s)	Pear, horseshoe, butterfly shape, linear striations, or other shapes		
Color (any combination)	Red, yellow, or black. Deep darkening of the tissue (for individuals with dark skin tone). Nonblanchable pink, purple, or maroon. May have a white center.		
Speed of change	Sudden and rapid development with increase in size of skin discoloration/injury/blister in the previous 24 hours of this assessment.		

Complete Section 3 if you answer **'Yes' to TWO OR MORE** assessment questions

Section 3: CONFIRMATION and MANAGEMENT

In your assessment, is this an end-of-life wound? (circle one): **Yes** **No[a]**

End-of-life wound management plan developed? (circle one): **Yes[a]** **No[a]**

Consider:
1. Wound: manage wound infection, pain, odor, exudate
2. Patient and family involvement in care and education (wound management and end-of-life care)
3. Quality of life and psychosocial support
4. Clinical specialist referral
5. Documentation as per facility requirements

Completed by: Name: _____ Signature: _____
Date: _____ Time: _____

[a]Refer to European Pressure Ulcer Advisory Panel, National Pressure Injury Advisory Panel, and Pan Pacific Pressure Injury Alliance. Prevention and treatment of pressure ulcers/injuries: Clinical practice guideline. Haesler E, ed. EPUAP/NPIAP/PPPIA; 2019:1-408.

Flinders University

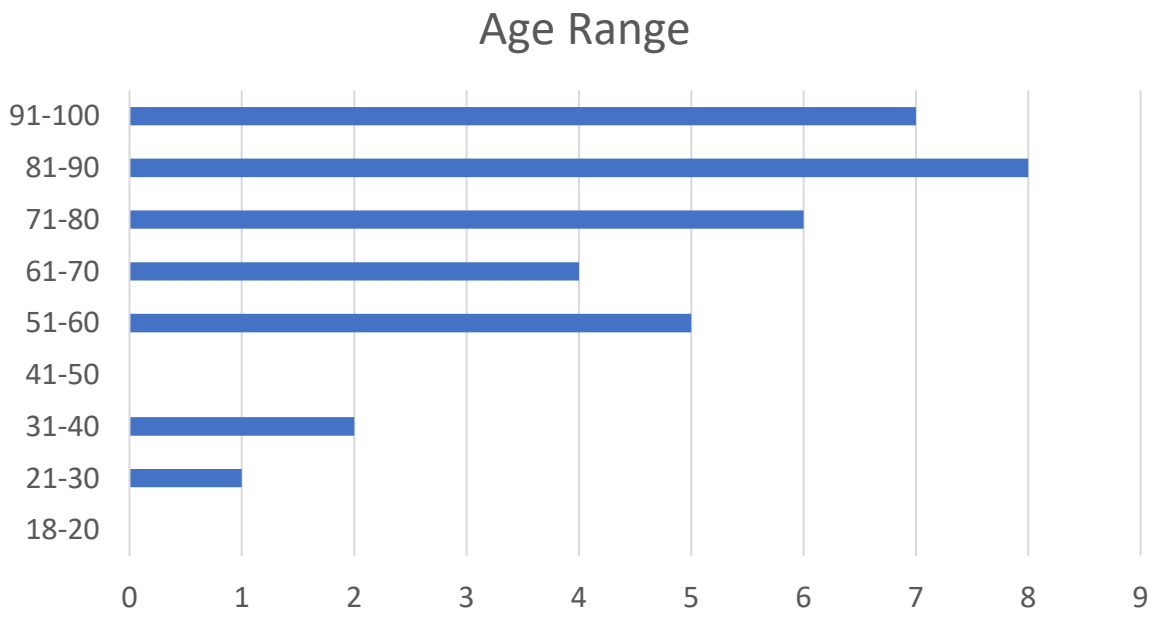
Preliminary Results

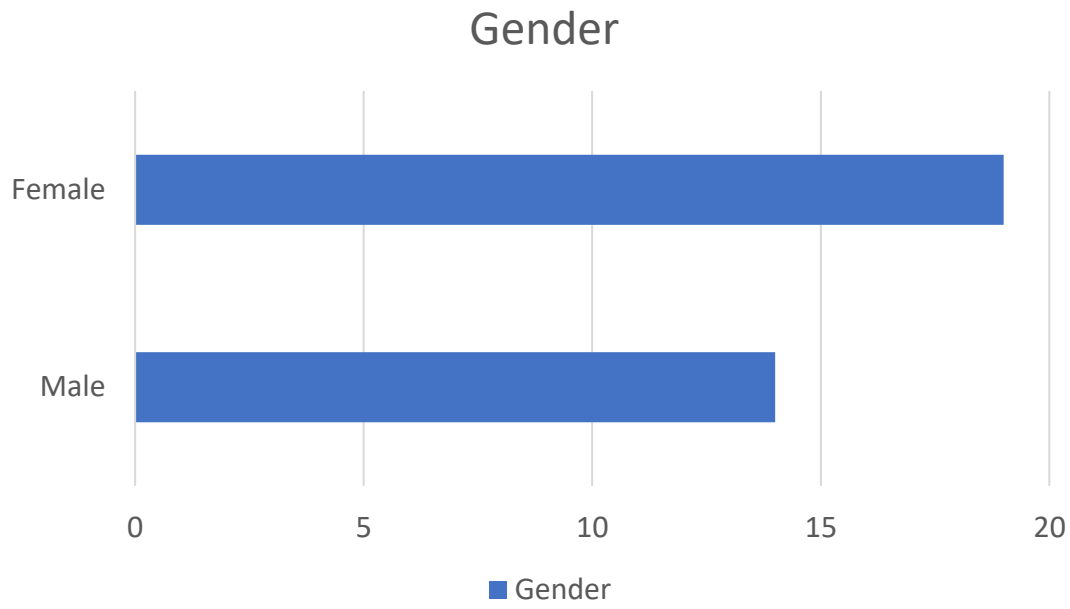
- 428 records screened
- 64 met inclusion criteria
- 33 assessed as being an EOL wound

Prevalence rate:
7.7%

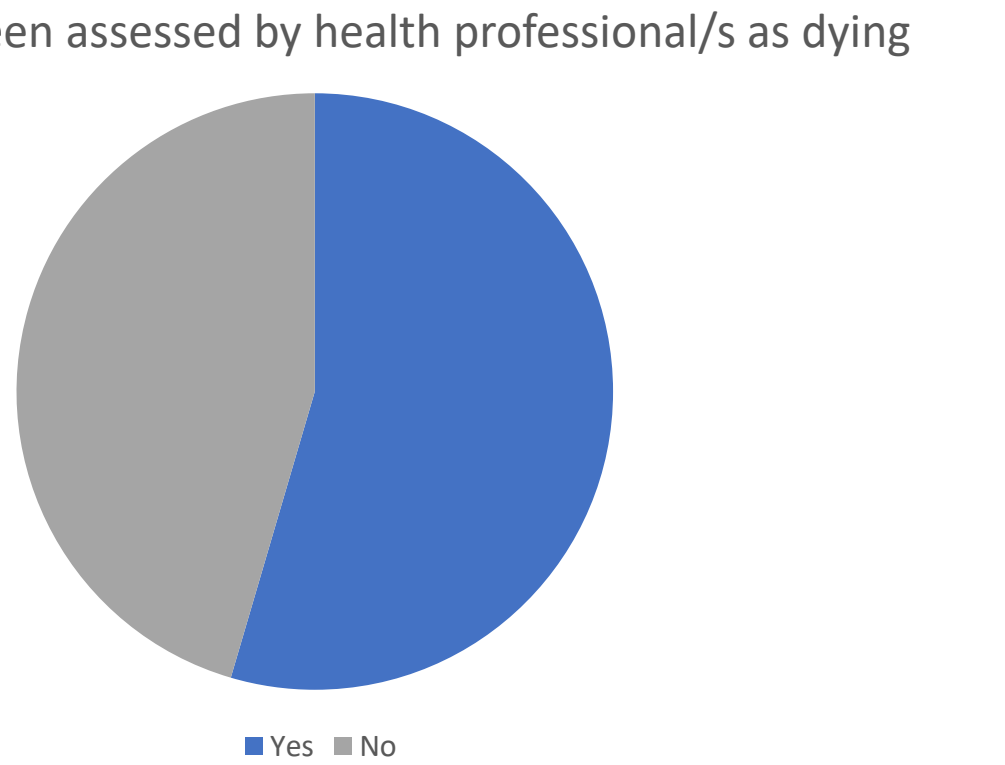
Flinders University

Demographics



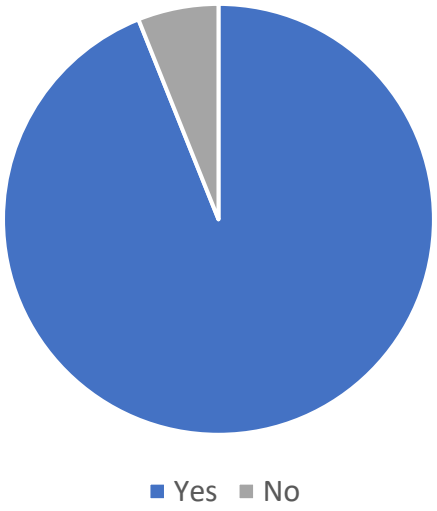


Recognition of Dying

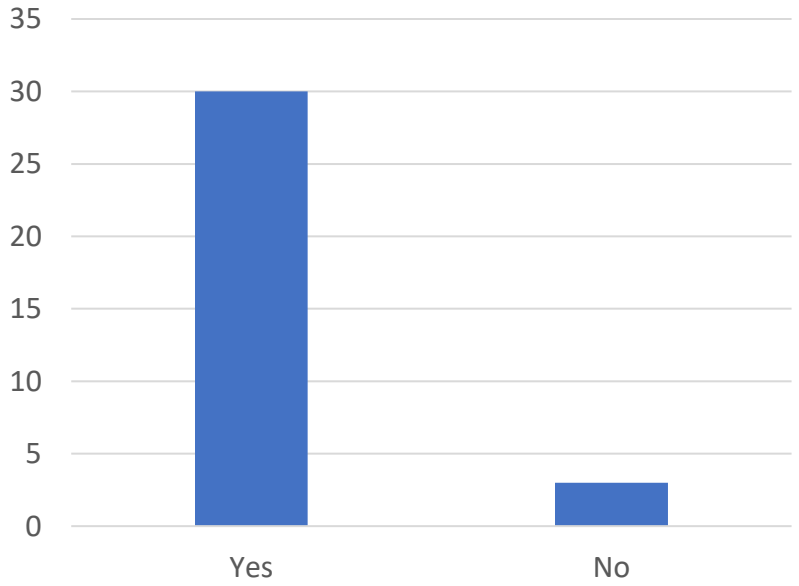


Characteristics

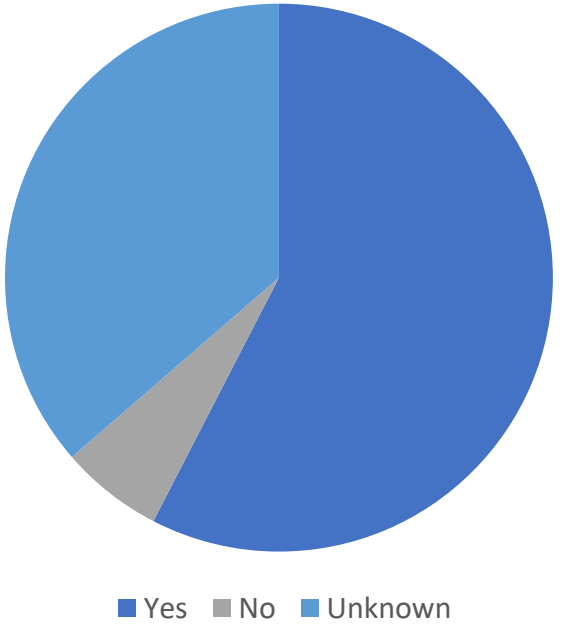
Patient has suddenly developed skin discolouration/injury/blister in the previous 24 hours?



Location: coccyx, sacrum, buttock, leg, heel, arm, shoulder, thoracic, lumber spine



Shape(s) - pear, horseshoe, butterfly, linear, other



Discussion

- 64 met inclusion criteria but only 33 identified as EOL wounds
- Novel use of a tool specifically designed for prospective use
- Study adds to a growing body of evidence in this area
- Inherant limitations with a retrospective chart review

Conclusion

- Expanding the evidence base
- Supporting nursing decision making in end of life
- Preventing unnecessary treatments
- Promoting goal concordant care
- Encourages open and compassionate communications with families

- Potential benefits to organisations noting that KU's are considered "unavoidable"

Flinders University

References

1. Artico, M., D'Angelo, D., Piredda, M., Petitti, T., Lamarca, L., De Marinis, M. G., Dante, A., Lusignani, M., & Matarese, M. (2018). Pressure injury progression and factors associated with different end-points in a home palliative care setting: A retrospective chart review study. *Journal of Pain and Symptom Management*, *56*(1), 23–32. https://doi.org/10.1016/j.jpainsymman.2018.03.011

2. Artico, M., Piredda, M., D'Angelo, D., Lusignani, M., Giannarelli, D., Marchetti, A., De Chirico, C., Mastroianni, C., & De Marinis, M. G. (2020). Prevalence, incidence and associated factors of pressure injuries in hospices: A multicentre prospective longitudinal study. *International Journal of Nursing Studies*, *111*, Article 103760. https://doi.org/10.1016/j.ijnurstu.2020.103760

3. Latimer, S., Harbeck, E., Walker, R. M., Ray-Barruel, G., Shaw, J., Hunt, T., & Gillespie, B. M. (2023). Development of a wound assessment tool for use in adults at end of life: A modified Delphi study. *Advances in Skin & Wound Care*, *36*(3), 142–150. https://doi.org/10.1097/01.ASW.0000911992.83362.eb

4. Latimer, S., Walker, R.M., Hewitt, J. *et al.* Testing the study protocol and interrater reliability of a new end-of-life wound assessment tool: a feasibility study. *BMC Palliat Care***24**, 216 (2025). https://doi.org/10.1186/s12904-025-01853-9

5. Saguatti, I., Baldessarini, R., Caleffi, D., Cannizzaro, D., & Ferri, P. (2026). Terminal ulcers in end-of-life care: a scoping review. *BMC palliative care*, *25*(1), 52. https://doi.org/10.1186/s12904-026-02000-8

6. Ven, S., Steele, M., Burston, A., Fulbrook, P., Lovegrove, J., Miles, S., & Prince, S. (2026). Incidence and characteristics of hospital-acquired pressure injuries in acute palliative care patients: A four-year analysis. *Journal of Clinical Nursing*, *35*, 255–267. https://doi.org/10.1111/jocn.17829

Flinders University

Contact

Grace Edwards, End of Life Care Coordinator

Clinical Nurse Consultant

Email: Grace.Edwards@health.nsw.gov.au

Connect with me on LinkedIn