



Government of **Western Australia**
Department of **Health**

WA Pressure Injury Prevention and Management Clinical Guideline

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1. Introduction

- A pressure injury is a localised injury to the skin and/or underlying tissue, usually over a bony prominence, as a result of pressure or pressure in combination with shear.¹
- Pressure injuries are largely considered avoidable and have the potential to be life threatening. They also have consequences for: quality of life; infection; pain; alteration to sleep and mood; delayed healing; and the provision of services.
- The appropriate management of all risk factors for pressure injuries will have wider benefits beyond reduction of pressure injuries, and support patient-centred holistic care and healthy ageing.
- The most effective approach to pressure injury prevention and management includes:
 - timely screening and assessment of risk factors
 - the engagement of patients and their carers
 - implementation of an individualised care plan that is:
 - tailored to the individual and addresses their risk factors
 - focussed on prevention and optimising healing
 - comprehensive and utilises the multidisciplinary team
 - delivered by a suitable trained workforce
 - inclusive of access to suitable equipment and products.
- The WA Pressure Injury Prevention and Management Clinical Guideline describes:
 - Clinical practice that is based on the National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance Guidelines for Prevention and Treatment of Pressure Ulcers¹ and the Standards for Wound Prevention and Management.²
 - Systems for the delivery of care that is in accordance with Australian Accreditation Standards.³
- The term 'patient' in this document is intended to also include consumers, clients, residents and other people, however titled, receiving healthcare from a clinician or other healthcare provider.

2. Applicability

- This guideline can be used as a resource by West Australian (WA) Health Service Providers (HSPs) and contracted health entities that provide publicly funded inpatient care. It is strongly recommended for use by all non-public health providers that interact with WA HSPs.

3. Governance and quality improvement

- HSPs should ensure:
 - all local policies, protocols or procedures are based on current agreed best practice guidelines and accreditation standards, and a system for their review is in place
 - processes are in place for healthcare workers to partner with patients and/or carers, to plan, communicate, set goals and make decisions about their current and future care
 - systems are in place to ensure that both staff expertise and resources such as equipment and products are available to prevent and manage pressure injuries
 - there are established clinical governance structures (e.g. committees, working groups) that have a responsibility for monitoring and improving performance, and for conducting relevant quality improvement activities
 - systems are in place to ensure ongoing monitoring and reporting of pressure injuries through the Datix Clinical Incident Management System (Datix CIMS), in line with the CIM Policy (OD 0611/15).⁴

4. Clinical practice – preventing and managing pressure injuries

4.1 Screening and assessment

- To identify patients who are at risk, screening and assessment should be undertaken and documented as soon as possible, but within a maximum of eight hours of presentation.
- The following assessments are recommended:
 - a comprehensive skin assessment
 - pressure injury risk assessment using the Braden Scale for adults and the Glamorgan Pressure Injury Screening Tool for paediatrics and neonates
 - nutritional screening using the Malnutrition Screening Tool (MST) or Mini Nutritional Assessment – Short Form (MNASF).
- Clinicians should use their clinical judgement in conjunction with risk assessment tools to determine the patient's overall level of risk.
- For all patients, reassessment of risk assessment and skin assessment should occur according to HSP procedures and policies.

4.2 Prevention strategies

- All patients identified as at risk should have evidence based prevention strategies implemented and documented as soon as possible, but within a maximum of eight hours of presentation.
- Prevention strategies include but are not limited to:
 - correct fitting, removal and checking of devices/orthoses/anti embolic stockings and casts

- repositioning and early-mobilisation, including safe transitional movement and manual handling
- selection and provision of equipment, including support surfaces and transfer equipment, to redistribute pressure and prevent shear forces
- patient /carer education
- referral to other health professionals as clinically indicated for assessment and treatment
- management of pain
- skin protection, moisture reduction and optimal skin hygiene and temperature
- adequate nutrition and hydration, including nutritional supplements (where indicated)
- continence management.

4.3 Managing pressure injuries

- Wound management plans should be initiated and documented for all pressure injuries.
- Assessment and documentation of the pressure injury should include:
 - classification of the stage of pressure injury according to the NPUAP/EPUAP Pressure Ulcer Classification System¹ (Appendix 1)
 - anatomical location
 - duration
 - measurements
 - clinical appearance
 - exudate
 - condition of wound edges and surrounding skin
 - pain – during and between dressing changes
 - a photographic record (in accordance with HSP policy).
- Mucosal membrane pressure injuries should be managed and documented accordingly, but must **not** be staged.
- Wound management is provided or supervised by health professionals with skills, knowledge and equipment to provide treatments in accordance with the Standards for Wound Prevention and Management.² These include but are not limited to:
 - advanced assessment
 - employment of infection control principles including Aseptic Technique
 - wound bed preparation
 - skin and wound hygiene
 - selection of wound dressings
 - treatment of infection

- topical applications and irrigation and
- other interventions such as electrotherapy, topical negative pressure wound therapy and hyperbaric oxygen treatments.
- Reassessment should occur at each dressing change. Wound management should be reviewed if healing is not proceeding in a timely manner.
- Collaboration with other health professionals, such as wound management experts, allied health, infection prevention specialists, pain specialists, discharge coordinators, for their assessment and contribution to care planning and management should occur as clinically indicated. This may occur via email, telephone or Telehealth.
- Pain is assessed at least every shift/episode of care/clinic review using a validated tool, and a pain management plan is developed with the patient including timing of analgesics, care with dressing changes, manual handling and repositioning.
- Provide (or consider) nutritional support to optimise healing and tissue repair.

4.4 Communication and documentation

- Clinical handover should be in accordance with the Clinical Handover Policy.⁵ Communication of the level of risk, the care plan and effectiveness of the care is to be part of all handover occasions, including discharge and transfer. This information should be available to all relevant members of the multidisciplinary team, as well as patients or carers.
- Documentation of screening, assessment and management strategies should be maintained.

5 Partnering with patients and/or carers

- Patients and/or carers should be informed, and involved in, all aspects of care. A management plan should be developed in collaboration with the patient and/or carer where possible, and their involvement and preferences should be documented.
- Patient and/or carer information should include (but not be limited to) written information. It should be provided in a way that meets the literacy needs of the patient and/or carer, at given intervals throughout the patients' journey.

6 Reporting pressure injury clinical incidents

- All pressure injuries (except mucosal membrane pressure injuries) should have an alert sticker placed in the patient medical record. The sticker should include the following information as a minimum:
 - stage of pressure injury
 - location of pressure injury
 - whether the pressure injury was present on admission.

- Pressure Injuries are clinically coded as 1221 *Pressure Injury*, with a subcategory of L89.0 - L89.9, while mucosal membrane pressure injuries are coded as *Procedural Complications, 1904 T82-85*, due to the injury not occurring in the skin or subcutaneous tissue.
- A clinical incident report should be submitted via the Datix CIMS for all:
 - hospital acquired pressure injuries (HAPI)*
 - pressure injuries that have significantly deteriorated (progressed to the next stage of pressure injury) since admission.
- All pressure injury clinical incidents should be submitted under tier 1 “Pressure Ulcers” on Datix CIMS.
- If a patient is transferred between organisations the HAPI is to be investigated by the responsible organisation (where it occurred).
- All clinical incidents should be investigated according to the Clinical Incident Management Policy.⁴
- If a pressure injury occurs during care, the patient and/or carer should be informed in accordance with Open Disclosure principles and documented accordingly.⁶

7 Glossary of Terms

Carer	A person who provides ongoing unpaid care and support to family members and friends who have a disability, a mental illness, chronic condition, terminal illness or are frail aged.
Friction	A mechanical force that occurs when two surfaces move across one another. Friction creates resistance between the skin and contact surface the person is lying or sitting on.
Health Service Provider	A Health Service Provider as established under the <i>Health Services Act 2016</i> and includes Child and Adolescent Health Service, East Metropolitan Health Service, North Metropolitan Health Service, South Metropolitan Health Service, WA Country Health Service, and Health Support Services.
Clinical Incident	An event or circumstance resulting from health care which could have, or did, lead to unintended and/or unnecessary harm to a patient/ consumer.
Clinical Handover	Transfer of information supporting the transfer of clinical accountability and responsibility and enables continuity of care for the patient.
Malnutrition	A state of nutrition in which a deficiency or excess (or imbalance) of energy, protein, and other nutrients causes measurable adverse effects on tissue / body form, function and clinical outcome.
Mucosal membrane pressure injury	A mucosal membrane pressure injury is found on a mucous membrane with a history of a medical device in use at the location of the injury, such as, oxygen tubing in the nostril. Due to the anatomy of the tissue these injuries cannot be staged. <i>ACS Category 1904 Procedural complications</i> <i>Category T82 - T85</i>
Patient	Refers to a person receiving healthcare. The term patient has been used for the purpose of this document and ease of reading only. It is intended to also include consumers, clients, residents and other people, however titled, receiving healthcare from a clinician or other healthcare provider.
Pressure Injury	A localised injury to the skin and/or underlying tissue, usually over a bony prominence, as a result of sustained pressure (including pressure in combination with shear). <i>ACS 1211 Pressure injury</i> <i>Category L89.0 - 89.9</i>
Repositioning	Changing a patient's body position to redistribute the pressure on the tissue overlying bony prominences that were in contact with the surface supporting the body. The frequency is

	determined by skin's response, support surface in use and patient's general condition. Select position(s) to promote comfort, safety and relaxation, prevent deformities and reduce the effects of tissue strain on skin.
Risk Screening / risk assessment	Use of a formal tool, score or scale to help determine the level or degree of risk of pressure injury, as indicated by a score.
Shear	<p>An action or stress resulting from applied forces which cause two contiguous internal parts of the body (bone, muscle, fat or skin) to deform in the transverse plain.</p> <p>Shear strain leads to cell death by:</p> <ul style="list-style-type: none"> ○ Occlusion of blood vessels resulting in change in metabolism and accumulation of waste products (4-6 days). ○ Direct deformation of cells resulting in membrane failure and disruption of cytoskeleton (within 24 hours).
Skin Assessment	General examination of the skin, looking for existing lesions or factors that may indicate reduced tissue tolerance.
Support surface	<p>Specialised devices for pressure redistribution designed for management of tissue loads, microclimate, and/or other therapeutic functions (i.e. any mattress, integrated bed system, mattress replacement, overlay, or seat cushion, or seat cushion overlay).</p> <p>Active support surface: a powered support surface with the capacity to change its load distribution properties with or without an applied load. This generally occurs through alternation of air pressure in air cells on a programmed cycle time. Also called an alternating pressure support surface or a dynamic support surface.</p> <p>Reactive support surface: A powered or non-powered support surface with the capability to change its load distribution properties only in response to an applied load. Provides a constant low pressure profile through immersion and envelopment of the load. May include air or fluid-filled cells and/or foams of varying densities, and low air loss systems.</p>
Tissue tolerance	The ability of skin and underlying tissues to endure pressure without experiencing any adverse effects.

8 Other recommended sources of information

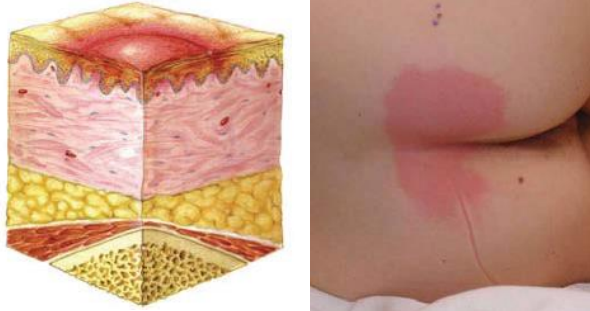

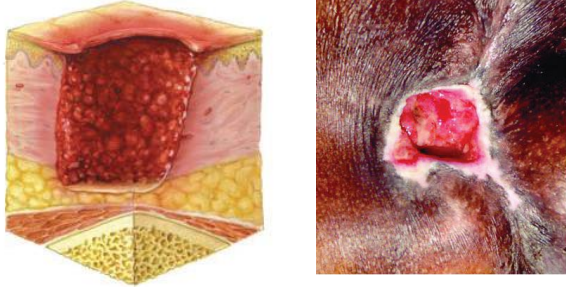
- The National Pressure Ulcer Advisory Panel (NPUAP) <http://www.npuap.org/>
- WoundsAustralia <http://www.woundsaustralia.com.au/pages/index.php>
- Wound Healing Institute Australia <https://www.whia.com.au/>
- Australian Commission on Safety and Quality in Health Care <https://www.safetyandquality.gov.au/>
- Patient First http://ww2.health.wa.gov.au/Articles/N_R/Patient-First

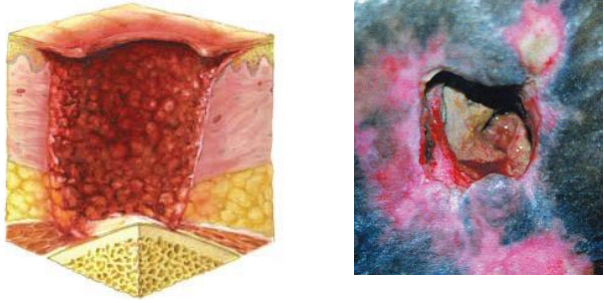
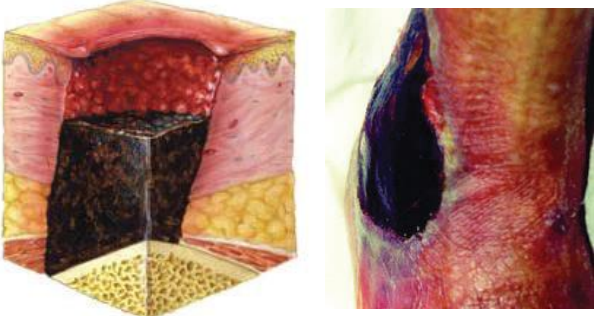
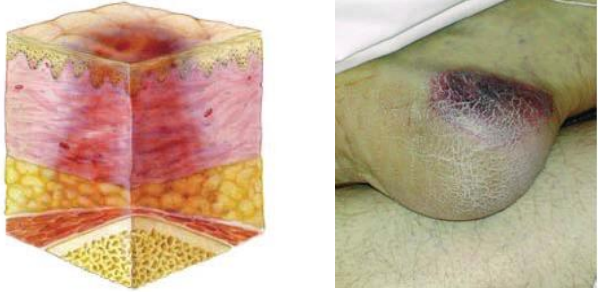
9. References

1. National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan pacific Pressure Injury Alliance. Prevention and treatment of Pressure Ulcers: Clinical Practice Guideline. Cambridge Media: Perth, Australia; 2014.
2. Wounds Australia. Standards for Wound Prevention and Management. Osborne Park, Western Australia: Cambridge Media; 2016.
3. Australian Commission on Safety and Quality in Health Care. National Safety and Quality Health Service Standards. Sydney: ACSQHC; 2012.
4. Department of Health. Clinical Incident Management Policy. Patient Safety Surveillance Unit. Perth; 2015.
5. Department of Health. Clinical Handover Policy. Quality Improvement and Change Unit. Perth; 2014.
6. Australian Commission on Safety and Quality in Health Care. Australian Open Disclosure Framework. Sydney: ACSQHC; 2013.

Appendix 1:

International NPUAP/EPUAP Pressure Ulcer Classification System

<p>Category/Stage I: Non-blanchable Erythema</p> <p>Intact skin with non-blanchable redness of a localized area usually over a bony prominence. Darkly pigmented skin may not have visible blanching; its colour may differ from the surrounding area. The area may be painful, firm, soft, warmer or cooler as compared to adjacent tissue. Category/Stage I may be difficult to detect in individuals with dark skin tones. May indicate “at risk” individuals (a heralding sign of risk).</p>	 <p>The diagram on the left shows a cross-section of skin with a localized area of redness in the epidermis. The photograph on the right shows a person's skin with a non-blanchable red area, likely over a bony prominence.</p>
<p>Category/Stage II: Partial Thickness Skin Loss</p> <p>Partial thickness loss of dermis presenting as a shallow open ulcer with a red pink wound bed, without slough. May also present as an intact or open/ruptured serum filled blister.</p> <p>Presents as a shiny or dry shallow ulcer without slough or bruising.* This Category/Stage should not be used to describe skin tears, tape burns, perineal dermatitis, maceration or excoriation.</p> <p>*Bruising indicates suspected deep tissue injury.</p>	 <p>The diagram on the left shows a cross-section of skin with a shallow ulcer extending into the dermis. The photograph on the right shows a close-up of a skin surface with a shallow, red, pink ulcer.</p>
<p>Category/Stage III: Full Thickness Skin Loss</p> <p>Full thickness tissue loss. Subcutaneous fat may be visible but bone, tendon or muscle is NOT exposed. Slough may be present but does not obscure the depth of tissue loss. May include undermining and tunnelling. The depth of a Category/Stage III pressure ulcer varies by anatomical location. The bridge of the nose, ear, occiput and malleolus do not have subcutaneous tissue and Category/Stage III ulcers can be shallow. In contrast, areas of significant adiposity can develop extremely deep</p>	 <p>The diagram on the left shows a cross-section of skin with a deep ulcer extending through the dermis and into the subcutaneous fat. The photograph on the right shows a close-up of a skin surface with a deep, red, ulcerated area.</p>

<p>Category/Stage III pressure ulcers.</p>	
<p>Category/Stage IV: Full Thickness Tissue Loss</p> <p>Full thickness tissue loss with exposed bone, tendon or muscle. Slough or eschar may be present on some parts of the wound bed. Often include undermining and tunnelling.</p> <p>The depth of a Category/Stage IV pressure ulcer varies by anatomical location. The bridge of the nose, ear, occiput and malleolus do not have subcutaneous tissue and these ulcers can be shallow. Category/Stage IV ulcers can extend into muscle and/or supporting structures (e.g., fascia, tendon or joint capsule) making osteomyelitis possible. Exposed bone/tendon is visible or directly palpable.</p>	 <p>The diagram on the left shows a cross-section of a Stage IV pressure ulcer where the skin, subcutaneous tissue, and muscle layers are all missing, exposing the underlying bone. The clinical photograph on the right shows a real-life example of such an ulcer, characterized by a deep, dark, necrotic wound bed with visible underlying structures.</p>
<p>Unstageable: Depth Unknown</p> <p>Full thickness tissue loss in which the base of the ulcer is covered by slough (yellow, tan, grey, green or brown) and/or eschar (tan, brown or black) in the wound bed.</p> <p>Until enough slough and/or eschar is removed to expose the base of the wound, the true depth, and therefore Category/Stage, cannot be determined.</p>	 <p>The diagram on the left illustrates an unstageable ulcer where the wound bed is completely filled with a thick layer of dark, necrotic eschar, preventing the underlying tissue from being seen. The clinical photograph on the right shows a patient's heel with a large, dark, necrotic ulcer that obscures the true depth of the tissue damage.</p>
<p>Suspected Deep Tissue Injury: Depth Unknown</p> <p>Purple or maroon localised area of discoloured intact skin or blood-filled blister due to damage of underlying soft tissue from pressure and/or shear. The area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue. Deep tissue injury may be difficult to detect in individuals with dark skin tones. Evolution may include a thin blister over a dark wound bed. The wound may further evolve and become covered by thin eschar.</p>	 <p>The diagram on the left shows a cross-section of a suspected deep tissue injury where the skin surface is intact but the underlying muscle and soft tissue are severely damaged and discolored. The clinical photograph on the right shows a patient's heel with a purple, maroon-colored area of intact skin, indicating deep tissue damage beneath the surface.</p>

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