

Information for clinicians

Preventing device related pressure injury

Device related pressure injury

'Device related pressure injuries result from the use of devices designed and applied for diagnostic or treatment purposes. Non-medical devices (e.g. bed clutter, furniture and equipment) can also result in pressure injuries when they (usually inadvertently) remain in contact with the skin and tissues'.

International Prevention and Treatment of Pressure Injuries: Clinical Practice Guideline 2019.

The following provides practical guidance to support clinicians prevent device related pressure injuries. This requires a multifaceted approach.



Identify patients with risk factors

Patients with the following risk factors are at increased risk of developing a device related pressure injury:

- Older or very young
- Multiple devices
- Dependence for survival*
- Prolonged use
- Localised tissue oedema
- Poor tissue oxygenation
- Peripheral shutdown
- Altered metabolic state
- Nutritional compromise
- Reduced sensory perception
- Limited ability to respond to signals of discomfort.



Device selection

To reduce tissue damage, select softer, more comfortable products when available.

Ensure correct size and shape of the device for the individual and apply the device according to the manufacturer's instructions.



Regular repositioning of devices

To aid in:

- Performing skin inspection to identify any changes
- Initiating management strategies e.g. applying protective dressings
- Redistribution of pressure and decrease shear forces.



Application of devices

Education and skill in the correct application of fixation products is important. Use recommended specific fixators for individual pieces of equipment, to prevent dislodgement and to comfortably secure the device.

Minimise additional pressure or shear on surrounding skin with fixation.

Note: Repositioning devices such as an endotracheal tube in a ventilated patient, requires clinicians with appropriate skills to safely reposition.



Apply protective dressings

To protect sites with little adipose tissue, use prophylactic dressings to reduce, shear, friction and accumulation of moisture.

When selecting prophylactic dressings consider:

- The dressing's ability to manage moisture and microclimate
- Ease of application and removal
- Ability to regularly assess the skin under the dressing
- Anatomical location
- Type and purpose of the device.



Evidence-based practices

Promote awareness of best-practice pressure injury prevention strategies and care standards.

Evidence-based strategies are implemented and documented in the medical record.



Timely removal of the device

Prevent prolonged use to reduce the risk of injury. Document application date and preferred removal dates. Monitor how long the device is in use and remove as soon as clinically suitable to reduce risk of harm.

If there are concerns that a pressure injury is developing, notify the treating team and remove the device under supervision as soon as possible. Do not delay review.



Regular skin and pain assessment

Identify early warning signs - inspect skin under and around medical devices and prophylactic dressings at least twice daily. Skin assessment will be required more often if oedema is present, or the patient's condition deteriorates. This facilitates detection of subtle changes and revision of prevention strategies.

Monitor for pain and altered sensation to the area, review and implement preventative strategies.



Patient, carer and family education

It is important to explain the rationale for the use of the device, the potential problems that devices can cause, and how to minimise the risk.

When clinically appropriate provide patient, carers and family information on how to:

- Perform skin inspections
- Reposition the device
- Apply protective dressings

- Notify a health professional of any concerns e.g. pain, discharge, change in skin colour, blistering, itching, swelling or tingling.



Multidisciplinary team approach

A Multidisciplinary team (MDT) approach improves care by increasing knowledge and shared learnings of the different specialities.

Communication and regular patient review are essential to ensure appropriate prevention strategies are in place and all team members are aware of them.



Use data to inform improvements

Continually monitor data to look for themes to drive improvement initiatives.

*Dependence for survival: whilst every attempt should be made to prevent and manage device related pressure injuries, it is acknowledged that the device in question may be vital to the care and survival of the patient. Therefore, any pressure injury prevention or management strategies need to be a secondary priority to survival, which may lead to unavoidable pressure injuries.

Resources

[National Pressure Injury Advisory Panel resources for general, critical care, long term care and paediatric populations.](#)

References

Pressure Ulcer Advisory Panel, National Pressure Ulcer Advisory Panel, and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers/Injuries: Clinical Practice Guideline. EPUAP/NPIAP/PPPIA, 2019

Ten top tips: Preventing device-related pressure ulcers [Wounds International](#) 2015 | Vol 6 Issue 1 | ©Wounds International 2015 |