

## Evidence Snapshot

### Update of Pressure injuries: Prevention and Management guideline

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### Background

The Monash Health endorses use of the Pan Pacific Clinical Practice Guideline for the Prevention and Management of Pressure Injury, published in 2012. The current Monash Health PROMPT guideline for Pressure injuries: Prevention and Management is due for review. The Centre for Clinical Effectiveness will provide an evidence snapshot to inform the update of the existing PROMPT guideline in use at Monash Health.

### Objectives

To provide an evidence snapshot to inform the update of the current Monash Health PROMPT guideline for Pressure injuries: Prevention and Management.

### Inclusion Criteria

<b>Population</b>	<b>Include:</b> Individuals with pressure injury (PI) or considered at risk of developing PI not limited by age or clinical setting
<b>Interventions</b>	<b>Include:</b> Not limited
<b>Context</b>	<b>Include:</b> Interventions for the prevention or management of pressure injury
<b>Outcome</b>	Not applicable
<b>Types of evidence</b>	<b>Include:</b> Guidelines (based on Level 1 evidence on the NHMRC Levels of evidence scale)
<b>Limits</b>	<b>Date:</b> September 2011 – current (August 2016) <b>Language:</b> Publications in English

### Search strategy

Information sources	Details of search
BMJ Best Practice	Terms: “pressure ulcer” or “pressure injury” Inclusion criteria and date limits applied.
Clinical guidelines portal (NHMRC)	
TRIP database	
The National Institute for Health and Care Excellence (NICE)	
National Guideline Clearinghouse (NGC)	
Pubmed Clinical Queries	

As the term “pressure injury” and “pressure ulcers” were used interchangeably in literature, the results include clinical guidelines on both pressure injuries and pressure ulcers.

## Results

From the search, four main sources of guidelines for the prevention and management of pressure injuries were identified; they were the National Institute for Health and Care Excellence (NICE), the National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel, Pan Pacific Pressure Injury Alliance, the American College of Physicians (ACP), and the Registered Nurses’ Association of Ontario (RNAO). Results of the guidelines identified by the search is found in Table 1.

The most up to date evidence was from the Registered Nurses’ Association of Ontario. [5]

This guideline provides evidence-based practice, education and policy recommendations for interprofessional teams across all care settings who are assessing and providing care to people with existing pressure injuries. Moreover, this Guideline refers to “pressure ulcers” as “pressure injuries.” This new terminology aligns with the National Pressure Ulcer Advisory Panel. [5]

This Guideline provides best practice recommendations (Table 2) in three main areas: [5]

- Practice recommendations are directed primarily to the front-line interprofessional teams who provide care for people with existing pressure injuries across all practice settings.
- Education recommendations are directed to those responsible for interprofessional team and staff education, such as educators, quality improvement teams, managers, administrators, and academic institutions.
- System, organisation, and policy recommendations apply to a variety of audiences, depending on the recommendation. Audiences include managers, administrators, policy-makers, health-care professional regulatory bodies, and government bodies.

**Table 1.** Guidelines that were identified from the search

Source	Year	Context	Quality of guideline	Link to source
National Institute for health and Care Excellence (NICE) [1]	2014	Management of pressure ulcers	High quality	<a href="https://www.nice.org.uk/guidance/cg179/evidence/full-guideline-management-547610510">https://www.nice.org.uk/guidance/cg179/evidence/full-guideline-management-547610510</a>
		Prevention of pressure ulcers	High quality	<a href="https://www.nice.org.uk/guidance/cg179/evidence/full-guideline-prevention-547610509">https://www.nice.org.uk/guidance/cg179/evidence/full-guideline-prevention-547610509</a>
National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel, Pan Pacific Pressure Injury Alliance [2]	2014	Interventions for prevention and treatment of pressure ulcers	High quality	<a href="https://guideline.gov/summaries/summary/48865">https://guideline.gov/summaries/summary/48865</a>
American College of Physicians (ACP) [3, 4]	2015	Risk assessment and prevention of pressure ulcers	Moderate to high quality	<a href="https://www.guideline.gov/summaries/summary/49050/">https://www.guideline.gov/summaries/summary/49050/</a>
		Treatment of pressure ulcers	Moderate to high quality	<a href="https://www.guideline.gov/summaries/summary/49051/">https://www.guideline.gov/summaries/summary/49051/</a>
Registered Nurses’ Association of Ontario (RNAO). [5]	2016	Assessment and management of pressure injuries	High quality	<a href="http://rnao.ca/sites/rnao-ca/files/PI_BPG_FINAL_WEB_August_9_2016_added_stakeholder_name.pdf">http://rnao.ca/sites/rnao-ca/files/PI_BPG_FINAL_WEB_August_9_2016_added_stakeholder_name.pdf</a>

**Table 2.** Clinical questions and recommendations from the Registered Nurses' Association of Ontario (2016).[5]

Clinical question(s) used to inform the development of recommendations	Recommendations for clinical practice from the RNAO guideline (2016)	Discussion of evidence (Page)
What are the most effective methods for the assessment of existing pressure ulcers/injuries in clients?	1.1 Conduct a health history, a psychosocial history, and a physical exam on initial examination and whenever there is a significant change in the person's medical status.	Page 28
	1.2 Assess the risk for developing additional pressure injuries on initial examination and if there is a significant change in the person's medical status using a valid and reliable pressure injury risk assessment tool.	Page 31
	1.3 Assess the person's pressure injury using the same valid and reliable wound assessment tool on initial examination and whenever there is a significant change in the pressure injury.	Page 32
	1.4 Assess the person's pressure injury for signs and symptoms of infection (superficial critical colonization/localized infection and/or deep and surrounding infection/systemic infection) using a standardized approach on initial examination and at every dressing change.	Page 35
	1.5 a) Screen all persons with pressure injuries for risk of malnutrition using a valid and reliable screening tool on first examination and if there is a delay in pressure injury healing. b) Determine the nutritional status of all persons at risk for malnutrition using a valid and reliable assessment tool within 72 hours of initial examination, and whenever there is a change in health status and/or the pressure injury. c) Perform a comprehensive nutrition assessment of all persons with poor nutritional status within 72 hours of initial examination, and if there is a change in health status or delayed healing.	Page 36
	1.6 Assess for pressure injury pain on initial examination and continue to monitor pain at subsequent visits, including prior to and after every wound care intervention, using the same valid and reliable tool consistent with the person's cognitive ability.	Page 39
	1.7 Perform a vascular assessment (i.e., medical history, physical exam) of all persons with pressure injuries in the lower extremities on initial examination.	Page 40
	1.8 Conduct a mobility and support surface assessment on initial examination and whenever there is a significant change in the person's medical condition, weight, equipment, mobility, and/or pressure injury healing.	Page 42
What are the most effective interventions to manage existing pressure ulcers/injuries in clients?	2.1 Obtain the referral or consultations required to plan and coordinate a pressure injury plan of care.	Page 44
	2.2 Develop a pressure injury plan of care that incorporates goals mutually agreed upon by the person, the person's circle of care and the interprofessional team.	Page 46
	3.1 Reposition the person at regular intervals (i.e., every two to four hours) based on person-centred concerns. While sitting, weight-shift the person every 15 minutes.	Page 47
	3.2 Position all persons with a pressure injury on a pressure redistribution support surface at all times.	Page 49

	3.3 Implement an individualized nutritional plan of care in collaboration with the person and his/her circle of care that addresses nutritional requirements and provides adequate protein, calories, fluid, and appropriate vitamin and mineral supplementation to promote pressure injury healing.	Page 52
	3.4 Provide local pressure injury care consisting of the following, as appropriate: <ul style="list-style-type: none"> <li>• cleansing</li> <li>• moisture balance (healable) or moisture reduction (non-healable, maintenance)</li> <li>• infection control (i.e., superficial critical colonization/localized infection and/or deep and surrounding infection/systemic infection)</li> <li>• debridement</li> </ul>	Page 54
	3.5 Provide electrical stimulation (when available) as an adjunct to best practice wound care in order to speed healing and promote wound closure installed but healable stage 2, 3, and 4 pressure injuries.	Page 63
	3.6 Implement, as an alternative, the following treatments in order to speed closure of stalled but healable pressure injuries, as appropriate and if available: <ul style="list-style-type: none"> <li>• electromagnetic therapy</li> <li>• ultrasound</li> <li>• ultraviolet light</li> </ul> DO NOT consider the following treatment to speed closure of stalled but healable pressure injuries: <ul style="list-style-type: none"> <li>• laser therapy (not recommended)</li> </ul>	Page 64
	3.7 Provide negative pressure wound therapy to people with stage 3 and 4 pressure injuries in exceptional circumstances, including enhancement of quality of life and in accordance with other person-/family-centred preferences.	Page 67
	3.8 Collaborate with the person and his/her circle of care to implement a pressure injury self-management plan.	Page 68
	3.9 Implement a person-centred pain management plan using pharmacological and nonpharmacological interventions.	Page 70
	4.1 Use the initial risk assessment tool to reassess the person's risk for developing additional pressure injuries on a regular basis and whenever a change in the person's health status occurs.	Page 72
	4.2 Use the initial wound assessment tool to monitor the person's pressure injuries for progress toward person-centred goals on a regular basis and at dressing changes.	Page 72
What education and training is required to ensure the provision of effective pressure ulcer/injury assessment and management among practicing health care professionals?	5.1 Develop and implement comprehensive and sustainable interprofessional pressure injury education programs for clinicians and students entering health-care professions.	Page 74
	5.2 Assess health-care professionals' knowledge, attitudes, and skills related to the assessment and management of existing pressure injuries before and following educational interventions using an appropriate, reliable, and validated assessment tool.	Page 78
How do health-care organizations and the broader healthcare	6.1 Organizations must lead and provide the resources to integrate pressure injury management best practices into standard and interprofessional clinical practice, with continuous evaluation of outcomes.	Page 80

system support and promote the optimal assessment and management of existing pressure ulcers/injuries in clients?	6.2 Lobby and advocate for investment in pressure injury management as a strategic quality and safety priority in jurisdictions in order to improve health outcomes for people with pressure injuries.	Page 82
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**Table 3.** Clinical questions and recommendations from the American College of Physicians (2015) [3,4]

<b>Clinical question(s) used to inform the development of recommendations</b>	<b>Recommendations for clinical practice from the ACP guideline (2016)</b>	<b>Discussion of evidence (Page)</b>
<ol style="list-style-type: none"> <li>1. Is the use of risk assessment tools effective in reducing the incidence or severity of pressure ulcers, and how does effectiveness vary according to setting and patient characteristics?</li> <li>2. How do various risk assessment tools compare with one another in their ability to predict the incidence of pressure ulcers?</li> <li>3. In patients at increased risk for pressure ulcers, what is the effectiveness and comparative effectiveness of preventive interventions in reducing the incidence or severity of pressure ulcers, and how does effectiveness vary according to assessed risk level, setting, or patient characteristics?</li> <li>4. What are the harms of interventions for preventing pressure ulcers? Do harms differ according to the type of intervention, setting, or patient characteristics?</li> </ol>	<p>Recommendation 1: ACP recommends that clinicians should perform a risk assessment to identify patients who are at risk of developing pressure ulcers. (Grade: weak recommendation, low-quality evidence)</p> <p>Recommendation 2: ACP recommends that clinicians should choose advanced static mattresses or advanced static overlays in patients who are at an increased risk of developing pressure ulcers. (Grade: strong recommendation, moderate-quality evidence)</p> <p>Recommendation 3: ACP recommends against using alternating-air mattresses or alternating-air overlays in patients who are at an increased risk of developing pressure ulcers. (Grade: weak recommendation, moderate-quality evidence)</p>	Page 362
<ol style="list-style-type: none"> <li>1. In adults with pressure ulcers, what is the comparative effectiveness of treatment strategies for improved health outcomes, including but not limited to complete wound healing, healing time, reduced wound surface area, pain, and prevention of serious complications of infection? Does the comparative effectiveness of treatment strategies differ on the basis of features (anatomical site or severity) of the pressure ulcers, patient characteristics, and health care settings?</li> <li>2. What are the harms of treatments for pressure ulcers? Do the harms differ on the basis of features (anatomical site or severity) of the pressure ulcers, patient characteristics, and health care settings?</li> </ol>	<p>Recommendation 1: ACP recommends that clinicians use protein or amino acid supplementation in patients with pressure ulcers to reduce wound size. (Grade: weak recommendation, low quality evidence)</p> <p>Recommendation 2: ACP recommends that clinicians use hydrocolloid or foam dressings in patients with pressure ulcers to reduce wound size. (Grade: weak recommendation, low-quality evidence)</p> <p>Recommendation 3: ACP recommends that clinicians use electrical stimulation as adjunctive therapy in patients with pressure ulcers to accelerate wound healing. (Grade: weak recommendation, moderate-quality evidence)</p>	Page 371

## References

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1. National Clinical Guideline Centre. Pressure ulcers: prevention and management of pressure ulcers. London (UK): National Institute for Health and Care Excellence; 2014. Clinical guideline; no. 179
2. National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel, Pan Pacific Pressure Injury Alliance. Interventions for prevention and treatment of pressure ulcers. In: Prevention and treatment of pressure ulcers: clinical practice guideline. Washington (DC): National Pressure Ulcer Advisory Panel; 2014.
3. Qaseem A, Mir TP, Starkey M, Denberg TD, Clinical Guidelines Committee of the American College of Physicians. Risk assessment and prevention of pressure ulcers: a clinical practice guideline from the American College of Physicians. *Ann Intern Med.* 2015 Mar 3;162(5):359-69.
4. Qaseem A, Humphrey LL, Forciea MA, Starkey M, Denberg TD, Clinical Guidelines Committee of the American College of Physicians. Treatment of pressure ulcers: a clinical practice guideline from the American College of Physicians. *Ann Intern Med.* 2015 Mar 3;162(5):370-9.
5. Registered Nurses' Association of Ontario (2016). *Assessment and Management of Pressure Injuries for the Interprofessional Team, Third Edition*. Toronto, ON: Registered Nurses' Association of Ontario.