

## Summary of Recommendations

RECOMMENDATION		*LEVEL OF EVIDENCE
<b>Practice Recommendations</b>		
Assessment	1.1 Conduct a history and focused physical assessment.	IV
	1.2 Conduct a psychosocial assessment to determine the client's goals and their ability and motivation to comprehend and adhere to the treatment plan of care options.	IV
	1.3 Assess quality of life from the client's perspective.	IV
	1.4 Ensure adequate dietary intake to prevent malnutrition or replace existing deficiencies to the extent that this is compatible with the individual's wishes.	III
	1.5 Prevent clinical nutrient deficiencies by ensuring that the patient is provided with optimal nutritional support through one or more of the following: <ul style="list-style-type: none"> <li>■ Consultation with a Registered Dietitian for assessment (IV)</li> <li>■ Consultation with a speech language pathologist for swallowing assessment (IV)</li> <li>■ A varied, balanced diet to meet clinical requirements for healing and co-existing diseases (e.g., renal failure and diabetes) (IV)</li> <li>■ Nutritional supplements if needed (Ia)</li> <li>■ Multivitamin and mineral preparations (Ib)</li> <li>■ Enteral tube feeding (IV)</li> <li>■ Parenteral nutrition (IV)</li> <li>■ Ongoing monitoring of nutritional intake, laboratory data and anthropometric data (IV).</li> </ul>	Ia-IV
	1.6 Assess all patients for pain related to the pressure ulcer or its treatment.	IV
	1.7 Assess location, frequency and intensity of pain to determine the presence of underlying disease, the exposure of nerve endings, efficacy of local wound care and psychological need.	I Ib
	1.8 Assess all patients with EXISTING PRESSURE ULCERS to determine their risk for developing additional pressure ulcers using the "Braden Scale for Predicting Pressure Sore Risk".	IV
	1.9 If the patient remains at risk for other pressure ulcers, a high specification foam mattress instead of a standard hospital mattress should be used to prevent pressure ulcers in moderate to high risk patients.	Ia
	1.10 Vascular assessment (e.g., clinical assessment, palpable pedal pulses, capillary refill, ankle/brachial pressure index and toe pressure) is recommended for ulcers in lower extremities to rule out vascular compromise.	IV
Management of causative/contributing factors	2.1 Choose the support surface which best fits with the overall care plan for the client considering the goals of treatment, client bed mobility, transfers, caregiver impacts, ease of use, cost/benefit, etc. Ensure ongoing monitoring and evaluation to ensure that the support surface continues to meet the client's needs and that the surface is used appropriately and is properly maintained. If the wound is not healing, consider the total care plan for the client before replacing the surface.	IV

\* Refer to page 17 for the Interpretation of Evidence

RECOMMENDATION		
	2.2 Pressure management of the heels while in bed should be considered independently of the support surface.	III
	2.3 Use pressure management for clients in the Operating Room to reduce the incidence of pressure ulcers post operatively.	Ia
	2.4 Obtain a seating assessment if a client has a pressure ulcer on a sitting surface.	IV
	2.5 Refer patients at RISK to appropriate interdisciplinary team members (Occupational Therapist, Physiotherapist, Enterostomal Therapist, etc.). Utilize those with expertise in seating, postural alignment, distribution of weight, balance, stability and pressure management when determining positioning for sitting individuals. Ensure support surfaces are used appropriately and are properly maintained.	IV
	2.6 A client with a pressure ulcer on the buttocks and/or trochanter should optimize mobilization. If pressure on the ulcer can be managed, encourage sitting as tolerated.	IV
Local Wound Care	<b>Assessment</b>	
	3.1a To plan treatment and evaluate its effectiveness, assess the pressure ulcer(s) initially for: <ul style="list-style-type: none"> <li>■ Stage/Depth;</li> <li>■ Location;</li> <li>■ Surface Area (<i>length x width</i>) (mm<sup>2</sup>, cm<sup>2</sup>);</li> <li>■ Odour;</li> <li>■ Sinus tracts/Undermining/Tunneling;</li> <li>■ Exudate;</li> <li>■ Appearance of the wound bed; and</li> <li>■ Condition of the surrounding skin (periwound) and wound edges.</li> </ul>	IV
	3.1b Conduct a comprehensive reassessment weekly to determine wound progress and the effectiveness of the treatment plan. Monitor for variances from assessment with each dressing change. Identification of variances indicates need for reassessment.	IV
	<b>Debridement</b>	
	3.2a Lower extremity ulcers or wounds in patients who are gravely palliative with dry eschar need not be debrided if they do not have edema, erythema, fluctuance or drainage. Assess these wounds daily to monitor for pressure ulcer complications that would require debridement.	IV
	3.2b Prior to debridement on ulcers on the lower extremities, complete a vascular assessment (e.g., clinical assessment, palpable pedal pulses, capillary refill, ankle/brachial pressure index and toe pressure) to rule out vascular compromise.	IV
3.2c Determine if debridement is appropriate for the patient and the wound.	IV	

## Assessment & Management of Stage I to IV Pressure Ulcers

RECOMMENDATION		
Local Wound Care	<p><b>3.2d</b> If debridement is indicated, select the appropriate method of debridement considering:</p> <ul style="list-style-type: none"> <li>■ Goals of treatment (e.g., healability);</li> <li>■ Client's condition (e.g., end of life, pain, risk of bleeding, patient preference, etc.);</li> <li>■ Type, quantity and location of necrotic tissue;</li> <li>■ The depth and amount of drainage; and</li> <li>■ Availability of resources.</li> </ul>	IV
	<p><b>3.2e</b> Sharp debridement should be selected when the need is urgent, such as with advancing cellulitis or sepsis, increased pain, exudate and odour. Sharp debridement must be conducted by a qualified person.</p>	IV
	<p><b>3.2f</b> Use sterile instruments to debride pressure ulcers.</p>	IV
	<p><b>3.2g</b> Prevent or manage pain associated with debridement. Consult with a member of the healthcare team with expertise in pain management. Refer to the RNAO Best Practice Guideline <i>Assessment and Management of Pain (Revised)</i> (2007).</p>	IV
	<b>Control Bacteria/Infection</b>	
	<p><b>3.3a</b> The treatment of infection is managed by wound cleansing, systemic antibiotics, and debridement, as needed.</p>	Ib
	<p><b>3.3b</b> Protect pressure ulcers from sources of contamination, e.g., fecal matter.</p>	Ila
	<p><b>3.3c</b> Follow Body Substance Precautions (BSP) or an equivalent protocol appropriate for the healthcare setting and the client's condition when treating pressure ulcers.</p>	IV
	<p><b>3.3d</b> Medical management may include initiating a two-week trial of topical antibiotics for clean pressure ulcers that are not healing or are continuing to produce exudate after two to four weeks of optimal patient care. The antibiotic should be effective against gram-negative, gram-positive and anaerobic organisms.</p>	Ib
	<p><b>3.3e</b> Medical management may include appropriate systemic antibiotic therapy for patients with bacteremia, sepsis, advancing cellulitis or osteomyelitis.</p>	Ib
<p><b>3.3f</b> To obtain a wound culture, cleanse wound with normal saline first. Swab wound bed, not eschar, slough, exudate or edges.</p>	IV	
<p><b>3.3g</b> The use of cytotoxic antiseptics to reduce bacteria in wound tissue is not usually recommended.</p>	Ilb	
<b>Wound Cleansing</b>		
<p><b>3.4a</b> Do not use skin cleansers or antiseptic agents (e.g., povidine iodine, iodophor, sodium hypochlorite solution, hydrogen peroxide, acetic acid) to clean ulcer wounds.</p>	III	
<p><b>3.4b</b> Use normal saline, Ringer's lactate, sterile water or non-cytotoxic wound cleansers for wound cleansing.</p>	IV	
<p><b>3.4c</b> Fluid used for cleansing should be warmed at least to room temperature.</p>	III	
<p><b>3.4d</b> Cleanse wounds at each dressing change.</p>	IV	

RECOMMENDATION		
Local Wound Care	3.4e To reduce surface bacteria and tissue trauma, the wound should be gently irrigated with 100 to 150 milliliters of solution.	IV
	3.4f Use enough irrigation pressure to enhance wound cleansing without causing trauma to the wound bed. Safe and effective ulcer irrigation pressures range from 4 to 15 psi. Pressure of 4 to 15 psi is achieved by using: <ul style="list-style-type: none"> <li>■ 35 milliliter syringe with a 19 gauge angiocath, or</li> <li>■ single-use 100 milliliter saline squeeze bottle.</li> </ul>	IIa
	<b>Management Approaches</b>	
	3.5a For comprehensive wound management options, consider the following: <ul style="list-style-type: none"> <li>■ Etiology of the wound;</li> <li>■ Client's general health status, preference, goals of care and environment;</li> <li>■ Lifestyle;</li> <li>■ Quality of life;</li> <li>■ Location of the wound;</li> <li>■ Size of the wound, including depth and undermining;</li> <li>■ Pain;</li> <li>■ A dressing that will loosely fill wound cavity;</li> <li>■ Exudate: type and amount;</li> <li>■ Risk of infection;</li> <li>■ Risk of recurrence;</li> <li>■ Type of tissue involved;</li> <li>■ Phase of the wound healing process;</li> <li>■ Frequency of the dressing change;</li> <li>■ Comfort and cosmetic appearance;</li> <li>■ Where and by whom the dressing will be changed;</li> <li>■ Product availability; and</li> <li>■ Adjunctive therapies.</li> </ul>	IV
	3.5b Moisture-retentive dressings optimize the local wound environment and promote healing.	Ia
	3.5c Consider caregiver time when selecting a dressing.	Ib
	3.5d Consider the following criteria when selecting an interactive dressing: <ul style="list-style-type: none"> <li>■ Maintains a moist environment (Ia)</li> <li>■ Controls wound exudate, keeping the wound bed moist and the surrounding intact skin dry (IV)</li> <li>■ Provides thermal insulation and wound temperature stability (IV)</li> <li>■ Protects from contamination of outside micro-organisms (IV)</li> <li>■ Maintains its integrity and does not leave fibres or foreign substances within the wound (IV)</li> <li>■ Does not cause trauma to wound bed on removal (IV)</li> <li>■ Client/patient preference (IV)</li> <li>■ Is simple to handle, and is economical in cost and time (IV).</li> </ul>	Ia-IV
	3.5e Monitor dressings applied near the anus, since they are difficult to keep intact. Consider use of special sacral-shaped dressings.	Ib

## Assessment & Management of Stage I to IV Pressure Ulcers

RECOMMENDATION		
Local Wound Care	<b>Adjunctive Therapies</b>	
	<b>3.6a</b> Refer to physiotherapy for a course of treatment with electrotherapy for Stage III and IV pressure ulcers that have proved unresponsive to conventional therapy. Electrical stimulation may also be useful for recalcitrant Stage II ulcers.	Ib
	<b>3.6b</b> Chronic pressure ulcers may be treated by: <ul style="list-style-type: none"> <li>■ Electrical stimulation (Ib)</li> <li>■ Ultraviolet light C (IIa)</li> <li>■ Warming therapy (Ib)</li> <li>■ Growth factors (Ib)</li> <li>■ Skin equivalents (IV)</li> <li>■ Negative pressure wound therapy (IV)</li> <li>■ Hyperbaric oxygen (IV)</li> </ul>	Ib-IV
	<b>Surgical Intervention</b>	
	<b>3.7</b> Possible candidates for operative repair are medically stable, adequately nourished and are able to tolerate operative blood loss and postoperative immobility.	IV
Discharge/Transfer of Care Arrangements	<b>4.1</b> Clients moving between care settings should have the following information provided: <ul style="list-style-type: none"> <li>■ Risk factors identified;</li> <li>■ Details of pressure points and skin condition prior to transfer;</li> <li>■ Need for pressure management/mobility equipment (e.g., support surfaces, seating, special transfer equipment, heel boots);</li> <li>■ Details of healed ulcers;</li> <li>■ Stage, site and size of existing ulcers;</li> <li>■ History of ulcers, previous treatments and dressings (generic) used;</li> <li>■ Type of dressing currently used and frequency of change;</li> <li>■ Any allergies to dressing products; and</li> <li>■ Need for on-going nutritional support.</li> </ul>	IV
	<b>4.2</b> Use the RNAO Best Practice Guideline <i>Risk Assessment and Prevention of Pressure Ulcers</i> (Revised) (2005).	IV
Patient Education	<b>5.1</b> Involve the patient and caregiver, when possible, in pressure ulcer treatment and prevention strategies and options. Include information on pain, discomfort, possible outcomes and duration of treatment, if known. Other areas of education may include patient information regarding appropriate support surfaces, as well as roles of various health professionals. Collaborate with patient, family and caregivers to design and implement a plan for pressure ulcer prevention and treatment.	IV

RECOMMENDATION		
<b>Education Recommendations</b>		
	<p><b>6.1</b> Design, develop and implement educational programs that reflect a continuum of care. The program should begin with a structured, comprehensive and organized approach to prevention and should culminate in effective treatment protocols that promote healing as well as prevent recurrence.</p>	IV
	<p><b>6.2</b> Develop educational programs that target appropriate healthcare providers, patients, family members and caregivers. Present information at an appropriate level for the target audience, in order to maximize retention and facilitate translation into practice.</p>	IV
	<p><b>6.3</b> Include the following information when developing an educational program on the treatment of pressure ulcers:</p> <ul style="list-style-type: none"> <li>■ Role of the interdisciplinary team;</li> <li>■ Etiology and pathology;</li> <li>■ Risk factors;</li> <li>■ Individualized program of skin care, quality of life and pain management;</li> <li>■ Uniform terminology for stages of tissue damage based on specific classifications;</li> <li>■ Need for accurate, consistent and uniform assessment, description and documentation of the extent of tissue damage;</li> <li>■ Principles of wound healing;</li> <li>■ Principles of cleansing, debridement and infection control;</li> <li>■ Principles of nutritional support with regard to tissue integrity;</li> <li>■ Product selection (i.e., support surfaces, dressings, topical antibiotics, antimicrobials);</li> <li>■ Principles of postoperative care including positioning and support surfaces;</li> <li>■ Principles of pressure management;</li> <li>■ Mechanisms for accurate documentation and monitoring of pertinent data, including treatment interventions and healing progress; and</li> <li>■ Principles of patient education related to prevention to reduce recurrence.</li> </ul>	IV
	<p><b>6.4</b> Update knowledge and skills related to the assessment and management of pressure ulcers on an ongoing basis. Organizations should provide opportunities for professional development related to the best practice guideline and support its use in daily practice.</p>	IV

RECOMMENDATION		
<b>Organization &amp; Policy Recommendations</b>		
	7.1 Guidelines are more likely to be effective if they take into account local circumstances and are disseminated by an active ongoing educational and training program.	IV
	7.2 Practice settings need a policy with respect to providing and requesting advance notice when transferring or admitting clients between practice settings when special resources (e.g., surfaces) are required.	IV
	7.3 Practice settings must ensure that resources are available to clients and staff, e.g., appropriate moisturizers, barriers, dressings, documentation systems, access to equipment and clinical experts, etc.	IV
	7.4 Practice settings need a policy that requires product vendors to be registered as a regulated healthcare professional if they provide assessment and/or recommendations on any aspect of pressure ulcer related practice.	IV
	7.5 Practice settings need an interdisciplinary team of interested and knowledgeable persons to address quality improvement in pressure ulcer management. This team requires representation across departments and programs.	IV
	7.6 Nursing best practice guidelines can be successfully implemented only where there are adequate planning, resources, organizational and administrative support, as well as the appropriate facilitation. Organizations may wish to develop a plan for implementation that includes: <ul style="list-style-type: none"> <li>■ An assessment of organizational readiness and barriers to implementation.</li> <li>■ Involvement of all members (whether in a direct or indirect supportive function) who will contribute to the implementation process.</li> <li>■ Dedication of a qualified individual to provide the support needed for the education and implementation process.</li> <li>■ Ongoing opportunities for discussion and education to reinforce the importance of best practices.</li> <li>■ Opportunities for reflection on personal and organizational experience in implementing guidelines.</li> </ul>	IV