

Foundations of Best Practice for Skin and Wound Management

BEST PRACTICE RECOMMENDATIONS FOR THE Prevention and Management of Skin Tears

Click to go to . . .

[INTRODUCTION](#)

[STEP 1:
ASSESS](#)

[STEP 2:
GOALS](#)

[STEP 3:
TEAM](#)

[STEP 4:
PLAN OF CARE](#)

[STEP 5:
EVALUATE](#)

Kimberly LeBlanc, MN RN CETN (C) PhD (c)

Kevin Woo, PhD RN FAPWCA

Dawn Christensen, MSc (N) RN CETN (C)

Louise Forest-Lalande, RN MEd ET

Jennifer O'Dea, MD FRCP(C)

Marlene Varga, MSc RN CNS (Wound Healing and Tissue Repair)

Jane McSwiggan, MSc OT Reg (MB)

Cornelia van Ineveld, MD MSc FRCP(C)



WoundsCANADA.ca

The best practice recommendation articles are special publications of *Wound Care Canada*. Together they form the Foundations of Best Practice for Skin and Wound Management, an online resource available for free download from the Wounds Canada website (woundscanada.ca).

These 2017 updates build on the work of previous author teams and incorporate the latest research and expert opinion.

We would like to thank everyone involved in the production of past and present versions of these articles for their hard work, diligence and rigour in researching, writing and producing these valuable resources.

Executive Editor: Sue Rosenthal
Project Editor: Heather L. Orsted
Editorial Assistant: Katie Bassett
Copy Editor: Jessica Rezunyk

Art Direction and Layout: Robert Ketchen
Photo Researcher: Joanne Crone

This paper was produced by the Canadian Association of Wound Care (Wounds Canada).

How to cite this document:

LeBlanc K, Woo K, Christensen D, Forest-Lalande L, O’Dea K, Varga M, et al. Best practice recommendations for the prevention and management of skin tears. In: Foundations of Best Practice for Skin and Wound Management. A supplement of Wound Care Canada; 2017. 46 pp. Retrieved from: www.woundscanada.ca/docman/public/health-care-professional/bpr-workshop/552-bpr-prevention-and-management-of-skin-tears/file.

woundscanada.ca
info@woundscanada.ca

© 2018 Canadian Association of Wound Care
All rights reserved. 1525r3E

Last updated 2021 02 11.

Foundations of Best Practice for Skin and Wound Management

BEST PRACTICE RECOMMENDATIONS FOR THE Prevention and Management of Skin Tears

Kimberly LeBlanc, MN RN CETN (C) PhD (c)

Kevin Woo, PhD RN FAPWCA

Dawn Christensen, MHSc (N) RN CETN (C)

Louise Forest-Lalande, RN MEd ET

Jennifer O'Dea, MD FRCP(C)

Marlene Varga, MSc RN CNS (Wound Healing and Tissue Repair)

Jane McSwiggan, MSc OT Reg (MB)

Cornelia van Ineveld, MD MSc FRCP(C)

Introduction



Introduction

What are Skin Tears?

The International Skin Tear Advisory Panel (ISTAP) defines a skin tear as “a wound caused by shear, friction, and/or blunt force resulting in separation of skin layers. A skin tear can be partial-thickness (separation of the epidermis from the dermis) or full-thickness (separation of both the epidermis and dermis from underlying structures).”¹ Skin tears have been reported to occur in the extremes of age (neonates and the elderly) as well as in the critically and chronically ill.^{1,2} Skin tears can be found on all areas of the body but are particularly common on the extremities.^{1,3}

Skin tears are traditionally categorized as acute wounds as they are reported to be traumatic wounds and are therefore expected to heal in a timely trajectory. Yet many reports indicate that skin tears fail to meet the expected wound healing milestones, resulting in the transition to chronic wounds. It is hypothesized that this transition to chronic status is related to the co-morbidities and complications often associated with the frail elderly, the very young and those who are critically or chronically ill, all of whom are deemed to be at greater risk for skin tear development in the first place.⁴

Prevalence of Skin Tears

Skin tears are found in various clinical settings and are highly prevalent yet preventable wounds.³ It is important for clinicians to recognize that skin tears are adverse and reportable events that compromise patient safety. Consistent documentation is required to aid in tracking and monitoring the prevalence of these wounds. Skin tears are frequently compared to pressure injuries in the literature because: a) they are both



found in the frail elderly, the very young and those who are critically or chronically ill and b) pressure injury burdens have long been used to benchmark quality of care, a function that could be applied to skin tears as well.^{2,5-7}

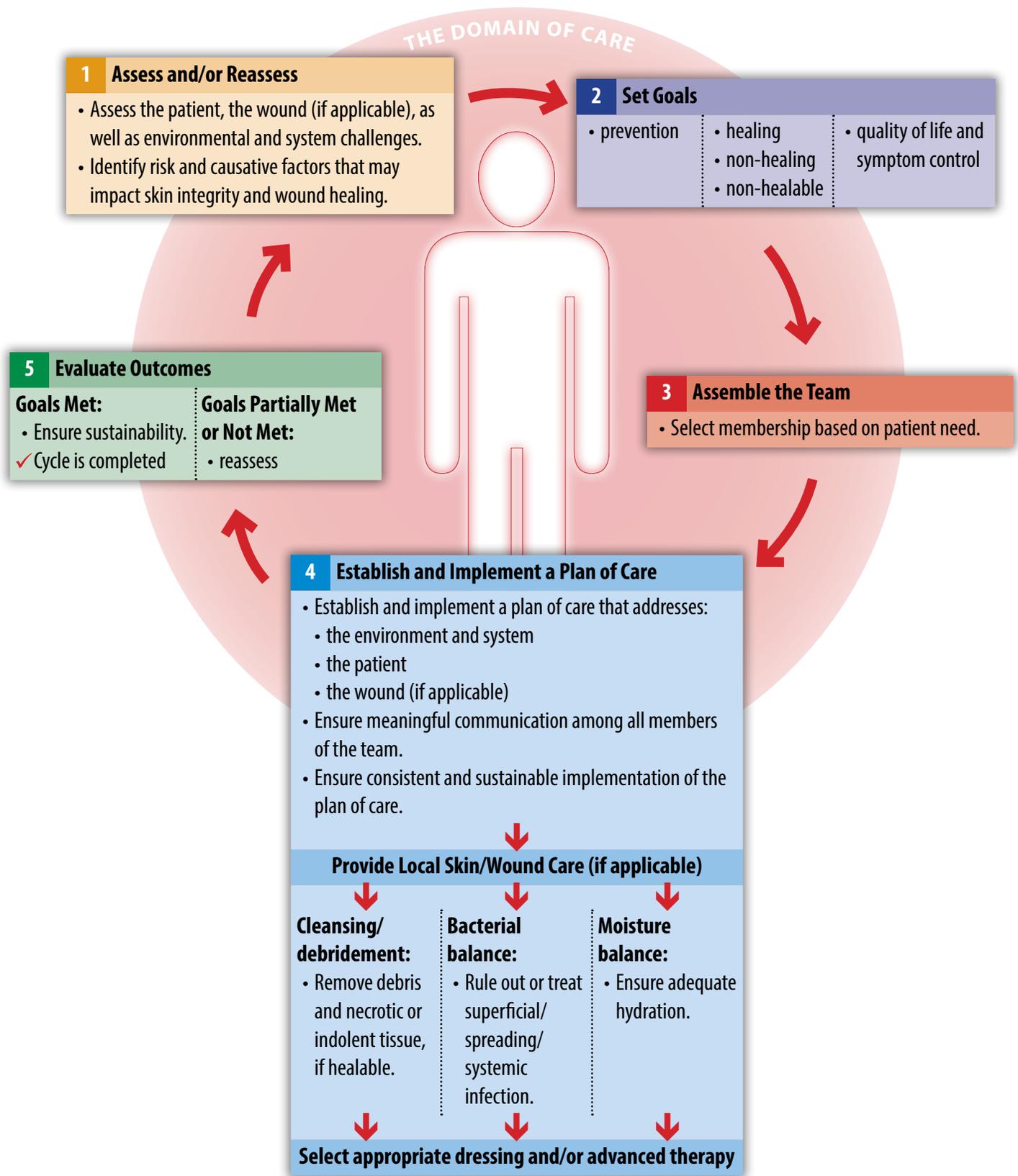
The paucity of published studies and the lack of standardized assessment makes the benchmarking of skin tears difficult. Skin tears are generally more common among the long-term care (LTC) population, with prevalence rates ranging from 10 to 54% across different countries.⁷⁻¹²

In recent years, researchers have begun to monitor the prevalence and incidence of skin tears and have established a common definition and universally acceptable classification system to identify risk factors and examine prevention strategies. While health-care professionals and caregivers should place a primary focus on risk assessment and implementation of prevention strategies to limit the prevalence of skin tears, they must also be equipped to manage these wounds when they do occur. By recognizing which patients are at risk for skin tears, preventing skin injuries and using the appropriate skin tear treatment protocols, health-care professionals can ensure that patient outcomes are improved, unnecessary pain is avoided, system efficiencies are enhanced and costs are reduced.¹ Current treatment of skin tears may vary based on available—but not always appropriate—options. In fact, skin tears are often left untreated without any dressing.¹¹

The Wound Prevention and Management Cycle

This paper offers a practical, easy-to-follow guide that incorporates the best available evidence. It outlines a process, or series of consecutive steps, that supports patient-centred care. This process, called the Wound Prevention and Management Cycle (see Figure 1) guides the clinician through a logical and systematic method for developing a customized plan for the prevention and management of wounds from the initial assessment to a sustainable plan targeting self-management for the patient.

Figure 1: The Wound Prevention and Management Cycle



The recommendations in this document are based on the best available evidence and are intended to support the clinician, the patient, his/her family and the health-care team in planning and delivering the best clinical practice. Two foundational papers supplement this document with additional evidence-informed information and rec-

ommendations that are general to all wound types: “Skin: Anatomy, Physiology and Wound Healing,”¹³ and “Best Practice Recommendations for the Prevention and Management of Wounds.”¹⁴

There are three guiding principles within the best practice recommendation papers (BPRs) that support effective prevention and management of skin breakdown:

1. the use of the Wound Prevention and Management Cycle regardless of the specifics to prevent and manage skin breakdown
2. the constant, accurate and multidirectional flow of meaningful information within the team and across all care settings
3. the patient as the core of all decision making

Quick Reference Guide

The quick reference guide (QRG) (see Table 1) provides the recommendations associated with the five steps in the Wound Prevention and Management Cycle (see Figure 1). These recommendations are discussed with the supporting evidence.

Table 1: Wound Prevention and Management Quick Reference Guide

Step	Recommendation	Evidence
1 Assess and/or Reassess	1.1 Select and use validated patient assessment tools.	1a – IV
	1.2 Identify risk and causative factors that may impact skin integrity and wound healing.	1a – IV
	1.2.1 Patient: Physical, emotional and lifestyle	
	1.2.2 Environmental: Socio-economic, care setting, potential for self-management	
	1.2.3 Systems: Health-care support and communication	
	1.3 Complete a wound assessment, if applicable.	1a – IV
2 Set Goals	2.1 Set goals for prevention, healing, non-healing and non-healable wounds.	1a – IV
	2.1.1 Identify goals based on prevention or healability of wounds.	
	2.1.2 Identify quality-of-life and symptom-control goals.	
3 Assemble the Team	3.1 Identify appropriate health-care professionals and service providers.	IV
	3.2 Enlist the patient and their family and caregivers as part of the team.	IV
	3.3 Ensure organizational and system support.	IV
4 Establish and Implement a Plan of Care	4.1 Identify and implement an evidence-informed plan to correct the causes or co-factors that affect skin integrity, including patient needs (physical, emotional and social), the wound (if applicable) and environmental/system challenges.	IV
	4.2 Optimize the local wound environment aided through	1a – IV
	4.2.1 Cleansing	
	4.2.2 Debriding	
	4.2.3 Managing bacterial balance	
4.2.4 Managing moisture balance		
	4.3 Select the appropriate dressings and/or advanced therapy.	1a – IV
	4.4 Engage the team to ensure consistent implementation of the plan of care.	1a – IV
5 Evaluate Outcomes	5.1 Determine if the outcomes have met the goals of care.	IV
	5.2 Reassess patient, wound, environment and system if goals are partially met or unmet.	1b – IV
	5.3 Ensure sustainability to support prevention and reduce risk of recurrence.	IV

Each recommendation above is supported by the level of evidence employed by the Registered Nurses' Association of Ontario (RNAO) guideline development panels (see Table 2). For more detailed information refer to the designated references.

Table 2: Levels of Evidence¹⁵

Ia	▪ Evidence obtained from meta-analysis or systematic review of randomized controlled trials
Ib	▪ Evidence obtained from at least one randomized controlled trial
IIa	▪ Evidence obtained from at least one well-designed controlled study without randomization
IIb	▪ Evidence obtained from at least one other type of well-designed quasi-experimental study
III	▪ Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies and case studies
IV	▪ Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities

Used with kind permission from the Registered Nurses' Association of Ontario.

A close-up photograph of a hand holding a baby's foot. The hand is positioned on the left, with fingers gently cradling the baby's foot. The baby's foot is on the right, with toes pointing towards the center. The skin tones are warm and natural. The background is a soft, out-of-focus light color.

Step 1: Assess and/or Reassess

Step 1: Assess and/or Reassess

Recommendations

1.1 Select and use validated patient assessment tools.

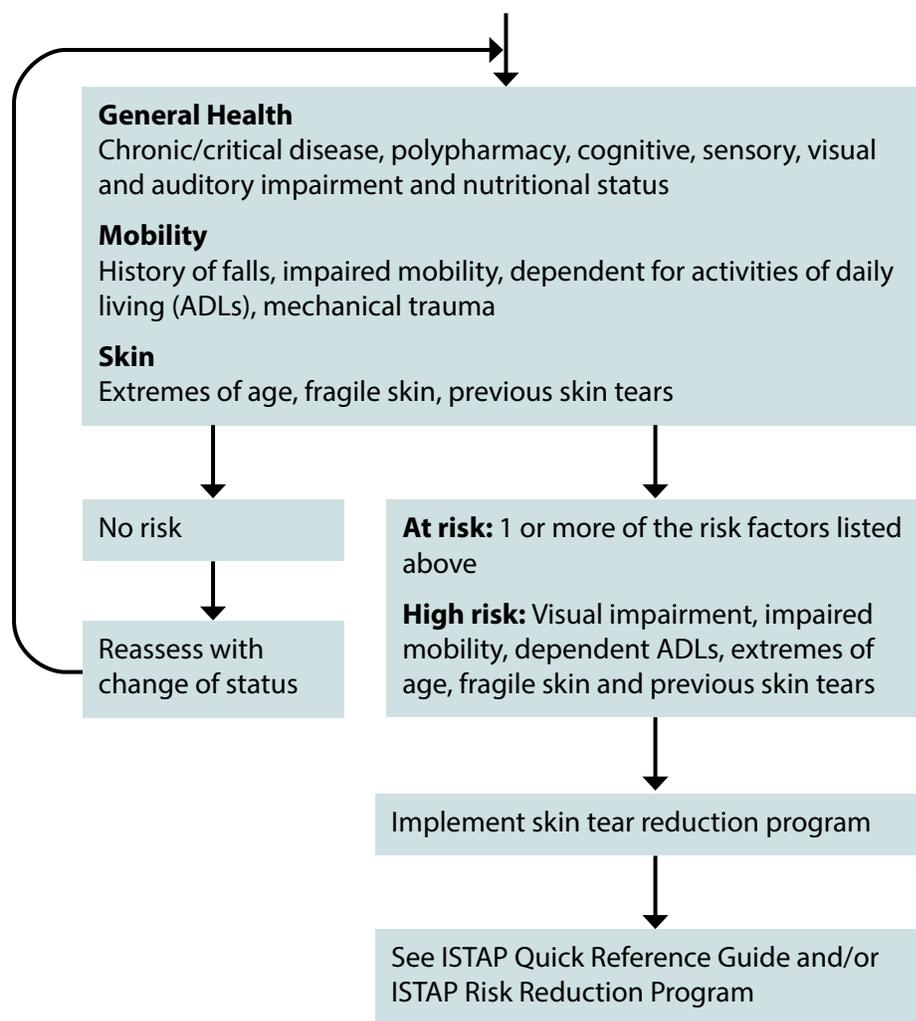
Discussion: Health-care professionals use risk assessment tools that take into account specific patient characteristics to estimate the probability that a specific event will occur. Risk assessment tools are therefore beneficial aids for the selection and implementation of strategies that might modify the risk of the event occurring.¹⁶ Health-care professionals have developed and validated risk assessment tools for various wound types, but unfortunately a validated risk assessment tool for skin tears does not exist. This lack of a validated risk assessment tool for skin tears complicates identifying who is most at risk and why. Few studies address skin tear risk factors in general, and the majority of the skin tear prevention literature is based on expert opinion only.¹⁷

The International Skin Tear Advisory Panel (ISTAP) conducted a scoping literature review of skin tear risk factors and expanded on search criteria.¹⁷ Using a Delphi process, the panel subsequently developed a risk assessment pathway (see Figure 2). The ISTAP risk assessment pathway is composed of three categories:

1. General health (chronic and critical disease, polypharmacy, cognitive, sensory, visual and auditory impairment and nutritional status)
2. Mobility (history of falls, impaired mobility, dependence for activities of daily living [ADLs] and mechanical trauma)
3. Skin (extremes of age, fragile skin and previous skin tears)

The pathway aids in identifying both modifiable and non-modifiable risk factors and predicts an increased risk among those with deficits in any of the categories. In addition to the risk factors identified by ISTAP, new evidence suggests that aggressive behaviour¹⁷ and an increased risk of pressure injuries^{11,18} may also be relevant to skin tear risk. Given these more recent findings, additional studies are required to include these factors in the ISTAP risk assessment pathway and to test its validity and predictive ability.¹⁸ It is recognized that the ISTAP risk assessment tool is limited in that it focuses primarily on elderly populations and does not address the chronically ill or pediatric populations.

Figure 2: ISTAP Risk Assessment Tool¹⁷



Reprinted with kind permission from ISTAP.

1.2 Identify risk and causative factors that may impact skin integrity and wound healing.

1.2.1 Patient: Physical, emotional and lifestyle

Discussion: A complete and thorough assessment of patients should be performed and documented, including baseline information pertaining to their knowledge, beliefs, health status and perceived learning needs, to address the risk factors as identified below (see Table 3).¹⁷ Cultural and psychological variables must also be considered.¹

Table 3: Skin Tear Risk Factors

Skin Tear Risk	Causative Factors	Level of Evidence
General Health		
Altered sensory, auditory and visual status	Decreased sensory, auditory and visual status that often occurs as an individual ages	III, IV
Cognitive impairment	An increased risk of skin tear development including: <ul style="list-style-type: none"> ▪ displaying aggressive behaviour ▪ being cognitively impaired ▪ having dementia, altered cognition or delirium 	IV
Nutritional concerns	Inadequate nutrition and hydration may affect tissue viability ¹⁹ and increase the risk of falls, leading to injury, ²⁰ thereby increasing the risk of skin tears.	IIb, III, IV
Polypharmacy	<p>Polypharmacy has been indicated to be an independent risk factor for falls.²¹ Pervin concluded that individuals receiving four or more medications are at a greater risk for falls.²¹</p> <p>Increased risk for falls coupled with the increased risk of confusion reported with polypharmacy in the elderly population²² links polypharmacy to a potentially heightened skin tear risk.¹</p> <p>The chronic use of topical and systemic corticosteroids has been linked to skin tear development.⁴ Corticosteroids are known to regulate the expression of genes encoding collagens, elastin, matrix metalloproteinases (MMPs) and tissue inhibitors of MMPs, among others.</p> <p>Medications that may affect skin integrity include:¹⁷</p> <ul style="list-style-type: none"> ▪ anti-bacterial agents ▪ anti-hypertensives ▪ analgesics ▪ tricyclic antidepressants ▪ antihistamines ▪ antineoplastic agents ▪ neuroleptics ▪ diuretics ▪ hypoglycemic agents ▪ nonsteroidal anti-inflammatory agents ▪ oral contraceptives ▪ steroids 	IIb, III, IV
Mobility		
Mobility	Factors that increase risk of skin tear development include: ^{23,24} <ul style="list-style-type: none"> ▪ having a decreased level of mobility ▪ being unable to reposition independently ▪ having spasticity 	IV

cont'd.

Skin Tear Risk	Causative Factors	Level of Evidence
Mobility <i>cont'd.</i>		
Assistance with activities of daily living (ADLs)	<p>Skin tears are frequently linked to:</p> <ul style="list-style-type: none"> ▪ wheelchair injuries ▪ transfers ▪ blunt trauma from bumping into objects^{1,25,26} ▪ impaired activity ▪ use of assistive devices ▪ dependence on others for care and activities of daily living^{1,26,27} ▪ lower levels of functional ability 	IV
History or risk of falls	<p>Falls and associated blunt trauma have been linked to heightened skin tear risk.^{1,28,29} Predisposing factors for falls include:</p> <ul style="list-style-type: none"> ▪ unsteady gait and balance ▪ weak muscles ▪ poor vision ▪ medications ▪ dementia ▪ poor lighting ▪ loose rugs ▪ poorly fitting shoes ▪ floor clutter ▪ beds or toilets without handrails ▪ medical conditions such as: <ul style="list-style-type: none"> ♦ continence urgency ♦ low blood pressure ♦ stroke ♦ Parkinson's disease ♦ arthritis ♦ Ménière's disease ♦ poorly controlled diabetes ♦ poorly controlled epilepsy ♦ brain disorders ♦ thyroid problems³⁰ <p>The RNAO has published Best Practice Guidelines for the Prevention of Falls and Fall Injuries in the Older Adult that may be of value to the clinician.³¹ Clinicians are encouraged to review fall-prevention programs and implement the prevention strategies that are best suited to the individual. Examples of several fall prevention program websites include:</p> <ul style="list-style-type: none"> ▪ http://rnao.ca/bpg/guidelines/prevention-falls-and-fall-injuries-older-adult ▪ http://rnao.ca/sites/rnao-ca/files/Prevention_of_Falls_and_Fall_Injuries_in_the_Older_Adult.pdf ▪ www.mountsinai.on.ca/education/geriatrics/presentations/2014-geriatrics-update-presentations/5-dr-arielle-berger-and-dr-vicky-chau-update-on.pdf ▪ www.cdc.gov/steady/pdf/tug_test-a.pdf 	IIb, III, IV

cont'd.

Skin Tear Risk	Causative Factors	Level of Evidence
Mobility <i>cont'd.</i>		
Mechanical trauma (not related to mobility aids)	<p>Medical adhesives are common contributors to skin tear development in all at-risk groups. Skin tears that result from adhesives occur when the adhesive attachment is stronger than the skin's tensile strength.</p> <p>The Pennsylvania Patient Safety Authority (PPSA) reports that skin tears frequently occur in the operating room with the post-surgery removal of adhesive products.²⁶</p> <p>Handling premature neonates may result in skin breakdown due to the extreme fragility of their skin. Close monitoring of premature neonates requires the use of medical devices that must be frequently removed. Removal of any layers of the neonatal stratum corneum during the process of adhesive removal can further reduce the skin's barrier function, which significantly compromises fluid balance and homeostasis and increases skin permeability; these disruptions can lead to toxicity and irritation from topically applied substances as well as an increased risk of infection.³²</p>	III, IV

Skin		
Skin changes related to extremes of age and critical illness	<p>Skin-related risk factors include:</p> <ul style="list-style-type: none"> ▪ extremes of age (very young and very old) or critically ill ▪ presenting with skin exhibiting signs and symptoms of aging and/or sun damage ▪ having been identified with an increased pressure injury risk^{7,11,17} ▪ having ecchymosis, senile purpura, hematoma, stellate pseudoscar, ecchymosis, skin atrophy^{3,33,34} ▪ having any evidence of previous healed skin tears ▪ presenting with edema of the extremities ▪ chronically ill individuals (greater risk for skin breakdown in general and skin tears in particular)^{1,7,35} 	III, IV

Considerations Specific to the Pediatric Population

Lack of cognition or insight can potentially increase the risk of skin tears in the pediatric population. Unfortunately, very little literature addresses skin tear risk factors in the pediatric population.³⁶ Premature neonates are known to have minimal stratum corneum and attenuated rete ridges, giving their skin a red, wrinkled, translucent and gelatinous appearance. They also have less subcutaneous tissue than other populations, meaning that the dermis lies directly over muscle. With less subcutaneous tissue, pediatric patients are at a much higher risk of skin tears caused by medical adhesive removal.³⁶ Baharestani reports that all children are at heightened risk of skin tears until the age of three, when the stratum corneum is fully matured, and that all children suffering from acute and chronic illnesses, like their adult counterparts, are at heightened risk for skin tear development.³⁶

1.2.2 Environmental: Socio-economic, care setting, potential for self-management

Discussion: Health-care professionals must be cognizant of environmental factors that can impact skin integrity. These factors include socio-economic status, health-care setting and ability to self-manage.³⁷ Socio-economic and environmental factors not only affect patients' access to wound-healing products and technology, but also their ability to adhere to a recommended prevention or wound management protocol. Regional differences in access to supplies, equipment and care may also affect the individual's self-management potential. Even within similar regions, access to supplies, equipment and care may fluctuate depending on the type of environment in which the care is being delivered. For example, skin tear prevention for an elderly individual living independently in their home may be completely different from that of an individual with dementia living in a long-term care facility. With the current trend of individuals with dementia and other co-morbidities remaining longer in a home setting, self-management and prevention will present challenges and more resources will be required to prevent skin tears from occurring. As discussed above, resources such as fall prevention programs will be required to enable individuals to safely reside in their homes. Environments should be assessed to identify factors such as sharp-edged objects like coffee tables, dishwasher doors and loose rugs that may lead to injury and put patients at risk for a skin tear. There may also be ethnic or cultural biases toward or against certain wound care products or practices.^{38–40}

1.2.3 Systems: Health-care support and communication

Discussion: Organizations and health-care professionals are concerned with the prevalence of skin tears and their ultimate burden on the health-care system. In order to improve care, an assessment is required to understand current skin tear prevention practices at a population, health-care professional and organizational level. This assessment is challenging due to the absence of existing skin tear evidence that might inform quality indicators. Delphi techniques can be used in the absence of or in combination with quality indicators to establish a report of current practices and outcomes of skin tear prevention. The process involves discussions and consensus on the current practices and needs of those at risk. Representatives from all stakeholder groups should participate.

1.3 Complete a wound assessment, if applicable.

Discussion: Wounds should be classified in a systematic and universally accepted manner.^{16,41} To accurately assess, document and treat skin tears, it is important that a common language be used to describe these challenging wounds. Proper documentation is vital to understanding the extent of the problem. Skin tears should not be grouped into pressure injury categories.⁴¹

Prior to the initial assessment of the skin tear, the wound should be cleansed, removing all residual hematoma or debris, and the flap re-approximated. Skin tears should be assessed and documented as per facility protocol. Refer to the ISTAP Skin Tear Classification system (see Figure 4) for skin tear classification.^{17,27}

Figures 3a–c: Re-approximating a Skin Tear



Figure 3a



Figure 3b



Figure 3c

Reprinted with kind permission from KDS Consulting.

Skin Tear Classification

Health-care professionals can more effectively communicate with other health-care professionals, policy makers, researchers and patients by using common and appropriate descriptors for various types of wounds, including skin tears.⁴¹

Figure 4: ISTAP Skin Tear Classification System⁴²

Type 1: No Skin Loss	Type 2: Partial Skin Loss	Type 3: Total Flap Loss
		
Linear or flap tear that can be repositioned to cover the wound bed	Partial flap loss that cannot be repositioned to cover the wound bed	Total flap loss that exposes the entire wound bed

Reprinted with kind permission from ISTAP.

Anatomical Location of Skin Tears

It has been previously assumed that skin tears occur primarily on the extremities. As a result, many prevention strategies have been limited to preventing skin tears on the extremities.^{43,44} Expert opinion, however, holds that skin tears can occur anywhere on the body and prevention strategies should include the entire body.^{1,35}

Step 2:
Set Goals



Step 2: Set Goals

Recommendations

2.1 Set goals for prevention, healing, non-healing and non-healable wounds.

Discussion: Even in the presence of skin tears, a primary goal is the prevention of future skin tears.

2.1.1 Identify goals based on prevention or healability of wounds.

Discussion: Like all wounds, it is critical that the healability of the skin tear be determined prior to initiating treatment. To prevent situations of misunderstanding due to different assumptions about the healability of the skin tear and the goals of care, it is important that there be discussion and, optimally, mutual agreement among health-care professionals, the patient and their family regarding goals related to the “healability” of the skin tear and the treatment plan. This discussion allows the health-care team to provide wound care that is directed toward achieving goals that are appropriate for the individual with the wound.⁴⁵

Before deciding on a treatment, it must be determined whether or not healing is a reasonable goal. The wound, therefore, should be identified as:

Healing: The skin tear has sufficient vascular supply, underlying causes can be corrected and health can be optimized.⁴⁵

Non-healing: The skin tear has healing potential, but various patient factors are compromising wound healing at this time (example: skin tear on a lower limb with uncontrolled edema).⁴⁵

Non-healable: The skin tear has no ability to heal due to untreatable causes such as terminal disease or end-of-life status.^{39,46} If the wound is deemed to be non-healable, management strategies should be selected to ensure that infection is prevented and the fragile periwound skin is protected to prevent further skin tears from occurring.

2.1.2 Identify quality-of-life and symptom-control goals.

Discussion: An important aspect of wound healing includes the establishment of a customized plan of care tailored to the individual. The plan of care should include the patient’s goals of care, for example: wound healing, pain management or perhaps prevention of future skin tears. Goals should be in line with the individual’s needs and abilities, risk factors, co-morbidities, pain, quality-of-life issues, support systems, access to care and personal preferences.^{39,47}

Health-care providers and family/caregivers must work together to form common goals for skin tear prevention in the pediatric population.

Skin Tear Tool Kit

The International Skin Tear Advisory Panel (ISTAP) has developed a tool kit to aid in the prediction, prevention, assessment and management of skin tears.¹⁶ The goal of the ISTAP Skin Tear Tool Kit is to provide a foundation that assists and guides individuals, their families and health-care professionals in the prediction, prevention, assessment and treatment of skin tears using a systematic approach. Many of the components in the kit have been embedded into the best practice recommendations presented in this article. ISTAP has highlighted repeatedly that the cornerstone to the treatment of skin tears is the prevention of future skin tears. The tool kit is available at www.skintears.org.

Step 3: Assemble the Team



Step 3: Assemble the Team

Recommendations

3.1 Identify appropriate health-care professionals and service providers.

Discussion: Key stakeholders should be identified and included in any skin tear prevention and management program. Stakeholders should include (but are not limited to): individuals at risk and their families, nurses, physicians, pharmacists, dietitians, physiotherapists, occupational therapists, personal support workers, social workers, spiritual care providers, policy makers and other allied health professionals as appropriate.⁴⁸ All health-care professionals involved in the care of the patient with skin tears must be willing and able to work together toward positive patient outcomes.

3.2 Enlist the patient and their family and caregivers as part of the team.

Discussion: The ISTAP tool kit for the prediction, prevention, assessment and treatment of skin tears¹⁷ stresses that prevention is the best treatment for skin tears and that the patient and caregivers are vital in the prevention of skin tears. All patients, caregivers and health professionals should be provided with information regarding the risks, prevention and treatment of skin tears. In addition, they must be aware of the proper techniques for providing care without causing skin tears (see section 4.1).



Information should include the points discussed in section 1.2.1.

Engagement

Given that skin tears are found across the continuum of age and the associated risk factors have yet to be fully explored, engagement of individuals and family/caregivers is crucial to any prevention program. By engaging individuals and family/caregivers to participate in the prevention and appropriate treatment of these wounds, it is hoped that fewer skin tears will be found to transition from acute wounds to complex and costly wounds.¹

Effective patient and family engagement requires a shift in the role of the health-care team from unidirectional care providers to collaborators. Interactive patient care has emerged as a care-delivery method that effectively engages and empowers patients to control their health status.⁴⁹ Empowering patients and families to engage actively in preventative strategies can support self-managed care, enhanced patient experience, improved health prevention and well-being and lowered health-care costs.^{49,50} Engagement is not ideal for all situations, however. In some instances patients and their families may choose to be disengaged in their care. Should this occur, health professionals must be prepared to adjust their strategies for engaging individuals based on their desired level of involvement.⁵¹



3.3 Ensure organizational and system support.

Discussion: Organizations are frequently concerned with the burden of wounds on the health-care system. Individuals at risk are more concerned with quality-of-life issues (pain, physical disability, social needs and mental anguish) and healing. Because of the disparity between priorities among these groups, close attention is required to identify the knowledge gaps and address them appropriately to ensure that implementation of skin tear prevention programs is successful.

Given the prevalence of skin tears and their potential to become complex and chronic wounds, skin tears should be included in prevalence and incidence studies and benchmarked in order to track the extent of this type of wound within a facility, agency or system.

In order to be successful in reducing the burden of skin tears, health professionals and organizations must be encouraged to conceptualize the outcomes of interventions in terms of the processes of care that have a direct impact on the outcomes. Reduction of skin tear prevalence is one important component to be addressed; however, as not all skin tears are preventable, health-care professionals and organizations should also strive to reduce the number of skin tears that transition to complex and chronic wounds. Outcome measures will dictate the success or failure of implementation strategies and, if success is not met, should be used to adjust the strategies.⁵²

A desired outcome for skin tear prevention and management programs includes ensuring health-care professionals, patients and families have the skills necessary to maintain skin health and prevent skin tears and to reduce the number of skin tears that transition to complex and chronic wounds.

Step 4: Establish and Implement a Plan of Care



Step 4: Establish and Implement a Plan of Care

Recommendations

4.1 Identify and implement a personalized, evidence-informed plan to correct the causes or co-factors that affect skin integrity, including patient needs (physical, emotional and social), the wound (if applicable) and environmental/system challenges.

Discussion: ISTAP conducted a Delphi consensus study to establish skin tear prevention strategies.¹⁷ Table 4 presents the ISTAP prevention strategies, which have been modified to include the latest literature findings and a focus on all age groups, including neonates and young children.

Table 4: ISTAP Skin Tear Prevention Strategies¹⁷

Risks	Patient Strategies	Caregiver and Health-care Professional Strategies
General Health		
Altered sensory, auditory and visual status	<p>Participate actively in care.</p> <p>Be cognizant of environment.</p> <p>Have regular vision and hearing screening.</p>	<p>Ensure a safe environment (occupational therapist home assessment).</p> <p>Implement a falls assessment and reduction program.</p> <p>Assess footwear.</p> <p>Assess sensation, particularly for patients with a history of diabetes.</p> <p>Assess for clothing that could injure the patient’s skin.</p> <p>Neonates and critically ill children in intensive care units (ICUs) should have an occupational therapy consult for positioning.</p> <p>Caregivers should handle premature neonates with gentle care.</p> <p>Provide information on safety concerns regarding individual impairment and risks for skin tears.</p>
Cognitive impairment	<p>Participate actively in care as applicable.</p> <p>Be cognizant of environment (with cues and support).</p>	<p>Consult an occupational therapist to assess cognitive status.</p> <p>Utilize a confusion assessment method if patient is exhibiting signs of delirium.</p> <p>Ensure a safe environment. Involve an occupational therapist for home assessment for patients living in their own homes.</p> <p>Provide information to the patient and their caregivers on safety concerns regarding individual impairment and risks for skin tears.</p> <p>Protect the individual from self-harm when possible.</p> <p>Consult a primary care provider (PCP) or pharmacist to review the patient’s medications to:</p> <ul style="list-style-type: none"> ▪ ADD/INCREASE medications for the management of dementia and/or ▪ STOP/DECREASE medications that may negatively impact cognition

cont'd.

Risks	Patient Strategies	Caregiver and Health-care Professional Strategies
General Health <i>cont'd.</i>		
Nutritional concerns	Optimize nutrition and hydration.	<p>Consult a dietitian to provide comprehensive nutritional assessment to optimize nutrition and hydration.</p> <p>Promote and monitor nutrition and fluid intake appropriate to age and physiological status. Increase fluid intake as appropriate.</p> <p>Consult a speech language therapist or occupational therapist (depending on the setting).</p> <p>Weigh the patient frequently and monitor for weight loss. Assess for feeding and swallowing difficulties.</p> <p>Ensure protected meal times.</p> <p>Be aware that extremes of weight (bariatric, cachectic or excessively thin) require extra care to prevent skin tears.</p>
Polypharmacy	<p>Be aware of the potential for skin changes with certain medications.</p> <p>Discuss all medications with prescriber or pharmacist.</p>	<p>Consult with an intra-professional team to monitor the effects of polypharmacy on the individual's skin; complete a comprehensive medical review of all medications. Refer to a pharmacist to complete a comprehensive medication review.</p>

Mobility		
Mobility and patient-handling-related issues	<p>Participate actively in care.</p> <p>Be cognizant of environment.</p>	<p>Consult a physiotherapist to promote stability.</p> <p>Ensure safe handling techniques and safe equipment.</p> <p>Use repositioning slings and sliders to change position to avoid trauma to skin.</p> <p>Use transfer belts to avoid gripping arms during transitional movements.</p> <p>Perform daily skin assessment and monitoring for skin tears to look for issues caused by mobility devices.</p> <p>Be aware that extremes of weight (bariatric, cachectic or excessively thin) require extra care to prevent skin tears.</p> <p>Be aware of fragile skin in the critically ill of all ages including pediatric.</p> <p>Strategies for preventing mobility-related skin tears include but are not limited to:</p> <ul style="list-style-type: none"> ▪ padding devices and hard objects in the individual's environment ▪ encouraging the individual at risk of skin tears to wear long sleeves and trousers, knee-high socks and gloves ▪ providing shin/elbow pads for those who have frequent skin tears ▪ ensuring an uncluttered environment ▪ consulting a primary care provider (PCP) or pharmacist to review the patient's medications to optimize medications for medical conditions that affect mobility (e.g., Parkinson's medication)

cont'd.

Risks	Patient Strategies	Caregiver and Health-care Professional Strategies
Mobility <i>cont'd.</i>		
Assistance with activities of daily living (ADLs)	<p>Participate actively in care.</p> <p>Be cognizant of environment.</p>	<p>Provide protection from trauma during routine care and ADLs.</p> <p>Employ proper transferring using positioning slings and sliders and positioning techniques.</p> <p>Ensure safe environment; involve an occupational therapist for home assessment for patients living in their own homes.</p> <p>Provide information to the patient and their caregivers on proper transferring and positioning techniques.</p>
History or risk of falls	<p>Participate actively in care.</p> <p>Be cognizant of environment.</p> <p>Utilize assistive devices as prescribed by health-care professionals.</p> <p>Work with caregivers to follow falls prevention program when capable.</p> <p>Take vitamin D and calcium supplement when prescribed by physician.</p>	<p>Initiate a falls-prevention program as per facility/institution/workplace policy. The program should include the pediatric/neonatal population when appropriate.</p> <p>Create a safe environment.</p> <p>Consult an occupational therapist when appropriate to assess falls risk.</p> <p>Remove clutter from environment.</p> <p>Maintain a well-lit environment.</p> <p>Ensure safe handling techniques and safe equipment.</p> <p>Pharmacist/physician to assess need for vitamin D and calcium supplement and prescribe if advised.</p> <p>Refer the patient to a pharmacist for possible de-prescription of medications that increase the risk of falls.</p>

cont'd.

Risks	Patient Strategies	Caregiver and Health-care Professional Strategies
Mobility <i>cont'd.</i>		
Mechanical trauma (not related to mobility aids)	<p>Participate actively in care.</p> <p>Be cognizant of environment.</p> <p>Practice behaviours that will reduce the incidence of skin tears.</p> <p>Remove clutter from environment.</p> <p>Avoid the use of adhesives on skin.</p> <p>Hydrate skin with hypoallergenic moisturizer two times per day, especially after bathing, with the skin still damp, not wet; use warm, not hot, water for bathing.</p> <p>Use soapless, no-rinse and/or pH-neutral skin cleansers.</p> <p>If at risk wear protective clothing, such as long sleeves, long pants/trousers or knee-high socks or shin/elbow guard pads.</p> <p>Keep fingernails and toenails cut short and filed to remove rough edges to prevent self-inflicted skin tears.</p> <p>Ensure safe environment: Pad bed rails, wheelchair legs, furniture edges and other objects that may lead to blunt trauma; remove unnecessary equipment from environment; keep a well-lit environment.</p>	<p>Implement safe activities for those who are at risk for skin tears.</p> <p>Hydrate skin with hypoallergenic moisturizer two times per day, especially after bathing, with the skin still damp, not wet; use warm, not hot, water for bathing.</p> <p>Use soapless, no-rinse and/or pH-neutral skin cleansers.</p> <p>Provide those at risk with protective clothing, such as long sleeves, long pants or knee-high socks or shin/elbow guard pads.</p> <p>Avoid using adhesive products on frail skin. If dressings or tapes are required, use non-traumatic paper/silicone tapes, non-adherent contact layers, non-adherent/silicone foam dressings or other topical dressings specifically formulated for management of fragile skin to avoid skin stripping or tearing the skin with the removal of adhesives (ensure proper removal of all adhesives).</p> <p>Communicate the risks of using adhesive tape to other health-care professionals such as laboratory services.</p> <p>Keep the patient's fingernails and toenails cut short and filed to remove rough edges to prevent self-inflicted skin tears.</p> <p>Ensure safe environment: Pad bed rails, wheelchair legs, furniture edges and other objects that may lead to blunt trauma; remove unnecessary equipment from environment; ensure well-lit environment.</p> <p>Initiate a falls-prevention program as per facility/institution/workplace policy. The program should include the pediatric population when appropriate.</p> <p>Use proper positioning, turning, lifting and transferring techniques.</p> <p>Provide extra protection (padding) of the skin for individuals with extremes of weight (bariatric, cachectic, very thin).</p> <p>Provide information to staff/caregivers on prevention and treatment of skin tears; communicate with other health-care professionals the need for gentle care, including transport services, porters and other specific departments such as radiology and dialysis.</p> <p>Staff/caregivers: keep fingernails cut short and do not wear rings or jewellery that could hurt the skin.</p>

cont'd.

Risks	Patient Strategies	Caregiver and Health-care Professional Strategies
Skin		
Skin changes related to extremes of age and critical illness	<p>Participate actively in care.</p> <p>Be cognizant of environment.</p> <p>Be aware of risks for skin tears.</p> <p>Practice behaviours that will reduce the incidence of skin tears.</p>	<p>Know if the individual is at risk for skin tears and how to reduce the risk.</p> <p>Implement safe activities for those who are at risk for skin tears.</p> <p>Exercise caution when caring for those with intravenous lines, neo-gastric (NG) and other tubes.</p> <p>Be cautious when anchoring catheter tubes, nasal prongs.</p> <p>Hydrate skin with hypoallergenic moisturizer after bathing, with the skin still damp, not wet; use warm, not hot, water for bathing.</p> <p>Use soapless, no-rinse and/or pH-neutral skin cleansers.</p> <p>Provide those at risk with protective clothing, such as long sleeves, long pants or knee-high socks or shin/elbow guard pads.</p> <p>Avoid using adhesive products on frail skin. If dressings or tapes are required, use non-traumatic paper/silicone tapes, non-adherent contact layers, non-adherent/silicone foam dressings or other topical dressings specifically formulated for management of fragile skin to avoid skin stripping or tearing with the removal of adhesives.</p> <p>Use silicone dressings when appropriate; note: silicone dressings may not provide enough adhesive security to ensure that essential medical devices (e.g., arterial lines) remain securely in place.</p> <p>Avoid patient identification armbands that have sharp edges or hard plastic or metal material.</p> <p>Keep the patient’s fingernails and toenails cut short and filed to remove rough edges to prevent self-inflicted skin tears.</p> <p>Provide information to staff/caregivers on the importance of “gentle care.”</p> <p>Staff/caregivers: keep fingernails cut short and do not wear rings or jewellery that could hurt the skin.</p> <p>Pediatrics:</p> <ul style="list-style-type: none"> ▪ Use thin hydrocolloid as a base when adhesives are needed. ▪ Leave adhesives on site for at least 24 hours.

Modified with kind permission from ISTAP.

4.2 Optimize the local wound environment.

Discussion: When treating skin tears, the first step is to control bleeding, cleanse the wound and re-approximate the wound edges. It is only then that the skin tear classification should be determined using the ISTAP Skin Tear Classification System¹⁷ (see Figure 4) and documented. While skin tears represent a specific type of wound, the same principles used to manage other wounds should be employed when treating skin tears.¹⁷ Once the skin tear has been properly categorized, local conditions within the wound can be assessed. Bacteria and necrotic tissue must be removed and the appropriate dressing selected to maintain moisture balance. Specific to those with and/or those at risk for skin tears, topical dressings should be selected that will not cause additional trauma to the wound bed and any remaining skin flap or cause further skin tear damage to the periwound skin.

4.2.1 Cleansing

Discussion: Uncomplicated skin tears (i.e., those without debris) can be gently cleansed with non-cytotoxic solutions such as clean/potable water, normal saline or nonionic surfactant cleansers at a low pressure of less than 8 psi to protect granulating tissue.¹⁷ Congealed and dried blood should be removed gently from the flap.²⁷ When removing an existing dressing to evaluate the wound, it is important not to disrupt healing or damage the intact skin surrounding the wound. Special care should be taken to NOT cause further trauma to any remaining fragile skin tear flap (Type 1 or 2 skin tears) or the fragile periwound skin. Skin tears with necrotic debris may require wound debridement (see debridement section below) and a wound specialist should be consulted when necessary.²⁷ If the layer of skin is torn but still attached, the flap should be repositioned over the wound, covering as much of the original surface as possible. If the skin flap is viable, the area should be gently cleansed and the flap rolled back into place with a dampened cotton tip applicator, gloved finger or twee-



zers.^{17,27} If the flap is difficult to align, the clinician should consider the applications of a moistened non-woven gauze compress to the area for five to 10 minutes to rehydrate the flap before repositioning. The flap should not be disturbed for at least five days to allow for adherence to the cellular structures below.^{17,27} A viable flap may not cover the entire wound bed, but should be positioned to cover as much area as possible.

4.2.2 Debriding

Discussion: Non-viable tissue provides a locus for infection, prolongs inflammatory response, inhibits wound contraction and delays wound healing.⁵³ Debridement is the process of removing non-vitalized tissue. This process may occur naturally by autolytic debridement (which can be supported through the use of moisture-balanced dressings) or by mechanical, enzymatic/chemical, larval, surgical or conservative sharp debridement. It is important to note that prior to debridement an assessment of tissue perfusion and blood flow, especially on the lower leg or foot, is required.¹⁷

In relation to skin tears where the skin flap is present but not viable, the flap may need to be debrided. Care should be taken during debridement to ensure that viable skin flaps are left intact and fragile skin is protected.²⁷ Determining if the remaining skin flap is viable can be complicated due to the ecchymosis, senile purpura and hematomas that are often associated with skin tears.⁵⁴ It is recommended that a wound specialist be consulted prior to debriding skin tears.

4.2.3 Managing bacterial balance

Discussion: It is important to note that skin tears are acute wounds. Initially these wounds may display increased inflammation to the injured area as the result of the trauma. Prior to treating for infection it is critical that health-care professionals distinguish between inflammation from trauma and inflammation from wound infection.^{3,27,55}

All topical dressings selected for the management of infection must be compatible with fragile skin in order to prevent further trauma (see Section 4.3).¹⁷

4.2.4 Managing moisture balance

Discussion: Ensure that all topical dressings for the management of moisture balance are compatible with fragile skin to prevent further trauma.²⁷ Dressings should be chosen in accordance with the demands of the wound bed and other patient factors. Generally, skin tears are not heavily exudating wounds; however, in some cases, depending on the location and co-morbidities such as peripheral edema, skin tears may be heavily exudating. Absorbent dressings such as foams, hydrofibres or alginates may be required to manage exudate.²⁷

4.3 Select the appropriate dressing and/or advanced therapy.

Discussion: The ISTAP established a skin tear product selection guide (see Table 5) to identify products currently in the global marketplace that will allow for moist wound healing in accordance with the local wound conditions, while at the same time respecting the fragile nature of the skin of those who have been identified as

Tetanus

Tetanus is an acute, often fatal disease caused by wound contamination with *Clostridium tetani*. Individuals with interruption of skin integrity by a non-surgical mechanism who have not received a tetanus toxoid (Td) inoculation in the past 10 years should be given human tetanus immunoglobulin (TIG) according to institutional policy. TIG neutralizes circulating tetanospasmin and toxin in the wound but not toxin that is already fixed in the nervous system. The TIG should be given before wound debridement because exotoxin may be released during wound manipulation.⁵⁴ For pediatric and critically ill populations, determine if TIG is appropriate.

being at risk for skin tear development.¹⁷ ISTAP does NOT recommend dressings be used as preventative measures. Adhesives should be avoided on the skin whenever possible. The list is neither all-inclusive nor all-encompassing. Frequency of dressing changes will be based on local wound conditions. The ISTAP recognized that not all of the products discussed are available in all countries. Some dressing categories were excluded for differing reasons: the strong adhesive nature of hydrocolloid and films dressings, the drying effects of iodine-based dressings, the lack of availability in many countries of non-gauze forms of polyhexamethylene biguanide (PHMB) dressings and an increased risk of periwound maceration with the use of medical honey dressings.

Special care should be taken with the pediatric population when selecting topical dressings. Ideally, topical wound dressings used in the pediatric population should be able to maintain moisture balance, protect the wound from bacteria and be atraumatic to the wound bed and periwound skin. Non-interactive dressings such as soft silicone foams and wound contact layers are viable choices.⁵⁷

Table 5: ISTAP Skin Tear Product Selection Recommendations⁵⁴

Product Categories	Indications	Skin Tear Type	Considerations
Non-adherent mesh dressings (e.g., lipido-colloid mesh, impregnated gauze mesh, silicone mesh, petrolatum)	<ul style="list-style-type: none"> dry or exudative wound 	1, 2, 3	<ul style="list-style-type: none"> maintains moisture balance for multiple levels of wound exudate atraumatic removal may need secondary cover dressing
Foam dressings	<ul style="list-style-type: none"> moderate exudate longer wear time (2 – 7 days depending on exudate levels) 	2, 3	<ul style="list-style-type: none"> caution with adhesive border foams use non-adhesive versions when possible to avoid periwound trauma
Hydrogels	<ul style="list-style-type: none"> for dry wounds; donates moisture 	2, 3	<ul style="list-style-type: none"> caution: may result in periwound maceration if wound is exudative for autolytic debridement in wounds with low exudate secondary cover dressing required
2-octyl cyanoacrylate topical bandages (skin glue)	<ul style="list-style-type: none"> to approximate wound edges 	1	<ul style="list-style-type: none"> use in a similar fashion as sutures within first 24 hours post injury relatively expensive medical directive/protocol may be required
Calcium alginates	<ul style="list-style-type: none"> moderate to heavy exudate; hemostatic 	1, 2, 3	<ul style="list-style-type: none"> may dry out wound bed if inadequate exudate secondary cover dressing required

cont'd.

Hydrofibres	<ul style="list-style-type: none"> moderate to heavy exudate 	2, 3	<ul style="list-style-type: none"> no hemostatic properties may dry out wound bed if inadequate exudate secondary cover dressing required
Acrylic dressings	<ul style="list-style-type: none"> mild to moderate exudate without any evidence of bleeding, may remain in place for an extended period based on product monograms 	1, 2, 3	<ul style="list-style-type: none"> care on removal should only be used as directed and left on for extended wear time, especially on extremely fragile skin not appropriate for heavily exuding wounds may cause skin tears if improperly removed

Special Considerations for Infected Skin Tears

Product Categories	Indications	Skin Tear Type	Considerations
Methylene blue and gentian violet dressings	<ul style="list-style-type: none"> effective broad-spectrum antimicrobial action including on antibiotic-resistant organisms 	1, 2, 3	<ul style="list-style-type: none"> non-traumatic to wound bed use when local or deep tissue infection is suspected or confirmed secondary dressing required
Ionic silver dressings	<ul style="list-style-type: none"> effective broad-spectrum antimicrobial action including on antibiotic-resistant organisms 	1, 2, 3	<ul style="list-style-type: none"> should not be used indefinitely contraindicated in patients with silver allergy use when local or deep infection is suspected or confirmed use non-adherent products whenever possible to minimize risk of further trauma

Note: This product list is not all-inclusive; there may be additional products applicable for the treatment of skin tears.

Special Considerations for Skin Tears in the Pediatric Populations

- Ensure that all products used have been verified for use in the pediatric populations.
- Ensure that products do not pose a risk of causing systematic or tissue toxicity when used on immature skin.
- Ensure that all products are atraumatic on removal.

Modified with kind permission from ISTAP.

Evidence to Support Products not Included on the ISTAP Product Guide for Skin Tears

Honey dressings: Given that honey dressings provide moist wound healing, health-care professionals may want to consider *Leptospermum* honey dressings if they deem it appropriate for the wound bed conditions.⁵⁸

Polyhexamethylene biguanide (PHMB) dressings: Given that PHMB is an effective antimicrobial product,⁵⁹ health-care professionals may want to consider its use if they deem it appropriate for the wound bed conditions. There have been no studies to date addressing the use of PHMB for the treatment of infected skin tears.

Products NOT Recommended for Use in Skin Tears

Iodine-based dressings: Iodine has been used in various forms in wound care since 1882 for the prevention and treatment of infected wounds with great success.⁶⁰ While iodine is a very effective antimicrobial dressing, one of its results is the drying of the wound and periwound skin. If iodine-based products are used on individuals with fragile skin, health-care professionals must be cognizant of the potential risks such as drying of the periwound skin.

Film/Hydrocolloid dressings: While film and hydrocolloid dressings are widely used in wound care, they have a strong adhesive component and have been reported to contribute to medical adhesive-related skin tears.³² Therefore, film and hydrocolloid dressings are not recommended for use in those who are at high risk for or who have a skin tear. In contrast, acrylic dressings, while similar in appearance to both film and hydrocolloid dressings, are designed to remain in place for an extended period of time (up to 21 days) and have been used in skin tears effectively.⁵⁴

Change in Practice Related to Skin Closure Strips

Wounds closed by primary intention have been traditionally secured with sutures or staples. Given the fragility of elderly skin, sutures and staples are not a recommended option.^{1,3}

In the pediatric population, Quinn et al. reported that topical skin glue was a faster and less painful method, with better scar management, compared with sutures or skin closure strips for managing skin tears and lacerations in children.⁶¹ These findings warrant further research into this treatment across all age groups for the treatment of Type 1 skin tears.

Advanced Dressing Considerations Specific for Skin Tears

Skin tears are generally acute wounds; however, in cases where the circumstances or co-morbidities delay wound healing, advanced therapies may be considered. A wound expert should be consulted to work with the health-care team, the organization and the patients and their families to ensure that the agreed-upon goals of care are established and that the treatment plan is in accordance with these goals.¹⁷

4.4 Engage the team to ensure consistent implementation of the plan of care.

Discussion: Engagement of individuals in their own care occurs when they meaningfully and actively collaborate in the goal setting and management of their care. This engagement results in improved care and improved outcomes.⁶³ Carman et al. emphasized that engagement is characterized by a fluidity of information between the individual and their health-care provider, how active the individual is in care decisions and how involved the individual becomes in decision making. Engagement occurs at multiple levels, including direct care, organizational and policy making.⁶³ Skin tear prevention programs across all age groups and levels of care must include a plan

Dressing Tip

Always remove the dressing with the skin flap (the pedicle) and not against it to maintain flap viability. Indicate on the dressing the classification, size and shape of the skin tear and direction for dressing removal. Care should be taken to follow the product monogram instructions for proper dressing removal.

for engaging individuals, families, caregivers, health-care professionals and organizations to ensure that best practices are implemented. All stakeholders must collaborate to ensure that programs are successful and sustainable.

Self-management refers to an individual’s ability to make life-style choices to prevent or manage a disease or condition. It is central to patient-centred care.⁶⁴ Self-management programs seek to empower or engage individuals to cope with and/or prevent disease and in the process enjoy a better quality of life. This approach does not replace the health-care team, but rather encourages a partnership between individuals at risk and their health-care team.

Implementation of a prevention program should centre on self-management and ways health-care professionals can aid individuals in modifying behaviours where necessary. As one example of how health-care professionals can assist individuals to choose beneficial behaviours, consider the modifiable risk factor of xerosis. Studies have indicated skin tear incidence can be greatly reduced by twice daily application of moisturizers.⁵ Therefore, individuals who can be motivated to modify their behaviours by applying a skin moisturizer twice daily can enjoy potential reduction of skin tears. To achieve this reduction, the individual at risk may need physical assistance or support in the form of regular reminders to apply the moisturizer.

Special Consideration: Control Peripheral Edema

Lower leg edema is well documented to contribute to delayed wound healing, regardless of wound etiology.⁶⁰ When skin tears occur on the lower limb, the risk and cause of potential peripheral edema should be assessed.^{4,26} It is important to control edema and equally important to rule out any significant degree of peripheral vascular disease. This should be done prior to the application of compression therapy for edema control and can be established through a clinical history and total leg assessment, including the use of Doppler ultrasound to determine the ankle brachial pressure index.^{4,26}

Table 6: Engagement Strategies for Skin Tear Management⁶³

Level	Skin Tear Management Strategies
Direct care	<ul style="list-style-type: none"> integration of individual’s (including family/caregivers) beliefs around skin health into the plan of care introduction of the individual, family/caregivers and their health-care providers to strategies for prediction, prevention, assessment and management of skin tears open dialogue between the individual, family/caregivers and health-care providers to discuss and implement plan of care
Organizational	<ul style="list-style-type: none"> integration of the health-care providers and the individual, family/caregivers into the design and governance of an overarching skin tear management program including individual, family/caregivers in continuous quality improvement teams and strategies to maintain resources over time
Policy making	<ul style="list-style-type: none"> engagement focused on developing, implementing and evaluating skin tear management programs partnerships between individual, family/caregivers, health-care providers and organization to set priorities and make policies required to support skin tear management programs

Step 5: Evaluate Outcomes



Step 5: Evaluate Outcomes

5.1 Determine if the outcomes have met the goals of care.

Discussion: Literature supports primary prevention as the best skin tear management strategy.^{65,66} By controlling modifiable risk factors, skin health can be maintained and injury avoided. However, if skin tears occur, they are acute wounds and should close in a timely fashion (seven to 21 days).

5.2 Reassess patient, wound, environment and system if goals are partially met or unmet.

Discussion: If skin tears do not close in a timely fashion (seven to 21 days), barriers to wound healing should be assessed. The individual should be assessed for possible repeat trauma to the area and co-morbidities that might be delaying wound healing.¹ The local wound environment, the physical environment and the supports from the organization should be reassessed to ensure that best practice is being followed and all modifiable factors are controlled. If any goals are not met, the barriers should be readdressed and modified if applicable. If necessary, new, more realistic goals should be set.

5.3 Ensure sustainability to support prevention and reduce risk of recurrence.

Discussion: As with any other wound-related program, sustainability of a successful skin tear program requires support at both the organizational and clinical level.

The association between skin tear prevalence and rising wound care costs, coupled with governments' political agendas emphasizing primary prevention, provides governments with the incentive to promote population-based skin health.^{7,67} Skin tear prevalence and incidence should be monitored and tracked to allow for benchmarking and program evaluation.⁷

The RNAO developed a tool kit for implementation of best practice guidelines.⁶⁷ While these guidelines were developed for the implementation of guidelines on a more global level, the principles can be distilled to be applicable to the individual as well as an organization (see Table 7). The RNAO guidelines are based on the "knowledge to action" framework.⁶⁸

Table 7: Implementation and Sustainability of a Skin Tear Management Plan^{17,67}

Steps of the Knowledge-to-Action Model	Specific Content	Skin-tear-management-specific Application
Identify the problem	Identify gaps in practice. Use quality indicators to determine the extent of the problem.	Identify the knowledge, attitude and practice around skin tear prediction, prevention, assessment and management.
Adapt knowledge to local context	Develop an infrastructure for implementing best practices. Critically appraise and adapt best practice to the culture.	Identify available resources and attitudes surrounding skin tears. Adapt knowledge to the environment (long-term care, community, various age groups).
Involve stakeholders	Ensure stakeholder identification, analysis and engagement to lead the implementation process.	As skin tears occur across the age continuum and across health-care settings, multiple stakeholders may be involved.
Identify resources	Identify resources (physical and knowledge-based), including available best practices.	Valuable resources for skin tear prevention include positive attitudes and practices by individuals, family/caregivers and health-care providers.
Assess facilitators and barriers to implementation	Address or manage potential barriers and maximize facilitators (see section 4.2).	A major barrier to skin tear management is the knowledge, attitudes and practices of individuals, family/caregivers and health-care providers (see section 4.2 for strategies).
Tailor implementation strategies to the individual	Assess education needs based on audits and stakeholder feedback. Design implementation strategies to meet the identified needs and to align with organizational policies and needs.	Adapt skin tear management plan to the setting and age group.
Monitor knowledge use and outcomes	Implement ongoing quality improvement processes, indicator monitoring and ongoing data collection and review. Some considerations: <ul style="list-style-type: none"> ▪ the use of e-health and electronic health records in this process ▪ indicator identification worksheet ▪ structure, process and outcome, evaluation relevant to initial problem and reducing the gaps ▪ evaluation models, logic model 	Ensure consistent documentation of skin tears using a validated classification system. Conduct ongoing prevalence and incidence studies to benchmark burden of skin tears and success of management programs.

cont'd.

Steps of the Knowledge-to-Action Model	Specific Content	Skin-tear-management-specific Application
Sustain knowledge and implementation	<p>Embed an evidence-informed practice culture through orientation, position descriptions, performance appraisal and mission, vision and values.</p> <p>Leverage key organizational structures in ensuring such a culture is adopted throughout the organization at every level.</p>	<p>Engage all levels (individual, family/caregivers, health-care providers and organization) in ongoing knowledge production and dissemination and implementation of best practices.</p>

Conclusion

There is every reason to believe that well-crafted interventions can be highly effective in improving skin health. Skin tears are preventable acute wounds with a high propensity in certain individuals to develop into chronic wounds and impose health burdens on individuals and care agencies. Although often under-reported, skin tears are hypothesized to be highly prevalent and particularly troublesome for the elderly population. Individuals with skin tears often complain of increased pain that, in addition to biopsychosocial factors associated with wounds such as physical disability, social needs and mental anguish, may negatively impact quality-of-life.

Neonatal and pediatric populations can also be affected by skin tears, but the healing process is usually fast if their health condition is stable. Skin growth rates in infants are higher than in adults. The skin of infants is characterized by a greater ability to restore itself as a barrier.⁶⁹ It is important to note that skin tears are a source of pain and anxiety for these patients and can create great distress in parents seeing their newborn's skin disrupted.

Prevention of skin tears in all age groups is considered the key to management, so the focus should be on controlling modifiable risk factors so skin health can be maintained and injury avoided.

References



References

1. LeBlanc K, Baranoski S, Christensen D, Langemo D, Sammon M, Edwards K, et al. State of the science: Consensus statements for the prevention, prediction, assessment and treatment of skin tears. *Advances in Skin and Wound Care*. 2011;24(9):2.
2. Carville K, Lewin G, Newall N, Halehurst P, Michael R, Santamaria N, et al. STAR: A consensus for skin tear classification. *Primary Intention: The Australian Journal of Wound Management*. 2007;15(1):18.
3. Rayner R, Carville K, Leslie G, Roberts P. A review of patient and skin characteristics associated with skin tears. *Journal of Wound Care*. 2015;24(9):406.
4. LeBlanc K, Baranoski S, Christensen D, Langemo D, Edwards K, Holloway S, et al. The art of dressing selection: A consensus statement on skin tears and best practices. *Advances in Skin and Wound Care*. 2016;29(1):32–46.
5. Carville K, Leslie G, Osseiran-Moisson R, Newall N, Lewin G. The effectiveness of a twice-daily skin-moisturizing regimen for reducing the incidence of skin tears. *International Wound Journal*. 2014;11(4):446–453.
6. Hsu M, Chang S. A study on skin tear prevalence and related risk factors among inpatients. *Tzu Chi Nursing Journal*. 2010;9(4):84–95.
7. LeBlanc K, Christensen D, Cook J, Gutierrez O. Prevalence of skin tears in a long-term care facility. *J Wound, Ostomy, Cont Nurs*. 2013;40(6):580–584.
8. Everett JP. The underestimated wound. *Primary Intention: The Australian Journal of Wound Management*. 1998;2(8):8.
9. McErlean BS. Skin tear prevalence and management at one hospital. *Primary Intention: The Australian Journal of Wound Management*. 2004;12(2):83.
10. Santamaria N. Wounds West: Identifying the prevalence of wounds within western Australia's public health system. *EWMA Journal*. 2009;9(3):13–18.
11. Woo K, LeBlanc K. Prevalence of skin tears among the elderly living in Canadian long-term care facilities. *Canadian Association of Wound Care*. 2014;11. Toronto: CAWC.
12. Woo KY, Sears K, Almost J, Wilson R, Whitehead M, VanDenKerkhof EG. Exploration of pressure ulcer and related skin problems across the spectrum of health care settings in Ontario using administrative data. *Int Wound J*. 2017;14(1):24–30.
13. Orsted HL, Keast DH, Forest-Lalande L, Kuhnke JL, O'Sullivan-Drombolis D, Jin S, et al. Skin: Anatomy, physiology and wound healing. In: *Foundations of Best Practice for Skin and Wound Management. A supplement of Wound Care Canada*; 2017. Available from: www.woundscanada.ca/health-care-professional/education-health-care-professional/advanced-education/12-healthcare-professional/110-supplements.
14. Orsted HL, Keast DH, Forest-Lalande L, Kuhnke JL, O'Sullivan-Drombolis D, Jin S, et al. Best practice recommendations for the prevention and management of wounds. In: *Foundations of Best Practice for Skin and Wound Management. A supplement of Wound Care Canada*; 2017. Available from: www.woundscanada.ca/health-care-professional/education-health-care-professional/advanced-education/12-healthcare-professional/110-supplements.
15. Registered Nurses' Association of Ontario (RNAO). *Clinical Best Practice Guidelines: Assessment and Management of Foot Ulcers for People with Diabetes (2nd Edition)*. 2013.

16. Coultous M, Forsyth D, Hume A, Morrison J. National Patient Safety Agency: Health-care Risk Assessment Made Easy. National Patient Safety Agency. 2007. Available from: www.nrls.npsa.nhs.uk/EasySiteWeb/getresource.axd?AssetID=60138&type=full&servicetype=Attachment.
17. LeBlanc K, Baranoski S, Christensen D, Langemo D, Williams A, Edwards K, et al. International skin tear advisory panel: A tool kit to aid in the prevention, assessment, and treatment of skin tears using a simplified classification system. *Advances in Skin and Wound Care*. 2013;26(10):459–476.
18. LeBlanc K, Alam T, Langemo D, Baranoski S, Campbell K, Woo K. Clinical challenges of differentiating skin tears from pressure ulcers. *EWMA Journal*. 2016;16(1):17–23.
19. Dorner B, Posthauer M, Thomas D. European Pressure Ulcer Advisory Panel and National Pressure Ulcer Advisory Panel: Role of Nutrition in Pressure Ulcer Healing. EPUAP & NPUAP. London: EPAUP & NPUAP. 2009.
20. Stratton RJ, Ek AC, Engfer M, Moore Z, Rigby P, Wolfe R, et al. Enteral nutritional support in prevention and treatment of pressure ulcers. *Age Res Rev*. 2005;4:422–50.
21. Hajjar ER, Cafiero AC, Hanlon JT. Polypharmacy in elderly patients. *Am J Geriatr Pharmacother*. 2007;5(4):345–51.
22. Pervin L. Polypharmacy and the aging: Is there cause for concern? *AJN*. 2008;1(1):10.
23. Strazzieri-Pulido KC, Peres G, Campanili T, Conceição de Gouveia Santos V. Skin tear prevalence and associated factors: A systematic review. *Rev Esc Enferm USP*. 2015;49(4):668–674.
24. Lewin G, Newall N, Alan J, Carville K, Santamaria N, Roberts P. Identification of risk factors associated with the development of skin tears in hospitalized older persons: A case-control study. *International Wound Journal*. 2016;13(6):1246–1251.
25. Lopez V, Dunk A, Cubit K, Parke J, Larkin D, Trudinger M. Skin tear prevention and management among patients in the acute aged care and rehabilitation units in the Australian capital territory: A best practice implementation project. *International Journal of Evidence-Based Health-care*. 2011;9(4):429–434.
26. Pennsylvania Patient Safety Reporting System (PPSRS). Skin tears: The clinical challenge. PA-PPSRS Patient Safety Advisory. 2006;3(3):1–7.
27. Ellis R, Gittins E. All Wales Tissue Viability Nurse Forum Best Practice Statement: The Assessment and Management of Skin Tears. London, UK: Wounds UK. 2015.
28. Bank DN. Preventing skin tears in a nursing and rehabilitation center: An interdisciplinary effort. *Ostomy/Wound Management*. 2006;52(9):38.
29. White M, Karam S, Cowell B. Skin tears in frail elders: A practical approach to prevention. *Geriatric Nursing*. 1994;15(2):95–99.
30. Neyens J, Dijcks B, Twisk J. A multifactorial intervention for the prevention of falls in psychogeriatric nursing home patients, a randomised control trial. *Age and Aging*. 2009;38(1): 194–9.
31. Registered Nurses' Association of Ontario (RNAO). Nursing Best Practice Guidelines: Prevention of Falls and Fall Injuries in the Older Adult. 2011. Available from: www.rnao.ca/sites/rnao-ca/files/Prevention_of_Falls_and_Fall_Injuries_in_the_Older_Adult.pdf.
32. McNichol L, Lund C, Rosen T, Gray M. Medical adhesives and patient safety: State of the science: Consensus statements for the assessment, prevention, and treatment of adhesive-related skin injuries. *Orthop Nurs*. 2013;32(5):267–81.

33. Kaya G, Saurat J. Dermatoporosis: A chronic cutaneous insufficiency/fragility syndrome. *Dermatology*. 2007;215(1):284.
34. Kaya G, Saurat J. Dermatoporosis: A new concept in skin aging. *European Geriatric Medicine*. 2013;166(1):440.
35. LeBlanc K, Baranoski S, Holloway S, Langemo D, Regan M. A descriptive cross-sectional international study to explore current practices in assessment, prevention and treatment of skin tears. *International Wound Journal*. 2014;11(1):424–430.
36. Baharestani M. An overview of neonatal and pediatric wound care knowledge and considerations. *Ostomy/Wound Management*. 2007;53(6):34–55.
37. Montague M, Borland R, Sinclair C. Slip, slop, slap and SunSmart 1980 to 2000: Skin cancer control and 20 years of population based campaigning. *Health Education & Behavior*. 2001;28(3):31.
38. Sibbald RG, Krasner DL. SCALE: Skin Changes at Life's End. Final Consensus Statement. 2009. Available from: www.epuap.org/wp-content/uploads/2012/07/SCALE-Final-Version-2009.pdf.
39. Sibbald RG, Krasner DL, Lutz J. Tip the SCALE toward quality end-of-life skin care. *Nursing Management*. 2011;42(3):24–33.
40. Woo KY. Trends in wound management. *Advances in Skin and Wound Care*. 2013;26(12):5.
41. Salcido R. The language of wound care: Taxonomy of discourse. *Advances in Skin and Wound Care*. 2000;13(1):252–245.
42. International Skin Tears Advisory Panel. Skin Tear Classification System. 2015. Available from: www.skintears.org/Skin-Tear-Algorithm/.
43. Payne RM. Skin tears, the epidemiology and management of skin tears in older adults. *Ostomy/Wound Management*. 1990;26(1):26–37.
44. Sanada H, Nakagami G, Koyano Y, Lizaka S, Sugama J. Incidence of skin tears in the extremities among elderly patients at a long-term medical facility in Japan. *Geriatric Gerontology International*. 2015;15:1059–61.
45. Sibbald RG. Best practice recommendations for preparing the wound bed: Update 2006. *Wound Care Canada*. 2006;4(1):15.
46. Sibbald RG, Krasner DL, Lutz J, Baranoski S. SCALE: Skin changes at life's end: Final consensus statement. *Advances in Skin & Wound Care*. 2010;23(5):225–236.
47. Holloway S, Harding K, Stechmiller J, Schultz G. Acute and chronic wound healing. In: Baranoski S, Ayello EA. (eds.) *Wound Care Essentials: Practice Principles (3rd Edition)*. Philadelphia, PA: Wolters Kluwer/Lippincott Williams & Wilkins; 2012. p. 83.
48. Baranoski S, Ayello EA, Langemo D. Wound assessment. In: Baranoski S, Ayello EA. (eds.) *Wound Care Essentials: Practice Principles (3rd Edition)*. Philadelphia PA: Wolters Kluwer/Lippincott Williams & Wilkins; 2012. p. 101.
49. Marshall L. *Mastering Patient and Family Education: A Health-care Handbook for Success*. Sigma Theta Tau; 2016.
50. Hibbard JH, Green J. What the evidence shows about patient activation: Better health outcomes and care experiences; Fewer data on costs. *Health Affairs*. 2013;32(2):2017–14.
51. Carman KL, Dardess P, Maurer M, Sofaer S, Adams K, Bechtel C. Patient and family engagement: A framework for understanding the elements and developing interventions and policies. *Health Affairs*. 2013;32(2):223–231.

52. Graham ID, Logan J, Harrison MB, Straus SE, Tetroe J, Caswell W, et al. Lost in knowledge translation: Time for a map? *Journal of Continuing Education in the Health Professions*. 2006;26(1):13–24.
53. Baranoski S, Ayello E, Tomic-Canic M, Levine J. Skin: An essential organ. In: Baranoski S, Ayello EA. (eds.), *Wound Care Essentials: Practice Principles (3rd Edition)*. Philadelphia PA: Wolters Kluwer/Lippincott Williams & Wilkins; 2012. p. 57.
54. LeBlanc K, Baranoski S, Christensen D, Langemo D, Edwards K, Holloway S, et al. The art of dressing selection: A consensus statement on skin tears and best practice. *Advances in Skin and Wound Care*. 2015;29(1):32–46. Available from: <https://cme.lww.com/files/TheArtofDressingSelectionAConsensusStatementonSkinTearsandBestPractice-1450129419341.pdf>.
55. Krasner D. Skin tears: Understanding problem leads to prevention and proper care. *J Am Geriatric Soc*. 2010;29(5):30–3.
56. Tintinalli J, Kelen G, Stapczynski (eds.). *Emergency Medicine: A Comprehensive Study Guide (6th Edition)*. New York : McGraw-Hill; 2004.
57. Buront F, Irving V, Bethell E. Preventing trauma and pain in pediatric wound care. In: White R, Denyer J. *Paediatric Skin and Wound Care*. Wounds UK, Upperkirkgate, Aberdeen; 2006. p. 168–184.
58. Molan P, Rhodes T. Honey: A biologic wound dressing. *Wounds*. 2015;27(6):141–151.
59. Mulder GD, Cavorsi JP, Lee DK. Polyhexamethylene biguanide (PHMB): An addendum to current topical antimicrobials. *Wounds*. 2007;19(7):173–182.
60. Sibbald RG, Leaper DJ, Queen D. Iodine made easy. *Wounds International*. 2011;2(2):S1.
61. Quinn JV, Drzewiecki A, Li MM, Stiell IG, Sutcliffe T, Elmslie TJ, et al. A randomized, controlled trial comparing a tissue adhesive with suturing in the repair of pediatric facial lacerations. *Ann Emerg Med*. 1993;22:1130.
62. Lindsay E, White R. (eds.). *Leg Ulcers and Problems of the Lower Limb: A Holistic Approach*. Aberdeen, UK: HealthComm UK Ltd; 2007.
63. Carman L, Dardess P, Maurer M, Sofaer S, Adams K, Bechtel C, et al. Patient and family engagement: A framework for understanding the elements and developing interventions and policies. *Health Affairs*. 2013;32(2):223–231.
64. McGowan PT. Self-management education and support in chronic disease management. *Primary Care*. 2012;39(2):307–325.
65. Hampton S. How to preserve skin integrity and prevent skin tears. *Nursing and Residential Care*. 2010;12(6):284.
66. Sussman G, Golding M. Skin tears: Should the emphasis be only on their management? *Wound Practice and Research*. 2011;19(2):66–71.
67. Registered Nurses' Association of Ontario (RNAO). *Implementation Strategies*. 2012. Available from: <http://rnao.ca/bpg/implementation-resources>.
68. Kitson A, Straus S. Identifying knowledge to action gaps. In: Straus S, Tetroe J, Graham I. (eds.). *Knowledge Translation in Health-care: Moving Evidence to Practice (2nd Edition)*. Oxford, UK: Wiley-Blackwell; 2013. p. 97–109.
69. Oranges T, Dini V, Romanelli M. Skin physiology of the neonate and infant: Clinical implications. *Adv Wound Care*. 2015;4(10):587–595.

