

Patient Safety Alert

File Number: 17/18- 03

November 9, 2017

PREVENTING PRESSURE ULCERS IN ACUTE CARE PATIENTS

Pressure ulcers¹ cause considerable harm to patients, hindering functional recovery and frequently causing pain and the development of serious infections. Pressure ulcers have also been associated with extended lengths of stay in hospital, sepsis and mortality (Institute for Healthcare Improvement – Pressure Ulcers). Acquiring a stage 3 or 4 pressure ulcer after admission to a facility is considered a “never event”² by the Canadian Patient Safety Institute.

In the five-year period ending March 31, 2017, there were 63 critical incidents reported regarding *stage 3 or 4 pressure ulcers acquired after admission to a facility*. Prior to 2016-17, 21% of those events occurred in acute care settings, with the balance occurring in long term care or other settings. A change was observed in 2016-17 when 50% (10 out of 20) of the stage 3 or 4 pressure ulcer critical incidents occurred in acute care.

The absence or inconsistent use of guidelines for assessment, management, documentation, and communication were factors contributing to the development of stage 3 or 4 pressure ulcers in patients in acute care settings.

RECOMMENDATIONS

The Ministry of Health recommends that regional health authorities and health care organizations:

- **Ensure guidelines are followed in acute care settings so that patients at risk of pressure ulcers are clearly identified upon admission using validated tools such as the Braden Scale for Predicting Pressure Ulcer Risk;**
- **Ensure evidence-based guidelines for the treatment of pressure ulcers are developed, incorporated into patients’ care plans, and evaluated on a regular basis.**

¹ A pressure ulcer is a localized injury to the skin and/or underlying tissue, usually over a bony prominence as a result of pressure, or pressure in combination with shear.

² Never events are patient safety incidents that result in serious patient harm or death and that are preventable using organizational checks and balances.

www.patientsafetyinstitute.ca/en/toolsResources/NeverEvents/Documents/Never%20Events%20for%20Hospital%20Care%20in%20Canada.pdf

- **Establish a work standard for clear and consistent documentation for reporting pressure ulcers present on admission and those that are acquired while hospitalized;**
- **Ensure that upon discharge, proper communication regarding the patient's skin integrity is communicated to the patient/family and to resources within the community (i.e. homecare following up with patient, and/or private care homes where the patient may reside); and**
- **Institute pressure ulcer prevention strategies for use in acute care in accordance with best practices and evaluate on an ongoing basis.**

Supporting Documents

1. Patient Safety Institute – Hospital Harm Improvement Resource Pressure Ulcers (attached) www.patientsafetyinstitute.ca/en/toolsResources/Hospital-Harm-Measure/Documents/Resource-Library/HHIR%20Pressure%20Ulcer.pdf
2. Institute for Healthcare Improvement – Pressure Ulcers. See website for many resources. www.ihl.org/Topics/PressureUlcers/Pages/default.aspx
3. Braden Scale Pressure Injury Risk Assessment Tool (attached)
4. Prince Albert Parkland Health Region – Policy on Wound Care / Pressure Injury Prevention and Management (December 29, 2016)
5. Prince Albert Parkland Health Region – Pressure Ulcer: Prevention and Management Learning Package (September 2015)
6. Prince Albert Parkland Health Region – Pressure (Injury Ulcer) Prevention Handout for Patients and Families

Background of the Critical Incident

Incident 1

A 72-year-old patient was admitted to acute care and underwent a surgical hip repair. Throughout the admission, 'hotspots' were noted to the heels, and the Braden scale indicated mild to moderate risk. The patient developed a stage 3 pressure injury to the right heel approximately four weeks after admission. The pressure injury was noted by the wound care nurse and a dressing was applied. Intervention to prevent the injury was not documented until that time.

Incident 2

An 87-year-old who resided in a long term care facility was admitted to an inpatient medical unit with hypernatremia, hypovolemia and urosepsis. The patient had an extensive medical history. There was no documentation to imply any impairment in the patient's skin integrity. A wound on the patient's coccyx was first documented as an intact blister on day 4 of the admission and a dressing was applied. The patient remained on antibiotics for treatment of urosepsis and pneumonia while in hospital. Limited improvements were noted in the patient's condition and a decision was made to transfer the patient back

to the long term care facility with comfort care measures in place. The patient was discharged from hospital after 20 days. Upon return to the long term care facility, staff noted an unstageable (most severe) pressure ulcer on the patient's coccyx.

Incident 3

A patient was admitted to hospital for 14 days. In this time frame there was little documentation regarding a Stage 2 pressure injury to the coccyx. Two days post discharge, the enterostomal therapy nurse assessed the client as an outpatient, and noted a Stage 3 pressure injury to the coccyx.

Incident 4

A 72-year-old patient was admitted and underwent surgery to repair a fractured left femur resulting from a fall at home. There was no documentation to imply any impairment in the patient's skin integrity. A red area on the patient's coccyx was first documented three days post surgery, for which a dressing was applied. Dressing changes continued to occur throughout the admission. The patient's risk for skin breakdown was not assessed until 17 days post surgery when the Braden Scale for Predicting Pressure Ulcer Risk was first used. At 28 days post surgery, a 1 cm round area of open skin was noted on the patient's coccyx. The area was cleansed with normal saline and a mepilex border dressing was applied. A small scabbed area was also reported to the patient's left buttock and the area was cleansed and Nystatin cream was applied. The patient was discharged from hospital to home the next day with a referral to home care for occupational therapy but no referral for wound management. The occupational therapist assessed the patient at home 20 days post discharge, at which time a pressure ulcer was noted on the right ischial tuberosity (IT) region. The patient's spouse reported that three wounds were present upon discharge from hospital (two additional wounds were present on the patient's coccyx and above the right IT region).

Summary of Contributory Factors and Analysis

- Head-to-toe assessments are not consistently being done, increasing the likelihood of missing alterations in skin integrity.
- Risk tools such as the Braden Scale for Predicting Risk for Skin Breakdown are not being completed according to standards, which contributes to the patient not being identified as at risk of developing a pressure ulcer.
- Preventative measures are not being used consistently when risks for skin breakdown are identified.
- Medical records are lacking documentation on wound assessment and management, and frequency of patient turning and repositioning.
- Patients that present with cognitive impairment may pose a challenge when staff are attempting to turn and reposition the patient.
- Referrals to dietitians are not being made in a timely manner leading to poor nutritional intake of the patient during admission.

General Background

- The number of critical incidents reported as *stage 3 or 4 pressure ulcers acquired after admission to a facility* has increased in Saskatchewan over the past five years. Notable is the tenfold increase of stage 3 and 4 pressure ulcers reported in acute care settings.

Pressure Ulcers reported as Critical Incidents					
Year	LTC	Hospital	Other *	Home Care	Total
2012-13	8 (89%)	1 (11%)	0	0	9
2013-14	6 (60%)	1 (10%)	3	0	10
2014-15	4 (57%)	3 (43%)	0	0	7
2015-16	13(76%)	4 (24%)	0	0	17
2016-17	9 (45%)	10 (50%)	0	1	20

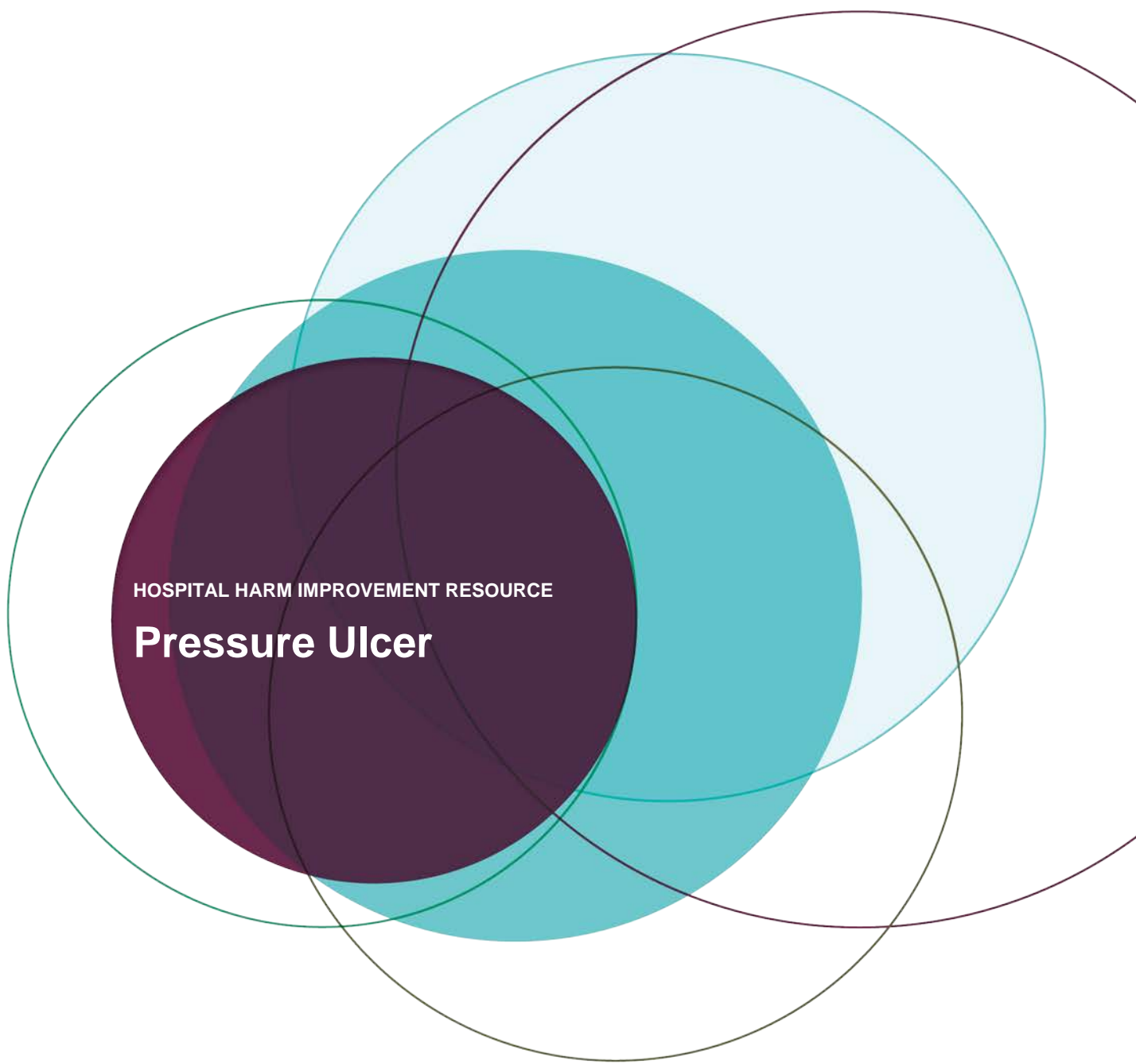
*Undetermined if pressure ulcer developed in LTC or Hospital

- Stage 3 or 4 pressure ulcers are amongst the five most-often-reported critical incident sub-categories in four of the past five years.

Patient safety alerts may be issued by the Ministry of Health following the review of at least one critical incident reported to the Ministry. A critical incident is defined as a serious adverse health event including, but not limited to, the actual or potential loss of life, limb or function related to a health service provided by, or a program operated by, a regional health authority, Saskatchewan Cancer Agency or health care organization.

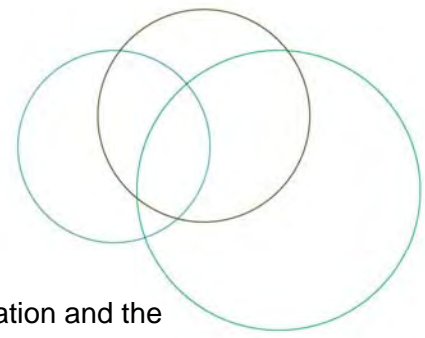
The purpose of a patient safety alert is to recommend actions that will improve the safety of patients who may be cared for under similar circumstances. Recommendations are intended to support the development of best practices and to act as a framework for improvement and can be adapted to fit the needs of the health service organization. When possible, policies or initiatives that have been developed by RHAs or the Saskatchewan Cancer Agency will be shared, to encourage adoption of similar policies or actions.

Patient Safety Alerts online: www.ehealthsask.ca/services/resources/Pages/Safety-Alerts.aspx



HOSPITAL HARM IMPROVEMENT RESOURCE

Pressure Ulcer



ACKNOWLEDGEMENTS



The Canadian Institute for Health Information and the Canadian Patient Safety Institute have collaborated on a body of work to address gaps in measuring harm and to support patient safety improvement efforts in Canadian hospitals.

The Hospital Harm Improvement Resource was developed by the Canadian Patient Safety Institute to complement the Hospital Harm measure developed by the Canadian Institute for Health Information. It links measurement and improvement by providing evidence-informed resources that will support patient safety improvement efforts.

The Canadian Patient Safety Institute acknowledges and appreciates the key contributions of the Registered Nurses' Association of Ontario and Karen E. Campbell, RN, MSCN, PhD for the review and approval of this Improvement Resource.

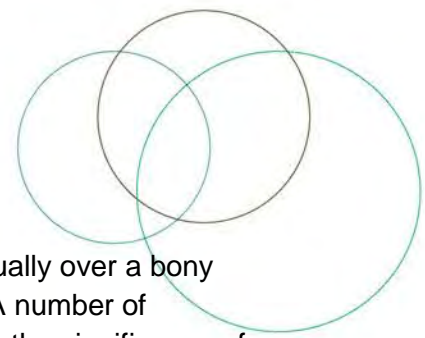




DISCHARGE ABSTRACT DATABASE (DAD) CODES INCLUDED IN THIS CLINICAL CATEGORY:

A08: Pressure Ulcer	
Concept	Any stage of pressure ulcer identified during a hospital stay.
Selection criteria	L89.– Identified as diagnosis type (2)
Codes	Code descriptions
L89.–	Decubitus (pressure) ulcer and pressure area





Overview

A pressure ulcer is a localized injury to the skin and/or underlying tissue, usually over a bony prominence as a result of pressure, or pressure in combination with shear. A number of contributing or confounding factors are also associated with pressure ulcers; the significance of these factors is yet to be elucidated (National Pressure Ulcer Advisory Panel et al, 2014). Pressure ulcers cause considerable harm to patients, hindering functional recovery, frequently causing pain and the development of serious infections. Pressure ulcers have also been associated with an extended length of stay, sepsis, and mortality (IHI, Pressure Ulcers). Accreditation Canada recognizes the importance of effective prevention strategies in the reduction of pressure ulcers and has identified pressure ulcer prevention as a Required Organizational Practices (ROP) (Accreditation Canada).

IMPLICATIONS

Pressure ulcers continue to be a significant health concern as the population ages and the complexity of care increases across all care settings (RNAO, 2011). A literature review done in Canada in 2004 found that the overall prevalence of pressure ulcers across all institutions studied was 26 per cent. Although 50 per cent of these were Stage 1 ulcers, this data is still disturbing (Woodbury & Houghton, 2004). Pressure ulcer incidence rates vary considerably by clinical setting — ranging in the United States from 0.4 per cent to 38 per cent in acute care, from 2.2 per cent to 23.9 per cent in long-term care, and from 0 per cent to 17 per cent in home care. It is estimated that pressure ulcer prevalence (the percentage of patients with pressure ulcers at any one point in time) in acute care is 15 per cent, while incidence (the rate at which new cases occur in a population over a given time period) in acute care is seven per cent. It is estimated that 2.5 million patients are treated for pressure ulcers in U.S. acute healthcare facilities each year. The estimated cost of managing a single full thickness pressure ulcer is as high as \$70,000, and the total cost for treatment of pressure ulcers in the U.S. is estimated at \$11 billion per year (IHI, 2011).

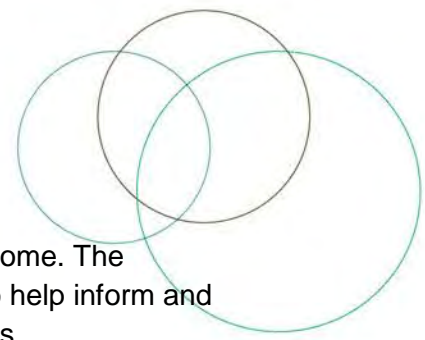
GOAL

To reduce the incidence of pressure ulcers.

IMPORTANCE TO PATIENTS AND FAMILIES

Patients and families are aware that pressure ulcers are painful and slow to heal; and that ulcers are often seen as an indication of poor quality of care. When caregivers practice the best care every time, patients can avoid needless suffering (IHI, 2012).





The Swans' Story (patient video)

Richard developed an avoidable pressure ulcer during respite at a nursing home. The experience has inspired him, together with his caregiver and wife Doreen, to help inform and educate in the hope that together we can eliminate avoidable pressure ulcers.

EVIDENCE-INFORMED PRACTICES

Key Changes for Improvement

(IHI, 2011)

Steps for preventing pressure ulcers:

1. Conduct a pressure ulcer admission assessment for all patients.
2. Reassess risk for all patients daily.
3. Inspect skin daily.
4. Manage moisture on skin.
5. Minimize pressure, friction and shear:
 - a. Turn/reposition patients every two hours.
 - b. Use pressure-redistribution surfaces.
6. Optimize nutrition and hydration.

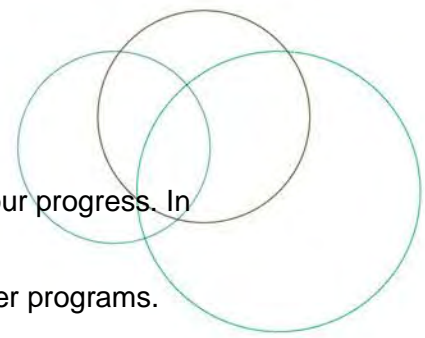
Additional Elements

1. Maximize activity and mobility, reducing or eliminating friction and shear (Keast et al., 2006).
2. Avoid skin massage.
3. Barrier creams (NICE, 2014).
4. Emerging therapies for prevention of pressure ulcers:
 - Microclimate control.
 - Prophylactic Dressings.
 - Fabrics and Textiles.
 - Electrical Stimulation of the Muscles for Prevention of Pressure Ulcers (National Pressure Ulcer Advisory Panel, et al., 2014).

MEASURES

Vital to quality improvement is measurement, and this applies specifically to implementation of interventions. The chosen measures will help to determine whether an impact is being made (primary outcome), whether the intervention is actually being carried out (process measures), and whether any unintended consequences ensue (balancing measures).





Below are some recommended measures to use, as appropriate, to track your progress. In selecting your measures, consider the following:

- Whenever possible, use measures you are already collecting for other programs.
- Evaluate your choice of measures in terms of the usefulness of the final results and the resources required to obtain them; try to maximize the former while minimizing the latter.
- Try to include both process and outcome measures in your measurement scheme.
- You may use different measures or modify the measures described below to make them more appropriate and/or useful to your particular setting. However, be aware that modifying measures may limit the comparability of your results to others.
- Posting your measure results within your hospital is a great way to keep your teams motivated and aware of progress. Try to include measures that your team will find meaningful and exciting (IHI, 2011).

For more information on measuring for improvement, contact the Canadian Patient Safety Institute Central Measurement Team at measurement@cpsi-icsp.ca

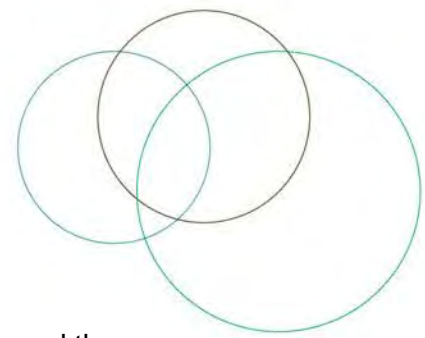
Outcome Measure

1. Incidence of Pressure Ulcers.

Process Improvement Measures

1. Percentage with Pressure Ulcer Risk Assessment Completed on Admission.
2. Percentage of At-Risk Patients Receiving Full Pressure Ulcer Preventive Care Admission.
3. Percentage of Patients Receiving Daily Pressure Ulcer Risk Reassessment.
4. Percentage of Patients with Pressure Ulcer Risk Reassessed Following Change in Clinical Status (NICE Audit Tool, 2014).
5. Percentage of At-Risk Patients Repositioned Every Six Hours (Self or With Assistance) (NICE Audit Tool, 2014).
6. Percentage of At-Risk Patients with High-Specification Foam Mattress (NICE Audit Tool, 2014).
7. Percentage of At-Risk Patients who Received an Individualized Care Plan (NICE Audit Tool, 2014).





STANDARDS AND REQUIRED ORGANIZATIONAL PRACTICES

Accreditation Canada Required Organizational Practice

- Requires an assessment of clients' risk of developing pressure ulcers and the implementation of preventative interventions.

GLOBAL PATIENT SAFETY ALERTS

[Global Patient Safety Alerts](#) provides access and the opportunity to learn from other organizations about specific patient safety incidents including alerts, advisories, recommendations, and solutions for improving care and preventing incidents. Learning from the experience of other organizations can accelerate improvement.

Recommended search terms:

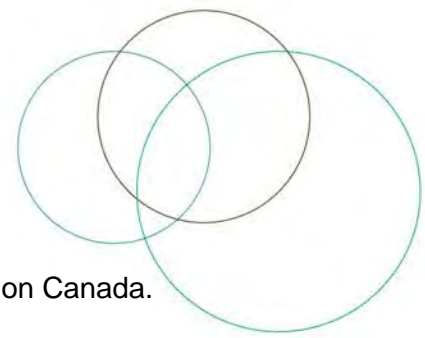
- Bed sore
- Decubitus ulcer
- Deep tissue injury
- Pressure area
- Pressure injury
- Pressure ulcer

SUCCESS STORIES

Implementation of Turning Clocks for Pressure Ulcer Prevention and Management

The use of an individualized repositioning schedule is a recommended strategy for prevention and management of pressure ulcers. As individuals' needs differ, it is often a challenge to communicate specific repositioning schedules to care staff, which may result in inconsistent positioning. The literature suggests that using a visual cue, or diagram with body positions, may be a helpful reminder of resident positioning schedules (Accreditation Canada, Leading Practices Database).

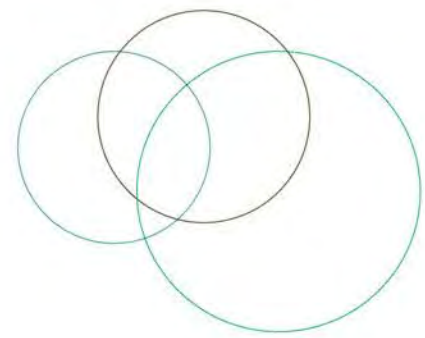




REFERENCES

- Accreditation Canada. *Leading Practices Database*. Ottawa, ON: Accreditation Canada. <http://www.accreditation.ca/node/7298>
- Accreditation Canada. *Required Organizational Practices Handbooks*. Ottawa, ON: Accreditation Canada. <http://www.accreditation.ca/rop-handbooks>
- Canadian Patient Safety Institute. *Global Patient Safety Alerts*. www.globalpatientsafetyalerts.com
- Institute for Healthcare Improvement (IHI). *How-to Guide: Prevent pressure ulcers*. Cambridge, MA: IHI; 2011. <http://www.ihl.org/resources/Pages/Tools/HowtoGuidePreventPressureUlcers.aspx>
- Institute for Healthcare Improvement (IHI). *IHI Improvement Map: Prevention of pressure ulcers*. IHI; 2012. <http://app.ihl.org/imap/tool/#Process=cbe9c419-f6ae-49ed-8bb5-5d17844796e2>
- Institute for Healthcare Improvement (IHI). *Pressure ulcers*. Cambridge, MA: IHI. <http://www.ihl.org/Topics/PressureUlcers/Pages/default.aspx>
- Keast DH, Parslow N, Houghton PE, Norton L, Fraser CI. Best practice recommendations for the prevention and treatment of pressure ulcers: Update 2006. *Wound Care Canada*. 2006; 4 (1): 31-43. <http://cawc.net/images/uploads/wcc/4-1-vol4no1-BP-PU.pdf>
- National Institute for Health and Care Excellence (NICE). *Pressure ulcers: prevention and management of pressure ulcers. NICE clinical guideline 179*. NICE; 2014. <https://www.nice.org.uk/guidance/cg179/chapter/1-recommendations#/prevention-adults>
- NICE. *Clinical audit tools. NICE clinical guideline 179*. NICE; 2014. <https://www.nice.org.uk/guidance/cg179/resources>
- National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. Emily Haesler (Ed.) *Prevention and treatment of pressure ulcers: Quick reference guide*. Cambridge Media: Perth, Australia; 2014. <http://www.npuap.org/wp-content/uploads/2014/08/Updated-10-16-14-Quick-Reference-Guide-DIGITAL-NPUAP-EPUAP-PPPIA-16Oct2014.pdf>
- Registered Nurses' Association of Ontario (RNAO). *Nursing best practice guideline: Risk assessment and prevention of pressure ulcers*. Toronto, ON: RNAO; 2011. <http://rnao.ca/bpg/guidelines/risk-assessment-and-prevention-pressure-ulcers>
- Woodbury MG, Houghton PE. Prevalence of pressure ulcers in Canadian healthcare settings. *Ostomy/Wound Management*. 2004; 50 (10): 22-38. <http://cawc.net/images/uploads/resources/Woodbury.pdf>





PRESSURE ULCER RESOURCES

Professional Associations and Helpful Websites

British Columbia Provincial Nursing Skin and Wound Committee.

<https://www.clwk.ca/communities-of-practice/skin-wound-community-of-practice/>

National Pressure Ulcer Advisory Panel. <http://www.npuap.org/>

Registered Nurses' Association of Ontario (RNAO). <http://rnao.ca/bpg/guidelines/risk-assessment-and-prevention-pressure-ulcers>

Stop the Pressure. <http://nhs.stopthepressure.co.uk/index.html>

Pressure Ulcer Clinical Practice Guidelines

Agency for Healthcare Research and Quality (AHRQ). *Preventing pressure ulcers in hospitals: A toolkit for improving quality of care*. AHRQ; 2011.

http://www.woundcarenurses.org/uploads/7/6/6/7/7667574/pu_toolkit.pdf

Black JM, Edsberg LE, Baharestani MM, Langemo D, Goldberg M, McNichol L, et al. Pressure ulcers: avoidable or unavoidable? Results of the National Pressure Ulcer Advisory Panel Consensus Conference. *Ostomy Wound Manage*. 2011; 57 (2): 24-37.

British Columbia Provincial Nursing Skin and Wound Committee. *Guideline: Prevention of skin breakdown due to pressure, friction, shear and moisture in adults & children*. BC; 2012.

<https://www.clwk.ca/buddydrive/file/guideline-prevention-2012-january-3>

Dorner B, Posthauer ME, Thomas D, National Pressure Ulcer Advisory Panel. The role of nutrition in pressure ulcer prevention and treatment: National Pressure Ulcer Advisory Panel white paper. *Adv Skin Wound Care*. 2009; 22 (5): 212-221.

Houghton PE, Campbell KE, CPG Panel. *Canadian Best Practice Guidelines for the prevention and management of pressure ulcers in people with spinal cord injury: A resource handbook for clinicians*. Mississauga, ON: Ontario Neurotrauma Foundation; 2013.

http://onf.org/system/attachments/168/original/Pressure_Ulcers_Best_Practice_Guideline_Final_web4.pdf

Institute for Healthcare Improvement (IHI). *How-to Guide: Prevent pressure ulcers*. Cambridge, MA: IHI; 2011.

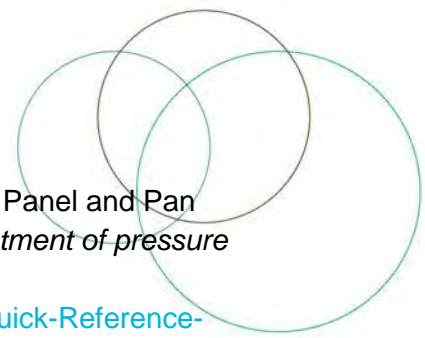
<http://www.ihl.org/resources/Pages/Tools/HowtoGuidePreventPressureUlcers.aspx>

Institute for Healthcare Improvement (IHI). *IHI Improvement Map: Prevention of pressure ulcers*.

IHI; 2012. <http://app.ihl.org/imap/tool/#Process=cbe9c419-f6ae-49ed-8bb5-5d17844796e2>

Keast DH, Parslow N, Houghton PE, Norton L, Fraser C. Best practice recommendations for the prevention and treatment of pressure ulcers: update 2006. *Adv Skin Wound Care*. 2007; 20 (8): 447-460.





National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. Emily Haesler (Ed.) *Prevention and treatment of pressure ulcers: Quick reference guide*. Cambridge Media: Perth, Australia; 2014.

<http://www.npuap.org/wp-content/uploads/2014/08/Updated-10-16-14-Quick-Reference-Guide-DIGITAL-NPUAP-EPUAP-PPPIA-16Oct2014.pdf>

Registered Nurses' Association of Ontario (RNAO). *Nursing best practice guideline: Risk assessment and prevention of pressure ulcers*. Toronto, ON: RNAO; 2011.

<http://rnao.ca/bpg/guidelines/risk-assessment-and-prevention-pressure-ulcers>

Winnipeg Regional Health Authority (WRHA). *Pressure ulcer prevention and treatment: Clinical practice guideline*. Winnipeg, MB: WRHA; 2012.

<http://www.wrha.mb.ca/extranet/eipt/files/EIPT-013-004.pdf>

Additional Resources for Pressure Ulcer Prevention

Bergquist-Beringer S, Dong L, He J, Dunton N. Pressure ulcers and prevention among acute care hospitals in the United States. *Jt Comm J Qual Patient Saf*. 2013; 39 (9): 404-414.

Bogie K, Powell HL, Ho CH. New concepts in the prevention of pressure sores. *Handb Clin Neurol*. 2012; 109: 235-246. doi: 10.1016/B978-0-444-52137-8.00014-0.

Burk RS, Grap MJ. Backrest position in prevention of pressure ulcers and ventilator-associated pneumonia: conflicting recommendations. *Heart Lung*. 2012; 41 (6): 536-545.

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3690585/>

Chou R, Dana T, Bougatsos C, Blazina I, Starmer A, Reitel K. et al. *Pressure ulcer risk assessment and prevention: comparative effectiveness*. Rockville, MD: Agency for Healthcare Research and Quality (AHRQ); 2013.

<http://www.ncbi.nlm.nih.gov/books/NBK143579/>

Chou R, Dana T, Bougatsos C, Blazina I, Starmer AJ, Reitel K, Buckley DI. Pressure ulcer risk assessment and prevention: a systematic comparative effectiveness review. *Ann Intern Med*. 2013; 159 (1): 28-38. doi: 10.7326/0003-4819-159-1-201307020-00006.

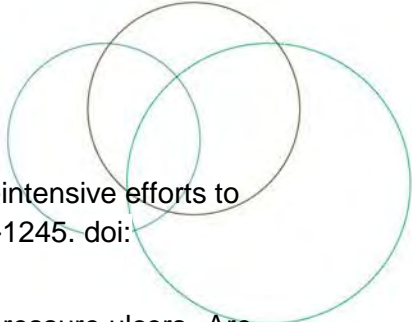
Clark M, Black J, Alves P, Brindle C, Call E, Dealey C, Santamaria N. Systematic review of the use of prophylactic dressings in the prevention of pressure ulcers. *Int Wound J*. 2014; 11 (5): 460-471. doi: 10.1111/iwj.12212.

Keast DH, Parslow N, Houghton PE, Norton L, Fraser CI. Best practice recommendations for the prevention and treatment of pressure ulcers: Update 2006. *Wound Care Canada*. 2006; 4 (1): 31-43. <http://cawc.net/images/uploads/wcc/4-1-vol4no1-BP-PU.pdf>

Huang HY, Chen HL, Xu XJ. Pressure-redistribution surfaces for prevention of surgery-related pressure ulcers: a meta-analysis. *Ostomy Wound Manage*. 2013; 59 (4): 36-38, 42, 44, 46, 48.

Levine SM, Sinno S, Levine JP, Saadeh PB. Current thoughts for the prevention and treatment of pressure ulcers: using the evidence to determine fact or fiction. *Ann Surg*. 2013; 257 (4): 603-608. doi: 10.1097/SLA.0b013e318285516a.



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- Mathiesen AS, Norgaard K, Andersen MF, Moller KM, Ehlers LH. Are labour-intensive efforts to prevent pressure ulcers cost-effective? *J Med Econ.* 2013; 16 (10): 1238-1245. doi: 10.3111/13696998.2013.832256.
- McInnes E, Jammali-Blasi A, Bell-Syer S, Dumville J, Cullum N. Preventing pressure ulcers--Are pressure-redistributing support surfaces effective? A Cochrane systematic review and meta-analysis. *Int J Nurs Stud.* 2012; 49 (3): 345-359. doi: 10.1016/j.ijnurstu.2011.10.014.
- Moore ZE, Webster J. Dressings and topical agents for preventing pressure ulcers. *Cochrane Database Syst.Rev.* 2013; 8: CD009362. doi: 10.1002/14651858.CD009362.pub2.
- Niederhauser A, VanDeusen Lukas C, Parker V, Ayello EA, Zulkowski K, Berlowitz D. Comprehensive programs for preventing pressure ulcers: a review of the literature. *Adv Skin Wound Care.* 2012; 25 (4): 167-188. doi: 10.1097/01.ASW.0000413598.97566.d7.
- Soban LM, Hempel S, Munjas BA, Miles J, Rubenstein LV. Preventing pressure ulcers in hospitals: A systematic review of nurse-focused quality improvement interventions. *Jt Comm J Qual Patient Saf.* 2011; 37 (6): 245-252.
- Sullivan N, Schoelles KM. Preventing in-facility pressure ulcers as a patient safety strategy: a systematic review. *Ann Intern Med.* 2013; 158 (5 Pt 2): 410-416. doi: 10.7326/0003-4819-158-5-201303051-00008.
- White-Chu EF, Reddy M. Pressure ulcer prevention in patients with advanced illness. *Curr Opin Support Palliat Care.* 2013; 7 (1): 111-115. doi: 10.1097/SPC.0b013e32835bd622



BRADEN SCALE FOR PREDICTING PRESSURE SORE RISK

Patient's Name _____	Evaluator's Name _____	Date of Assessment							
SENSORY PERCEPTION ability to respond meaningfully to pressure-related discomfort	1. Completely Limited Unresponsive (does not moan, flinch, or grasp) to painful stimuli, due to diminished level of consciousness or sedation. OR limited ability to feel pain over most of body	2. Very Limited Responds only to painful stimuli. Cannot communicate discomfort except by moaning or restlessness OR has a sensory impairment which limits the ability to feel pain or discomfort over 1/2 of body.	3. Slightly Limited Responds to verbal commands, but cannot always communicate discomfort or the need to be turned. OR has some sensory impairment which limits ability to feel pain or discomfort in 1 or 2 extremities.	4. No Impairment Responds to verbal commands. Has no sensory deficit which would limit ability to feel or voice pain or discomfort.					
MOISTURE degree to which skin is exposed to moisture	1. Constantly Moist Skin is kept moist almost constantly by perspiration, urine, etc. Dampness is detected every time patient is moved or turned.	2. Very Moist Skin is often, but not always moist. Linen must be changed at least once a shift.	3. Occasionally Moist: Skin is occasionally moist, requiring an extra linen change approximately once a day.	4. Rarely Moist Skin is usually dry, linen only requires changing at routine intervals.					
ACTIVITY degree of physical activity	1. Bedfast Confined to bed.	2. Chairfast Ability to walk severely limited or non-existent. Cannot bear own weight and/or must be assisted into chair or wheelchair.	3. Walks Occasionally Walks occasionally during day, but for very short distances, with or without assistance. Spends majority of each shift in bed or chair	4. Walks Frequently Walks outside room at least twice a day and inside room at least once every two hours during waking hours					
MOBILITY ability to change and control body position	1. Completely Immobile Does not make even slight changes in body or extremity position without assistance	2. Very Limited Makes occasional slight changes in body or extremity position but unable to make frequent or significant changes independently.	3. Slightly Limited Makes frequent though slight changes in body or extremity position independently.	4. No Limitation Makes major and frequent changes in position without assistance.					
NUTRITION <u>usual</u> food intake pattern	1. Very Poor Never eats a complete meal. Rarely eats more than 1/3 of any food offered. Eats 2 servings or less of protein (meat or dairy products) per day. Takes fluids poorly. Does not take a liquid dietary supplement OR is NPO and/or maintained on clear liquids or IV's for more than 5 days.	2. Probably Inadequate Rarely eats a complete meal and generally eats only about 1/2 of any food offered. Protein intake includes only 3 servings of meat or dairy products per day. Occasionally will take a dietary supplement. OR receives less than optimum amount of liquid diet or tube feeding	3. Adequate Eats over half of most meals. Eats a total of 4 servings of protein (meat, dairy products) per day. Occasionally will refuse a meal, but will usually take a supplement when offered OR is on a tube feeding or TPN regimen which probably meets most of nutritional needs	4. Excellent Eats most of every meal. Never refuses a meal. Usually eats a total of 4 or more servings of meat and dairy products. Occasionally eats between meals. Does not require supplementation.					
FRICITION & SHEAR	1. Problem Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequently slides down in bed or chair, requiring frequent repositioning with maximum assistance. Spasticity, contractures or agitation leads to almost constant friction	2. Potential Problem Moves feebly or requires minimum assistance. During a move skin probably slides to some extent against sheets, chair, restraints or other devices. Maintains relatively good position in chair or bed most of the time but occasionally slides down.	3. No Apparent Problem Moves in bed and in chair independently and has sufficient muscle strength to lift up completely during move. Maintains good position in bed or chair.						
					Total Score				

PRINCE ALBERT PARKLAND HEALTH REGION
Nursing

SECTION:	General	NUMBER: 170-10-90
TOPIC:	Wound Care - Pressure Injury Prevention and Management Policy	DATE APPROVED: December 29, 2016
APPROVED BY:	Management	REVIEW DATE:
REVISED DATE:		

1. Purpose

1.1 To promote evidence based care in the maintenance of skin integrity.

1.2 To optimize pressure injury prevention in the clients considered to be at risk for pressure injuries as determined for pressure injury through assessment, documentation and management.

1.3 To determine which interventions are required for clients who have an existing pressure injury.

1.4 To provide a standardized approach to pressure injury prevention and management in the Prince Albert Parkland Health region.

2. Policy

2.1 All nursing staff involved in direct patient care will complete The pressure ulcer prevention and management learning package.

2.2 A pressure injury risk assessment will be completed on every client within 24 hours of admission utilizing the appropriate risk assessment tool for each clinical area e.g. Braden scale, Braden Q scale, Pressure Ulcer Risk Assessment Scale (PURS)..

2.3 Clients who are identified as being at risk for pressure injury or who have contributing factors for development of pressure injury, will have individualized care plan in place that addresses factors contributing to skin breakdown. Skin inspections will be completed on admission and daily on all clients at risk for developing pressure injuries.

2.4 Client/family/caregivers will receive education on pressure injury prevention utilizing the Pressure Ulcer Prevention Handout for Patients and Families. Teaching will be documented in the client's chart.

2.5 Client/family/caregivers should be involved in decision-making regarding pressure area care and the use of devices to prevent or treat skin breakdown.

2.6 All members of the interdisciplinary team will be involved in caring for the client at risk of pressure injury.

2.7 Pressure injuries will be identified and staged to the current National Pressure Ulcer Advisory Panel (NPUAP) clinical guidelines and their presence recorded on the Wound Record.

2.8 All pressure injuries while in our care are incidents. Stage 3 and 4 are potential critical incidents. Chart review and root cause analysis must be done and reported to Quality Management, as per Critical Incident Policy and Procedure 10-10-35 and 10-10-35 P

3. References

3.1 National Pressure Ulcer Advisory Panel (NPUAP) Prevention and Treatment of Pressure Ulcers Quick Reference Guide 2014. Retrieved from <http://www.npuap.org/wp-content/uploads/2014/08/Quick-Reference-Guide-DIGITAL-NPUAP-EPUAP-PPPIA-Jan2016.pdf>

3.2 National Pressure Ulcer Advisory Panel (NPUAP), 2016 NPUAP Pressure Injury Stages . Retrieved from <http://www.npuap.org/resources/educational-and-clinical-resources/npuap-pressure-injury-stages/>

3.3 Saskatoon Health Region Pressure Injury Prevention and Management



**PRINCE ALBERT PARKLAND HEALTH
REGION**

**Pressure Ulcer:
Prevention and Management
LEARNING PACKAGE**

Acute / Home Care

September 2015

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1) PURPOSE

Pressure Ulcer Prevention & Management and Risk Assessment are recommended steps in preventing pressure ulcer development. The Braden Scale Risk Assessment is to be done on each adult admission and repeated on all patients as needed. The purpose of this learning package is to improve assessment skills and promote the early implementation of interventions to manage skin integrity.

2) LEARNING OBJECTIVES

On completion of this package, the learner will:

- Define pressure ulcer, shear and friction
- Identify risk factors associated with pressure ulcer development
- Perform a skin assessment
- Know the Braden Scale for predicting pressure ulcer risk
- Identify interventions to prevent pressure ulcers
- Be familiar with the forms used to document

3) DEFINITIONS

Backstaging: The staging of pressure ulcers occurs only in one direction. If a wound deteriorates, staging numbers will increase and will reflect the most severe stage. Improvement or healing of a wound is determined by objective data (i.e. wound measurements, etc) not by adjustments in the stage. The stage will remain at the maximum number. For example, once a stage IV, always a stage IV. It may be a healing stage IV or a closed stage IV but always stage IV.

Friction: Mechanical forces exerted when two surfaces move across each other resulting in the removal of superficial layers of skin. The areas on the body most susceptible are the heels and elbows.

Pressure (Interface): The force between the patient and the sitting or lying surface. Pressure ulcers are associated with high interface pressure especially over a bony prominence. External pressure over the tissues causes compression and distortion of the underlying structures. If the pressure is higher than the capillary closing pressure occlusion of the blood vessels, decreased tissue perfusion and tissue death may result. (RNAO, 2005)

Pressure Reducing Surface: A surface that reduces the interface pressure between the body surface and the resting surface. It does not consistently maintain pressure below capillary closing pressure. (RNAO, 2005) *Common examples include gel pads, off loading boots and chair cushions.*

Pressure Relieving Surface: A surface that consistently reduces the interface pressure between the body surface and resting surface below capillary closing pressure. *A common example would include an airflow surface.*

Pressure ulcer: A pressure ulcer is any localized injury caused by unrelieved pressure or pressure in combination with friction and/or shear that results in damage of skin and underlying tissue. They usually occur over bony prominences such as the sacrum, heels and hips and are graded according to the amount of tissue damage. Pressure ulcers are the only wounds that are staged. They cannot be back staged.

Shear: Deep tissue damage and necrosis that occurs as a result of a mechanical force that impedes blood flow to the skin. When tissue is pulled it leads to stretching, kinking and tearing of the vessels at the subcutaneous level. The resulting disruption of the local blood supply produces ischemia. *Most shear injuries occur when patients slide down or are pulled up in a bed or chair.* The areas on the body most susceptible are the sacrum and coccyx.

Tunneling: Wounds which have channels that extend from the wound bed into and through subcutaneous tissue or muscle (Barnes, 2009).

Undermining: Extension of a wound under wound margins caused by tissue destruction

4) THEORY

Stages of Pressure Ulcers:

Deep Tissue Injury:

Purple or maroon localized area of discolored intact skin or blood filled blister due to damage of underlying soft tissue from pressure and/or shear. Deep tissue injury may be difficult to detect in individuals with dark skin tones and can spiral quickly to a worsening stage.

Stage I:

Intact skin with a localized area of non-blanchable redness usually over a bony prominence. Darkly pigmented skin may not have visible blanching; its color may differ from surrounding area.

Stage II:

Partial thickness loss of dermis presenting as a shallow open ulcer with a red or pink wound bed, without slough. Stage II pressure ulcers may also present as an intact or open/ruptured serum filled blister.

Stage III:

Full thickness tissue loss. Subcutaneous fat may be visible but bone, tendon or muscle is not exposed. Slough may be present but does not obscure the

depth of tissue loss. Stage III pressure ulcers may include undermining and tunneling.

Stage IV:

Full thickness tissue loss with exposed bone, tendon or muscle. Slough or eschar may be present on some parts of the wound bed. Stage IV pressure ulcers often include undermining and tunneling.

Stage X (Un-stagable):

Full thickness tissue loss in which the base of the ulcer is covered by slough (yellow, tan, gray, green or brown) and or eschar (tan, brown or black) in the wound bed. The evaluator is unable to determine the depth of the wound due to slough or eschar tissue obscuring the base of the wound thus unstagable.

5) Complications Related to Bedrest:

Bedrest should be a treatment option exercised only after its efficacy is clearly established. Physical complications of bedrest include: joint contractures, muscle atrophy, osteoporosis, pathological fractures, urinary tract infections, decreased cardiac reserve, resting and post exercise tachycardia, orthostatic hypotension, pulmonary embolism, deep vein thrombosis, pneumonia, anorexia, constipation and bowel impaction. Psychological complications include: depression, learned helplessness and decreased executive functioning (Norton et. al. 2007).

6) Risk factors associated with Pressure Ulcer Development:

Paralysis or immobilization: Patient is unable to turn or reposition independently to relieve pressure.

Sensory loss (e.g. hemiplegia, spinal cord injury, diabetic neuropathy): When sensory loss is present, the patient feels no discomfort from pressure and does not independently change position.

Circulatory disorders (e.g. diabetes mellitus, peripheral vascular disease): Disorders that reduce perfusion of skin's tissue layers.

Fever: Increases metabolic demands of tissues. Accompanying diaphoresis leaves skin moist.

Anemia: Decreased hemoglobin reduces oxygen-carrying capacity of blood and amount of oxygen available to tissues.

Malnutrition: Inadequate nutrition can lead to weight loss, muscle atrophy, and reduced tissue mass. Severe protein deficiency makes tissue more susceptible to breakdown. Poor protein, vitamin, mineral and caloric intake limits wound healing capabilities.

Incontinence: Skin becomes exposed to moist environment containing bacteria. Moisture causes skin maceration. Incontinence of both urine and feces will result in increased skin irritation and breakdown. Fecal enzymes attack the skin and are more active as the pH increases. The interaction between urine and feces produces ammonia leading to increased damaging enzymatic activity. (Narzako, 2007, Berg, Buckingham & Stewart, 1986).

Heavy sedation and anesthesia: Patient is not mentally alert and does not turn or change position independently. Sedation can also alter sensory perception.

Age: There is a loss of dermal thickness in the older adult impairing the ability to distribute pressure.

Dehydration: Results in decreased skin elasticity and turgor.

Edema: Edematous tissues are less tolerant of pressure, friction and shear.

Existing pressure ulcers: Limits surfaces available for position changes, placing available tissues at increased risk.

History of pressure ulcer/wounds: Skin only regains about 80% of its original tensile strength following wound healing. This area is more susceptible to the development of a pressure ulcer. It is important to know the location and severity of any previous skin damage or wounds.

Other Factors to Consider: Diastolic Blood Pressure below 60 which results in decreased tissue perfusion.

7) Performing a Skin Assessment:

Inspect skin and bony prominences **at least daily**. Assess condition of patient's skin over regions of pressure. Body weight against bony prominences places skin at risk for breakdown.

Particular areas of concern include:

- Ear
- Occiput
- Shoulder
- Scapula
- Elbow
- Trochanter
- Sacrum
- Ischial Tuberosity
- Coccyx
- Knee
- Malleolus
- Heel

Any skin changes should be documented, including a description of skin changes and any interventions implemented.

Look for:

1. Skin changes: Any of the following changes may indicate that tissue was under pressure.

- Color change-redness in light-tone skin; purplish or bluish in darkly pigmented skin
- Tissue consistency -firm or boggy feel
- Unusual sensations of pain, itch etc.

2. Blanching

If an area of redness blanches (lightens in color) when the nurse applies pressure, this indicates that the tissue, although reddened, is not ischemic. Tissue that does not blanch when palpated indicates that there is ischemic injury (Stage 1).

3. Pallor and mottling

Persistent hypoxia/poor tissue oxygenation can result in skin color changes including pallor and/or mottling and may be a physiological response to the effects of pressure.

4. Absence of superficial skin layers

Assess underlying cause to determine if it is a pressure area versus a traumatic injury (i.e. skin tear, puncture, etc). If the absence of superficial skin layers is due to pressure, the pressure ulcer is Stage II or greater.

5. Skin temperature

Palpation of differences in temperature between reddened area and adjacent skin, either coolness or warmth, may be an initial indicator of ischemia.

8) Cultural Considerations Related to Skin Assessment:

Patients with darkly pigmented skin cannot be assessed for pressure ulcer risk by examining only skin color. Follow these recommended guidelines:

1. Assess Localized Skin Color Changes

Any of the following may appear:

- Skin color changes are different from usual skin tone
- Darkly pigmented skin may not have visible blanching; its color may differ from the surrounding area
- Color is darker than surrounding skin-purplish, bluish, eggplant.

2. Importance of lighting for skin assessment:

- Use natural or halogen light
- Avoid fluorescent lamps, which can give the skin a bluish tone.
- Avoid wearing tinted lenses when assessing skin color

3. Tissue Consistency

- Assess for edema, swelling.
- Assess for firm or boggy feel.

4. Sensation

- Assess for pain or changes in skin sensation such as itching.

5. Skin Temperature

- Initially skin in the area of pressure ulcer may feel warmer than surrounding skin.
- Subsequently skin may feel cooler than surrounding skin.
- Feel areas of skin that are not involved in or around a pressure point to serve as a point of temperature reference.

9) Braden Scale Risk Assessment:

The Braden Risk Assessment takes into account 6 areas of risk, and assigns a score to each. (Keast et al, 2006).

SENSORY PERCEPTION - Ability to respond meaningfully to pressure-related discomfort

1. **Completely Limited:** Unresponsive (does not moan, flinch, or grasp) to painful stimuli, due to diminished level of consciousness or sedation OR limited ability to feel pain over most of body.
2. **Very Limited:** Responds only to painful stimuli. Cannot communicate discomfort except by moaning or restlessness OR has a sensory impairment which limits the ability to feel pain or discomfort over ½ of body.
3. **Slightly Limited:** Responds to verbal commands, but cannot always communicate discomfort or the need to be turned OR has some sensory impairment which limits ability to feel pain or discomfort in 1 or 2 extremities.
4. **No Impairment:** Responds to verbal commands. Has no sensory deficit which would limit ability to feel or voice pain or discomfort.

MOISTURE - Degree to which skin is exposed to moisture

1. **Constantly Moist:** Skin is kept moist almost constantly by perspiration, urine, etc. Dampness is detected every time patient is moved or turned.
2. **Very Moist:** Skin is often, but not always moist. Linen must be changed at least once a shift.
3. **Occasionally Moist:** Skin is occasionally moist, requiring an extra linen change approximately once a day.
4. **Rarely Moist:** Skin is usually dry; linen only requires changing at routine intervals.

ACTIVITY - Degree of physical activity

1. **Bedfast:** Confined to bed.
2. **Chairfast:** Ability to walk severely limited or non-existent. Cannot bear own weight and/or must be assisted into chair or wheelchair.
3. **Walks Occasionally:** Walks occasionally during day but for very short distances, with or without assistance. Spends majority of each shift in bed or chair.
4. **Walks Frequently:** Walks outside room at least twice a day and inside room at least once every two hours during walking hours.

MOBILITY - Ability to change and control body position

1. **Completely Immobile:** Does not make even slight changes in body or extremity position without assistance.
2. **Very Limited:** Makes occasional slight changes in body or extremity position but unable to make frequent or significant changes independently.
3. **Slightly Limited:** Makes frequent though slight changes in body or extremity position independently.
4. **No Limitation:** Makes major and frequent changes in position without assistance.

NUTRITION

1. **Very Poor:** Never eats a complete meal. Rarely eats more than ½ of any food offered. Eats 2 servings or less of protein (meat or dairy products) per day. Takes fluids poorly. Does not take a liquid dietary supplement OR is NPO and/or maintained on clear liquids or IV's for more than 5 days.
2. **Probably Inadequate:** Rarely eats a complete meal and generally eats only about ½ of any food offered. Protein intake includes only 3 servings of meat or dairy products per day. Occasionally will take a dietary supplement OR receives less than optimum amount of liquid diet or tube feeding.
3. **Adequate:** Eats over half of most meals. Eats a total of 4 servings of protein (meat, dairy products per day). Occasionally will refuse a meal, but will usually take a supplement when offered OR is on a tube feeding or TPN regimen which probably meets most of nutritional needs.
4. **Excellent:** Eats most of every meal. Never refuses a meal. Usually eats a total of 4 or more servings of meat and dairy products. Occasionally eats between meals. Does not require supplementation.

FRICION & SHEAR

1. **Problem:** Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequently slides down in bed or chair, requiring frequent repositioning with maximum assistance. Spasticity, contractures or agitation leads to almost constant friction.
2. **Potential Problem:** Moves feebly or requires minimum assistance. During a move skin probably slides to some extent against sheets, chair, restraints, or other devices. Maintains relatively good position in chair or bed most of the time but occasionally slides down.
3. **No Apparent Problem:** Moves in bed and in chair independently and has sufficient muscle strength to lift up completely during move. Maintains good position in bed or chair

19-23 = No risk
15-18 = Low risk
13-14 = Moderate risk
10-12 = High risk
6-9 = Very high risk

10) Pressure Ulcer Prevention Interventions:

A) General Prevention Recommendations

- Inspect skin daily and **document findings**.
- Individualize bathing frequency; avoid hot water, irritating cleaning agents and excessive friction.
- Use moisturizers on dry skin. Minimize factors leading to dry skin such as low humidity and cold air.
- Do not use sheepskins. The use of sheepskin increases moisture and this moisture remains close to the skin.
- Do not massage skin over bony prominences.
- Keep the head of bed at lowest height possible (less than 30 degrees when medically appropriate).

B) Prevention Recommendations dealing with Moisture

- Control incontinence by establishing bowel/ bladder schedule. **Toilet every 2 hours.**
- Offer a bedpan or urinal coinciding with turning schedule.
- When incontinence cannot be controlled, cleanse skin at time of soiling with mild soap, use a topical moisture barrier and select incontinence products that are absorbent and provide a quick drying surface to the skin.

C) Prevention Recommendations dealing with Patients who are Bedfast, Chair fast or who have Problems with Mobility

- Turn and position at risk patients q2h or more frequently if indicated.
- Use pillows or other devices to keep bony prominences from direct contact with each other.
- Raise heels of at risk patients off the bed. Do not use donut-type devices.
- Use a 30 degree lateral side lying position. Do not place patient directly on trochanter.
- Limit the amount of time head of bed is higher than 30 degrees when medically appropriate.
- Use lifting devices to move patients during transfers and position changes.
- Use pressure-reducing devices for at risk patients.
- Encourage chair fast patients to reposition themselves every hour if unable to do so then reposition chair fast patients every hour.
- Limit time in chair to 2 hours or less per sitting or as per individualized activity plan.
- Consult physiotherapist and occupational therapist
- Encourage mobilization as much as possible
- Encourage active range of motion exercises
- Perform passive range of motion exercises if patient unable to do active range of motion exercises.

D) Prevention Interventions dealing with Inadequate Nutrition

- Encourage adequate caloric intake.
- Encourage fluid intake of 1500 mls per day unless contraindicated. Offer a glass of water coinciding with turning schedule.
- Monitor for signs of dehydration (dry skin, dry mucous membranes)
- Consult dietician to assess need for dietary supplements, increasing protein and calorie intake.

E) Prevention Interventions dealing with Friction and Shears

- Use proper positioning, transferring and turning techniques to minimize skin injury due to friction and shear forces.
- Use a lift sheet, slider sheets or mechanical lift to move patient.
- Protect high-risk areas such as elbows, heels, sacrum and back of head from friction injury.
- Do not elevate the head of bed more than 30 degrees if medically appropriate.
- Use only paper tape on fragile skin.

11) DOCUMENTATION

- Complete the “Braden Scale for predicting pressure sore risk” either on paper or electronically in SCM charting.
- Determine their risk score and follow appropriate measures to prevent pressure ulcer formation and / or healing
- On SCM (Sunrise Clinical Manager) charting fill in the Hot Spot picture area for pressure ulcers (if available)
- When changing dressings on pressure ulcers the Wound Record must be used.
- Communication to other team members is key: for Turn and Position Q2h, regular toileting schedule, nutrition requirement, dressing change regime, activity, TLR assessment. Chart this information in your care plan and progress notes.
- If a patient develops a stage 2 pressure ulcer while in hospital it must be reported to your manager.
- In the Home Care setting you will document in the Narrative progress notes, along with the wound record and braden scale.



Pressure Ulcer Prevention Handout for Patients and Families

What you need to know: Confined to bed?

- 1. Be sure staff are turning and positioning you every 2 hours if you are unable to do so yourself.**
- 2. Avoid raising the head of bed as much as possible.**
- 3. Use pillows or foam wedges to keep your knees and ankles from pressing against each other.**
- 4. When lying on your side, avoid lying directly on your hip bone – roll back slightly onto your buttock.**
- 5. When on your back, keep your heels off the bed by placing a pillow under your calves – be careful not to place pillows behind the knees.**
- 6. When changing position in bed, don't drag or pull yourself across the sheets, and don't push and pull with your heels or elbows. Instead, roll or lift with your body.**
- 7. Avoid repetitive movements like rubbing your feet on the sheets to scratch an itchy spot.**
- 8. Inspect your skin at least once per day (or have family member do so). If you notice and red, purple painful or open areas of skin, stay off the area and notify a healthcare provider.**
- 9. Prevent dry skin by using moisturizers, but don't rub or massage if an area is red or purple.**
- 10. Immediately clean urine or stool from your skin to prevent skin breakdown. If leaking urine or stool is a problem, talk to your healthcare provider. Use absorbent pads or briefs to pull moisture away from your body.**
- 11. Minimize layers of linens/padding under your body.**
- 12. Eat a well-balanced diet and drink plenty of fluids**

REFERENCES

Barnes, L. (2009). Pearls for practice: Wound tunneling. *Ostomy Wound Management* February, 55(2), 6. <http://www.o-wm.com/content/wound-tunneling>

Breg R.W, Buckingham, K.W. & Stewart R.L. (1986). Etiologic factors in diaper dermatitis: The role of urine. *Pediatric Dermatology*, 3(2), 102-106.

Crumbley, D.R., Kane, M.A. (2010). Development of an Evidence-Based Pressure Ulcer Program at the National Naval Medical Center: Nurses' Role in Risk Factor Assessment, Prevention, and Intervention Among Young Service Members Returning from OIF/OEF, *Nursing Clinics of North America*, 45(2), 153-168 .

Farage, M.A., Miller, K.W., Berardesca, E., & Maibach, H. (2007). Incontinence in the aged: contact dermatitis and other cutaneous consequences. *Contact Dermatitis*, 57, 211-217.

Institute for Clinical Systems Improvement. (2007). *Skin Safety Protocol: Risk Assessment and Prevention of Pressure Ulcers*. 2nd Ed. 1-31.

Keast, D., Parlson, N., Houghton, P, Norton, L., Fraser, C. (2006). Best Practice Recommendations for the Prevention and Treatment of Pressure Ulcers: Update 2006, *Wound Care Canada*, Volume 4, Number 1, 2006. Retrieved From <http://cawc.net/images/uploads/wcc/4-1-vol4no1-BP-PU.pdf>

National Pressure Ulcer Advisory Panel <http://www.npuap.org/pr2.htm>

Nazarko, L. (2007). Managing a common dermatological problem: incontinence dermatitis, *Br. J. Community Nursing*, 12(8), 358-363.

Noonan, C., Quigley, S., & Curley, M. (2011). Using the Braden Q Scale to Predict Pressure Ulcer Risk in Pediatric Patients. *Journal of Pediatric Nursing*.

Norton, L., Coultts, P., Fraser, C., Nicholson, T., Sibbald, RG.(2007). *Chronic Wound Care: A Clinical Source Book for Health Professionals*, 4 edition Krasner DL., Rodeheaver, GT., Sibbald, RG. Editors. HMP Communications. Malvern PA.

Nova Scotia Department of Health. *Nova Scotia Community Care Evidence Based Wound Management Protocol*, 2000.

Perry, A. and Potter. (2010). *Clinical Nursing Skills and Techniques*, 7th Ed. Elsevier Mosby: St. Louis, Missouri.

Registered Nurses Association Ontario, *Nursing Best Practice Guideline, Shaping the future of Nursing, Risk Assessment & Prevention of Pressure Ulcers*; Revised March 2005.

White-Chu, E.F., Flock, P., Struck, B., & Aronson, L. (2011). Pressure Ulcers in Long-Term Care. *Clinics in Geriatric Medicine* 27(2), 241-258

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Name _____ Date _____

SELF TEST

1. Pressure ulcers usually occur over bony prominences such as the sacrum, heels and hips and are graded according to the amount of tissue damage.

True or False

2. Incontinence is a risk factor associated with pressure ulcer development.

True or False

3. Clients with darkly pigmented skin can be assessed for pressure ulcer risk by examining only skin color.

True or False

4. Using the Braden Scale Risk Assessment a score of 9 or below indicates low risk for developing a pressure ulcer.

True or False

5. It's OK to massage skin over bony prominences.

True or False

6. Included in a patient's care plan should be a bathing schedule that reflects skin care needs.

True or False.

7. Which one of the following nursing care orders should the nurse question as being inappropriate in the plan of care for an 82-year-old incontinent female, when preventing the development of pressure ulcers is an important goal?

- a. Turn and position the client every 2 hours.
- b. Monitor the client's serum albumin level.
- c. Use a 'donut' device on the chair when client is sitting.
- d. Implement a toileting schedule to treat her urinary incontinence.

8. Which of the following are risk factors associated with pressure ulcer development?

- a. dehydration
- b. malnutrition
- c. heavy sedation
- d. immobility
- e. all of the above

9. _____ is the mechanical forces exerted when skin is dragged across a coarse surface such as bed linens.

10. The head of the bed should not be elevated more than _____ degrees.

11. Full thickness tissue loss with exposed bone, tendon or muscle, slough or eschar may be present on some parts of the wound bed. Often includes undermining and tunneling. This describes a stage _____ pressure ulcer.

12. List 5 risk factors associated with developing a pressure ulcer:

- a) _____
- b) _____
- c) _____
- d) _____
- e) _____

13. For each risk factor listed below name one intervention that you as a nurse can do to decrease that risk:

- a) _____
- b) _____
- c) _____
- d) _____
- e) _____

14. A nurse identifies a high risk patient who is elderly, has a fractured hip awaiting surgery and is on bedrest. Which therapies should the nurse put into place to avoid the development of a pressure ulcer. Circle all that apply:

- a) Place a protective dressing (such as mepilex border) on the patients high risk areas such as heels and coccy.
- b) Turn and position patient every 2 hours
- c) Give patient high doses of analgesic and let the patient rest
- d) Place sage boots or heel protectors on the patient
- e) If patient is not NPO be sure they receive adequate nutrition and fluids
- f) When turning the patient rub lotion on dry skin and massage any bony area

Pressure Ulcer Learning Package

Self test Answers

1. True
2. True
3. False
4. False
5. False
6. True
7. c
8. e
9. Friction
10. 30
11. IV
12. And 13.
 - i. Paralysis: turn and position q2h
 - ii. Sensory loss: turn and position, air mattress, sage boots
 - iii. Circulatory disorders: turn and position, air mattress, sage boots, protective dressings, keep dry
 - iv. Fever: keep dry, good fluid and nutrition intake
 - v. Malnutrition: increase food intake, boost or ensure, dietician consult, vitamins
 - vi. Incontinence: regular toileting schedule, change attends when wet, peri-care
 - vii. Heavy sedation: turn and position, less sedation
 - viii. Age: close observation for breakdown
 - ix. Dehydration: increase oral intake or consider IV fluids if needed. Offer fluid regularly
 - x. Edema: pressure relieving surface, close observation, turn and position
 - xi. History of pressure ulcers: monitor closely
14. a,b,d, e

Quality Management
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Pressure (Injury) Ulcer Prevention Handout for Patients and Families

What you need to know if you are confined to bed or need assistance to get out of bed:

1. Be sure staff are turning and positioning you every 2 hours if you are unable to do so yourself. Family members may request turning for patients who are unable to do so themselves.
2. Avoid raising the head of bed as much as possible. Try to keep the Head of bed at 30 degrees or less except for meals.



3. Use pillows lengthwise between your legs to keep your knees and ankles from pressing against each other. (check with a nurse prior to placement of pillows)



4. When lying on your side, avoid lying directly on your hip bone – roll back slightly onto your buttock.
5. When lying on your back, keep your heels off the bed by placing a pillow under your calves – be careful not to place pillows behind the knees. When the pillow is placed correctly under your legs there should be no space between your heels and the mattress(your heels should not be resting on the pillow)
6. When changing position in bed, don't drag or pull yourself across the sheets, and don't push and pull with your heels or elbows. Instead, roll or lift with your body.
7. Avoid repetitive movements like rubbing your feet on the sheets to scratch an itchy spot.
8. Take a close look at your skin at least once per day. Have a family member or your nurse check areas that you cannot see, for example you heels, tailbone and buttocks. If you notice any red, purple painful or open areas of skin, stay off the area and notify a healthcare provider.
9. Prevent dry skin by using moisturizers, but don't rub or massage an area if it is red or purple.
10. Immediately clean urine or stool from your skin to prevent skin breakdown. If leaking urine or stool is a problem, talk to your healthcare provider. Use absorbent pads or briefs to pull moisture away from your body.
11. Eat a well-balanced diet and drink plenty of fluids.
12. If your family member is restless, and unable to keep a pillow in place to prevent pressure to their heels, ask the nursing staff about the use of protection boots to prevent pressure injury to heels.

