[Toolkit For]

Skin Integrity Assessment

RHSCIR 2.0

Rick Hansen Institute
Institut Rick Hansen

A clinical guideline for basic pressure ulcer assessments for individuals with spinal cord injury.

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TOOLKIT FOR SKIN INTEGRITY ASSESSMENT

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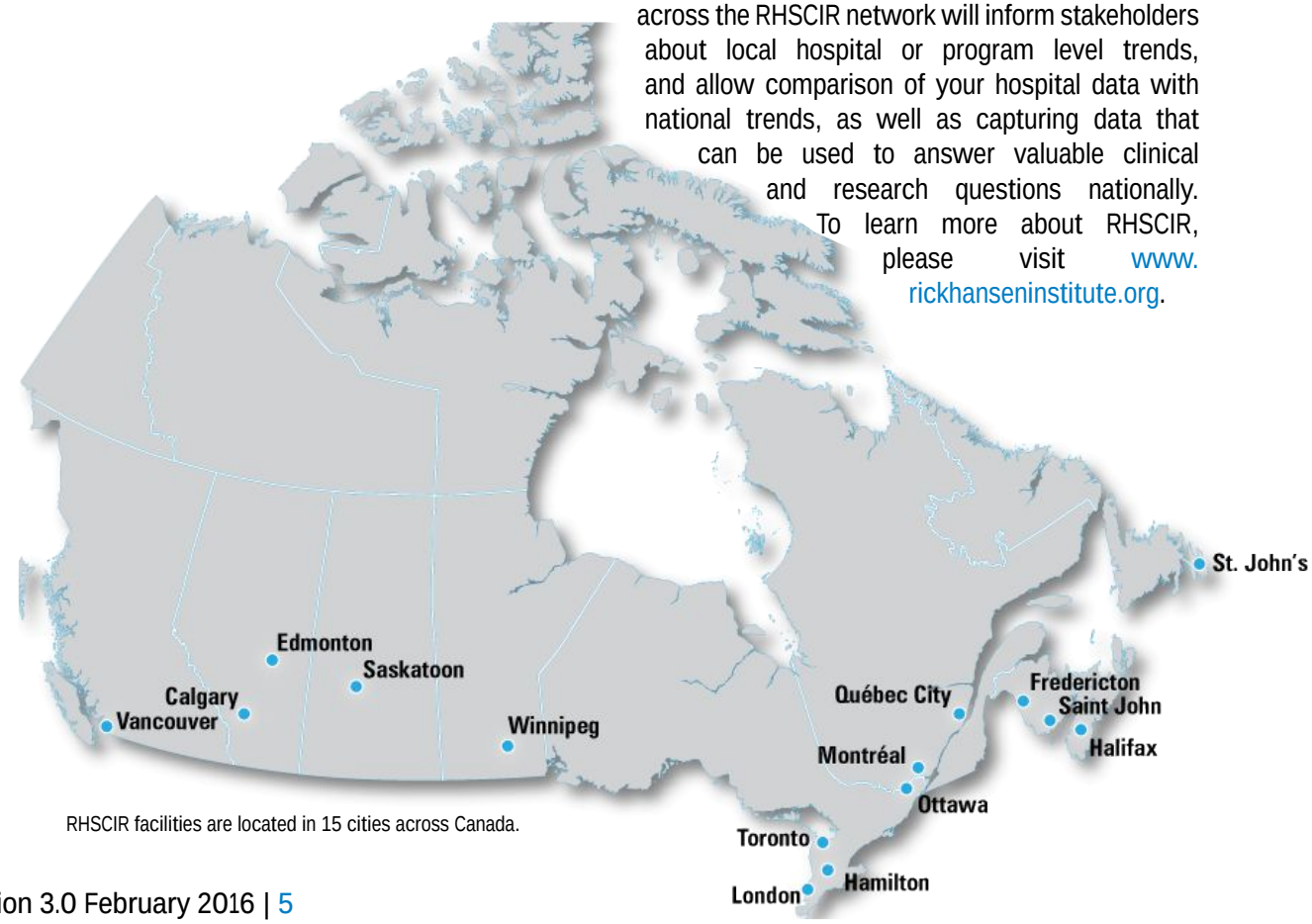
01 BACKGROUND

About RHSCIR

The RICK HANSEN SPINAL CORD INJURY REGISTRY (RHSCIR) is a pan-Canadian prospective observational registry located at 31 major Canadian acute care and rehabilitation hospitals. Across Canada, RHSCIR is collecting comprehensive SCI data for the purpose of improving SCI care and clinical outcomes. Using standardized research protocols and data collection forms, RHSCIR tracks the experiences and outcomes of people with traumatic SCI during their journey from injury, through acute care and rehabilitation to community reintegration. Details about participants' spinal cord injuries including extent of injury and level of paralysis, recovery, and success of various treatments are among the data recorded.

The data collected in RHSCIR contains powerful information that will help track the effectiveness of specific treatments, practices or programs for improving functional outcomes and quality of life after SCI. RHSCIR promotes, encourages and supports the pursuit of excellence in all areas of SCI health care management.

This network of 31 hospitals has adopted a new goal of standardizing the basic assessment of pressure ulcers (including pressure ulcer incidence and stage). A recent environmental scan and surveys collected by the Rick Hansen Institute (RHI) show that many hospitals currently use a pressure ulcer assessment tool (1). This new pressure ulcer assessment guideline is not meant to replace current clinical practice, but represents a standardized way to support tracking and reporting of this important information. Collection of standardised data elements across the RHSCIR network will inform stakeholders about local hospital or program level trends, and allow comparison of your hospital data with national trends, as well as capturing data that can be used to answer valuable clinical and research questions nationally. To learn more about RHSCIR, please visit www.rickhanseninstitute.org.



RHSCIR facilities are located in 15 cities across Canada.

02 WHY IS THIS INFORMATION IMPORTANT?

Variations in the quality of care for people with spinal cord injury (SCI) may increase the incidence of costly ongoing secondary complications such as pressure ulcers. Individuals with SCI have a life-long risk of developing pressure ulcers with 95% of them developing at least one sometime during their lifetime (1). Currently, pressure ulcers cost the Canadian health care system somewhere between $173 and $355.4 million annually (2,3), and have a negative impact on quality of life (4). Standardized collection of pressure ulcer incidence and severity data across Canada can help to track and compare your facility's rates of pressure ulcers.

Information regarding the incidence and severity of pressure ulcers in the SCI population may be used to identify trends which subsequently support program planning and resource allocation. Additionally, such information can serve as a basis for patient education as part of facilitating self-management and directing care.

The data you collect (as outlined in this toolkit) will be added to RHSCIR. The RHSCIR project will provide you and your program data entry services, data analysis services and standardized hospital level data reports with national-benchmarks available free of charge. The data you collect will assist in providing validated and supported evidence-based practice with the potential to improve efficiencies in the health care system and ultimately improve outcomes for individuals living with spinal cord injury.

Read "What Happens Once I Collect the Data?" on page 6 to learn more about what happens with the data you will collect.

Benefits to Clinicians and Patients

Being informed is a crucial part of an injured person's recovery process. This toolkit provides step-by-step details on how to conduct pressure ulcer staging according to NPUAP guidelines (5). The National Pressure Ulcer Advisory Panel (NPUAP) is the authoritative voice for improved patient outcomes in pressure ulcer prevention and treatment gained through public policy, education and research. This assessment and staging information can be used as the basis for patient education, which is part of facilitating skills in self-management and directing care.

Collection and reporting of this data can benefit clinicians and patients by:

- Supporting patient education about pressure ulcer prevention and clarifying the patient's roles and responsibilities.
- Determining the incidence and severity of pressure ulcers along the care continuum. In turn, this can assist with the further development of pressure ulcer prevention protocols and determine where they are most needed.
- Allowing comparison of data across the country, which helps identify national trends regarding pressure ulcers in acute and rehab facilities. This comparison can also inform future goals to improve care in these areas both nationally and locally.

- Assisting with directing specific treatment plans, patient education, and ensuring consistent communication and documentation between care providers.
- Ensuring less severe pressure ulcers are documented and monitored at admission potentially limiting progression to more severe stages.
- Tracking all pressure ulcers throughout the patient's admission to determine if an identified pressure ulcer has improved, resolved or is still present upon discharge which is a factor in monitoring the impact of prevention and treatment plans, as well as in transitional care planning.
- Providing important data regarding whether a wound required surgical treatment, which can inform ongoing seating, positioning and mobilization care planning as well as providing information about post-surgical recurrence rates.
- Enabling patients to provide ongoing self-report of pressure ulcers after they have been discharged back to the community (through the RHSCIR Community Follow-up Questionnaire).

Benefits to the Program

With 15% of traumatic SCI patients developing at least one pressure ulcer at some point during their acute care admission (6), effective guidelines are critical to improve patient outcomes, reduce costs and decrease hospital length of stay. Pressure ulcers are also a risk factor for other serious complications such as osteomyelitis, septicemia, and psychological disorders as well as acting as a barrier to patients' full participation in rehabilitation (7). Additionally, pressure ulcer risk assessment and the implementation of pressure ulcer prevention strategies is a Required Organizational Practice (ROP) outlined by the Accreditation Canada Spinal Cord Injury Acute (8) and Rehabilitation Services Standards (9). These documents also promote the education of staff with regard to the prevention and treatment of pressure ulcers.

Collection and reporting of this data can benefit your program by:

- Tracking the incidence of pressure ulcers along the continuum of care, hence:
  - Facilitating larger system planning (e.g. feedback to EHS transport systems) to coordinate and improve service delivery between different points of care.
  - Facilitating interventions targeted at the appropriate point of care (e.g. acute, rehabilitation or community).
- Analysing staffing levels – determining what type of staff (e.g. RN, LPN, WOCN, OT, PT, research, etc.) are involved/required and determining equipment and supply requirements.
- Creating continuity between health care providers.

- Providing comparators to national data and a system of tracking to support requirements for Accreditation Canada SCI acute and rehabilitation standards and Required Organizational Practices.
- Reporting metrics to hospital administrators to allow correlation of program expenditures (e.g. equipment, regular and overtime staffing requirements, etc.) with pressure ulcer status as well as patient demographics (e.g. age, neurology, etc.).

What Happens Once I Collect the Data?

- **Providing invaluable data to RHSCIR:** Once you collect the data, your hospital's RHSCIR coordinator will abstract the information from the medical record and input the data into the RHSCIR database (including additional pressure ulcer data collected in the community through self-report; see "RHSCIR - Additional Pressure Ulcer Data" on page 21), along with other clinical, demographic, sociodemographic, participant flow, and outcomes information. RHSCIR has developed a number of practices to ensure patient confidentiality is maintained and strict privacy policies and procedures are followed.
- **Providing a baseline for management of SCI across Canada:** The de-identified data from your hospital (including additional pressure ulcer data collected via self-report in the community) will be reported to you on a quarterly basis, providing information on your hospital's SCI pressure ulcer incidence and frequency, average length of stay (categorized by presence or absence of pressure ulcer), and other information.

To access your site's data reports, visit Supporting Clinical Initiatives in SCI (SCI^2) resource site at http://sci2.rickhanseninstitute.org. Please see your local RHSCIR coordinator, or designated representative, to receive this log in information.

You can also access the SCI^2 site by visiting www.rickhanseninstitute.org.

03 RESOURCE REQUIREMENTS

To complete data collection as outlined in this toolkit, the following resources are required:

Time

Estimated time required for good clinical practice:

- No wounds - 5-10 minutes
- 1-3 wounds - 10-20 minutes
- 4+ wounds - 20-30 minutes

Equipment

- **Pressure Ulcers Clinical Data Collection Form** or your local hospital version with these questions integrated
- Paper, single-use (disposable) measuring tape
- Two sterile cotton swabs per wound

NOTE: This form is provided for convenience and meets the minimum requirements for RHSCIR data collection. Please integrate this information into your local hospital pressure ulcer assessment tool. If your facility does not have a data collection tool, please add any additional hospital specific information to this form to meet your facility's practice requirements. If you would like assistance to combine your existing local hospital information and this form, please contact us at clinical@rickhanseninstitute.org.

04 FORMS

Pressure Ulcers Clinical Data Collection Form

A version of this form you can insert into your chart is available at http://sci2.rickhanseninstitute.org.

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CI-Pressure Ulcers-MULT

RHSCIR ID #

Reference Table / Legend (Please use reference tables below to complete the Pressure Ulcer Tracking Table)

Location	Location Code		
	Right	Midline	Left
Occiput	A	B	C
Ear	D		E
Scapula	F		G
Elbow	H		I
Ribs	J		K
Spinous process	L	M	N
Iliac crest	O		P
Sacral	Q	R	S
Ischial tuberosity	T		U
Trochanter	V		W
Genitals	X	Y	Z
Knee	AA		BB
Malleolus	CC		DD
Heel	EE		FF
Foot	GG		HH
Other Location:_____	II	JJ	KK

NPUAP Pressure Ulcer Stages: (Staging and illustrations can be found at: www.npuap.org/resources/educational-and-clinical-resources/)	
SDTI (Suspected 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. The area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue.
I	Intact skin with non-blanchable redness of a localized area usually over a bony prominence. Darkly pigmented skin may not have visible blanching; its colour may differ from the surrounding area.
II	Partial thickness loss of dermis presenting as a shallow open ulcer with a red pink wound bed, without slough. May also present as an intact or open/ruptured serum-filled blister.
III	Full thickness tissue loss. Subcutaneous fat may be visible but bone, tendon or muscle are not exposed. Slough may be present but does not obscure the depth of tissue loss. May include undermining and tunneling.
IV	Full thickness tissue loss with exposed bone, tendon or muscle. Slough or eschar may be present on some parts of the wound bed. Often include undermining and tunneling.
U (Unstageable)	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.
Note: Please do not use reverse staging to document a healing pressure ulcer. A Stage IV pressure ulcer cannot become a Stage III, Stage II, and/or subsequently Stage I. When a Stage IV ulcer has healed it should be classified as a healed Stage IV pressure ulcer not a Stage 0 pressure ulcer. Reverse staging does not accurately characterize what is physiologically occurring in the ulcer.	

Qualifiers at discharge:

Resolved: Skin is intact and no longer red, purple, indurated, painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue. Refers to SDTI and stage I, where the skin was never open (therefore "closed" doesn't work here).

Closed: Ulcer is covered with epithelium (even a very thin layer) with no drainage. Refers to Stages II, III, IV and U.

Healing: Decreasing in size, depth, amount of necrotic tissue or exudates, or increasing granulation tissue, etc. (see above). Refers to Stages II, III, IV and U.

Data Collection Details					
Collected by: (please print name)		Initial Here:		Date Abstraction Completed:	YYYY-MM-DD

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PRESSURE ULCERS
Multiple Data Collection Points

CHART ABSTRACTION — CI-Pressure Ulcers-MULT

RHSCIR ID # ______

Pressure Ulcer Assessment

Data Collection Point (check ONE only):
- ☐ Acute care (or Emergency and Acute care) provided
- ☐ Rehab care provided

☐ Information unavailable, unable to complete. Specify Reason: ____

1. Any pressure ulcers during stay at facility? (please include any ulcers present on admission to the facility)
   - ☐ Yes
   - ☐ No (skip to Data Collection Details on page 3)

Definitions related to pressure ulcer form: Please see page 3.

Pressure Ulcer Assessment

2. Was a skin integrity risk assessment completed at admission?
   - ☐ Yes →
     - ☐ SCIPUS (Score:____)
     - ☐ Braden (Score:____)
     - ☐ Other (specify): ______________
   - ☐ No

3. Was a pre-albumin level tested?
   This is a proxy for general nutritional status.
   - ☐ Yes → Level: _____(g/L)
   - ☐ No

4. Any pressure ulcers at admission assessment? (please include any ulcers present on admission to the facility)
   - ☐ Yes → Complete Sections A and B of table below at admission for each ulcer and Section C at discharge.
   - ☐ No

   Assessment Date: _ _ _ _ / _ _ / _ _
   YYYY - MM - DD

   Clinician Name/Signature: ______________________________

5. Any pressure ulcers following admission to the facility (i.e. during stay)?
   - ☐ Yes → Complete Sections A B C at discharge
   - ☐ No

   Assessment Date: _ _ _ _ / _ _ / _ _
   YYYY - MM - DD

   Clinician Name/Signature: ______________________________

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RHSCIR ID # ______

6. Pressure Ulcer Tracking Table *(See Definitions and Reference Tables on page 3)*

Pressure Ulcer Identifier A		Admission Assessment (within 7 days after admission) B		Discharge Assessment (within 7 days prior to discharge from facility) C			
	Onset:	Stage at Admission to Facility:	Qualifier at Admission If Stage II, III, or IV:	Stage at D/C from Facility:	Qualifier at Discharge if Stage SDTI, I, II, III, or IV:	What type of non-surgical treatment was used?	Has the ulcer been surgically treated? (Includes major surgical methods such as direct closure, skin grafting, rotation flaps or debridement of ulcer surface; do not include minor debridement [i.e. bedside debridement by RN/OT/PT].)
Location (enter ONE location code from table below): ☐	☐ Prior to Admission ☐ During stay Date of Appearance: _ _ _ _ / _ _ / _ _ YYYY / MM / DD ☐ Unknown	☐ SDTI ☐ I ☐ II ☐ III ☐ IV ☐ U ☐ N/A (No ulcer at admission) ☐ Unknown	Closed? ☐ Yes ☐ No ☐ Unknown Healing? ☐ Yes ☐ No ☐ Unknown	☐ SDTI ☐ I ☐ II ☐ III ☐ IV ☐ U ☐ Unknown	Resolved? ☐ Yes ☐ No ☐ Unknown Closed? ☐ Yes ☐ No ☐ Unknown Healing? ☐ Yes ☐ No ☐ Unknown	☐ Biophysical (ultrasound, Estim, etc.) ☐ Pressure redistribution (sleeping and seating surface changes) ☐ Dressings (including VAC dressing, occlusive, etc.) ☐ Minor/bedside debridement ☐ No treatment ☐ Unknown ☐ Other (specify): ______________	☐ Yes ☐ No ☐ Unknown If yes, date surgically treated: _ _ _ _ / _ _ / _ _ YYYY / MM / DD

Pressure Ulcer Identifier A		Admission Assessment (within 7 days after admission) B		Discharge Assessment (within 7 days prior to discharge from facility) C			
	Onset:	Stage at Admission to Facility:	Qualifier at Admission If Stage II, III, or IV:	Stage at D/C from Facility:	Qualifier at Discharge if Stage SDTI, I, II, III, or IV:	What type of non-surgical treatment was used?	Has the ulcer been surgically treated? (Includes major surgical methods such as direct closure, skin grafting, rotation flaps or debridement of ulcer surface; do not include minor debridement [i.e. bedside debridement by RN/OT/PT].)
Location (enter ONE location code from table below): ☐	☐ Prior to Admission ☐ During stay Date of Appearance: _ _ _ _ / _ _ / _ _ YYYY / MM / DD ☐ Unknown	☐ SDTI ☐ I ☐ II ☐ III ☐ IV ☐ U ☐ N/A (No ulcer at admission) ☐ Unknown	Closed? ☐ Yes ☐ No ☐ Unknown Healing? ☐ Yes ☐ No ☐ Unknown	☐ SDTI ☐ I ☐ II ☐ III ☐ IV ☐ U ☐ Unknown	Resolved? ☐ Yes ☐ No ☐ Unknown Closed? ☐ Yes ☐ No ☐ Unknown Healing? ☐ Yes ☐ No ☐ Unknown	☐ Biophysical (ultrasound, Estim, etc.) ☐ Pressure redistribution (sleeping and seating surface changes) ☐ Dressings (including VAC dressing, occlusive, etc.) ☐ Minor/bedside debridement ☐ No treatment ☐ Unknown ☐ Other (specify): ______________	☐ Yes ☐ No ☐ Unknown If yes, date surgically treated: _ _ _ _ / _ _ / _ _ YYYY / MM / DD

Pressure Ulcer Identifier A		Admission Assessment (within 7 days after admission) B		Discharge Assessment (within 7 days prior to discharge from facility) C			
	Onset:	Stage at Admission to Facility:	Qualifier at Admission If Stage II, III, or IV:	Stage at D/C from Facility:	Qualifier at Discharge if Stage SDTI, I, II, III, or IV:	What type of non-surgical treatment was used?	Has the ulcer been surgically treated? (Includes major surgical methods such as direct closure, skin grafting, rotation flaps or debridement of ulcer surface; do not include minor debridement [i.e. bedside debridement by RN/OT/PT].)
Location (enter ONE location code from table below): ☐	☐ Prior to Admission ☐ During stay Date of Appearance: _ _ _ _ / _ _ / _ _ YYYY / MM / DD ☐ Unknown	☐ SDTI ☐ I ☐ II ☐ III ☐ IV ☐ U ☐ N/A (No ulcer at admission) ☐ Unknown	Closed? ☐ Yes ☐ No ☐ Unknown Healing? ☐ Yes ☐ No ☐ Unknown	☐ SDTI ☐ I ☐ II ☐ III ☐ IV ☐ U ☐ Unknown	Resolved? ☐ Yes ☐ No ☐ Unknown Closed? ☐ Yes ☐ No ☐ Unknown Healing? ☐ Yes ☐ No ☐ Unknown	☐ Biophysical (ultrasound, Estim, etc.) ☐ Pressure redistribution (sleeping and seating surface changes) ☐ Dressings (including VAC dressing, occlusive, etc.) ☐ Minor/bedside debridement ☐ No treatment ☐ Unknown ☐ Other (specify): ______________	☐ Yes ☐ No ☐ Unknown If yes, date surgically treated: _ _ _ _ / _ _ / _ _ YYYY / MM / DD

If the participant has more than 3 pressure ulcers, please complete an additional CI – Pressure Ulcers-MULT form. On the GRP, all pressure ulcer information can be entered into one table.

Refer to the end of this document for definition of terms found on the form.

05 INSTRUCTIONS

*PLEASE NOTE: The activities described, herein, do not replace your facility's existing protocols or practices, but represent the **minimum** steps necessary to obtain the required information. These standards were developed to concur with other standards available in North America.*

For the purposes of RHSCIR, you will perform two assessments:

- One Admission Assessment
- One Discharge Assessment

Step 1: Get Ready

1. Collect supplies:
   - Pressure Ulcer Assessment Clinical Data Collection Form
   - Single-use, paper measuring tape (dispose after use)
   - Two sterile cotton swabs per wound (dispose after use)
2. Liaise with other staff, as required, to plan time to perform the assessment.

   Admission: A skin assessment should be performed as soon as possible after admission (i.e. within 24 hours), but within seven days at a minimum. If you are unable to complete the admission assessment within seven days (e.g. the patient is too critically ill, or access is not possible due to surgery, etc.), please complete the skin assessment and **Pressure Ulcer Assessment Clinical Data Collection Form** as soon as possible.

   Discharge: A skin assessment should be performed within seven days prior to discharge. Please complete the skin assessment and Pressure Ulcer Assessment Clinical Data Collection Form even if the discharge assessment is completed outside this window.
3. Inform the patient of the assessment and obtain consent to proceed.

Step 2: Complete a Head-To-Toe Visual Skin Inspection

1. To minimize patient burden, first inspect as many body areas as possible that do not require patient turning. Reposition the patient as needed at the beginning, during, and at the end of the assessment (follow physician orders and unit-specific protocols of care related to turning and positioning of individuals with known or suspected orthopedic injury and SCI).

2. Inspect the patient's skin. Particular attention should be paid to vulnerable areas, especially over bony prominences and all (15) locations listed below must be inspected:

- occiput
- ears
- scapulae
- elbows
- ribs – both anterior and posterior chest wall
- spinous processes
- iliac crests
- sacrum
- ischial tuberosities
- trochanters
- genitals
- knees
- malleoli
- heels
- feet
- other locations (so that the entire body is inspected)

3. Note the presence of pressure ulcers of any severity. Include all pressure ulcers, regardless of stage of healing (i.e. open or closed). See NPUAP and CWAP resources in 'TRAINING RESOURCES' on page 17 for more information on staging.

Please note that a risk assessment (such as SCIPUS or Braden) and a head-to-toe skin assessment should be carried out with all patients at admission, and a head-to-toe skin assessment daily, thereafter, for individuals identified at risk for skin breakdown (usually performed by nursing staff during regular assessment)(10,11). The RHSCIR dataset does not include the specific data arising from the risk assessment, only that it was completed (or not).

Go to the Pressure Ulcer Assessment Data Collection Form:

On Admission to Facility:
Regardless of whether or not there is a pressure ulcer on admission to the facility, please complete the Pressure Ulcer Assessment Clinical Data Collection Form.

Complete question 1 - Was a skin integrity risk assessment completed at admission?

- ☐ **Yes.** Indicate yes, and note which risk assessment tool was used (e.g., SCIPUS,
- ☐ Braden, other) **as well as their score.**
- ☐ **No.** Indicate no, and proceed to the next question

Complete question 2 Was a prealbumin level tested?

- ☐ **Yes.** Indicate yes, and note the level in g/L. This is a proxy for general nutritional status.
- ☐ **No.** Indicate no, and proceed to the next question

Complete question 3 - Any pressure ulcers identified from admission assessment?

- ☐ **Yes.** Indicate yes, and proceed with a detailed assessment. Complete only sections **A** and **B** (Steps 3 & 4 below) of the Pressure Ulcer Tracking Table for all pressure ulcers identified at admission to facility (section **C** should be completed only at discharge). Complete the date of assessment and your name.
- ☐ **No.** Complete the date of assessment and your name. Continue skin monitoring following hospital specific protocols or on a daily basis for those identified at risk for skin breakdown.

If your patient has no pressure ulcers, your Admission Assessment is now finished. If they do have one or more pressure ulcers, please continue on to Step 3.

Step 3: Collect general information about the pressure ulcer(s)

1. If you answered 'Yes' to question 3, determine the location and onset information of all pressure ulcer(s) present. Assess each pressure ulcer separately.
   - **Location:** Determine where on the body a pressure ulcer(s) is present. Uniquely identify each pressure ulcer using the location codes.
   - **Onset:** Did this pressure ulcer begin at a different facility, or after admission to your facility?
   - **Date of appearance:** A pressure ulcer usually presents with minor alteration to the skin and progresses later. The date of appearance should be the date when the first alteration to the skin was observed by any staff member (at any point on the continuum of care). This information may be found in the medical record or determined from the patient or health care team.

Go to the Pressure Ulcer Assessment Data Collection Form:

On Admission to Facility AND on Discharge from Facility:

Complete Section A of the Pressure Ulcer Assessment Clinical Data Collection Form. Complete a separate row for each pressure ulcer.

- **Location**
  - Only one location code (taken from the legend located on the first page of the Pressure Ulcer Clinical Data Collection Form) may be entered. For example, a pressure ulcer located on the right iliac crest is identified as O; a mid-line sacral pressure ulcer is identified as R.
- **Onset**
  - **Onset - Prior to admission.** Any pressure ulcer with onset prior to admission to your facility.
  - **Onset - During stay.** Any pressure ulcer with onset after admission to your facility and before discharge from your facility (including other care areas in your facility).
  - **Date of appearance**
    - Partial dates may be entered if exact date is unknown (e.g. YYYY/MM).
      Note: Date of appearance is the date when this pressure ulcer was first noted by a care provider at any facility or at any point of care including: EHS transport, Emergency Department, ICU, etc., not the day when your assessment is performed.
  - **Date of Appearance – Unknown.** Unknown must be selected when the date of pressure ulcer appearance is not known and cannot be determined via medical record review, from patient or health care team interview.

Step 4: On admission, stage each pressure ulcer and determine the appropriate qualifier (i.e. whether it is healing or closed)

1. Determine the stage of each pressure ulcer as per the NPUAP Guidelines. See the Pressure Ulcer Assessment reference tables (reference table/legend, first page of the Pressure Ulcer Clinical Data Collection Form), the definitions section in this booklet (Section 6: Definitions, on page 15), and training materials (Section 7: Training Resources on page 17) for more information about staging.

2. Determine whether the ulcer has changed since onset. "Successful ulcer management requires a parameter to judge the effectiveness of the treatment plan. For the clinician to say, "The ulcer is healing," requires comparison between the present state and previous state of the ulcer and evidence that the ulcer has improved." (5). On admission, the previous state of the pressure ulcer may not be available; in that case, it is appropriate to use "unknown". The following qualifiers should be used to provide this comparison where possible:

   - **If Stage is II, III, or IV, determine the appropriate Qualifier at Admission:**

   A) Use the following criteria to determine if the pressure ulcer is closed:

   - **Closed – Yes.** Ulcer is 100% covered with epithelium (even a very thin layer) with no drainage.
   - **Closed – No.** Ulcer is not 100% covered with epithelium (even a very thin layer) and/or drainage is present.
   - **Closed – Unknown.** Unknown must be selected when unable to determine if the pressure ulcer is closed through any source (e.g. medical record review, patient, or health care team).

   B) If the pressure ulcer closed status is 'No' or 'Unknown', use the following criteria to determine if the pressure ulcer is healing:

   - **Healing – Yes.** Ulcer is decreasing in size, depth, amount of necrotic tissue or exudates, or increasing granulation tissue, etc.
   - **Healing – No.** Ulcer is not decreasing in size, depth, amount of necrotic tissue or exudates, or increasing granulation tissue, etc. A pressure ulcer that remains the same is considered not to be healing.
   - **Healing – Unknown.** Unknown must be selected when unable to determine if the pressure ulcer is healing through any source (e.g. medical record review, patient, or health care team).

Go to the Pressure Ulcer Assessment Data Collection Form:

Complete the corresponding Admission Assessment Section B for each pressure ulcer

- ☐ **Stage at Admission to Facility**
  - ☐ Indicate the NPUAP stage of the pressure ulcer as determined by your assessment.
- ☐ **Qualifier at Admission If Stage is II, III, or IV**
  - ☐ Indicate the Closed and Healing status using the criterion above

Your Admission Assessment is now finished.

Step 5: On discharge, stage each pressure ulcer and determine the appropriate qualifier (i.e. whether it has resolved, is healing or is closed)

1. Determine 'Stage at Discharge from Facility' and the 'Date Stage' determined as outlined for admission assessment above (Step 4).

   - **If Stage is SDTI or Stage I, determine whether the pressure ulcer has resolved using the following criteria:**

- **Resolved – Yes.** Skin surface (epithelium) is intact, and deeper tissues are not red, purple, indurated, painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue.
- **Resolved – No.** Skin surface (epithelium) is intact, but deeper tissues show red or purple markings, are indurated, painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue.
- **Resolved – Unknown.** Unknown must be selected when unable to determine if the pressure ulcer has resolved through any source (e.g. medical record review, patient, or health care team).

- **If Stage is II, III, or IV, determine if the pressure ulcer is closed using the same criteria defined in Step 4.**

Note: Pressure ulcers should not be reverse staged. For example, a Stage IV pressure ulcer at admission cannot become a lower staged pressure ulcer at discharge. Instead, use the "closed" or "healing" qualifiers as appropriate to modify its status as a Stage IV pressure ulcer. For more information see Section 6: Definitions - NPUAP Pressure Ulcer Stages.

Go to the Pressure Ulcer Assessment Data Collection Form:

At Discharge from Facility:

Complete question 4 - Any pressure ulcers following admission to the facility (i.e. during stay)?

- **No.** Complete the date of assessment and your name.
- **Yes.** Indicate yes, and proceed with a detailed assessment to complete sections **A** , **B** and **C** of the Pressure Ulcer Tracking Table for all pressure ulcers identified at discharge from facility: **Steps 3, 5, 6 and 7.** Complete a separate row for each pressure ulcer. Complete the date of assessment and your name.
  - NB: for pressure ulcers that develop following admission, choose "N/A (No ulcer at admission) for "stage at admission to facility" in part **B**. Accordingly, leave blank the Qualifier at Admission (In section **B**).

Additionally, for any pressure ulcer present on admission to facility where sections A and B were completed, complete the corresponding Discharge Assessment (Section C).

- **Stage at D/C from Facility**
  - Enter the NPUAP stage of the pressure ulcer as determined by your assessment
- **If stage is SDTI or I, complete the Qualifier at Discharge by marking whether the pressure ulcer is resolved using the criteria above**
- **If stage is II, III, or IV, complete the Qualifier at Discharge by marking whether the pressure ulcer is closed using the criteria in step 4.**
  - If closed status "no" or "unknown" is selected, mark whether the pressure ulcer is healing using the criteria in step 4.

Step 6: At discharge, determine if the pressure ulcer was ever treated non-surgically or surgically

1. Determine if the pressure ulcer was treated non-surgically at any time. Non-surgical treatments are described in five categories:
   - **Biophysical:** including ultrasound and electrical stimulation, among other similar treatments.

- **Pressure redistribution:** including the changing of any surface that touches the affected area, including sleeping, toileting, washing/showering and seating surfaces.
- **Dressings:** including all types of occlusive, regular and specialized dressings; including negative pressure wound therapy.
- **Minor/bedside debridement:** including any removal of tissue at the bedside or in a specialized area but does not include treatment performed in an operating room.
- **Other.**

2. Determine if the pressure ulcer was surgically treated at any time. Surgical treatment includes major surgical methods such as: direct closure, skin grafting, rotation flaps or debridement of pressure ulcers that occur in an operating room (bedside debridements are not considered surgical and should not be included in this category).

Go to the Pressure Ulcer Assessment Data Collection Form:

Complete the corresponding Discharge Assessment (Section C) for each pressure ulcer

- ☐ **What type of non-surgical treatment was used?**
  - ☐ **If applicable,** choose all the non-surgical treatment used, as defined above.
- ☐ **Has the ulcer been surgically treated?**
  - ☐ **Surgically treated – Yes.**
  - ☐ **Surgically treated – No.**
  - ☐ **Surgically treated – Unknown.** Unknown must be selected when unable to determine if surgical treatment was provided through any source; e.g. medical record review, patient, or health care team.
- ☐ **If yes, date surgically treated**
  - ☐ Date surgically treated is the calendar date (yyyy/mm/dd) on which the surgical treatment occurred.

Step 7: Finish pressure ulcer assessment

Review the information you have collected to make sure other care providers can use it to re-assess this pressure ulcer later (e.g. are able to identify the location and stage of the pressure ulcer in future).

Go to the Pressure Ulcer Assessment Data Collection Form:

Ensure all data is complete, accurate, and legible.
Place the original form in the medical record.

Step 8: Address facility specific care protocols

This assessment and documentation process fulfills only the minimum requirements for good practice and data collection for the RHSCIR process. Site specific protocols may require additional assessment, intervention, and documentation which are not included in this document.

06 DEFINITIONS

Admission: The date the individual is admitted to the care facility, regardless of where in the facility the individual is first admitted or where he/she may be internally transferred between care areas.

Admission assessment: A skin assessment should be performed as soon as possible after admission (i.e. within 24 hours), but within seven days at a minimum. If the admission assessment cannot be completed within seven days (e.g. the patient is too critically ill, or access is not possible due to surgery, etc.) then it should be completed as soon as possible.

Closed: The previously open ulcer is covered with epithelium (even a very thin layer) with no drainage.

Date of appearance: A pressure ulcer usually presents with a minor alteration to the skin and progresses later. The date of appearance should be the date when the first alteration to the skin was observed. If the date is unknown this should be documented (source: international SCI Skin and Thermoregulation Basic Data Set)

Date stage determined: The calendar date (yyyy/mm/dd) on which the pressure ulcer was first staged as per NPUAP Pressure Ulcer Staging Guidelines.

Date surgically treated: The calendar date (yyyy/mm/dd) on which the surgical treatment occurred.

Discharge assessment: A skin assessment should be performed within seven days prior to discharge. Please complete the skin assessment and Pressure Ulcer Assessment data collection form even if the discharge assessment is completed outside this window.

Healing: The ulcer is decreasing in size, depth, amount of necrotic tissue or exudates, or increasing in granulation tissue, etc.

NPUAP Pressure Ulcer Stages:

SDTI (Suspected Deep Tissue Injury): Purple or maroon localized area of discoloured intact skin or blood-filled blister due to damage of underlying soft tissue from pressure and/or shear. The area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue.

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

Stage II: Partial thickness loss of dermis presenting as a shallow open ulcer with a red pink wound bed, without slough. 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 are not exposed. Slough may be present but does not obscure the depth of tissue loss. 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. Often include undermining and tunneling.

Unstageable/Unclassified (U): 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.

Note: Do not use reverse staging to document a healing pressure ulcer. Pressure ulcers heal to progressively more shallow depth; they do not replace lost muscle, subcutaneous fat, or dermis before they re-epithelialize. Instead, the ulcer is filled with granulation (scar) tissue composed primarily of endothelial cells, fibroblasts, collagen and extracellular matrix. A Stage IV pressure ulcer cannot become a Stage III, Stage II, and/or subsequently Stage I. When a Stage IV ulcer has healed it must be classified as a healed Stage IV pressure ulcer; no other description is applicable. Therefore, reverse staging does not accurately characterize what is physiologically occurring in the ulcer (12). In the case of "Unstageable/Unclassfied" wounds, these can be staged once the wound bed is visible. For example, a wound may be unstageable on admission, but classified as a Stage IV once the wound bed is visible after debridement (11). For more information, see NPUAP Position Statement on reverse staging.

Onset - prior to admission: Any pressure ulcer with onset before admission to your facility.

Onset - during stay: Any pressure ulcer with onset after admission to your facility and before discharge from your facility (including other care areas in your facility).

Resolved: A SDTI or Stage I pressure ulcer is considered resolved when the skin surface (epithelium) is intact, and deeper tissues are not red, purple indurated, painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue.

Surgical treatment: Surgical treatment may include any treatment ranging from small debridement of the ulcer surface to rotation flaps. In this context, this variable includes only major surgical methods such as direct closure, skin grafting, or rotation flaps. Minor debridement is defined as conservative treatment and should not be documented (13).

Questions or comments regarding this guideline?
Email clinical@rickhanseninstitute.org.

07 TRAINING RESOURCES

Canadian Best Practice Guidelines for the Prevention and Management of Pressure Ulcers in People with Spinal Cord Injury

- Available online at: http://onf.org/system/attachments/168/original/Pressure_Ulcers_Best_Practice_Guideline_Final_web4.pdf.
- Chapter 8 is a comprehensive explanation of assessment after developing a pressure ulcer.
- Other chapters in the document cover all topics related to the prevention, monitoring and treatment of pressure ulcers.

National Pressure Ulcer Advisory Panel (NPUAP)

- Available online at www.npuap.org.
- On-line access to information and resources.
- Pressure Ulcer Photos, includes:
  - 'Real-life' images of pressure ulcer at all stages: ankle, buttocks, ear, elbow, etc.

Canadian Association of Wound Care (CAWC)

- Available online at www.cawc.net.
- On-line access to information and resources.
- Wound Assessment Pocket Guide, includes:
  - NPUAP updated staging system (2007)
  - Wong-Baker FACES© pain scale
  - Calculation to determine percentage healing over time
  - BWAT© Pictorial Guide with enhanced descriptors
  - Braden Scale for Predicting Pressure Sore Risk©

08 REFERENCES

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09 ADDITIONAL RESOURCES

- NPUAP has the **Pressure Ulcer Scale for Healing** (PUSH), which is a non-SCI specific way to measure the healing of wounds: www.npuap.org/wp-content/uploads/2012/02/push3.pdf.
- The **Braden Scale** is used by most sites for the assessment of pressure sore risk: www.in.gov/isdh/files/Braden_Scale.pdf.
- A SCI-specific pressure ulcer risk assessment, the **Spinal Cord Injury Pressure Ulcer Scale (SCIPUS)**, is also available at: www.rehabmeasures.org/Lists/RehabMeasures/DispForm.aspx?ID=962.
- The **Spinal Cord Injury Rehabilitation Evidence Project** has evidence-based information on the assessment and treatment of pressure ulcers: www.scireproject.com/rehabilitation-evidence/pressure-ulcers.
- The International Spinal Cord Society produced **eLearnSCI**, a set of education modules covering a wide variety of topics for all health-care professionals: www.elearnsci.org/.
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10 RHSCIR – ADDITIONAL PRESSURE ULCER DATA

Additional pressure ulcer data is collected in the RHSCIR from all participants who consent. This data is collected via self-report at all community follow-up time points (1 year, 2 year, 5 year and every 5 years following the date of SCI) as a part of the collection of secondary complications information.

Participant Self-Report

14. **Pressure Ulcers - New** (Also called skin ulcers, bedsores, and decubitus ulcers - A skin wound often caused by constant pressure against the skin causing reduced blood supply to the area and death of the tissue. These develop as a skin rash or redness and may progress to an infected sore.)

a) In the past 12 months (or if this is your first CFU, in the time since you were discharged from the hospital), how many NEW pressure ulcers have you had? **(Check ONE) (If None or Don't Know, skip to Question 15)**

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 or more ☐ None ☐ Don't know

b) Of these NEW pressure ulcers, how many are in a NEW location? **(i.e., A location where you have not had a previous pressure ulcer)**

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6

c) You mentioned that you experienced new pressure ulcers in the past 12 months. Have you received some form of treatment for this problem? **(If No, skip to Question 14 e)**

☐ Yes ☐ No

d) If yes, were the new ulcers surgically treated?

☐ Yes ☐ No

e) When you had new pressure ulcers, to what extent did it limit your activities? **(Check ONE)**

☐ Not at all ☐ Very little ☐ To some extent ☐ To a great extent ☐ Completely

15. **Pressure Ulcers - Ongoing** (Also called skin ulcers, bedsores, and decubitus ulcers - A skin wound often caused by constant pressure against the skin causing reduced blood supply to the area and death of the tissue. These develop as a skin rash or redness and may progress to an infected sore.)

a) Other than the NEW pressure ulcers described above, how many ONGOING/UNRESOLVED pressure ulcers do you have that were previously existing? **(Check ONE) (If None or Don't Know, skip to Question 16)**

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 or more ☐ None ☐ Don't know

b) Of these NEW pressure ulcers, how many are in a NEW location **(i.e., A location where you have not had a previous pressure ulcer)**

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6

c) You mentioned that you experienced ongoing or unresolved pressure ulcers in the past 12 months. Have you received some form of treatment for this problem? **(If No, skip to Question 14 e)**

☐ Yes ☐ No

d) If yes, were the ongoing or unresolved ulcers surgically treated?

☐ Yes ☐ No

e) When you had ongoing or unresolved pressure ulcers, to what extent did it limit your activities? **(Check ONE)**

☐ Not at all ☐ Very little ☐ To some extent ☐ To a great extent ☐ Completely

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