

Health Quality Ontario

The provincial advisor on the quality of health care in Ontario

Indicator Technical Specifications for the Quality Standard *Pressure Injuries: Care for Patients in All Settings*

Technical Appendix

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Technical Appendix Overview: Pressure Injuries

This technical appendix accompanies Health Quality Ontario's Quality Standard *Pressure Injuries: Care for Patients in All Settings*. Early in the development of each quality standard, a small number of performance indicators are chosen to measure the success of the entire standard. These indicators guide the development of the quality standard so that every statement within the standard aids in achieving the standard's overall goals. This appendix includes information on the definitions and technical details of the indicators listed below, including data sources for indicators that can be consistently measured across providers, across the sectors of health care, and at the provincial level.

- Percentage of patients with a new pressure injury in a 6-month period (incidence)
- Percentage of patients with a pressure injury in a 6-month period (prevalence)
- Percentage of patients with a closed pressure injury in a 12-week period
- Percentage of patients with a healed pressure injury who were diagnosed with a secondary pressure injury within 1 year (recurrence)
- Percentage of patients with a pressure injury who had a diagnosed wound infection in a 6-month period
- Percentage of patients with a pressure injury in a 12-month period who reported high satisfaction with the care provided

Indicators are categorized as:

- Currently measurable in Ontario or similar health systems (the indicator is well defined and validated); or
- Developmental (the indicator is not well defined, and data sources do not currently exist to measure it consistently across providers and at the system level)

Quality Standard Scope

This quality standard focuses on care for people who are at risk of developing or who have developed a pressure injury. The scope of the standard covers all settings, including primary care, home care, long-term care, and acute care. It also provides guidance on care when a person transitions between these settings—for example, when someone is discharged from a hospital to their home or to a long-term care home. It is one of three quality standards related to wound care; the other two are for venous leg ulcers and diabetic foot ulcers.

In this quality standard, the term *patient* includes community care clients and residents of long-term care homes.

Questions or Comments?

Please email: info@HQOntario.ca

Currently Measureable Indicators

The following two indicators are currently measureable in several sectors of Ontario’s health care system:

- Percentage of patients with a new pressure injury in a 6-month period (incidence)
- Percentage of patients with a pressure injury in a 6-month period (prevalence)

Methodological details are as follows:

Table 1: Percentage of patients with a new pressure injury in a 6-month period (incidence)

GENERAL DESCRIPTION	Indicator description	The percentage of patients with a new pressure injury in a 6-month period Directionality: A lower percentage is better
	Indicator status	Measureable (acute care, inpatient rehabilitation, long-term care, complex continuing care, and long-stay home care patients)
	Dimensions of quality	Effective
DEFINITION & SOURCE INFORMATION	Calculation: General	<p>Denominator Total number of patients</p> <p>Numerator Number of patients with a newly diagnosed pressure injury within the prior 6 months</p> <p><i>Exclusions</i> Patients with a pressure injury on their previous assessment (if available)</p> <p>Method Numerator/denominator × 100</p>
	Calculation: Acute care	<p>Denominator Total number of patients discharged from an acute care facility within the past 6 months</p> <p>Numerator Number of patients in the denominator with a type 3 (post-admit) diagnostic code for pressure injury</p> <p><i>Inclusions</i> Diagnosis code in ICD-10-CA:</p> <ul style="list-style-type: none"> • L89.^ Decubitus [pressure] injury and pressure area • L89.00 Pressure injury of unspecified elbow • L89.01 -.02 Pressure injury of right and left elbow • L89.10-5 Pressure injury of back • L89.2 Pressure injury of hip • L89.3-4 Pressure injury of buttock • L89.5-6 Pressure injury of ankle • L89.9 Pressure injury unspecified site

	<p><i>Exclusions</i> Patients with a pre-admit (diagnosis type 1 or 2) pressure injury Diagnosis code in ICD-10-CA (any diagnosis type)</p> <ul style="list-style-type: none"> • L90.0 Stage 1 decubitus injury and pressure area <p>Method Numerator/denominator × 100</p> <p>Data source: Discharge Abstract Database</p>
Calculation: Acute rehabilitation	<p>Denominator Total number of patients discharged from an acute inpatient rehabilitation care facility within the past 6 months</p> <p>Numerator Number of patients in the denominator with a post-admit comorbid health condition diagnostic code for pressure injury</p> <p><i>Inclusions</i> Diagnosis code in ICD-10-CA:</p> <ul style="list-style-type: none"> • L89.^ Decubitus [pressure] injury and pressure area • L89.00 Pressure injury of unspecified elbow • L89.01 -.02 Pressure injury of right and left elbow • L89.10-5 Pressure injury of back • L89.2 Pressure injury of hip • L89.3-4 Pressure injury of buttock • L89.5-6 Pressure injury of ankle • L89.9 Pressure injury unspecified site <p><i>Exclusions</i> Patients with a pressure injury (coded as most responsible health condition or pre-admit comorbid health condition) on their previous assessment Diagnosis code in ICD-10-CA (any diagnosis type):</p> <ul style="list-style-type: none"> • L90.0 Stage 1 decubitus injury and pressure area <p>Method Numerator/denominator × 100</p> <p>Data source: National Rehabilitation Reporting System</p>

<p>Calculation: Long-term care and complex continuing care</p>	<p>Denominator Total number of long-term care residents or complex continuing care patients</p> <p>Numerator Number of patients in the denominator with a diagnostic code for pressure injury</p> <p><i>Inclusions</i> Include if M2a >= 1 and Prev_M2a = 0, where M2a = stage of pressure injury at target assessment [0-4] and Prev_M2a = stage of pressure injury at prior assessment [0-4]</p> <p><i>Exclusions</i> Patients with a pressure injury on their previous assessment [Prev_M2a > 1] Patients whose pressure injury formed while in another care setting, e.g., in acute care</p> <p>Method Numerator/denominator × 100</p> <p>Data source: Continuing Care Reporting System</p> <p>Potential adjustments: Age younger than 65 years, resource utilization group (RUG), late loss activities of daily living (ADL), standardization with the case mix index (CMI)</p>
<p>Calculation: Long-stay home care</p>	<p>Denominator Total number of patients who have received home care services for at least 6 months</p> <p>Numerator Number of patients in the denominator with diagnostic code for pressure injury</p> <p><i>Inclusions</i> Include if [Prev_N2a = 0] and [N2a > 1], where N2a = pressure injury stage at target assessment (highest pressure injury stage present [0, 1, 2, 3, 4]) and Prev_N2a = pressure injury stage at previous assessment (0 = no pressure injury ; 4 = highest stage of pressure injury present)</p> <p><i>Exclusions</i> Patients with a pressure injury on their previous assessment [Prev_N2a > 1] Patients whose pressure injury formed while in another care setting, e.g. in acute care</p> <p>To prevent capturing outcomes that result from the care received outside of the home care setting, assessments are excluded according to the following criteria:</p> <ul style="list-style-type: none"> • If case open date is missing (CC1) and reason for assessment is initial assessment (A2=1): exclude if CC1 = missing and A2 = 1; or • If the assessment took place within 60 days of when the referral was first received/case open date: A1-CC1 < 60; or • If assessment was completed in hospital settings (X70 = 2)

		<p>Method Numerator/denominator × 100</p> <p>Data source: Home Care Reporting System</p> <p>Potential adjustments: Home care: activities of daily living (ADL) impairment (ADL hierarchy score = 4, 5, 6 vs. 0, 1, 2, 3)</p>
	Calculation: Primary care	<p>Not currently measurable in primary care because it is not possible to determine if a pressure injury is new or if it developed while receiving care in another setting</p> <p>Denominator Total number of patients rostered in your practice within the past 6 months</p> <p>Numerator Number of patients in the denominator with a post-admit comorbid health condition diagnostic code for pressure injury</p> <p><i>Inclusions</i> Diagnosis code in ICD-10-CA:</p> <ul style="list-style-type: none"> • L89.^ Decubitus [pressure] injury and pressure area • L89.00 Pressure injury of unspecified elbow • L89.01 -.02 Pressure injury of right and left elbow • L89.10-5 Pressure injury of back • L89.2 Pressure injury of hip • L89.3-4 Pressure injury of buttock • L89.5-6 Pressure injury of ankle • L89.9 Pressure injury unspecified site <p><i>Exclusions</i> Patients with a pressure injury in the previous 6 months Diagnosis code in ICD-10-CA (any diagnosis type):</p> <ul style="list-style-type: none"> • L90.0 Stage 1 decubitus injury and pressure area <p>Method Numerator/denominator × 100</p> <p>Data source: Local data collection</p>
GEOGRAPHY & TIMING	Levels of comparability	Overall province, LHIN, sub-LHIN region, patient characteristics (subject to sample size)

ADDITIONAL INFORMATION	Comments	<p>The indicator only captures new pressure injuries. If a patient develops a secondary pressure injury while the first injury has not healed, this will not be counted in the indicator.</p> <p>This indicator measures incidence, so it is a measure of prevention not treatment.</p> <p>For more information on measuring this indicator in the home care setting, see: http://indicatorlibrary.hqontario.ca/Indicator/Summary/Pressure-injurys-home-care-patients/EN</p> <p>A variation of this indicator, which measures new or worsening pressure injuries, is available for long-term care and complex continuing care: http://indicatorlibrary.hqontario.ca/Indicator/Summary/Pressure-Injurys-Among-Residents/EN http://indicatorlibrary.hqontario.ca/Indicator/Summary/pressure-injurys-complex-continuing-care-patients/EN</p>
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Abbreviations: ICD, International Classification of Diseases; LHIN, local health integration network.

Table 2: Percentage of patients with a pressure injury in a 6-month period (prevalence)

GENERAL DESCRIPTION	Indicator description	The percentage of patients with a pressure injury in the previous 6 months Directionality: A lower percentage is better
	Indicator status	Measureable (acute care, inpatient rehabilitation, long-term care, complex continuing care, long-stay home care, and primary care patients)
	Dimensions of quality	Effective
DEFINITION & SOURCE INFORMATION	Calculation: General	<p>Denominator Total number of patients</p> <p>Numerator Number of patients with a documented pressure injury within the prior 6 months</p> <p><i>Exclusions</i> Patients with a pressure injury on their previous assessment (if available)</p> <p>Method Numerator/denominator × 100</p>
	Calculation: Acute care	<p>Denominator Total number of patients discharged from an acute care facility within the past 6 months</p> <p>Numerator Number of patients in the denominator with a diagnostic code (pre- or post-admit) for pressure injury</p> <p><i>Inclusions</i> Diagnosis code in ICD-10-CA:</p> <ul style="list-style-type: none"> • L89.^ Decubitus [pressure] injury and pressure area • L89.00 Pressure injury of unspecified elbow • L89.01 -.02 Pressure injury of right and left elbow • L89.10-5 Pressure injury of back • L89.2 Pressure injury of hip • L89.3-4 Pressure injury of buttock • L89.5-6 Pressure injury of ankle • L89.9 Pressure injury unspecified site <p><i>Exclusions</i> Diagnosis code in ICD-10-CA (any diagnoses type):</p> <ul style="list-style-type: none"> • L90.0 Stage 1 decubitus injury and pressure area <p>Method Numerator/denominator × 100</p> <p>Data source: Discharge Abstract Database</p>

<p>Calculation: Acute rehabilitation</p>	<p>Denominator Total number of patients discharged from an acute inpatient rehabilitation care facility within the past 6 months</p> <p>Numerator Number of patients in the denominator with a most responsible health condition, pre-admit comorbid health condition, or post-admit comorbid health condition diagnostic code for pressure injury</p> <p><i>Inclusions</i> Diagnosis code in ICD-10-CA:</p> <ul style="list-style-type: none"> • L89.^ Decubitus [pressure] injury and pressure area • L89.00 Pressure injury of unspecified elbow • L89.01 -.02 Pressure injury of right and left elbow • L89.10-5 Pressure injury of back • L89.2 Pressure injury of hip • L89.3-4 Pressure injury of buttock • L89.5-6 Pressure injury of ankle • L89.9 Pressure injury unspecified site <p><i>Exclusions</i> Diagnosis code in ICD-10-CA (any diagnoses type):</p> <ul style="list-style-type: none"> • L90.0 Stage 1 decubitus injury and pressure area <p>Method Numerator/denominator × 100</p> <p>Data source: National Rehabilitation Reporting System</p>
<p>Calculation: Home care</p>	<p>Denominator Total number of patients who have received home care services for at least 6 months</p> <p>Numerator Number of patients in the denominator with a diagnostic code for pressure injury</p> <p>Inclusions Include if [N2a > 1], where N2a = pressure injury stage at target assessment (highest pressure injury stage present [0, 1, 2, 3, 4])</p> <p>Method Numerator/denominator × 100</p> <p>Data source: Home Care Reporting System</p> <p>Potential adjustments: Home care: activities of daily living (ADL) impairment (ADL hierarchy score = 4, 5, 6 vs. 0, 1, 2, 3)</p>

<p>Calculation: Long-term care and complex continuing care</p>	<p>Denominator Total number of long-term care residents or complex continuing care patients</p> <p>Numerator Number of patients in the denominator with a diagnostic code for pressure injury</p> <p><i>Inclusions</i> Include if [M2a > 1], where M2a = pressure injury stage at target assessment (highest pressure injury stage present [0, 1, 2, 3, 4])</p> <p>Method Numerator/denominator × 100</p> <p>Data source: Continuing Care Reporting System</p> <p>Potential adjustments: Age younger than 65 years, resource utilization group (RUG), late loss activities of daily living (ADL)</p>
<p>Calculation: Primary care</p>	<p>Denominator Total number of unique patients rostered who you have seen in your practice within the past 6 months</p> <p>Numerator Number of patients in the denominator with at least 1 diagnostic code for a pressure injury</p> <p><i>Inclusions</i> Diagnosis code in ICD-10-CA:</p> <ul style="list-style-type: none"> • L89.^ Decubitus [pressure] injury and pressure area • L89.00 Pressure injury of unspecified elbow • L89.01 -.02 Pressure injury of right and left elbow • L89.10-5 Pressure injury of back • L89.2 Pressure injury of hip • L89.3-4 Pressure injury of buttock • L89.5-6 Pressure injury of ankle • L89.9 Pressure injury unspecified site <p><i>Exclusions</i> Diagnosis code in ICD-10-CA (any diagnosis type):</p> <ul style="list-style-type: none"> • L90.0 Stage 1 decubitus injury and pressure area <p>Method Numerator/denominator × 100</p> <p>Data source: Ontario Health Insurance Plan Claims Database</p>

GEOGRAPHY & TIMING	Levels of comparability	Overall province, LHIN, sub-LHIN region, patient characteristics (subject to sample size)
ADDITIONAL INFORMATION	Comments	<p>This indicator can include patients with a pressure injury on their previous assessment.</p> <p>The indicator only captures 1 pressure injury per person, so a patient with more than 1 pressure injury will only be counted once in the numerator.</p> <p>This indicator measures prevalence, so it is a measure of both prevention and treatment</p>

Abbreviations: ICD, International Classification of Diseases; LHIN, local health integration network.

Developmental Indicators

The following four indicators are currently developmental and rely on local data collection for reporting:

- Percentage of patients with a closed pressure injury in a 12-week period
- Percentage of patients with a healed pressure injury who were diagnosed with a secondary pressure injury within 1 year (recurrence)
- Percentage of patients with a pressure injury who had a diagnosed wound infection in a 6-month period
- Percentage of patients with a pressure injury in a 12-month period who reported high satisfaction with the care provided

Methodological details are as follows:

Table 3: Percentage of patients with a closed pressure injury in a 12-week period

GENERAL DESCRIPTION	Indicator description	The percentage of patients with a pressure injury that closed within a 12 week period Directionality: A higher percentage is better
	Indicator status	Developmental
	Dimensions of quality	Effective
DEFINITION & SOURCE INFORMATION	Calculation	<p>Denominator Number of patients with a diagnosis of a pressure injury within the prior 6 months</p> <p>Numerator Number of patients with a diagnosed pressure injury within the prior 6 months that closed within 12 weeks</p> <p><i>Exclusions</i> Patients with a non-healable pressure injury</p> <p>Method Numerator/denominator × 100</p>
	Data source	Local data collection
ADDITIONAL INFORMATION	Limitations	Although the majority of closed pressure injuries eventually heal, this indicator would not capture pressure injuries that reopen beyond 12 weeks due to poor assessment or care
	Comments	If a patient has more than 1 pressure injury, the indicator should capture the most severe pressure injury.

Table 4: Percentage of patients with a healed pressure injury who were diagnosed with a secondary pressure injury within 1 year (recurrence)

GENERAL DESCRIPTION	Indicator description	The percentage of patients with a healed pressure injury who were diagnosed with a secondary pressure injury within 1 year Directionality: A lower percentage is better
	Indicator status	Developmental
	Dimensions of quality	Effective
DEFINITION & SOURCE INFORMATION	Calculation	Denominator Number of patients with a healed pressure injury within a 1-year period Numerator Number of patients in the denominator with a newly diagnosed pressure injury within the 1-year period Method $\text{Numerator/denominator} \times 100$
	Data source	Local data collection
	Limitations	
ADDITIONAL INFORMATION	Comments	This indicator measures the recurrence of a pressure injury. If someone develops a secondary pressure injury before the first heals, it would not be included in this indicator.

Table 5: Percentage of patients with a pressure injury who had a diagnosed wound infection in a 6-month period

GENERAL DESCRIPTION	Indicator description	The percentage of patients with a pressure injury who had a diagnosed wound infection in a 6-month period Directionality: A lower percentage is better
	Indicator status	Developmental
	Dimensions of quality	Safe; Effective
DEFINITION & SOURCE INFORMATION	Calculation	Denominator Number of patients with a diagnosis of a pressure injury within the prior 6 months Numerator Number of patients in the denominator who had a diagnosed wound infection Method $\text{Numerator/denominator} \times 100$
	Data source	Local data collection
ADDITIONAL INFORMATION	Limitations	
	Comments	

Table 6: Percentage of patients with a pressure injury in a 12-month period who reported high satisfaction with the care provided

GENERAL DESCRIPTION	Indicator description	The percentage of patients with a pressure injury in a 12-month period who reported high satisfaction with the care provided Directionality: A higher percentage is better
	Indicator status	Developmental
	Dimensions of quality	Patient-centred
DEFINITION & SOURCE INFORMATION	Calculation	<p>Denominator Number of patients with a diagnosis of a pressure injury</p> <p>Numerator Number of patients with a diagnosed pressure injury (or their caregivers) who reported that their satisfaction with the care they received was “excellent” or “very good” in their most recent assessment within the prior 12 months</p> <p>Suggested survey question: Overall, how would you rate the wound care services you received from the individuals who provided care to you?</p> <p><i>Inclusions</i> Caregivers should be surveyed in place of patients in the event that either (1) the patient is < 12 years of age at time of sample selection or (2) the patient is identified as cognitively incapable.</p> <p><i>Exclusions</i> Patients and caregivers who were unable to complete the survey (e.g., comatose, language barrier)</p> <p>Method Numerator/denominator × 100</p>
	Data source	Local data collection
ADDITIONAL INFORMATION	Limitations	<p>A patient or caregiver may feel they cannot respond honestly because of risk to their services. This can be mitigated by the survey not being conducted by the provider.</p> <p>The patient’s response may be influenced by other health care services being provided, in addition to the wound care.</p>
	Comments	
	Alignment	Aligns with the Client and Caregiver Experience Evaluation (CCEE) Survey, conducted in all LHINs

Abbreviations: LHIN, local health integration network.