QUALITY STANDARDS

Low Back Pain

Technical Specifications

2025 UPDATE

Ontario Health

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How to Use the Technical Specifications

This document provides technical specifications to support the implementation of the *Low Back Pain* quality standard. Care for people with acute low back pain is a critical issue, and there are substantial gaps and variations in the quality of care that people with acute low back pain receive in Ontario. Recognizing this, Ontario Health released the quality standard to identify opportunities that have a high potential for quality improvement.

This document is intended for use by those looking to implement the *Low Back Pain* quality standard, including clinicians working in regional or local roles.

This document has dedicated sections to describe the following:

- Indicators that can be used to measure progress toward the overarching goals of the quality standard as a whole
- Statement-specific indicators that can be used to measure improvement for each quality statement within the quality standard

Indicators may be provincially or locally measurable:

- Provincially measurable indicators: how we can monitor the progress being made to improve care at the provincial level using provincial data sources
- Locally measurable indicators: what you can do to assess the quality of care that you provide locally

The following tools and resources are provided as suggestions to assist in the implementation of the *Low Back Pain* quality standard:

- The *Getting Started Guide* outlines the process for using quality standards as a resource to deliver high-quality care; it contains evidence-based approaches, as well as useful tools and templates to implement change ideas at the practice level
- Our Spotlight Report highlights examples from the field to help you understand what successful quality standard implementation looks like

Measurement to Support Improvement

This document accompanies Ontario Health's *Low Back Pain* quality standard. The Low Back Pain Quality Standard Advisory Committee identified 6 overarching indicators to monitor the progress being made to improve care for people with acute low back pain in Ontario. Some overarching indicators are provincially measurable (well-defined or validated data sources are available), and some are measurable only locally (the indicators are not well defined, and data sources do not currently exist to measure them consistently across health care teams and at the system level).

The *Low Back Pain* quality standard also includes statement-specific indicators that can be used to measure improvement for each quality statement in the quality standard.

Additional information on measuring indicators can be found in the *Measurement Guide*. The measurement guide also includes descriptions of data sources that can be used to support quality standard indicators that are measured consistently across health care teams, health care sectors, and the province.

Equity Considerations

Ontario Health is committed to promoting health equity and reducing disparities, and it encourages collecting data and measuring indicators using equity stratifications that are relevant and appropriate for your population, such as patient socioeconomic and demographic characteristics. These may include age, income, region or geography, education, language, race and ethnicity, gender, and sex. Please refer to Appendix 3, Values and Guiding Principles, in the quality standard for additional equity considerations.

Quality Standard Scope

This quality standard addresses care for adults aged 16 years and older who have a first episode of acute low back pain, or who have recurrent episodes of acute low back pain that last less than 12 weeks. The quality standard addresses mechanical low back pain with or without associated leg symptoms,[1,2] such as radiculopathy caused by compression of a spinal nerve root (a pinched nerve) and neurogenic claudication (painful cramping or weakness in the legs with walking or standing).

Although it applies to care in all settings, this quality standard focuses on primary care and community-based care that can be provided by an interprofessional health care team. It includes the assessment of acute low back pain with or without leg symptoms, assessment of risk factors to prevent chronic low back pain, and management (including pharmacological and nonpharmacological interventions), as well as physical activity, education, self-management, and psychosocial support for people with acute low back pain. This quality standard includes referral to nonsurgical and surgical speciality health care teams for patients who require additional medical care for their low back pain, but it excludes information on specialty-based interventions.

This quality standard does not address the management of chronic low back pain (lasting more than 12 weeks). Other quality standards addressing chronic pain and pain management include *Chronic Pain* and *Opioid Prescribing for Chronic Pain*. This quality standard also excludes low back pain in pregnancy and the diagnosis and treatment of specific causes of low back pain, such as inflammatory conditions (e.g., ankylosing spondylitis), infections (e.g., discitis, osteomyelitis, epidural abscess), fracture, neoplasm, and metabolic bone disease (e.g., osteoporosis, osteomalacia, Paget's disease), nonspinal causes of back pain (e.g., from the abdomen, kidney, ovary, pelvis, bladder), chronic pain syndromes,[3] and surgical interventions (e.g., fusion and disc replacement, discectomy, laminectomy).[2]

Cohort Identification

Survey data suggest that low back pain (both chronic and acute) affects over 20% of adults 18 years of age and over; however, clinical administrative data show much lower rates. This may be due to a combination of under coding in health administrative data or a significant proportion of people not seeking physician care. As well, a significant number of people may be seeking care through other clinicians, such as nurse practitioners, physiotherapists, or chiropractors, which would not be captured in administrative data.[4-6]

For measurement at the provincial level, people who presented to a physician or emergency department for a first episode of acute low back pain can be identified using administrative data. For local measurement, people with low back pain can be identified using local data sources such as electronic medical records or clinical patient records.

Cohort Identification Using Administrative Data

To identify people who presented to a physician or the emergency department for a first episode of acute low back pain for the provincially measurable indicators in this quality standard, the National Ambulatory Care Reporting System (NACRS), the Ontario Health Insurance Plan (OHIP) Claims Database and the Registered Persons Database can be used. Please refer to the measurement guide for more information on these databases. Based on advisory committee consensus, we have used a combination of diagnosis codes and exclusion criteria below to identify health care interactions with those with a first episode of acute low back pain.

DIAGNOSIS CODES

To identify people who have a diagnosis of low back pain and presented to the emergency department, records from NACRS can be used. The following are inclusions from the *International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Canada* (ICD-10-CA):

- M513: Thoracic, thoracolumbar, and lumbosacral intervertebral disc disorders
- M543, M544, M545, M548, M549: Dorsalgia
- S335, S337: Dislocation and sprain of joints and ligaments of lumbar spine

To identify people who had a diagnosis of low back pain during a primary care visit, OHIP claims records can be used. The following are inclusions from the *International Statistical Classification of Diseases, Injuries, and Causes of Death, 9th Revision* (ICD-9):

- 722: Intervertebral disc disorders
- 724: Other and unspecified disorders of back
- 847: Sprains and strains of other and unspecified parts of back

EXCLUSION

To establish a cohort of people who presented to a physician or the emergency department for a first episode of acute low back pain, the following exclusion criteria was confirmed by the Low Back Pain Quality Standard Advisory Committee:

- Scheduled visits to the emergency department (in NACRS records)
- Vacated the emergency department without being seen (in NACRS records)
- Admitted to hospital following a visit to the emergency department (in NACRS records)
- Prior low back pain visits within the 5 years prior to the date of the index visit
- Red flags that appeared within the 5 years prior to and including the date of the index visit or that appeared within the 90 days after the date of the index visit
- Deaths that occurred within the 90 days after the date of the index visit
- Congenital anomalies (based on visit codes that occurred within the 5 years prior to and including the date of the index visit)
- Spinal surgery within the 5 years prior to and including the date of the index visit

AGE RANGE

The cohort includes people between 16 and 120 years of age, in alignment with the scope of the *Low Back Pain* quality standard.

A Note on Terminology

Clinicians: In this quality standard, the term "clinicians" refers to regulated professionals who provide care to patients or clients with acute low back pain. Examples are chiropractors, nurses, nurse practitioners, occupational therapists, pharmacists, physicians, physiotherapists, psychologists, and social workers.

Health care team: In this quality standard, the term "health care team" refers to clinicians, as well as people in unregulated professions, such as administrative staff, behavioural support workers, patient transport staff, personal support workers, recreational staff, spiritual care staff, and volunteers.

Red flags: In this quality standard, the term "red flag" indicates a sign or symptom of a serious underlying pathological disease that may require tests or investigations.[7,8] Red flag signs or symptoms can be identified as follows:

- Neurological disorders: diffuse or substantial motor/sensory loss, progressive neurological deficits, cauda equina syndrome. (Note: acute cauda equina syndrome is a surgical emergency. Symptoms include new bowel or bladder disturbance, including unrecognized fecal incontinence, saddle numbness, lower motor neuron weakness, and distinct loss of saddle/perineal sensation[9])
- Infection: fever, history of intravenous (IV) drug use, immunosuppression
- Fracture: trauma, osteoporosis risk/fragility fracture
- Tumour: history of cancer, unexplained weight loss, significant unexpected night pain, severe fatigue
- Inflammation: chronic low back pain lasting more than 3 months, age of onset less than 45 years, morning stiffness for more than 30 minutes, improvement with exercise, or disproportionate night pain

Yellow flags: In this quality standard, the term "yellow flag" indicates a psychosocial risk factor for developing chronic low back pain.[7,8] Yellow flags may be identified through the answers to the following questions:

- "Do you think your pain will improve or become worse?"
  - *What to listen for*: a belief that back pain is damaging or potentially severely disabling
- "Do you think you would benefit from activity, movement, or exercise?"
  - *What to listen for:* fear and avoidance of activity or movement
- "How are you coping emotionally with your back pain?"
  - *What to listen for:* a tendency to have a low mood or withdrawal from social interaction
- "What treatments or activities do you think will help you recover?"
  - *What to listen for:* expectations of passive treatment, rather than expectations that active participation will help

Overarching Indicators That Can Be Measured Using Provincial Data

Indicator 1: Percentage of people who seek physician or emergency department care for a first episode of acute low back pain who undergo diagnostic imaging of the spine (x-ray, computed tomography [CT], magnetic resonance imaging [MRI], bone scan) within 90 days and 180 days of the date of the index visit

DESCRIPTION

Directionality: Lower is better

Measurability: Measurable at the provincial level

Dimensions of quality: effective, efficient

Quality statement alignment:

- Quality statement 2: People with acute low back pain do not receive diagnostic imaging tests unless they present with red flags that suggest serious pathological disease.

CALCULATION

Denominator

Total number of people (16 years of age and older) who presented to a physician (OHIP Claims Database) or the emergency department (NACRS) for a first episode of acute low back pain (see Cohort Identification)

Exclusions

- People aged less than 16 or more than 120 years on the date of the index visit
- Records without a health insurance number
- Records without an Ontario residence
- Sex not recorded as male or female
- Missing/invalid date of birth
- Invalid admissions date/time, discharge date/time (in NACRS records)
- Scheduled visits to the emergency department (in NACRS records)
- Vacated the emergency department without being seen (in NACRS records)
- Admitted to hospital following a visit to the emergency department (in NACRS records)
- Prior low back pain visits (low back pain visits defined in Cohort Identification, above) within the 5 years prior to the date of the index visit

- Red flags (defined below) that appeared within the 5 years prior to and including the date of the index visit or that appeared within the 90 days after the date of the index visit
- Deaths that occurred within 90 days after the date of the index visit
- Congenital anomalies (defined below, based on visit codes that occurred within the 5 years prior to and including the date of the index visit)
- Spinal surgery (defined below) within the 5 years prior to and including the date of the index visit
- Spinal imaging (x-ray, CT, MRI, bone scan) (defined below) within the 5 years prior to the date of the index visit
- Other spinal imaging (other tests on spine, electromyography [EMG]) (defined below) within the 5 years prior to and including the date of the index visit

Red Flags

- OHIP (ICD-9 code):
  - 140–239: Cancer/history of cancer
  - 320–359: Neurological problems
  - 714, 715, 716, 720, 730: Arthritis
  - 733: Vertebral compression fracture

Congenital Anomalies

- OHIP (ICD-9 code):
  - 740–742: Nervous system
  - 754–756: Musculoskeletal system

Spinal Surgery

- OHIP fee codes:
  - E533, E534, E535, E536, E548, E549, E554, E562, E565, E566, E567, E568, E570, E573, E574, E897, E901, E909, E910, E913, E914, E915, E920, E924, E926, E928, E929, F103, F105, F107, M137, N126, N182, N185, N186, N192, N194, N195, N196, N197, N248, N313, N314, N317, N318, N319, N320, N321, N323, N324, N329, N330, N331, N332, N333, N334, N335, N336, N337, N338, N339, N340, N341, R234, R251, R252, R254, R264, R270, R271, R274, R275, R296, R303, R310, R336, R346, R348, R350, R356, R357, R358, R359, R361, R362, R368, R369, R370, R371, R373, R374, R397, R419, R447, R450, R451, R452, R455, R457, R459, R461, R464, R493, R494, R634, R635, R636, S312, Z215, Z219, Z226, Z228, Z236, Z241, Z244, Z662, Z800, Z810, Z817, Z823, Z868

Spinal Imaging

- X-ray
  - OHIP fee codes:

        - X028, X205, X206
- NACRS intervention codes:
    - 3.SC.10.^^, 3.SC.12.^^, 3.SE.10.^^, 3.SE.12.^^, 3.SF.10.^^, 3.SF.12.^^
- CT
    - OHIP fee codes:
- X415, X416, X128
    - NACRS intervention codes:
        - 3.SC.18.^^, 3.SC.20.^^, 3.SF.18.^^, 3.SF.20.^^
- MRI
    - OHIP fee codes:
        - X490, X492, X493, X495, X496, X498
    - NACRS intervention codes:
        - 3.SC.40.^^, 3.SF.40.^^
- Bone scan
    - OHIP fee codes:
        - J619, J650, J651, J819, J850, J851

Other Spinal Imaging

- Other tests on spine
    - OHIP fee codes:
        - X057, X058, X080, X081, X164, J006, J030, X173, J011, J038, J020, Z454, G368, G386
- EMG
    - OHIP fee codes:
        - G455, G456, G457, G458, G459, G465, G466, G467, G469

Numerator

Number of people in the denominator who had a diagnostic image (x-ray, CT, MRI, bone scan) of the spine within 90 days and 180 days of the date of the index visit:

- By any scan (overall rate)
- By type of scan (x-ray, CT, MRI, bone scan)

Inclusions

- Spinal imaging (x-ray, CT, MRI, bone scan) (defined above)

Method

Numerator ÷ denominator × 100

Data Sources

NACRS, OHIP claims database

LIMITATIONS

To accurately capture people with acute low back pain, we were limited to capturing the first occurrence of low back pain only. Some of the people captured will eventually develop chronic low back pain.

We have chosen to limit our look-back period to 5 years, so we may not necessarily be excluding everyone who has a history of low back pain that may reflect a chronic condition.

Additionally, low back pain visits may not be captured in administrative data for patients who visit a primary care physician for multiple conditions during a single visit, as only 1 diagnosis per visit is captured in OHIP claims data. Therefore, the occurrence of low back pain–related visits should not be used as an estimate for the incidence of low back pain.

This indicator underestimates the number of people with low back pain because some people with low back pain do not seek physician care. Individuals seeking care through nurse practitioners, physiotherapists, chiropractors and other health care professionals are not captured in administrative data.

To the best of our ability, we excluded red flags from all indicators to attempt to capture only inappropriate diagnostic imaging for low back pain. However, some red flags identified in the *Low Back Pain* quality standard could not be excluded using administrative data. This may result in an overestimate of inappropriate diagnostic imaging. For some patients, spinal imaging following a low back pain visit may be for a condition other than low back pain.

The overall rate for diagnostic imaging may not necessarily be equal to the combined rates for each type of diagnostic image (x-ray, CT, MRI, bone scan) as an individual may undergo multiple types of diagnostic images within the prescribed time period.

Indicator 2: Percentage of people who seek physician or emergency department care for a first episode of acute low back pain who are prescribed an opioid medication within 7 days and 90 days of the date of the index visit

DESCRIPTION

Directionality: Lower is better

Measurability: Measurable at the provincial level

Dimensions of quality: effective, safe

Quality statement alignment:

- Quality statement 6: People with acute low back pain whose symptoms do not adequately improve with physical activity, education, reassurance, and self-management support are offered information on the risks and benefits of nonopioid analgesics to improve mobility and function
- Quality statement 7: People with acute low back pain whose symptoms do not adequately improve with physical activity, education, reassurance, and self-management support are offered information on the risks and benefits of additional nonpharmacological therapies to improve mobility and function

CALCULATION

Denominator

Total number of people (16 years of age and older) who presented to a physician (OHIP Claims Database) or the emergency department (NACRS) for a first episode of acute low back pain (see Cohort Identification)

Exclusions

- People aged less than 16 years or more than 120 years on the date of the index visit
- Records without a valid health insurance number
- Records without an Ontario residence
- Sex not recorded as male or female
- Missing/invalid date of birth
- Invalid admissions date/time, discharge date/time (in NACRS records)
- Prior low back pain visits (low back pain visits defined in cohort identification) within the 5 years prior to the date of the index visit
- Scheduled visits to the emergency department (in NACRS records)
- Vacated the emergency department without being seen (in NACRS records)
- Admitted to hospital following a visit to the emergency department (in NACRS records)

- Red flags (defined below) that appeared within the 5 years prior to and including the date of the index visit or that appeared within the 90 days after the date of the index visit
- Deaths that occurred within the 90 days after the date of the index visit
- Congenital anomalies (defined below*;* based on visit codes that occurred within the 5 years prior to and including the date of the index visit)
- Spinal surgery (defined below) within the 5 years prior to and including the date of the index visit
- Palliative care claim (defined below) within the 365 days prior to the index date (including the date of the index visit; to exclude people who may be receiving opioids as part of palliative care)
- Opioid prescription filled within the 180 days prior to the index date (to exclude people who have recently been prescribed an opioid)

Red Flags

- OHIP (ICD-9 code)
  - 140–239: Cancer/history of cancer
  - 320–359: Neurological problems
  - 714, 715, 716, 720, 730: Arthritis
  - 733: Vertebral compression fracture

Congenital Anomalies

- OHIP (ICD-9 code):
  - 740–742: Nervous system
  - 754–756: Musculoskeletal system

Spinal Surgery

- OHIP fee codes:
  - E533, E534, E535, E536, E548, E549, E554, E562, E565, E566, E567, E568, E570, E573, E574, E897, E901, E909, E910, E913, E914, E915, E920, E924, E926, E928, E929, F103, F105, F107, M137, N126, N182, N185, N186, N192, N194, N195, N196, N197, N248, N313, N314, N317, N318, N319, N320, N321, N323, N324, N329, N330, N331, N332, N333, N334, N335, N336, N337, N338, N339, N340, N341, R234, R251, R252, R254, R264, R270, R271, R274, R275, R296, R303, R310, R336, R346, R348, R350, R356, R357, R358, R359, R361, R362, R368, R369, R370, R371, R373, R374, R397, R419, R447, R450, R451, R452, R455, R457, R459, R461, R464, R493, R494, R634, R635, R636, S312, Z215, Z219, Z226, Z228, Z236, Z241, Z244, Z662, Z800, Z810, Z817, Z823, Z868

Palliative Care Claims

- OHIP fee codes:
  - A945: Special palliative care consultation in clinic, office, home; minimum 50 minutes

  - B966: Travel premium for palliative care (billed with B998/B996)
  - B997: Home visit for palliative care between 24:00 and 07:00
  - B998: Home visit for palliative care between 07:00 and 24:00
  - C882: Family medicine palliative care, non-emergency (routine) hospital inpatient service
  - C945: Special palliative care consult (minimum 50 minutes); K023 may be used to add time for longer consultations following a code for C945, or may be billed alone
  - C982: Specialist palliative care, non-emergency (routine) hospital inpatient service
  - G511: Telephone services to patient receiving PC at home (max 2/week)
  - G512: Weekly care case management from palliative primary care management (Mon-Sun) – this code should be considered as outpatient (however it may sometimes be billed in hospital)
  - K023: Palliative care support in half-hour increments; may be used to add time for longer consultations
  - K700: Palliative care out-patient case conference
  - W872: Chronic care or convalescent hospital - Family physician palliative care subsequent visit
  - W882: Nursing home or home for the aged - Family physician palliative care subsequent visit
  - W972: Nursing home or home for the aged- Specialist physician palliative care subsequent visit
  - W982: Chronic care or convalescent hospital - Specialist physician palliative care subsequent visit
- CIHI Discharge Abstract Database:
  - ICD-10 code:
    - Z51.5 Any diagnosis of palliative
  - MainPatientService = 58: palliative care
  - ProviderService [1–8] or InterventionProviderService1–20] = 00121: palliative medicine

Numerator

Number of people in the denominator who had an opioid prescription dispensed within 7 days and 90 days of the date of the index visit

Exclusions

- Prescriptions filled for the following reasons: methadone maintenance therapy or buprenorphine/naloxone, cough, injectable cassettes, medical assistance in dying, and antidiarrheals

Data source: Narcotics Monitoring System (NMS)

Method

Numerator ÷ Denominator × 100

Data Sources

NACRS, NMS, OHIP Claims Database

LIMITATIONS

This indicator captures all new occurrences of low back pain. Some of the people captured will eventually develop chronic low back pain.

We have chosen to limit our look-back period to 5 years, so we may not necessarily be excluding everyone who has a history of low back pain that may reflect a chronic condition.

Additionally, low back pain visits may not be captured in administrative data for patients who visit a primary care physician for multiple conditions during a single visit, as only 1 diagnosis per visit is captured in OHIP claims data. Therefore, the occurrence of low back pain–related visits should not be used as an estimate for the incidence of low back pain.

This indicator underestimates the number of people with low back pain because some people with low back pain do not seek physician care. Individuals seeking care through nurse practitioners, physiotherapists, chiropractors, and other health care professionals are not captured in administrative data.

To the best of our ability, we excluded red flags from all indicators to attempt to capture only inappropriate diagnostic imaging for low back pain. However, some red flags identified in the *Low Back Pain* quality standard could not be excluded using administrative data. This may result in an overestimate of inappropriate diagnostic imaging.

The percentage of people with low back pain who newly start on an opioid may be overestimated for those with acute low back pain, as people could be receiving an opioid prescribed for another condition. This overestimate may be more pronounced for the longer follow-up period (90 days after the index date). Additionally, we may be underestimating the percentage of people with low back pain who newly start on an opioid, as we have excluded all people who filled an opioid prescription within 180 days prior to the index date. Some of those people may have filled an opioid prescription for reasons other than low back pain.

Indicator 3: Percentage of people who seek physician or emergency department care for a first episode of acute low back pain who subsequently present to the emergency department for low back pain within 30 days and 90 days of the date of the index visit

DESCRIPTION

Directionality: Lower is better

Measurability: Measurable at the provincial level

Dimension of quality: effective

Quality statement alignment:

- Quality statement 3: People with acute low back pain are offered education and ongoing support for self-management that is tailored to their individual needs and abilities
- Quality statement 4: People with acute low back pain are encouraged to stay physically active by continuing to perform activities of daily living, with modification if required to maintain or improve mobility and function
- Quality statement 5: People with acute low back pain who have psychosocial barriers to recovery (yellow flags) identified during their comprehensive assessment are offered further information and support to manage the identified barriers
- Quality statement 6: People with acute low back pain whose symptoms do not adequately improve with physical activity, education, reassurance, and self-management support are offered information on the risks and benefits of nonopioid analgesics to improve mobility and function
- Quality statement 7: People with acute low back pain whose symptoms do not adequately improve with physical activity, education, reassurance, and self-management support are offered information on the risks and benefits of additional nonpharmacological therapies to improve mobility and function

CALCULATION

Denominator

Total number of people (aged 16 years and older) who presented to a physician (OHIP Claims Database) or the emergency department (NACRS) for a first episode of acute low back pain (see Cohort Identification)

Exclusions

- People aged less than 16 years or more than 120 years on the date of the index visit
- No valid health insurance number
- No Ontario residence
- Sex not recorded as male or female

- Missing/invalid date of birth
- Invalid admissions date/time, discharge date/time (in NACRS records)
- Scheduled visits to the emergency department (in NACRS records)
- Vacated the emergency department without being seen (in NACRS records)
- Admitted to hospital following a visit to the emergency department (in NACRS records)
- Prior low back pain visits (low back pain visits defined in cohort identification) within the 5 years prior to the date of the index visit
- Red flags (defined below) that appeared within the 5 years prior to and including the date of the index visit or that appeared within the 90 days after the date of the index visit
- Deaths that occurred within the 90 days after the date of the index visit
- Congenital anomalies (defined below, based on visit codes that occurred within the 5 years prior to and including the date of the index visit)
- Spinal surgery (defined below) within the 5 years prior to and including the date of the index visit

Red Flags

- OHIP (ICD-9 code):
  - 140–239: Cancer/history of cancer
  - 320–359: Neurological problems
  - 714, 715, 716, 720, 730: Arthritis
  - 733: Vertebral compression fracture

Congenital Anomalies

- OHIP (ICD-9 code):
  - 740–742: Nervous system
  - 754–756: Musculoskeletal system

Spinal Surgery

- OHIP fee codes:
  - E533, E534, E535, E536, E548, E549, E554, E562, E565, E566, E567, E568, E570, E573, E574, E897, E901, E909, E910, E913, E914, E915, E920, E924, E926, E928, E929, F103, F105, F107, M137, N126, N182, N185, N186, N192, N194, N195, N196, N197, N248, N313, N314, N317, N318, N319, N320, N321, N323, N324, N329, N330, N331, N332, N333, N334, N335, N336, N337, N338, N339, N340, N341, R234, R251, R252, R254, R264, R270, R271, R274, R275, R296, R303, R310, R336, R346, R348, R350, R356, R357, R358, R359, R361, R362, R368, R369, R370, R371, R373, R374, R397, R419, R447, R450, R451, R452, R455, R457, R459, R461, R464, R493, R494, R634, R635, R636, S312, Z215, Z219, Z226, Z228, Z236, Z241, Z244, Z662, Z800, Z810, Z817, Z823, Z868

Numerator

Number of people in the denominator who presented to the emergency department for low back pain within 30 days and 90 days of the date of the index visit

Inclusions

Any visit to an emergency department for low back pain (see Cohort Identification)
Data source: NACRS

Method

Numerator ÷ Denominator × 100

Data Sources

NACRS, OHIP Claims Database

LIMITATIONS

To accurately capture people with acute low back pain, we were limited to capturing the first occurrence of low back pain only. Some of the people captured will eventually develop chronic low back pain.

We have chosen to limit our look-back period to 5 years, so we may not necessarily be excluding everyone who has a history of low back pain that may reflect a chronic condition.

Additionally, low back pain visits may not be captured in administrative data for patients who visit a primary care physician for multiple conditions during a single visit, as only 1 diagnosis per visit is captured in OHIP claims data. Therefore, the occurrence of low back pain–related visits should not be used as an estimate for the incidence of low back pain.

To the best of our ability, we excluded red flags from all indicators to attempt to capture only inappropriate diagnostic imaging for low back pain. However, some red flags identified in the *Low Back Pain* quality standard could not be excluded using administrative data. This may result in an overestimate of inappropriate diagnostic imaging.

In certain areas of the province where resourcing is reduced, patients rely on the emergency department for comprehensive care. Therefore, in these areas, the directionality suggested for this indicator (a lower percentage is better) may not necessarily reflect high quality care.

Overarching Indicators That Can Be Measured Using Only Local Data

You might want to assess the quality of care you provide to your patients with acute low back pain. You might also want to monitor your own quality improvement efforts. It may be possible to do this using your own clinical records, or you might need to collect additional data. We recommend the following potential indicators, which currently can be measured using only local data collection:

Indicator 1: Percentage of people with acute low back pain who have surgeon or specialist consultations within 90 days of a low back pain diagnosis

- Denominator: total number of people (aged 16 years and older) with acute low back pain
  - Exclusions: red flags (cancer/history of cancer, neurological problems, arthritis, vertebral compression fracture) that appeared prior to the diagnosis (including the date of the diagnosis) or that appeared within 90 days after the diagnosis
- Numerator: number of people in the denominator who have a surgeon or specialist consultation within 90 days of a low back pain diagnosis
- Data source: local data collection
- Comments: In some cases of acute low back pain, surgeon or specialist consultation may be appropriate. In general, surgeon or specialist consultations early in an acute low back pain episode are unlikely to be helpful.

Indicator 2: Percentage of people with acute low back pain who report an improvement in their quality of life

- Denominator: total number of people (aged 16 years and older) with acute low back pain
- Numerator: number of people in the denominator who reported an improvement in their quality of life
- Data source: local data collection; the EQ-5D-3L may be used where available
- Comments: The data for this indicator should be collected at regular intervals (e.g., every 6 weeks) to be able to assess changes in quality of life, including improvement and declines; the EQ-5D-3L is one of many possible tools available to collect these data

Indicator 3: Percentage of people with acute low back pain who rate their interaction with their clinicians as "definitely helping them feel better able to manage their low back pain"

- Denominator: total number of people (aged 16 years and older) with acute low back pain
- Numerator: Number of people in the denominator who answered "definitely" to the question, "When thinking about your interaction with your clinician, how much better would you say that you feel in being able to manage your low back pain?" (options: definitely, for the most part, somewhat, not at all)
- Data source: local data collection
- Comments: The data for this indicator can be collected at 1 point in time

Statement-Specific Indicators

The *Low Back Pain* quality standard includes statement-specific indicators that are provided as examples; you may wish to create your own quality improvement indicators based on the needs of your population. We recommend that you identify areas to focus on in the quality standard and then use 1 or more of the associated indicators to guide and evaluate your quality improvement efforts.

Quality Statement 1: Clinical Assessment

Number of days from when people with low back pain seek primary care to when they receive a comprehensive assessment from their primary care clinician

- Calculation: can be measured as mean, median, or distribution of the wait time (in days) from when people with low back pain seek primary care to when they receive a comprehensive assessment from their primary care clinician
- Data source: local data collection

Percentage of people with acute low back pain who are referred to a spine-focused clinician for unmanageable disabling back or leg pain, limitations from back pain that are ongoing and substantial, and/or symptoms that worsen with physical activity and exercise

- Denominator: total number of people (aged 16 years and older) with acute low back pain who have any of the listed conditions
- Numerator: number of people in the denominator who are referred to a spine-focused clinician for any of the following:
  - Unmanageable disabling back or leg pain
  - Limitations from back pain that are ongoing and substantial
  - Symptoms that worsen with physical activity and exercise
- Data source: local data collection

Local availability of rapid access clinics for people with acute low back pain

- Data source: regional or provincial data collection method needs to be developed

Quality Statement 2: Diagnostic Imaging

Percentage of people who seek physician or emergency department care for acute low back pain who undergo diagnostic imaging (x-ray, CT scan, MRI, bone scan) of the spine

- Denominator: total number of people (aged 16 years and older) who seek physician or emergency department care for acute low back pain
- Numerator: number of people in the denominator who undergo any of the following diagnostic imaging types of the spine:
  - X-ray
  - CT scan
  - MRI
  - Bone scan
- Data sources: local data collection (to identify the denominator); NACRS and OHIP (to identify the denominator and numerator)

Quality Statement 3: Patient Education and Self-Management

Percentage of people with acute low back pain who receive education and ongoing support for self-management

- Denominator: total number of people (aged 16 years and older) with acute low back pain
- Numerator: number of people in the denominator who receive education and ongoing support for self-management
- Data source: local data collection

Percentage of people with acute low back pain who report feeling confident about self-managing their pain

- Denominator: total number of people (aged 16 years and older) with acute low back pain
- Numerator: number of people in the denominator who report feeling confident about self-managing their low back pain
- Data source: local data collection
  - An example of a tool suitable for assessing confidence in self-management is the Self-Efficacy for Managing Chronic Disease 6-Item Scale.10 This tool is publicly available and can be used to assess more specific measures of confidence (e.g., one's ability to manage fatigue, pain, emotional distress, and other symptoms). The Pain Self-Efficacy Questionnaire11 is another publicly available tool that can be used to assess the confidence people with ongoing pain have in performing activities while in pain

Quality Statement 4: Maintaining Usual Activity

Percentage of people with acute low back pain who have documented discussions in their medical record about staying physically active by continuing activities of daily living, with modifications if required to maintain or improve mobility and function

- Denominator: total number of people (aged 16 years and older) with acute low back pain
- Numerator: number of people in the denominator who have documented discussions in their medical record about staying physically active by continuing activities of daily living, with modifications if required to maintain or improve mobility and function
- Data source: local data collection

Percentage of people with acute low back pain who have documented discussions in their medical record about continuing work or returning to work, with appropriate modifications to maintain or improve mobility and function

- Denominator: total number of people (aged 16 years and older) with acute low back pain who are working or who take a leave of absence from work
- Numerator: number of people in the denominator who have documented discussions in their medical record about continuing work or returning to work, with appropriate modifications to maintain or improve mobility and function
- Data source: local data collection

Number of days from when people with acute low back pain take a leave of absence from work to when they return to work

- Calculation: can be measured as mean, median, or distribution of the wait time (in days) from when people with acute low back pain take a leave of absence from work to when they return to work
- Data source: local data collection
- Note: This indicator is similar to an indicator in the *Quality-Based Pathway Clinical Handbook for Non-emergent Integrated Spine Care*[12]

Quality Statement 5: Psychosocial Information and Support

Percentage of people with acute low back pain with identified psychosocial barriers to recovery who report that their clinician has given them information and support to manage their identified psychosocial barriers

- Denominator: total number of people (aged 16 years and older) with acute low back pain with identified psychosocial barriers to recovery
- Numerator: number of people in the denominator who report that their clinician has given them information and support to manage their identified psychosocial barriers
- Data source: local data collection

Quality Statement 6: Pharmacological Therapies

Percentage of people with acute low back pain whose symptoms are not improving with nonpharmacological therapies (physical activity, education, reassurance, and self-management support) who are given information by their health care team on the risks and benefits of nonopioid analgesics for their acute low back pain

- Denominator: total number of people (aged 16 years and older) with acute low back pain whose symptoms are not improving with nonpharmacological therapies (physical activity, education, reassurance, and self-management support)
- Numerator: number of people in the denominator who are given information by their health care team on the risks and benefits of nonopioid analgesics for their acute low back pain
- Data source: local data collection

Percentage of people who seek physician or emergency department care for acute low back pain who are prescribed an opioid medication

- Denominator: total number of people (aged 16 years and older) who seek physician or emergency department care for acute low back pain
- Numerator: number of people in the denominator who are prescribed an opioid medication
- Data sources: local data collection (to identify the denominator); NACRS and OHIP Claims Database (to identify the denominator); NMS (to identify the numerator)

Quality Statement 7: Additional Nonpharmacological Therapies

Percentage of people with acute low back pain whose symptoms do not adequately improve with physical activity, education, reassurance, and self-management support who receive one or more additional nonpharmacological therapies (see examples of additional nonpharmacological therapies in the definitions that should be considered)

- Denominator: total number of people (aged 16 years and older) with acute low back pain whose symptoms do not adequately improve with physical activity, education, reassurance, and self-management support
- Numerator: number of people in the denominator who receive 1 or more additional nonpharmacological therapies
- Data source: local data collection

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Ontario Health
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Toll Free: 1-877-280-8538
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