Quality Standards

Low Back Pain

Care for Adults With Acute Low Back Pain

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Health Quality Ontario

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Summary

This quality standard addresses care for those 16 years of age and older with acute low back pain, with or without leg symptoms. It examines the assessment, diagnosis, and management of people with this condition by health care professionals across all health care settings, but focuses on primary care in particular. It provides guidance on reducing unnecessary diagnostic imaging and on both nonpharmacological and pharmacological therapies.

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About Quality Standards

Health Quality Ontario, in collaboration with clinical experts, patients, residents, and caregivers across the province, is developing quality standards for Ontario.

Quality standards are concise sets of statements that will:

- Help patients, residents, families, and caregivers know what to ask for in their care
- Help health care professionals know what care they should be offering, based on evidence and expert consensus
- Help health care organizations measure, assess, and improve their performance in caring for patients

The statements in this quality standard do not override the responsibility of health care professionals to make decisions with patients, after considering each patient's unique circumstances.

How to Use Quality Standards

Quality standards inform clinicians and organizations about what high-quality health care looks like for aspects of care that have been deemed a priority for quality improvement in the province. They are based on the best available evidence.

They also include indicators to help clinicians and organizations assess the quality of care they are delivering, and to identify gaps and areas for improvement. These indicators measure processes, structures, and outcomes.

In addition, tools and resources to support clinicians and organizations in their quality improvement efforts accompany each quality standard.

For more information on how to use quality standards, contact qualitystandards@hqontario.ca.

About This Quality Standard

Scope of This Quality Standard

This quality standard addresses care for adults who have a first episode of acute low back pain or recurrent low back pain that lasts less than 12 weeks. The 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, the quality standard focuses on primary care and community-based care provided by an interprofessional team of providers, including physiotherapists, chiropractors, nurse practitioners, and physicians. This quality standard includes the assessment and management (including nonpharmacological and pharmacological interventions) of low back pain with or without leg symptoms, as well as education, self-management, and psychosocial support for people with low back pain. This standard includes referral to nonsurgical and surgical speciality care providers, but it excludes information on speciality-based interventions.

This quality standard excludes:

- The management of chronic (> 12 weeks) low back pain
- Pregnant women with low back pain
- The diagnosis and treatment of specific causes of low back pain, such as inflammatory conditions (e.g., rheumatoid arthritis, 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] (e.g., syndromes that comprise physical and mental components that interfere with daily living)
- Surgical interventions (e.g., fusion and disc replacement, discectomy, laminectomy)[1]

Terminology Used in This Quality Standard

Red Flags

In this quality standard, the term "red flag" indicates a serious underlying disorder.[4] Red flags can be identified as follows[4]:

- **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[5])
  Investigation required: urgent magnetic resonance imaging (MRI)
- **Infection:** fever, intravenous (IV) drug use, immunosuppression
  Investigations required: x-ray and MRI

- **Fracture:** trauma, osteoporosis risk/fragility fracture
  Investigations required: x-ray and possibly a computed tomography (CT) scan
- **Tumour:** history of cancer, unexplained weight loss, significant unexpected night pain, severe fatigue
  Investigations required: x-ray and MRI
- **Inflammation:** chronic low back pain for more than 3 months, an age of onset less than 45 years, morning stiffness for more than 30 minutes, improvement with exercise, disproportionate night pain
  Investigations required: consult a rheumatologist and refer to guidelines

Yellow Flags

In this quality standard, the term "yellow flag" indicates a psychosocial risk factor for developing chronic low back pain.[4] Yellow flags can be identified through the answers to the following questions[4]:

- "Do you think your pain will improve or become worse?"
  What to listen for: a belief that the back pain is harmful 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

Why This Quality Standard Is Needed

Low back pain is defined as pain localized between the 12th rib and the inferior gluteal folds. Most cases of acute low back pain are "mechanical" or nonspecific, and are characterized by tension, soreness, or stiffness in the low back area.[1,6] Although the source of pain and other symptoms might be attributed to several structures in the back, including discs, facet joints, muscles, and connective tissue,[1] the specific source is often not identifiable.

Worldwide, low back pain causes more disability, activity limitation, and work absenteeism than any other condition.[1,7] An estimated 80% of adults experience an episode of low back pain at least once in their life.[8] Most low back pain episodes improve with initial primary care management, without further investigations or referral to specialists.[1]

In Canada, about 30% of adults have low back pain that recurs within 6 months and 40% within 1 year of their first episode.[9] Most people with low back pain can benefit from lifestyle modifications (such as physical activity) and manipulation therapies (such as physiotherapy).[10] Despite this, about 70% of those with low back pain do not see a health care professional beyond their family physician or nurse practitioner, which may be owing to out-of-pocket costs. Although the literature has consistent recommendations for managing low back pain, there is poor uptake of these recommendations and a lack of consistency in the provision of educational materials and resources to patients with low back pain.[10]

Evidence has shown that 90% of low back pain is not caused by serious underlying injury or disease that requires MRIs, CT scans, medication, or surgical referrals. Fewer than 5% of low back x-ray examinations reveal a finding associated with red flags, which include neurological

disorders, infection, fracture, tumour, or inflammation.[9] Medical imaging for low back pain is being used more often than necessary, rather than a clinical assessment to guide treatment for low back pain.[10] Imaging of the lumbar spine accounts for about one-third of all MRI examinations, and the use of diagnostic imaging has grown more rapidly than almost any other type of Canadian health service. In Ontario, there is considerable regional variation in the use of diagnostic imaging for low back pain. The total cost for spinal imaging, including x-ray examination, CT scanning, and MRI was estimated at $40.4 million in 2001/2, and increased to $62.6 million in 2010/11, marking a 55% increase over 10 years.[9]

There are many opportunities for improving low back pain care in Ontario. These include decreasing the progression from acute low back pain to chronic low back pain; decreasing the use of inappropriate imaging for low back pain; and ensuring timely access to interprofessional care for symptom management. Several programs aim to address these issues, although there is limited access across the province.

Principles Underpinning This Quality Standard

This quality standard is underpinned by the principles of respect, equity, and equality.

People with low back pain should receive services that are respectful of their rights and dignity and that promote self-determination. People with low back pain should be provided services that are respectful of their gender, sexual orientation, socioeconomic status, housing, age, background (including self-identified cultural, ethnic, and religious backgrounds), and disability. Language, a basic tool for communication, is an essential part of safe care and needs to be considered throughout a person's health care journey. For example, in predominantly English-speaking settings, services should be actively offered in French and other languages.

People with low back pain should have access to care through an integrated approach that facilitates access to primary care providers, rehabilitation care providers, surgical and nonsurgical specialists, and programs in the community, according to a patient's needs over time. Interprofessional collaboration, shared decision-making, coordination of care, and continuity of care (including follow-up care) are distinct aspects of a patient-centred approach. Collaborative practice in health care "occurs when multiple health workers from different professional backgrounds provide comprehensive services by working with patients, their families, carers, and communities to deliver the highest quality of care across settings."[11]

Care providers should be aware of the historical context of the lives of Canada's Indigenous peoples and be sensitive to the impacts of intergenerational trauma and the physical, mental, emotional, and social harms experienced by Indigenous people, families, and communities.

A high-quality health system is one that provides good access, experience, and outcomes for everyone in Ontario, no matter where they live, what they have, or who they are.

How Success Can Be Measured

The committee identified a limited number of overarching objectives for this quality standard. These have been mapped to indicators that may be used to assess quality of care provincially and locally.

How Success Can Be Measured Provincially

In this section, we list indicators that can be used to monitor success provincially given currently available data. If additional data sources are developed, other indicators could be added.

- Number of diagnostic imaging (x-ray, CT, MRI, bone scan) tests of the spine
- Number of people presenting to the emergency department for low back pain

Note: Numbers of events have been chosen instead of rates because data on the specific cohort of interest (i.e., people with low back pain) are not identifiable using provincially available administrative databases owing to the inadequate capture of low back pain. This limits the ability to accurately measure the rate of surgeon and specialist consultations and emergency department visits for this cohort, or to identify inappropriate diagnostic imaging (i.e., in people who do not present with red flags) at the provincial level.

How Success Can Be Measured Locally

You may want to assess the quality of care you provide to people living with low back pain. You may also want to monitor your own quality improvement efforts. It might 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 cannot be measured provincially using currently available data sources:

- Percentage of people with low back pain who had surgeon or specialist consultations for low back pain
- Percentage of people with low back pain who report an improvement in their quality of life 6 months after their previous assessment
- Percentage of people with low back pain who rated their interaction with their primary care provider as “definitely helping them feel better able to manage their low back pain” (response options: definitely, for the most part, somewhat, not at all)

In addition, each quality statement within the standard is accompanied by one or more indicators. These indicators are intended to guide the measurement of quality improvement efforts related to implementing the statement. To assess the equitable delivery of care, the quality standard indicators can be stratified by patient or caregiver socioeconomic and demographic characteristics, such as income, education, language, age, sex, and gender.

Quality Statements in Brief

Quality Statement 1: Clinical Assessment
People with low back pain who seek primary care receive a prompt and comprehensive assessment.

Quality Statement 2: Diagnostic Imaging
People with low back pain do not receive diagnostic imaging tests unless they present with red flags that suggest serious disease.

Quality Statement 3: Patient Education and Self-Management
People with low back pain are offered education and ongoing support for self-management that is tailored to their needs.

Quality Statement 4: Maintaining Physical Activity
People with low back pain are encouraged to stay physically active by continuing to perform activities of daily living, with modification if required.

Quality Statement 5: Psychosocial Information and Support
People with low back pain who have psychosocial barriers to recovery (yellow flags) identified during the comprehensive assessment are offered further information and support to manage the identified barriers.

Quality Statement 6: Nonpharmacological Interventions
People with low back pain whose symptoms do not improve with normal activity are offered nonpharmacological therapies.

Quality Statement 7: Pharmacological Pain Management
People with low back pain whose symptoms do not improve with nonpharmacological therapy are offered information on the risks and benefits of nonopioid analgesics to improve mobility and function by reducing pain.

Quality Statement 8: Return-to-Work Strategies
People with low back pain are supported to continue working or return to work, with appropriate modifications.

Quality Statement 1: Clinical Assessment

People with low back pain who seek primary care promptly receive a comprehensive assessment.

Background

Many people with an episode of low back pain do not require treatment from a health care provider, as the pain may resolve on its own. If people do seek advice from a primary health care provider, they should promptly receive a comprehensive assessment, using a validated tool, to support clinical decision-making. A precise anatomical diagnosis is not required to plan effective treatment for people experiencing nonspecific low back pain.[3] The most important outcomes to be assessed include pain severity, functional mobility, psychological distress, and health-related quality of life.[1] The assessment should be comprehensive and ongoing (repeated at subsequent visits) to check[12]:

- That symptoms are improving
- That the person is using nonpharmacological therapies (see Quality Statement 6) to manage the low back pain
- Whether factors unrelated to the spine are inhibiting the person's recovery

Imaging is not required and should be ordered only in cases where serious disease is suspected. If the patient has unmanageable disabling back or leg pain (is unable to perform usual daily activities), if limitations from back pain are ongoing and substantial, or if symptoms are worsened by physical activity and exercise, an appropriate referral should be made to a clinician who specializes in low back pain (such as an advanced practice physiotherapist, chiropractor, or other provider) or a specialist or practitioner focusing on spine care (such as a sports medicine specialist, surgeon, or pain specialist).[1,3,12] It's important that interactive, ongoing communication occurs between the primary care provider, specialist, and person experiencing low back pain.[13]

Sources: Institute for Clinical Systems Improvement 2012[12] | National Institute for Health and Care Excellence 2016[1] | Toward Optimized Practice 2015[3]

Definitions Used Within This Quality Statement

Prompt
Primary care providers should triage patients with low back pain who request appointments to ensure that urgent requests are assessed within 1 to 3 days. This appointment can be with the patient's own primary care provider or another member of the primary care team.

Comprehensive assessment
A complete and accurate history identifies pertinent elements of the patient's health, when pain occurs (e.g., in the morning, with minor forward bending, twisting, or lifting), and if this is a new episode or recurrent episode of low back pain. A physical examination should also be undertaken. Potential psychosocial risk factors for developing chronic pain are identified as yellow flags, and possible serious underlying disorders are identified as red flags in the validated assessment tool.[4,14]

Yellow flags can be identified through the answers to the following questions[4]:

- "Do you think your pain will improve or become worse?"
  What to listen for: a belief that the back pain is harmful 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

Red flags can be identified as follows[4]:

- **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 fecal incontinence; saddle numbness; lower motor neuron weakness; unrecognized fecal incontinence; and distinct loss of saddle/perineal sensation[5])
  Investigation required: urgent MRI
- **Infection:** fever, IV drug use, immunosuppression
  Investigations required: x-ray and MRI
- **Fracture:** trauma, osteoporosis risk/fragility fracture
  Investigations required: x-ray and possibly a CT scan
- **Tumour:** history of cancer, unexplained weight loss, significant unexpected night pain, severe fatigue
  Investigations required: x-ray and MRI
- **Inflammation:** chronic low back pain for more than 3 months, an age of onset less than 45 years, morning stiffness for more than 30 minutes, improvement with exercise, disproportionate night pain
  Investigations required: consultation with rheumatologist and refer to guidelines

Patients who present with yellow flags will benefit from education and reassurance to reduce the risk of chronic illness. If yellow flags persist, additional resources should be considered, including the Keele STarT Back tool or the Patient Health Questionnaire for Depression and Anxiety.[4]

Primary care
In this quality standard, "primary care" refers to care provided by a family physician or nurse practitioner. In some cases, other health care professionals who work closely with a primary care provider might be involved in primary care. These health care professionals include but are not limited to registered nurses, physiotherapists, chiropractors, and pharmacists.

What This Quality Statement Means

For Patients
If you seek primary care for your low back pain, a comprehensive assessment should be provided that includes screening for yellow and red flags. A full assessment of your health will help your health care professional understand your needs, preferences, and goals for your care.

For Clinicians
Perform and document a comprehensive assessment that includes screening for yellow and red flags for patients with low back pain. This assessment takes place early in their visit and whenever patients return to you to discuss a change in the condition.

For Health Services
Ensure health care settings have assessment tools that include screening for yellow and red flags, systems, processes, and resources in place for adults with low back pain so that comprehensive assessment can be performed early in any episode of low back pain.

Quality Indicators

Process Indicators

Percentage of people with low back pain who seek primary care who receive a comprehensive assessment from their primary care provider within 3 days

- Denominator: total number of people with low back pain who seek primary care
- Numerator: number of people in the denominator who receive a comprehensive assessment from their primary care provider within 3 days
- Data source: local data collection

One example of a standardized tool suitable for comprehensive assessment is the Clinically Organized Relevant Exam [CORE] Back Tool[4]

Percentage of people with low back pain who receive an assessment by a clinician who specializes in low back pain or a practitioner focusing on spine care, 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**

- Denominator: total number of people with low back pain who have any of the listed conditions
- Numerator: number of people in the denominator who receive an assessment by a clinician who specializes in low back pain or a practitioner focusing on spine care
- Data source: local data collection

Structural Indicator

Local availability of central intake and assessment centres for low back pain assessment and management

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

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

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

Quality Statement 2: Diagnostic Imaging

People with low back pain do not receive diagnostic imaging tests unless they present with red flags that suggest serious disease.

Background

People with acute mechanical low back pain and no red flags gain no clinical benefit from diagnostic imaging of the spine (x-ray, CT, MRI, bone scan).[1,2] In the absence of red flags, the risks associated with routine diagnostic imaging (unnecessary exposure to radiation[15,16] and lack of specificity of diagnostic imaging[3,15]) generally outweigh the benefits. Performing diagnostic imaging tests for people with low back pain may lead to unnecessary worry and may generate unnecessary follow-up tests and procedures,[16] yet imaging results on their own will rarely change the treatment plan.[3] It is common for natural changes that occur in the spine to be identified through imaging, but there is no standardized medical treatment for degenerative or "age-related" spine changes.[17]

People with signs or symptoms of serious underlying disease (red flags) do benefit from early imaging and should be identified through additional tests and clinical examination.

Sources: National Institute for Health and Care Excellence 2016[1] | Toward Optimized Practice 2015[3]

Definitions Used Within This Quality Statement

Diagnostic imaging
Diagnostic imaging frequently used for low back pain includes CT, MRI, x-ray examination, and bone scan.

Red flag
This indicates a serious underlying disorder.[4] Red flags can be identified as follows[4]:

- **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, saddle numbness, lower motor neuron weakness; unrecognized fecal incontinence; and distinct loss of saddle/perineal sensation[5])
  Investigation required: urgent MRI
- **Infection:** fever, IV drug use, immunosuppression
  Investigations required: x-ray and MRI
- **Fracture:** trauma, osteoporosis risk/fragility fracture
  Investigations required: x-ray and possibly a CT scan
- **Tumour:** history of cancer, unexplained weight loss, significant unexpected night pain, severe fatigue
  Investigations required: x-ray and MRI
- **Inflammation:** chronic low back pain for more than 3 months, an age of onset less than 45 years, morning stiffness for more than 30 minutes, improvement with exercise, disproportionate night pain
  Investigations required: consultation with rheumatologist and refer to guidelines

What This Quality Statement Means

For Patients
If you have nonspecific mechanical low back pain, an MRI, x-ray, bone scan, or CT examination should not be performed as part of your comprehensive assessment unless your primary care provider notices signs of a serious problem or disease. These tests will not explain your symptoms or help in making a diagnosis. Decisions about your treatment should be based on the comprehensive assessment and how your symptoms affect your life.

For Clinicians
Do not send patients with nonspecific low back pain for diagnostic imaging unless their symptoms suggest serious underlying disease. If a patient presents with red flags that suggest serious disease, early imaging may confirm or rule out a suspected diagnosis.

For Health Services
Ensure all primary care providers have clear polices and processes in place for evaluating low back pain through comprehensive assessment without imaging, unless the patient has red flags (serious underlying disease). Service providers should also monitor the use of imaging for assessing low back pain in adults to ensure that it is not being used inappropriately.

Quality Indicators

Process Indicator

Percentage of people with low back pain who receive diagnostic imaging (x-ray, CT, MRI, bone scan) of the spine (a lower percentage is better)

- Denominator: total number of people with low back pain
- Numerator: number of people in the denominator who receive diagnostic imaging of the spine:
    - MRI
    - X-ray
    - CT scan
    - Bone scan
- Data sources: National Ambulatory Care Reporting System (NACRS) and Ontario Health Insurance Plan (OHIP) to identify diagnostic imaging of the spine; local data collection to identify the denominator

Quality Statement 3: Patient Education and Self-Management

People with low back pain are offered education and ongoing support for self-management that is tailored to their needs.

Background

It is important for people with low back pain to understand that most episodes of low back pain will get better within a short time. Patient education provides people with information that encourages positive changes in knowledge, beliefs, and behaviour. People with low back pain who receive education from a primary care provider feel less fear and feel more in control of their health.[1,3] People with low back pain should be offered information on the nature of their symptoms; reassurance about the low risk for serious underlying disease; reminders about the importance of continuing their usual activities and remaining mobile; and guidance on self-managing their current and recurrent symptoms.[5] Self-management involves goal setting to encourage people's self-confidence to manage their pain successfully and increase daily functioning.[3] Educational materials should be provided in a format that meets the needs of the individual, for example through printed materials, videos, or multimedia formats.[3,16] Primary care providers may choose to use standardized questionnaires and tools to assess how the person manages their low back pain.

Educational materials should also describe how to prevent recurrent low back pain by emphasizing that patients should continue physical activity and participate in regular exercise.[3,18] Clinicians should be aware that patients might avoid physical activity because they fear that being physically active will cause the back pain to recur. Additional education, reassurance, close follow up, and referral to a spinal care program can promote return to activity among these people.[3,18]

Sources: Institute for Clinical Systems Improvement 2012[12] | National Institute for Health and Care Excellence 2016[1] | Toward Optimized Practice 2015[3]

Definitions Used Within This Quality Statement

Ongoing support
A partnership or collaborative working relationship between the health care team, people with low back pain, and their support networks to assist with goal setting, to overcome barriers to achieving goals, and to provide general support when necessary.

Self-management
Self-monitoring of symptoms to identify causes of pain exacerbation, activity pacing, relaxation techniques, communication techniques, and modification of negative self-talk (catastrophizing).[3]

Education
Focus on the following information:

- Back pain is common and usually improves quickly, but can recur
- Low back pain usually does not indicate a risk for serious underlying disease (reassure patients as part of the education strategy)
- It is important to remain active and resume normal activities as soon as possible
- It is important to partake in physical activity and a healthy lifestyle[12]

What This Quality Statement Means

For Patients
Your primary care provider should offer you information to help you understand low back pain and how to manage it. This will help you understand the nature of your pain and will help you make informed decisions about your care. Self-management techniques include self-monitoring of symptoms, pacing activity, implementing relaxation techniques, and modifying negative self-talk.

For Clinicians
Provide education for people with low back pain that is responsive to their needs. Information should include all aspects of management and be reinforced and expanded upon at subsequent visits. Family and caregivers should be included if appropriate.

For Health Services
Ensure all health care settings have patient education materials (includes written and electronic tools) available for adults with low back pain.

Quality Indicators

Process Indicators

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

- Denominator: total number of people with 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 low back pain who participate in an organized self-management program

- Denominator: total number of people with low back pain
- Numerator: number of people in the denominator who participate in an organized self-management program
- Data source: local data collection

Outcome Indicator

Percentage of people with low back pain who report feeling confident to self-manage their low back pain

- Denominator: total number of people with low back pain
- Numerator: number of people in the denominator who report feeling confident to self-manage 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.[19] This is publicly available and can be used to

assess more specific measures of confidence (i.e., one's ability to manage fatigue, pain, emotional distress, and other symptoms). The Pain Self-Efficacy Questionnaire[20] is publicly available and can be used to assess the confidence people with ongoing pain have in performing activities while in pain.

Quality Statement 4: Maintaining Physical Activity

People with low back pain are encouraged to stay physically active by continuing to perform activities of daily living, with modification if required.

Background

It is important for people with low back pain to remain active, especially during recovery from an episode of acute low back pain, to reduce further episodes.[3] Staying in bed, prolonged rest, or avoiding physical activity may increase pain and stiffness in the low back.[12] Patients also require reassurance that their back pain does not represent harm and that it is safe to continue with normal activities.[12,14]

People with low back pain should gradually increase their level of activity over time through pacing, to reduce the pain and discomfort of low back pain[1] and to improve general health and well-being with regular activity.[3] Pacing involves modification of behaviour to improve function, manage symptoms, and reduce relapses and disability for those experiencing pain.[21] Activity limitation might be required if physical activity causes symptoms to spread (pain or other symptoms radiating to the leg),[3] and modifications may be necessary for people to continue to remain active. People with low back pain should move in ways that work best for them to reduce pain and improve or maintain mobility.[22] Activity can be incorporated into a conservative management program to improve recovery from an episode of low back pain.[23] Regularly engaging in exercise following an episode of low back pain may reduce recurrences.[12,24]

Sources: Institute for Clinical Systems Improvement 2012[12] | National Institute for Health and Care Excellence 2016[1] | Toward Optimized Practice 2015[3]

Definitions Used Within This Quality Statement

Physical activity
Any bodily movement produced by the musculoskeletal system that necessitates energy expenditure, including activities that are done while working, playing, carrying out household chores, travelling, and engaging in recreational pursuits.[25] Patients who are recovering from an acute episode of low back pain should be advised that recurrent episodes are common and that remaining physically active and participating in regular exercise may lessen these recurrences.[3]

Activities of daily living
Activities of daily living include personal care, continence, toileting, walking, feeding ourselves, work, and leisure.[26] Instrumental activities of daily living include doing housework, preparing meals, shopping, and managing medications.[27]

What This Quality Statement Means

For Patients
Continue to stay physically active, moving around as much as you can and trying to do a little more each day. As soon as your back feels better, continue with regular fitness activities.

For Clinicians
Encourage your patients with low back pain to continue being physically active, moving around daily within their level of pain tolerance, doing more each day. Convey the importance of not

resting in bed, as bed rest will reduce their overall health and well-being. Once patients feel better, they should continue with regular fitness activities.

For Health Services
Ensure all health care settings have systems, processes, and resources in place for adults with low back pain to encourage optimizing their physical activity and minimizing periods of prolonged rest. Ensure all health care settings have systems and processes in place for people with low back pain to receive information on remaining active during an episode of low back pain.

Quality Indicators

Process Indicators

Percentage of people with low back pain who have documented discussions in their medical record with their primary care provider about staying physically active by continuing with activities of daily living, with modification if required

- Denominator: total number of people with low back pain
- Numerator: number of people in the denominator who have documented discussions in their medical record with their primary care provider about staying physically active by continuing activities of daily living, with modification if required
- Data source: local data collection

Percentage of people with low back pain who use a spine care program involving physical activity

- Denominator: total number of people with low back pain
- Numerator: number of people in the denominator who use a spine care program involving physical activity
- Data source: local data collection

This indicator is similar to an indicator in the *Quality-Based Pathway Clinical Handbook for Non-Emergent Integrated Spine Care*.[13]

Structural Indicator

Local availability of evidence-based spine-care programs on physical activity and rehabilitation

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

This indicator is similar to an indicator in the *Quality-Based Pathway Clinical Handbook for Non-Emergent Integrated Spine Care*.[13]

Quality Statement 5: Psychosocial Information and Support

People with low back pain who have psychosocial barriers to recovery (yellow flags) identified during the comprehensive assessment are offered further information and support to manage the identified barriers.

Background

As part of a comprehensive assessment, primary care providers should assess patients with low back pain for psychosocial risk factors, referred to as yellow flags (see Quality Statement 1), especially if a patient is not improving. People with psychosocial barriers to recovery may benefit from psychosocial support as a complement to other nonpharmacological interventions.[1,28] Programs that include psychosocial support, social and occupational components, and other nonpharmacological interventions are associated with less pain and back-specific disability, as well as with an increased likelihood of returning to work and fewer sick days.[28] People with low back pain can access various types of psychosocial supports, including communication and regular connection with their primary care provider, education, community support groups, individual counseling, support through employer-sponsored programs, and evidence-based treatment for mood disorders.

Sources: Institute for Clinical Systems Improvement 2012[12] | National Institute for Health and Care Excellence 2016[1] | Toward Optimized Practice 2015[3]

Definitions Used Within This Quality Statement

Psychosocial barriers to recovery (yellow flags)
A "yellow flag" indicates a psychosocial risk factor for developing chronic low back pain.[4] Patients who present with yellow flags will benefit from education and reassurance to reduce the risk of chronic illness. Patients might also experience barriers to recovery, including fear, financial problems, anger, depression, job dissatisfaction, family issues, and stress.[3] If yellow flags persist, consider additional resources, including the Keele STarT Back tool or the Patient Health Questionnaire for Depression and Anxiety.[4]

Yellow flags can be identified through the answers to the following questions[4]:

- "Do you think your pain will improve or become worse?"
  What to listen for: a belief that the back pain is harmful 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

Information
Information about psychosocial barriers should be provided to people with low back pain during in-person visits with their primary care provider, in verbal and printed or in multimedia formats.[3] Patients' needs and goals for improved function and mobility should be discussed.[12]

Support
The primary care provider is able to communicate factual information to patients that meets patients' values and preferences, while listening and encouraging patients to do what is best for them to achieve their care goals.[13]

What This Quality Statement Means

For Patients
If you are distressed and struggling to cope with your low back pain, tell your provider so that they can offer you psychosocial information and support in addition to other nondrug therapies.

For Clinicians
Offer people with low back pain who present with yellow flags information and support to manage the psychosocial barriers that could affect their recovery.

For Health Services
Ensure all health care settings have systems, processes, and resources in place for adults with low back pain to receive information and referral to psychosocial support services if needed.

Quality Indicators

Outcome Indicator

Percentage of people with low back pain who report that their primary care provider has given them information and support to manage their identified psychosocial barriers

- Denominator: total number of people with low back pain who have identified psychosocial barriers to recovery
- Numerator: number of people in the denominator who report that their primary care provider has given them information and support to manage their identified psychosocial barriers
- Data source: local data collection

Quality Statement 6: Nonpharmacological Interventions

People with low back pain whose symptoms do not improve with normal activity are offered nonpharmacological therapies.

Background

Remaining physically active and modifying daily activities as required (see Quality Statement 4) are examples of nonpharmacological therapies that will assist with recovery from an acute or recurrent episode of low back pain.[29] In addition to being offered advice to stay active, people with low back pain may benefit from psychosocial information and support (see Quality Statement 5) and education (see Quality Statement 3) from their primary care provider. These can help them identify any barriers to recovery.[1,3,28,30] Other nonpharmacological therapies include spinal manipulation, spinal mobilization, and soft tissue techniques[1,29]; these are delivered by advanced practice clinicians or spine care specialists.

It is important that clinicians initiate a discussion with patients about their values and preferences related to the timing and choices of nonpharmacological therapies. Some people with low back pain who are not responding or are unable to self-manage their symptoms may benefit from a combination of patient-centred nonpharmacological adjunctive therapies.[5,29,30]

People with low back pain should not be offered ultrasound, electrotherapy, orthotics, spinal injections, or denervation radiofrequency as these therapies have not been proven effective.[1,29]

Sources: American College of Physicians 2017[29] | Institute for Clinical Systems Improvement 2012[12] | National Institute for Health and Care Excellence 2016[1] | Toward Optimized Practice 2015[3]

Definitions Used Within This Quality Statement

Symptoms do not improve
This refers to when low back pain does not resolve on its own after resumption of normal activities and staying active.

Normal activity
Activities of daily living include personal care, continence, toileting, walking, feeding ourselves, work, and leisure.[26] Instrumental activities of daily living include doing housework, preparing meals, shopping, and managing medications.[27]

Nonpharmacological therapies
There are nonpharmacological adjunctive therapies that may be beneficial for people with low back pain. These include the use of spinal mobilization, spinal manipulation, and soft tissue techniques.[1,3,28-30]

What This Quality Statement Means

For Patients
Your care provider should offer you information on nondrug therapies that work for you, while you continue to be physically active. Incorporating these therapies may help to reduce pain and discomfort and may improve your overall health and well-being.

For Clinicians
Offer patients information about nonpharmacological therapies if their low back pain does not resolve. Explain to patients that nonpharmacological therapies may offer short-term relief from their acute low back pain and could improve their ability to move with more comfort.

For Health Services
Ensure all health care settings have systems, processes, and resources in place to provide adults with information on nonpharmacological therapies.

Quality Indicators

Process Indicator

Percentage of people with low back pain who receive any of the following nonpharmacological therapies:

- **Spinal manipulation**
- **Spinal mobilization**
- **Soft tissue techniques**

- Denominator: total number of people with low back pain
- Numerator: number of people in the denominator who receive any of the listed nonpharmacological therapies
- Data source: local data collection

Quality Statement 7: Pharmacological Pain Management

People with low back pain whose symptoms do not improve with nonpharmacological therapy are offered information on the risks and benefits of nonopioid analgesics to improve mobility and function by reducing pain.

Background

People experiencing low back pain are encouraged to try nonpharmacological management options, such as remaining physically active and initiating nonpharmacological therapies (see Quality Statement 6) with a trained health care professional to improve pain management before beginning pain-relieving medications.[30] Given the nature of low back pain and the potential for low back pain to recur, patients should be prescribed medication for only short periods. People with low back pain should also continue to remain physically active and continue with passive nonpharmacological therapies after they start taking medication. Pharmacological therapy is prescribed for patients with low back pain to maintain mobility and function, not primarily to relieve pain. When considering pain-relieving medications, clinicians should take into account risks, benefits, side effects, efficacy, costs, the person's needs, and patient preferences. A stepwise approach can help ensure all these factors are evaluated.[1,29]

Clinical guidelines for people with low back pain specify the first choice of medication is a short course of nonsteroidal anti-inflammatory drugs (NSAIDs) to improve function, regain mobility, and reduce pain. Patients who have contraindications to these medications should not use them.[1,5,12,29]

No high-quality evidence supports the use of opioids to treat mechanical acute low back pain. In some circumstances, it is reasonable to prescribe opioids at the lowest effective dose for a limited time if patients with severe pain and disability are unresponsive to nonpharmacological options and first-line analgesics.[3,12] For detailed information about opioid prescribing, please refer to the quality standard *Opioid Prescribing for Acute Pain*.[15]

Sources: American College of Physicians 2017[29] | Institute for Clinical Systems Improvement 2012[12] | National Institute for Health and Care Excellence 2016[1] |Toward Optimized Practice 2015[3]

Definitions Used Within This Quality Statement

Nonpharmacological interventions

- Patient education and self-management (see Quality Statement 3)
- Physical activity (see Quality Statement 4)
- Psychosocial information and support (see Quality Statement 5)
- Passive nonpharmacological interventions (see Quality Statement 6)

Information

Information addressing the benefits and harms associated with pharmacological therapy should be given to people with low back pain during in-person visits with their primary care provider, in verbal and printed or in multimedia formats.[3] Patients' needs and goals for improved function and mobility should be discussed.[12]

Nonopioid analgesics

- Nonsteroidal anti-inflammatory drugs (NSAIDs) are the first choice of therapy if nonpharmacological therapies do not reduce low back pain.[1] They have been shown to have short-term effectiveness in reducing pain severity and improving function
- Analgesics are over-the-counter short-term medications used to ease pain in the lower back.[1] These medications can be used if a person is unable to take NSAIDs
- Muscle relaxants are used to help manage low back pain that does not respond to first-choice therapies.[5,29] These medications should be prescribed at the lowest effective dose for a limited time to patients with severe pain and disability who do not respond to nonpharmacological therapies and first-choice analgesics. The side effects must be considered for each person

What This Quality Statement Means

For Patients

If things like remaining active and passive nondrug therapies are not working well enough to control your symptoms, your primary care provider (a family doctor or nurse practitioner) should offer you options for pain-relieving medication. If you decide to use pain medication, it is important to continue using other nondrug therapies as well. One does not replace the other.

For Clinicians

Offer people with low back pain whose symptoms are not improving with nonpharmacological therapy information on how nonopioid pain-relieving medications may be combined with nonpharmacological therapies to improve their function and mobility. Discussions with patients about medications should include an overview of the risks and benefits associated with different options.

For Health Services

Ensure all health care settings have systems, processes, and resources in place so that people with low back pain can receive information on the risks and benefits of nonopioid pain relievers.

Quality Indicators

Process Indicator

Percentage of people with low back pain whose symptoms are not improving with nonpharmacological therapies who are given information by their primary care provider on the risks and benefits of nonopioid analgesics for their low back pain

- Denominator: total number of people with low back pain whose symptoms are not improving with nonpharmacological therapies
- Numerator: number of people in the denominator who are given information by their primary care provider on the risks and benefits of nonopioid analgesics for their low back pain
- Data source: local data collection

Outcome Indicator

Percentage of people who seek primary or emergency department care for low back pain who are prescribed an opioid medication (a lower percentage is better)

- Denominator: total number of people who seek primary or emergency department care for low back pain
- Numerator: number of people in the denominator who are prescribed an opioid medication
- Data sources: Narcotics Monitoring System (NMS) to identify opioid prescriptions; Ontario Health Insurance Plan (OHIP) to identify primary care visits for low back pain, National Ambulatory Care Reporting System (NACRS) to identify emergency department visits for low back pain

Quality Statement 8: Return-to-Work Strategies

People with low back pain are supported to continue working or return to work, with appropriate modifications.

Background

Low back pain is the leading cause of work absenteeism, and although most people with low back pain return to work, some do not. Primary care providers should support people with low back pain to return to work (paid or unpaid) in a timely manner, with appropriate modifications. People with low back pain benefit if they can return to work quickly using strategies that are appropriate to their work environment, using work modifications as necessary,[3] and minimizing the risk of prolonged disability.[1,12] Not working can lead to loss of income and change in socioeconomic status, which can contribute to changes in self-image, psychological distress, and social exclusion.[1,12] Most people with low back pain should be encouraged to return to work, even if they feel residual back discomfort, as working will not cause any harm.[3] Continuing to work despite residual low back pain may reduce the person's pain and improve other aspects of health, quality of life, and well-being. Some organizations have return-to-work programs provided by occupational health that involve case management, education about physical activity, and psychological or behavioural support.[3]

Sources: Institute for Clinical Systems Improvement 2012[12] | National Institute for Health and Care Excellence 2016[1] | Toward Optimized Practice 2015[3]

Definitions Used Within This Quality Statement

Continue or return to work
Resuming usual activities includes paid and unpaid work, or other activities that contribute to a normal day for the person with low back pain.[1]

Modifications
Modified duties should allow patients, given their current health status, to ensure a safe work environment.[31]

What This Quality Statement Means

For Patients
Your primary care provider should support you to return to work even if you have low back pain. Modifications may be necessary, and it is important to speak with your employer, with input from your primary care provider, to identify what work accommodations can be made.

For Clinicians
Support people with low back pain to return to work as early in their treatment as possible. This should include appropriate recommendations for modifications and for keeping active within reasonable levels, based on the patient's mobility and function.

For Health Services
Ensure systems, processes, and resources are in place so that primary care providers can support people experiencing low back pain to return to work, with appropriate modifications.

Quality Indicators

Process Indicators

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

- Denominator: total number of people with 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 to work or returning to work, with appropriate modifications
- Data source: local data collection

Percentage of people with low back pain who are working, who report that they are supported by their primary care provider in their efforts to continue to work, with appropriate modifications

- Denominator: total number of people with low back pain who are working
- Numerator: number of people in the denominator who report that they are supported by their primary care provider in their efforts to continue to work, with appropriate modifications
- Data source: local data collection

Percentage of people with low back pain who take a leave of absence from work, who report that they are supported by their primary care provider in their efforts to return to work, with appropriate modifications

- Denominator: total number of people with low back pain who take a leave of absence from work
- Numerator: number of people in the denominator who report that they are supported by their primary care provider in their efforts to return to work with appropriate modifications
- Data source: local data collection

Percentage of people with low back pain who return to work

- Denominator: total number of people with low back pain who take a leave of absence from work
- Numerator: number of people in the denominator who return to work
- Data source: local data collection

This indicator is similar to an indicator in the *Quality-Based Pathway Clinical Handbook for Non-Emergent Integrated Spine Care*.[13]

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About Health Quality Ontario

Health Quality Ontario is the provincial advisor on the quality of health care. We are motivated by this single-minded purpose: **Better health for all Ontarians.**

Who We Are

We are a scientifically rigorous group with diverse areas of expertise. We strive for complete objectivity, and look at things from a vantage point that allows us to see the forest and the trees. We work in partnership with health care providers and organizations across the system, and engage with patients themselves, to help initiate substantial and sustainable change to the province's complex health system.

What We Do

We define the meaning of quality as it pertains to health care, and provide strategic advice so all the parts of the system can improve. We also analyze virtually all aspects of Ontario's health care. This includes looking at the overall health of Ontarians, how well different areas of the system are working together, and most importantly, patient experience. We then produce comprehensive, objective reports based on data, facts and the voices of patients, caregivers and those who work each day in the health system. As well, we make recommendations on how to improve care using the best evidence. Finally, we support large-scale quality improvements—by working with our partners to facilitate ways for health care providers to learn from each other and share innovative approaches.

Why It Matters

We recognize that, as a system there is much to be proud of, but also that it often falls short of being the best it can be. Plus, certain vulnerable segments of the population are not receiving acceptable levels of attention. Our intent at Health Quality Ontario is to continuously improve the quality of health care in this province regardless of who you are or where you live. We are driven by the desire to make the system better, and by the inarguable fact that better has no limit.

Looking for more information?

Visit our website at **hqontario.ca** and contact us at **qualitystandards@hqontario.ca** if you have any questions or feedback about this guide.

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