

Osteoarthritis of the Knee

Clinical Care Standard

August 2024

The Australian Commission on Safety and Quality in Health Care acknowledges the traditional owners of Country throughout Australia, and their continuing connection to land, sea and community. We pay our respects to them and their cultures, and to elders both past and present.

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The *Osteoarthritis of the Knee Clinical Care Standard* has been endorsed by the following organisations:



NACCHO



National Aboriginal Community Controlled Health Organisation



NAATSIHWP
National Association of Aboriginal and Torres
Strait Islander Health Workers and Practitioners



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Quality statements

1

Comprehensive assessment and diagnosis

A patient with suspected knee osteoarthritis receives a comprehensive, person-centred assessment which includes a detailed history of the presenting symptoms, comorbidities, a physical examination, and a psychosocial evaluation of factors affecting quality of life and participation in activities. A diagnosis of knee osteoarthritis can be confidently made based on this assessment.

2

Appropriate use of imaging

Imaging is not routinely used to diagnose knee osteoarthritis and is not offered to a patient with suspected knee osteoarthritis. When clinically warranted, X-ray is the first-line imaging. Magnetic resonance imaging (MRI), computerised tomography (CT) and ultrasound are not appropriate investigations to diagnose knee osteoarthritis. The limited value of imaging is discussed with the patient, including that imaging results are not required for effective non-surgical management.

3

Education and self-management

Information about knee osteoarthritis and treatment options is discussed with the patient. The patient participates in developing an individualised self-management plan that addresses their physical, functional, and psychosocial health needs.

4

Physical activity and exercise

A patient with knee osteoarthritis is advised that being active can help manage knee pain and improve function. The patient is offered advice on physical activity and exercise that is tailored to their priorities and preferences. The patient is encouraged to set exercise and physical activity goals and is recommended services or programs to help them achieve their goals.

5

Weight management and nutrition

A patient with knee osteoarthritis is advised of the impact of body weight on symptoms. The patient is offered support to manage their weight and optimise nutrition that is tailored to their priorities and preferences. The patient is encouraged to set weight management goals and is referred for any services required to help them achieve these goals.

6

Medicines used to manage pain and mobility

A patient with knee osteoarthritis is offered medicines to manage their pain and mobility in accordance with the current version of the *Therapeutic Guidelines* or locally endorsed, evidence-based guidelines. A patient is not offered opioid analgesics for knee osteoarthritis because the risk of harm outweighs the benefits.

7

Patient review

A patient with knee osteoarthritis receives planned clinical review at agreed intervals, and management is adjusted for any changing needs. A patient who has worsening symptoms and severe functional impairment that persists despite optimal non-surgical management is referred for assessment to a non-general practitioner (GP) specialist or multidisciplinary service.

8

Surgery

A patient with knee osteoarthritis who has severe functional impairment despite optimal non-surgical management is considered for timely joint replacement surgery or joint-conserving surgery. The patient receives comprehensive information about the procedure and potential outcomes to inform their decision. Arthroscopic procedures are not offered to treat uncomplicated knee osteoarthritis.

Indicators for local monitoring

The following indicators will support healthcare services to monitor how well they are implementing the care recommended in this clinical care standard. These indicators are intended to support local quality improvement activities.

1

Comprehensive assessment and diagnosis

Indicator 1a: Proportion of patients newly diagnosed with knee osteoarthritis who had a comprehensive person-centred assessment.

2

Appropriate use of imaging

Indicator 2a: Proportion of patients diagnosed with knee osteoarthritis without imaging.

Indicator 2b: Proportion of patients diagnosed with knee osteoarthritis without magnetic resonance imaging.

Indicator 2c: Proportion of patients diagnosed with knee osteoarthritis without computerised tomography.

Indicator 2d: Proportion of patients diagnosed with knee osteoarthritis without ultrasound.

3

Education and self-management

Indicator 3a: Proportion of patients with knee osteoarthritis who have an individualised self-management plan.

Indicator 3b: Proportion of patients with knee osteoarthritis whose individualised self-management plan includes documented advice on physical activity.

Indicator 3c: Proportion of patients with knee osteoarthritis who are overweight whose individualised self-management plan includes documented advice on weight management.

6

Medicines used to manage pain and mobility

Indicator 6a: Evidence of local arrangements to ensure patients with knee osteoarthritis are prescribed or recommended medicines in accordance with the current *Therapeutic Guidelines* or locally endorsed, evidence-based guidelines.

7

Patient review

Indicator 7a: Proportion of patients with knee osteoarthritis with a documented timeframe for review.

8

Surgery

Indicator 8a: Number of patients who have undergone arthroscopic procedures to treat uncomplicated knee osteoarthritis.

More information

The definitions required to collect and calculate indicator data are specified online at the Australian Institute of Health and Welfare's Metadata Online Registry (METEOR): meteor.aihw.gov.au/content/790044.

See the Commission's [Osteoarthritis of the Knee Clinical Care Standard](#) webpage for information about indicators and other relevant quality improvement measures.

Updates

This revised clinical care standard maintains similar goals and scope to the 2017 *Osteoarthritis of the Knee Clinical Care Standard* and incorporates changes in the relevant evidence-based guidelines since 2017.

Key updates in the current version include:

- Clarification of the scope of the Standard to exclude knee pain other than suspected knee osteoarthritis
- Expanded and strengthened statements on
 - appropriate use of imaging
 - weight management, nutrition, physical activity, and exercise
- Additional information on
 - psychosocial wellbeing considerations
 - cultural safety and equity considerations
 - communicating with patients to support self-management.

See [Appendix A: Updates in the 2024 Standard](#) for a detailed list of amendments.

Clinical care standards

A clinical care standard describes the care that patients should be offered by clinicians and healthcare services for a specific clinical condition, treatment, procedure or clinical pathway, regardless of where people are treated in Australia. Clinical care standards aim to address unwarranted variation in health care or patient outcomes by increasing evidence-based healthcare for priority aspects of care.

Clinical care standards include:

- Quality statements that describe the expected standard for key components of patient care
- Explanations of what each statement means for
 - people receiving care – so they know what care they may be offered and can make informed decisions in partnership with their clinician
 - clinicians – to support decisions about appropriate care
 - healthcare services – to inform them of the policies, procedures, and organisational factors that can enable the delivery of high-quality care
- Indicators to support local quality improvement, allowing clinicians and healthcare services to monitor the care described in the standard.

Clinical care standards are developed by the Australian Commission on Safety and Quality in Health Care (the Commission). By working in partnership with the Australian Government, states and territories, the private sector, clinical experts, and patients and carers, the Commission aims to ensure that the health system is better informed, supported and organised to deliver safe and high-quality care.

National Safety and Quality Standards

Clinical care standards support quality improvement. Information about the role of clinical care standards for healthcare services accredited to the [National Safety and Quality Health Service \(NSQHS\) Standards](#)¹ and the [National Safety and Quality Primary and Community Healthcare Standards \(Primary and Community Healthcare Standards\)](#)² can be found online.

See the Commission's [Fact sheet: Applicability of Clinical Care Standards](#) for more information.³

About the Osteoarthritis of the Knee Clinical Care Standard

Goals

- To improve timely assessment and optimal management for patients with knee osteoarthritis.
- To enhance patients' symptom control, joint function, psychological wellbeing, quality of life and participation in usual activities, and to lessen the disability caused by knee osteoarthritis.

Scope

This clinical care standard relates to the care that patients aged 45 years and over should receive when they present with knee pain and are suspected of having knee osteoarthritis. This includes:

- Early clinical assessment
- Diagnosis and ongoing non-surgical management over the course of the condition
- Referral to non-general practitioner specialists
- Consideration of surgery if indicated.

While some younger people have knee osteoarthritis, prevalence rises sharply after 45 years of age.⁴ For this reason, the scope of this clinical care standard is limited to patients 45 and over.

What is not covered

This clinical care standard does not cover:

- Management of knee pain in people aged under 45 years
- Management of knee pain due to recent trauma or with symptoms that are not suggestive of knee osteoarthritis and where another diagnosis is suspected
- Rehabilitation after knee surgery.

Healthcare settings

This clinical care standard applies to care provided in:

- Community and primary healthcare services such as general practices, Aboriginal and Torres Strait Islander Community Controlled Health Organisations (ACCHOs), and allied health services
- All hospital settings, including public and private hospitals, subacute facilities, outpatient clinics, and day procedure services
- Private medical clinics.

The standard is particularly relevant to:

- Aboriginal and Torres Strait Islander Health Workers and Aboriginal and Torres Strait Islander Health Practitioners
- Allied health practitioners including physiotherapists, dietitians, and occupational therapists
- Exercise physiologists
- General practitioners and rural generalists
- Nurses and nurse practitioners
- Orthopaedic surgeons
- Pharmacists
- Radiologists, radiographers, and sonographers
- Rehabilitation physicians
- Rheumatologists
- Sport and exercise physicians.

The standard may also be relevant in other specialist services and residential aged care services.

Not all quality statements within this standard will be applicable to every healthcare service. Healthcare services should consider their individual circumstances in determining how to apply each statement.

When implementing this clinical care standard, healthcare services should consider:

- The context in which care is provided
- Local variation
- Quality improvement priorities of the individual healthcare service.

In rural and remote settings, different strategies may be needed to implement the standard. For example, the use of:

- Hub-and-spoke models integrating larger and smaller health services and ACCHOs
- Telehealth consultations
- Multidisciplinary teams including allied health assistants where clinically appropriate.

Evidence

Key sources that underpin the standard are current clinical guidelines from the following:

- Therapeutic Guidelines Limited⁵
- National Institute for Health and Care Excellence (NICE) (UK)^{6,7,8,9}
- Osteoarthritis Research Society International (OARSI)¹⁰

- Royal Australian College of General Practitioners (RACGP)¹¹
- American Academy of Orthopaedic Surgeons (AAOS)¹²
- American College of Rheumatology (ACR) with the Arthritis Foundation (US).¹³

See the Commission's [Osteoarthritis of the Knee Clinical Care Standard](#) webpage for a full list of the evidence sources that support this clinical care standard.

Terminology

Key terms used in the context of this clinical care standard are described below. See also the [Glossary](#). The terms 'knee osteoarthritis' and 'osteoarthritis of the knee' are used interchangeably in this document.

Term	How it is used in this document
patient	<p>The patient is the person receiving care. When the word 'patient' is used in this standard, it may include the person's carer, family member, support person, or substitute decision maker.</p> <p>Only the patient or their substitute decision maker, such as a legal guardian, can give consent for care. However, carers, families and support people who are not substitute decision makers may also support the patient in their decision making and actively participate in their care. These people should be given information and included in discussions when the patient wishes this to occur.</p>
clinicians	<p>Clinicians are all types of healthcare providers who deliver direct clinical care to patients. They include nurses, doctors, pharmacists, Aboriginal and Torres Strait Islander Health Workers, Aboriginal and Torres Strait Islander Practitioners, physiotherapists, and other allied health professionals.</p>
healthcare services	<p>Healthcare services refers to those responsible for leading and governing the service. They are the organisations responsible for implementing clinical governance, administration and financial management of one or more service units providing health care to patients.</p> <p>Health care is delivered in a wide range of settings. Services may vary in size and organisational structure from single healthcare providers to complex organisations. Healthcare services include pharmacies, clinics, outpatient facilities, hospitals, community and primary healthcare settings, practices, and clinicians' rooms.</p>

Supporting resources

See the Commission's [Osteoarthritis of the Knee Clinical Care Standard](#) webpage for supporting documents. These include the:

- [Consumer guide](#)
- [Clinician fact sheet](#)
- [Healthcare services information sheet](#)
- Further [related resources](#) include links to additional information, education, and support.



Using indicators

Measurement is a key part of quality improvement. The indicators in this clinical care standard allow clinicians and healthcare services to monitor and improve the care they provide, as part of local quality improvement activities.

Before using the indicators, refer to each indicator's specifications as described in the [Metadata Online Registry](#) (METEOR). These define how to collect and calculate indicator data and describe the applicable healthcare settings.

When using the indicators note that:

- Indicators are listed with the related quality statement, however not all quality statements will have indicators
- The Commission does not set benchmarks for clinical care standards indicators
- Services may use other relevant measures in addition to, or instead of these indicators that relate to their needs and the needs of their patients.

See the [Commission's website](#) for more information on other quality measures, including [patient-reported outcome measures \(PROMs\)](#) and [patient experience measures](#).

General principles of care

This clinical care standard should be implemented as part of an overall approach to safety, quality, and improving the appropriateness of care. Some principles and key actions are described in other Commission standards and guidance and are not reproduced here. These include:

- Effective clinical governance
- Person-centred care
- Shared decision making and informed consent.

For more information, see:

- [NSQHS Standards¹](#)
- [National Safety and Quality Primary and Community Healthcare Standards²](#)
- [User Guide for Reviewing Clinical Variation](#)
- The Commission's [clinical care standards webpages](#).

Cultural safety and equity

Person-centred care recognises and respects differences in individual needs, beliefs, and culture.

The Commission:

- Is committed to supporting healthcare services to provide culturally safe and equitable healthcare to all Australians
- Acknowledges that discrimination and inequity are significant barriers to achieving high-quality health outcomes for some patients from culturally and linguistically diverse communities.

Culturally safe services and environments are those where the places, people, policies, and practices foster mutual respect, shared decision making, and an understanding of cultural, linguistic, and spiritual differences and perspectives. They are created by organisations and individuals that recognise cultural power imbalances and actively address them by:

- Ensuring access to and use of interpreter services or cultural translators when this will assist the patient and is in line with their wishes
- Providing cultural competency training for all staff
- Encouraging clinicians to review their own beliefs and attitudes when treating and communicating with patients¹⁴
- Identifying variation in healthcare provision or outcomes for specific patient populations, including those based on ethnicity.¹⁵



Cultural safety and equity for Aboriginal and Torres Strait Islander peoples

When implementing this clinical care standard, cultural safety can be improved through embedding an organisational approach. Specific considerations for cultural safety in people with knee osteoarthritis are provided below and with the quality statements.

Recommendations

In Australia, Aboriginal and Torres Strait Islander peoples generally experience poorer health outcomes than the rest of the population, with systemic racism a root cause. The considerations for improving cultural safety and equity in this clinical care standard focus primarily on overcoming cultural power imbalances and improving outcomes for Aboriginal and Torres Strait Islander people through better access to health care.¹⁶

When providing osteoarthritis care for Aboriginal and Torres Strait Islander peoples, particular consideration should be given to:

- Taking a collaborative approach to planning treatment and management of knee osteoarthritis to ensure that interventions are suitably tailored to the individual's personal needs and preferences for care
- Supporting people to self-report their Aboriginal and Torres Strait Islander status and ensure appropriate systems and processes are in place to promote self-identification
- Engaging interpreter services, cultural translators, Aboriginal and Torres Strait Islander Health Workers, and Aboriginal and Torres Strait Islander Health Practitioners when this will assist the patient
- Engaging Aboriginal and Torres Strait Islander Health Workers and Aboriginal and Torres Strait Islander Health Practitioners as part of a patient's multidisciplinary team
- Encouraging the inclusion of a carer, family member or friend in all aspects of care, including decision making and management planning
- Providing flexible service delivery to optimise attendance and help develop trust with individual Aboriginal and Torres Strait Islander people and communities.

Related resources

- National Safety and Quality Health Service (NSQHS) Standards: [*User Guide for Aboriginal and Torres Strait Islander Health*](#) – a guide for health service organisations to help them improve the quality of care and health outcomes for Aboriginal and Torres Strait Islander people based on the NSQHS Standards¹⁷
- [*National Agreement on Closing the Gap*](#) – an agreement built around **four priority reforms** for transforming the way governments work with, and for, Aboriginal and Torres Strait Islander peoples to improve outcomes
- [*Cultural Respect Framework 2016–2026*](#) – a framework that commits the Australian Government and all states and territories to embed cultural respect principles into their health systems¹⁵
- Western Australia Centre for Rural Health [*Clinical yarning*](#) – a patient-centred framework to improve communication in Aboriginal health care¹⁸
- NSW Ministry of Health [*Aboriginal cultural engagement self-assessment tool*](#) – a resource for healthcare services¹⁹
- NSW Health's [*Communicating Positively: A Guide to Appropriate Aboriginal Terminology*](#)²⁰
- Arthritis Australia [*Staying Moving Staying Strong*](#) – resources and patient story videos³²
- NSW Agency for Clinical Innovation (ACI) [*Pain Management Network*](#) – resources for Aboriginal and Torres Strait Islander people that are relevant for knee osteoarthritis management
- Australian Indigenous HealthInfoNet [*WellMob*](#) – digital library of over 350 mental health and wellbeing resources developed by and for First Nations Australians including websites, apps, videos, fact sheets, podcasts, and social media
- Aboriginal Health & Medical Research Council of NSW (AH&MRC) [*Living Longer Stronger*](#) – section on musculoskeletal conditions and chronic conditions

Osteoarthritis of the knee

Osteoarthritis is a chronic disease affecting the synovial joints – the type of joint found between bones that move against each other. It leads to pain accompanied by varying degrees of functional limitations and reduced quality of life. Knee osteoarthritis is defined as inflammation of one or both knee joints. The primary symptoms are knee pain, swelling, and stiffness.⁴

In 2022, over 2.1 million Australians were estimated to have osteoarthritis.⁴ Approximately one-third (30%) of people aged 75 years or older report experiencing osteoarthritis.⁴ Knee osteoarthritis may affect people of all ages, however the prevalence increases sharply from the age of 45 years and is rising, and the condition is more common in women than men.^{4,21}

Osteoarthritis contributes significantly to the global burden of disease for people over 50 years old. It has a high non-fatal disease burden compared to other health conditions associated with older age.²¹ Knee osteoarthritis is a major contributor to disability and lost productivity and is the main reason for knee replacement surgery.¹⁰

People with knee osteoarthritis often have difficulty with walking, climbing stairs, standing from a sitting position, getting in and out of cars, and a range of other everyday activities.¹² These limitations can further hinder physical activity and their participation in work, leisure, cultural, and social activities, and can contribute to psychological distress, including clinical depression.¹¹

People who are overweight have double the risk of developing knee osteoarthritis and for people with obesity the risk is fourfold.^{22,23,24} In 2019, 36% of years lived with disability for knee osteoarthritis were attributed to high body mass index (BMI), up from 28% in 1990.²¹

Aboriginal and Torres Strait Islander peoples

Aboriginal and Torres Strait Islander peoples are 1.5 times more likely than non-Indigenous people to have osteoarthritis, and it appears to develop at a younger age.²⁵

Significant environmental, economic, and social inequalities contribute to poorer health outcomes for Aboriginal and Torres Strait Islander peoples at a population level, compared to non-Indigenous people.²⁶ These factors also influence the development, progression, and effectiveness of self-management of osteoarthritis.

In both rural and urban areas, Aboriginal and Torres Strait Islander peoples experience difficulties accessing culturally appropriate health services near home and are 50% less likely to access primary care management of knee osteoarthritis than other Australians.²⁷ Ineffective communication between healthcare providers and patients is an important reason why Aboriginal and Torres Strait Islander people with osteoarthritis disengage from care.²⁸

Evidence suggests that Aboriginal and Torres Strait Islander patients with severe osteoarthritis receive similar benefits from joint replacement surgery as non-Indigenous patients.²⁹ However, their knee replacement rates are 20–50% lower than for non-Indigenous people.^{30,31}

Further investigation is needed to understand the variation in the prevalence of osteoarthritis between Aboriginal and Torres Strait Islander peoples and the non-Indigenous population. This includes investigation of risk factors, the related impact of access to health care, and contribution of any cultural beliefs about joint replacement surgery.

This evidence of variation underscores the need for integrated multidisciplinary care that is culturally sensitive and person-centric.²⁸

Background

The *Osteoarthritis of the Knee Clinical Care Standard* was first released in 2017 in response to findings from the 2015 *Australian Atlas of Healthcare Variation* (the Atlas). The Atlas identified considerable variation in rates of knee arthroscopy in Australia, despite the limited value of this intervention for degenerative disease due to knee osteoarthritis.³³ The Atlas also noted the importance of appropriate assessment, investigation, and management of knee osteoarthritis. It recommended the development of a clinical care standard to support improved care.

What has changed?

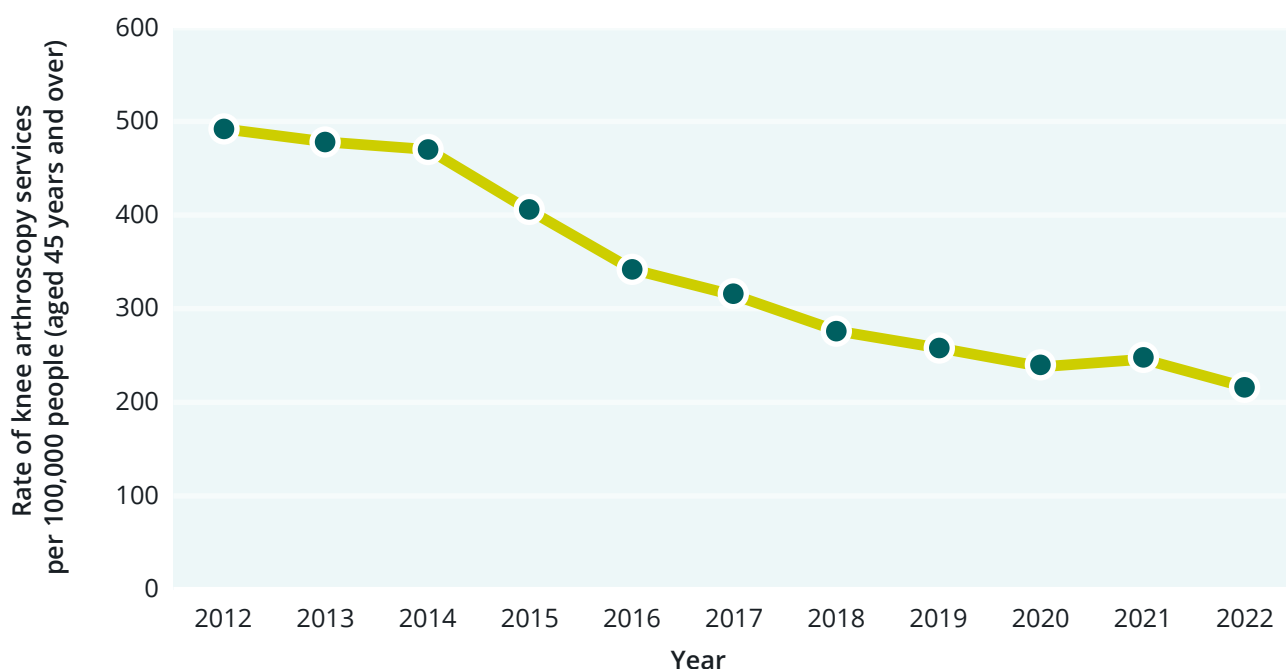
At the time of the first Atlas in 2015, there were more than 33,000 admissions for knee arthroscopy in people aged 55 years and over in Australia

(2012–13 data). The area with the highest rate of admissions had a rate seven times greater than the area with the lowest rate.³³ Subsequently, the Commission and other organisations recommended a move towards more appropriate use of arthroscopy. This resulted in changes to the Medicare Benefits Schedule (MBS) limiting the use of knee arthroscopy for degenerative changes.^{33,34,35}

Since the first Atlas, there has been a continuous decline in the overall number and rate of knee arthroscopy services. MBS claims fell by 47% between 2015 and 2022 for people aged 45 years and over, from 404 per 100,000 people to 216 per 100,000 (see [Figure 1](#)).

The revisions in this updated standard are designed to target further areas for improvement.

Figure 1: Medicare Benefits Schedule claims for knee arthroscopy services in people aged 45 years and over, 2012–22



Analysis of Medicare Benefits Schedule (MBS) claims data extracted 15 March 2023. Rate of knee arthroscopy services per 100,000 people (aged 45 years and over).*

Appropriate care

Surgery is important for certain patients with knee osteoarthritis. However, clinical guidelines consistently recommend non-surgical management for patients at all stages of knee osteoarthritis. These include lifestyle modifications, physical therapy, pain management, and exercise.

There are opportunities throughout the care pathway to:

- Reduce low-value care by avoiding ineffective or unnecessary treatments
- Avoid inappropriate care by ensuring that interventions are evidence-based and tailored to individual needs
- Optimise patient involvement and outcomes to improve quality of life.

* Note: MBS Item numbers changed over this period.³⁵ Relevant item numbers for the period are listed below.

- Prior to 1 July 2021 – MBS item numbers: 48586, 49557, 49558, 49559, 49560, 49561, 49562, 49563, 49565, 49566.
- From 1 July 2021 – MBS item numbers: 48586, 49570, 49572, 49574, 49576, 49578, 49580, 49582, 49584, 49586.

Imaging and investigations

Knee osteoarthritis can be diagnosed on clinical grounds alone.⁶ Imaging is not recommended for initial diagnosis as it does not significantly help with decisions on management, which should be guided by the person's functional abilities. Given its limited utility, there are concerns about the overuse of imaging for knee osteoarthritis, especially MRI.³⁶

There is poor correlation between radiological evidence of knee osteoarthritis and symptoms.¹¹ Minimal anatomical changes can be associated with substantial pain while more observable structural changes can occur with fewer and less severe accompanying symptoms.⁷ Patients with knee osteoarthritis often have changes to the meniscus in their knee as part of the condition and may have no related symptoms or pain. Yet structural changes identified on diagnostic imaging can lead to unhelpful health messaging to patients and to unnecessary interventions.

Imaging and laboratory tests are unnecessary unless:^{6,37}

- Alternative diagnoses are suspected
- Atypical features are apparent
- Symptoms have rapidly worsened
- Surgery is being considered.

In these cases, plain erect X-rays are the most appropriate initial imaging modality.

Environmental considerations

Imaging, especially MRI and CT scan, contributes to the carbon footprint of health care. Clinicians and healthcare services can reduce carbon emissions by reducing requests for unnecessary imaging.³⁸

Evidence-based management

Current guidelines for knee osteoarthritis recommend conservative non-surgical management using a combination of non-pharmacological and pharmacological treatments at all stages of the disease.^{6,10,11,12} Despite these recommendations, the NSW Osteoarthritis Chronic Care Program reported that nearly 70% of participants on the waiting list for knee replacement surgery had not received any non-surgical management other than medication.³⁹

Knee osteoarthritis is not an inevitable part of ageing and is not necessarily progressive.¹¹ If a person is overweight, losing a moderate amount of weight can improve their symptoms and physical capability.¹¹ Exercise programs that increase physical activity levels and muscle strength can reduce associated pain and disability.^{10,40,41}

In the UK, nine out of 10 people with knee osteoarthritis self-manage their condition without joint replacement surgery.⁴² For patients who do require surgery, staying physically active can help to improve functional outcomes after the operation and optimise their recovery.^{6,43,44}

Changing approaches to involving patients

Current evidence shows that a biopsychosocial approach to assessing and managing knee osteoarthritis achieves the best outcomes for patients. It requires a holistic understanding of the person, including their:

- Psychosocial wellbeing, including social and emotional support, mental health, and mood
- Beliefs and thoughts about knee osteoarthritis and perceived control over their symptoms
- Financial and environmental context on the affordability of medications, treatments, and physical aids, such as knee braces or walking sticks
- Geographical factors, especially for patients in rural and remote locations, including accessible transportation options for attending appointments and participating in other programs.

This fuller understanding of a patient's knee osteoarthritis, overall health, and broader situation allows healthcare providers to offer them the knowledge, skills, and support to meet their individual needs and priorities.^{45,46}

The healthcare provider's goal is therefore to empower people with knowledge and skills. This differs from the previous joint-centric approach to knee osteoarthritis where the goal was to address impairment. Optimising a patient's knowledge enables them to participate meaningfully in making decisions about their care.^{6,11} Supporting them to participate in activities that they enjoy encourages them to self-manage to improve the effectiveness of their treatment and health outcomes.

Self-management can significantly improve pain control and functional status in knee osteoarthritis.⁶

Multidisciplinary care

Patients with knee osteoarthritis often have complex care needs. Ongoing and effective delivery of guideline-recommended care requires a coordinated multidisciplinary approach.³⁹ Multidisciplinary care can improve health outcomes and is an optimal way to use health resources.

In Australia, there are several government initiatives to support multidisciplinary models of care for patients with knee osteoarthritis. Examples include:

- [Chronic Disease General Practitioner Management Plan \(GPMP\)](#) (Australian Government)
- [Chronic Disease Team Care Arrangement \(TCA\)](#) (Australian Government)
- [Osteoarthritis Hip and Knee Service](#) (Department of Health, Victoria)
- [Orthopaedic Physiotherapy Screening Clinic \(OPSC\) and Multidisciplinary Service \(MDS\)](#) (Queensland Health)
- [Osteoarthritis Chronic Care Program](#) (Agency for Clinical Innovation, NSW).

1

Quality statement 1 – Comprehensive assessment and diagnosis

A patient with suspected knee osteoarthritis receives a comprehensive, person-centred assessment which includes a detailed history of the presenting symptoms, comorbidities, a physical examination, and a psychosocial evaluation of factors affecting quality of life and participation in activities. A diagnosis of knee osteoarthritis can be confidently made based on this assessment.

Purpose

To ensure that all patients are treated as individuals and that care is evidence-based and provided in a way that respects and responds to their situation, priorities, needs and values. The patient's diagnosis is informed by an initial assessment of history, physical examination, and factors that might affect their self-management of their condition.

What this quality statement means

■ For patients

If you have pain in your knee and other symptoms such as stiffness and swelling around the joint, you can expect your healthcare provider to assess your situation thoroughly to see if you have osteoarthritis or another condition.

Your knee will be examined, and you will be asked questions about:

- Your medical history
- Your symptoms
- Your mental health and mood
- The ways your knee symptoms affect your daily life and activities most important to you.

Your healthcare provider can then do a comprehensive assessment that will help them make a diagnosis. They will recommend the best treatment and support options and share the most useful advice and information.

■ For clinicians

Conduct a comprehensive assessment to identify factors that may affect the patient's preferred treatment and their recovery. If the clinical signs, symptoms, and findings of a comprehensive assessment are typical of knee osteoarthritis, a diagnosis can be made without imaging or further investigations.⁶

Consider the person's context as part of a person-centred approach to making a holistic assessment ([Figure 2](#)). Ask how their symptoms affect their ability to carry out their usual daily activities and participate in paid and unpaid work, leisure, cultural and social activities.^{6,11} The assessment should include:

- **A detailed history** of the patient's symptoms, with particular attention to assessing pain, joint stiffness and movement, and a medical history to identify comorbidities, modifiable risk factors and response to treatment^{6,11,13,47}
- **Physical examination and functional assessment** of the affected knee(s) that includes assessing the patient's gait, range of motion, joint line tenderness, malalignment or deformities, bony enlargement, effusion, restricted movement, and crepitus¹¹
- **Identification of atypical features** that may indicate alternative or additional diagnoses, such as
 - a history of past trauma to the knee
 - malignancy
 - prolonged morning joint-related stiffness
 - rapidly worsening symptoms or the presence of a hot swollen joint¹¹
 - whether pain may be referred from hip or spine pathology
- **A psychosocial evaluation** to identify factors that may affect the patient's quality of life and their ability to carry out their usual activities,^{6,11,13} including their mental and emotional health, their social and economic situation, health literacy and beliefs and concerns, readiness to adopt self-management behaviours, and other emotional, social, cultural and environmental factors.¹¹

Identify and address with the patient any misconceptions and unhelpful beliefs about knee osteoarthritis, its management, trajectory, and treatments.

Consider using tools to aid the assessment and support monitoring of the patient's condition. Select tools tailored to the patient's individual needs and goals ([Table 1](#)).

Figure 2: Summary of the aspects of a holistic, comprehensive assessment for a patient with suspected knee osteoarthritis

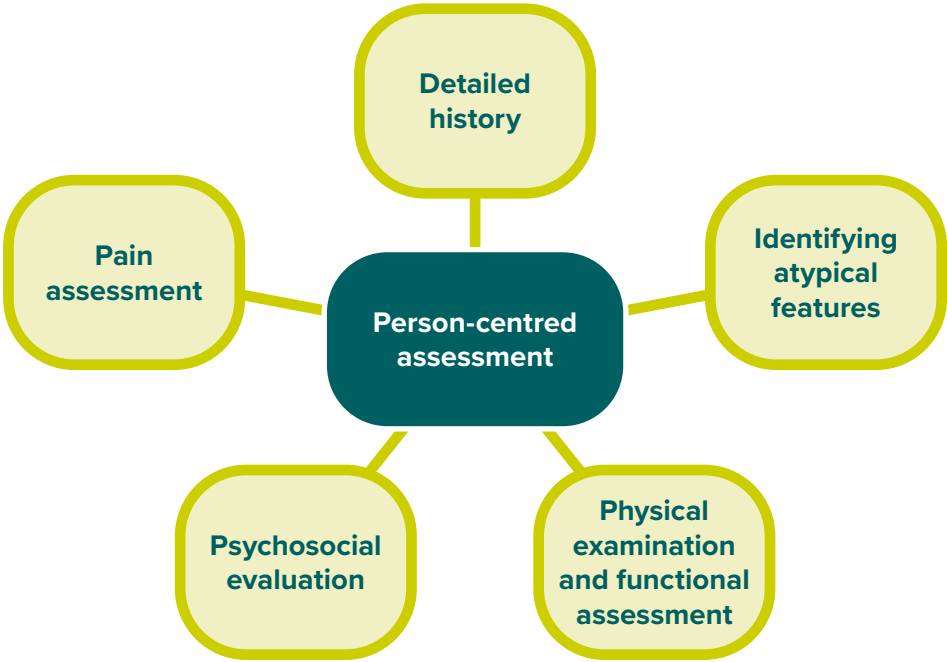


Table 1: Assessment tools used for the assessment and monitoring of knee osteoarthritis

Assessment domain	Name
Disease-specific	Knee injury and Osteoarthritis Outcome Score (KOOS) ^{48,49,50}
	OsteoArthritis Questionnaire (OA-Quest) ⁵¹
	Osteoarthritis Knowledge Scale (OAKS). ⁵²
Function	Timed Up and Go ^{53,54}
	30-second chair test
	Patient-Specific Functional Scale (PSFS). ⁵⁵
Pain	Visual Analogue Scale (VAS) ^{56,57}
	Numerical rating scale (VNRS). ^{57,58}
Depression and anxiety	Kessler (K10) Psychological Distress Test ^{59,60,61}
	Depression, Anxiety and Stress Scale 21 (DASS 21). ⁶²
Work limitations	Workplace Activity Limitations Scale (WALS). ^{63,64}
Quality of life	Assessment of Quality of Life (AQoL) instruments. ⁶⁵

Communicating with patients

Communicate an understanding that knee osteoarthritis affects both physical and psychosocial wellbeing. For example:

‘Joint aches and pains can interfere with the activities you enjoy. This can affect you emotionally, too. It’s important to know that osteoarthritis does not always get worse with time. With the right management, you can get back to doing the things you enjoy.’

Explain knee osteoarthritis in a way that addresses common unhelpful beliefs and promotes active self-management. For example:

‘Knee osteoarthritis is a complex condition of the knee joint and the muscles around it that can make your knees feel stiff and sore. It’s often described as joint wear and tear, but using your joints won’t wear them away – joints need to move to be healthy. Many things can affect the pain you feel in your knee, such as lack of exercise or poor sleep. The good news is that many of things can be within your control.’

Avoid saying:

‘Knee osteoarthritis is caused by joint wear and tear.’

This implies that the knee joint is worn down by overuse. People may avoid physical activity and exercise because they are afraid of causing further ‘damage’.⁴⁵

‘Your pain is caused by bone-on-bone changes.’

People who believe their joint is ‘bone-on-bone’ perceive their knee is vulnerable to loading, that non-surgical treatment options are futile as they cannot replace lost cartilage, and that a knee replacement is inevitable.⁶⁶

■ For healthcare services

Healthcare services should:

- Establish and maintain systems to coordinate and support clinicians to provide a comprehensive assessment of patients presenting with suspected knee osteoarthritis (see **Figure 2**) and that consider assessment of the patient's
 - other health conditions and of the psychosocial factors that might affect quality of life and ability to participate in preferred activities
 - ability to access and participate in health services
 - response to treatment
- Provide clinicians with access to continuing education that reinforces the importance of clinical assessment in the diagnosis of knee osteoarthritis and atypical features that suggest an alternative diagnosis
- Have tools available to staff to aid assessment and recording of patient-reported outcome measures.



Cultural safety and equity for Aboriginal and Torres Strait Islander people

Consider cultural safety and equity at all stages of assessment and diagnosis.

Refer to **Recommendations** on page 8 for considerations when providing care for Aboriginal and Torres Strait Islander peoples.

Resources

See the Commission's **[Osteoarthritis of the Knee Clinical Care Standard](#)** webpage for more information and links to useful resources, including information on the selection and use of **[patient-reported outcome measures \(PROMs\)](#)** and a list of validated PROMs.



Indicator for local monitoring

Indicator 1a: Proportion of patients newly diagnosed with knee osteoarthritis who had a comprehensive person-centred assessment.

METEOR link: meteor.aihw.gov.au/content/790046

More information about this indicator and the definitions needed to collect and calculate indicator data can be found online at the above METEOR link.

2

Quality statement 2 – Appropriate use of imaging

Imaging is not routinely used to diagnose knee osteoarthritis and is not offered to a patient with suspected knee osteoarthritis. When clinically warranted, X-ray is the first-line imaging. Magnetic resonance imaging (MRI), computerised tomography (CT) and ultrasound are not appropriate investigations to diagnose knee osteoarthritis. The limited value of imaging is discussed with the patient, including that imaging results are not required for effective non-surgical management.

Purpose

To reduce the potential harm to patients from unnecessary tests, investigations, and exposure to radiation.

What this quality statement means

■ For patients

If your knee pain and other symptoms suggest that you have knee osteoarthritis, you can expect your healthcare provider to confirm this by asking questions about your medical history, symptoms, and situation, and by giving you a physical examination.

Most people with knee osteoarthritis do not need X-rays, MRI or CT scans, ultrasound, or blood tests for a healthcare provider to make a diagnosis.

Scans will not help decide your initial treatment and are not the first step for treating knee osteoarthritis. Your ability to move and do the activities you want to do is more important than what is seen on scans.

Scans may cause you unnecessary concern if they show changes or tears to the meniscus, which is the cartilage between the bones in your knee. These changes are common for most people with knee osteoarthritis but may not have anything to do with your symptoms. Most changes to the meniscus do not need surgery and scans are not always helpful.

If your symptoms are unusual for someone with knee osteoarthritis, your healthcare provider may want to do an X-ray to get a clearer picture. You can expect them to discuss this with you, including what to expect from the X-ray and how it will help with your diagnosis.

If you have diagnosed knee osteoarthritis and are considering surgery, you may need X-rays or other scans at that time.

■ For clinicians

Routine imaging is not required to confirm a diagnosis based on an appropriate clinical assessment.⁶ This is because degenerative meniscal tears are common in osteoarthritic knees, whether people have symptoms or not.^{67,68} Therefore, detection of meniscal tears does not provide useful additional information and may lead people to pursue inappropriate management such as arthroscopy.

Patients may experience substantial pain with only minor structural changes to joints identified on imaging, while minimal symptoms may accompany more notable (though modest) structural changes.⁷

Imaging may be clinically warranted in some circumstances, such as if the patient presents with atypical features or signs and symptoms that increase suspicion of an alternative diagnosis. X-ray is the preferred first-line imaging modality in these cases.

If imaging is required to investigate alternate diagnoses, explain the reasons for this to the patient and document the reasons on the request form to enable relevant reporting.⁶⁹ Imaging results should be interpreted together with clinical findings and functional assessment.

If a patient with suspected knee osteoarthritis requests diagnostic imaging, ask about their concerns and their expectations of imaging. Reassure them that having X-rays or other diagnostic imaging will not change initial treatment, which will be guided by their mobility and function.

Advise the patient that there is a poor correlation between radiological evidence of osteoarthritis and symptoms.¹³ Explain that people may have severe pain with only minimal findings on X-ray or MRI because the experience of pain is influenced by many factors. Some of these symptoms are modifiable by changes to activity levels, weight, sleep, or stress management.

For radiologists

Report imaging findings in line with the Royal Australian and New Zealand College of Radiologists (RANZCR) *Clinical Radiology Written Report Guidelines*.⁷⁰ When reporting imaging studies requested for suspected knee osteoarthritis, include:

- A comment to the requesting clinician in response to the indication listed on the request, for example, 'suspected knee osteoarthritis'
- Key clinically relevant information to facilitate appropriate treatment planning^{69,70}
- A diagnosis based on the imaging, using the principles of a hierarchy of diagnosis.

Magnetic resonance imaging is not recommended for initial diagnosis. However, when knee osteoarthritis is observed on MRI, including thinning of the cartilage or degenerative meniscal changes including tears, a finding of 'knee osteoarthritis' should be included in the report. This is of greater clinical relevance than the presence of a meniscal tear.

Communicating with patients

Explain to patients why imaging is not needed to diagnose knee osteoarthritis using words that validate their experience. For example:

‘Two people can have the same changes on X-ray but experience the effects on their joints very differently. This tells us that other factors play a role in your knee osteoarthritis experience. Some of these can be changed and are within your control.’

Avoid saying:

‘It’s normal for adults to have joint changes on X-ray, but most won’t experience symptoms.’

People who do experience symptoms can perceive this as stigmatising, judgemental, or inferring they are ‘weak of the mind.’⁷¹

■ For healthcare services

Healthcare services should:

- Establish policies to minimise inappropriate imaging for suspected knee osteoarthritis, which
 - provide guidance on appropriate clinical diagnosis
 - include documentation of the indications for imaging of knee pain and related symptoms
 - use the hierarchy of imaging required
 - recommend commencing with X-ray if imaging is required
- Monitor the appropriateness of imaging requests for knee osteoarthritis
- Establish processes that support clinicians to request imaging only when clinically appropriate.³⁸

For radiology services

Radiology services should:

- Ensure protocols are in place that outline the required imaging for knee pain, including imaging for patients with suspected knee osteoarthritis with atypical features
- Ensure guidelines and requirements for reporting imaging results are in place that
 - require a response to the indication for imaging provided on the request from the referring clinician
 - require that key clinically relevant information is included in the report in line with the RANZCR *Clinical Radiology Written Report Guidelines*.⁷⁰



Cultural safety and equity for Aboriginal and Torres Strait Islander people

Consider cultural safety and equity when considering or providing imaging services.

Refer to [Recommendations](#) on page 8 for considerations when providing care for Aboriginal and Torres Strait Islander peoples.

Resources

- [*Clinical guidance for MRI referral*](#) (RACGP)⁶⁹
- [*Clinical Radiology Written Report Guidelines*](#) (RANZCR)⁷⁰
- [*Diagnostic Imaging Accreditation Scheme Standards*](#) (Commission)

See the Commission's [**Osteoarthritis of the Knee Clinical Care Standard**](#) webpage for more information and links to useful resources.



Indicators for local monitoring

Indicator 2a: Proportion of patients diagnosed with knee osteoarthritis without imaging.

METEOR link: meteor.aihw.gov.au/content/790048

Indicator 2b: Proportion of patients diagnosed with knee osteoarthritis without magnetic resonance imaging.

METEOR link: meteor.aihw.gov.au/content/790073

Indicator 2c: Proportion of patients diagnosed with knee osteoarthritis without computerised tomography.

METEOR link: meteor.aihw.gov.au/content/790075

Indicator 2d: Proportion of patients diagnosed with knee osteoarthritis without ultrasound.

METEOR link: meteor.aihw.gov.au/content/790077

More information about each indicator and the definitions needed to collect and calculate indicator data can be found online at the above METEOR links.

3

Quality statement 3 – Education and self-management

Information about knee osteoarthritis and treatment options is discussed with the patient. The patient participates in developing an individualised self-management plan that addresses their physical, functional, and psychosocial health needs.

Purpose

To educate and equip people with the information, skills, and support they require to self-manage their condition, knee osteoarthritis, and comorbidities, and to participate in life activities that are important to them.

What the quality statement means

■ For patients

If you have knee osteoarthritis, you can expect your healthcare provider to give you information about your condition. This includes the ways they can support you to maintain a healthy knee.

Together, you and your healthcare provider will set appropriate goals and create a plan that is tailored to your needs and priorities. This plan will include things you can do to help your knee pain and other health problems, either on your own or with professional support. This may include exercises and losing weight, if necessary, either on your own or with professional help.

For some people, medicines or physical aids such as knee braces or walking sticks might be suggested. Your plan will also consider how your knee pain affects your daily life and mood.

By working together, you and your healthcare team can address all your needs and help you manage your knee osteoarthritis so you can do the activities you want to do.

■ For clinicians

Support the patient to self-manage their condition by:^{5,6,10,11}

- Providing clear, comprehensive, and current information about knee osteoarthritis and how it is managed, in a way they can understand; this includes in a format that the patient prefers, including verbal or written information, and that is culturally appropriate
- Involving the patient in developing a plan which is documented in their healthcare record
- Tailoring the plan to address their individual physical, functional, and psychosocial needs and goals by including
 - strategies to support increased physical activity participation such as pacing activities, management of painful episodes and flares, and pain management techniques
 - strategies for protecting the knee joints such as the use of walking aids
 - weight management and nutrition guidance

- Managing comorbidities and discussing their impact on managing knee osteoarthritis
- Discussing non-pharmacological pain management and maintaining participation in usual activities and life roles, and supports and services available including allied health services
- Referring the patient to other clinicians or recommending services and resources that may help them self-manage their condition, including providing links to reliable online resources and contact details of support groups
- Monitoring and adjusting the plan as the patient's condition and needs change
- Involving the patient's family, carers, or support people as appropriate, particularly for people who require additional support to self-manage their condition.

Communicating with patients

Use positive, non-catastrophic language that is individualised to the patient's condition and empowers the patient to manage their osteoarthritis proactively. Consider terms such as 'healthy', 'strong', and 'active'. For example:

'Based on your story, we can see a range of factors that influence what you are able to work on. Things like weight around the belly, muscle weakness, lack of confidence to use your knee, and lack of sleep. The good news is that these things can be changed. We can work on a plan together for you to become active, strong, and healthy so you can participate in the activities you enjoy doing.'

Avoid saying things like 'degenerative', 'wear and tear' or 'bone-on-bone', which can reinforce the unhelpful belief that activity should be avoided to prevent (further) joint damage, or that surgery is needed to fix the problem.⁶⁶

■ For healthcare services

Healthcare services should:

- Ensure that systems are in place to offer patients clear, comprehensive, and current knee osteoarthritis information about their condition and support for self-management, including developing, monitoring, and revising self-management plans
- Ensure that the systems in place support patients and their clinicians to discuss the plan and any changes to it with other members of the multidisciplinary team, across different health services
- Provide clinicians with training and skills (for example, in coaching patients) to support them in managing patients with knee osteoarthritis
- Enable remotely delivered or telehealth options to be provided for education and self-management
- Build partnerships and links to organisations that can support patients to increase physical activity.



Cultural safety and equity for Aboriginal and Torres Strait Islander people

Have a tailored approach to health education that reflects the literacy, language, and cultural needs of the individual patient and builds understanding, engagement, and empowerment of Aboriginal and Torres Strait Islander patients. This can be done by establishing links with appropriate health services, community services, and organisations, and having referral processes in place to allow Aboriginal and Torres Strait Islander peoples' access to a network of suitable service providers that support long term management of their health.

See also the **Recommendations** on page 8 for considerations when providing care for Aboriginal and Torres Strait Islander peoples.

Resources

See the Commission's [Osteoarthritis of the Knee Clinical Care Standard](#) webpage for more information and links to useful tools, patient information, and other related resources.



Indicators for local monitoring

Indicator 3a: Proportion of patients with knee osteoarthritis who have an individualised self-management plan.

METEOR link: meteor.aihw.gov.au/content/790097

Indicator 3b: Proportion of patients with knee osteoarthritis whose individualised self-management plan includes documented advice on physical activity.

METEOR link: meteor.aihw.gov.au/content/790100

Indicator 3c: Proportion of patients with knee osteoarthritis who are overweight whose individualised self-management plan includes documented advice on weight management.

METEOR link: meteor.aihw.gov.au/content/790104

More information about each indicator and the definitions needed to collect and calculate indicator data can be found online at the above METEOR links.

4

Quality statement 4 – Physical activity and exercise

A patient with knee osteoarthritis is advised that being active can help manage knee pain and improve function. The patient is offered advice on physical activity and exercise that is tailored to their priorities and preferences. The patient is encouraged to set exercise and physical activity goals and is recommended services or programs to help them achieve their goals.

Purpose

To improve function and participation in life activities, manage pain, improve general health, improve psychosocial wellbeing, and reduce the need for medicines and surgery to manage knee osteoarthritis.

What the quality statement means

■ For patients

If you have knee osteoarthritis, being active by moving your body every day can significantly reduce your pain, strengthen your muscles, improve your mobility and balance, and may reduce the need for medicines.

Feeling some pain or discomfort when exercising is normal and does not mean it is damaging your knee joint. You can expect that your healthcare provider may recommend medicines to use before or after exercise, and they will support you by giving advice on the types of activities and exercises that are best for you, considering your ability, your priorities and what you like to do.

Exercise is safe for your knee, even if you have severe knee osteoarthritis. Your exercises can be adjusted according to your pain so that you can continue to do them. Even a small amount of physical activity is better than none to improve your general fitness and to strengthen muscles around your joints. Choose a form of physical activity that suits you – this may be group or individual training, supervised or unsupervised, land- or water-based.

You can expect to be encouraged to set physical activity goals, such as gradually increasing an activity you like to do. Where possible, your goals will be slowly upgraded as your strength and fitness improve.

You may be recommended to do a specific exercise program or be referred to a specialist clinic or healthcare provider with expertise in exercise. For example, a:

- Local community program, group or activity
- Physiotherapist, exercise physiologist or sport and exercise physician
- Specialist multidisciplinary service.

Nine out of 10 people with knee osteoarthritis can manage without needing joint replacement surgery.

Even if you do need knee surgery, being physically active leading up to the surgery can improve your ability to recover and return to your usual activities after the operation.

For clinicians

Provide strategies to reach physical activity goals that are tailored to the patient's needs and will help them to manage knee pain and improve function.^{5,6,10,11,41,47} Changes in activity may reduce the need for medicines and help patients to avoid surgery, as well as help patients manage chronic comorbidities and improve their overall health.⁷²

Reassure the patient that exercise will not cause damage and is not a risky activity. Advise them that physical activity and exercise will help to manage their pain and improve their function.

Provide advice on exercise that is specific to the patient's needs, preferences, and clinical context. Tailor appropriate exercise goals and activities to a sufficient dosage and duration to improve fitness and strength and minimise pain.

Encourage patients to set realistic and achievable physical activity goals, such as gradually increasing participation in an activity they enjoy, including muscle strengthening activities, incidental activity, and sport (see [Figure 3](#)). Tailor exercises to provide opportunities for the patient to have positive experiences or an experience of increasing function or mastery.

Regularly review and upgrade physical activity and exercise goals. Review factors such as the physical home environment, level of support, cultural activities, access to safe spaces to exercise, falls risk, and attitudes towards physical activity.

Provide the patient with clear, comprehensive, and current information on how to modify their usual physical activities to prevent symptoms worsening or aggravating any comorbidities.¹¹ Encourage patients to use tools such as exercise logbooks and to include these interventions and goals in their self-management plan. Discuss the ways that the use of medicines can allow the patient to participate in physical activity as well as the role of pacing.

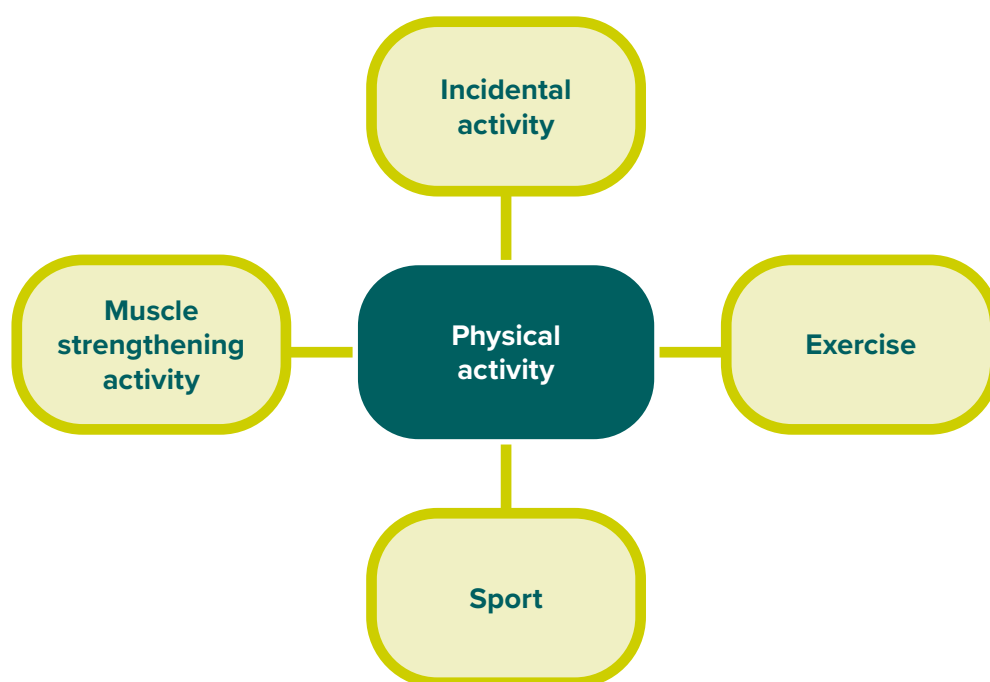
Refer the patient to other clinicians or recommended services, supports, and resources – if appropriate and available – that may help them to achieve their goals. This may include:

- Local community programs, groups, and activities
- Links to reliable online resources
- Clinicians such as physiotherapists, exercise physiologists, and sport and exercise physicians, and multidisciplinary services as appropriate.

Passive manual therapies, such as therapeutic ultrasound and electrotherapy, do not play a significant role in the treatment of knee osteoarthritis.^{10,11}

For patients who require surgery, being physically active can help to improve functional outcomes after the operation and optimise their recovery.^{6,43,44}

Figure 3: The forms of physical activity



Adapted from [About physical activity and exercise](#), Department of Health and Aged Care.⁷³

Communicating with patients

Address any unhelpful belief that weight-bearing activities for knee osteoarthritis are dangerous.

Use positive terms to communicate the benefits of movement and building and maintaining strength. For example:

‘Knee joints are strong – they stay healthy through movement and are designed to be loaded. It’s safe to be active, even if it’s a bit sore at the start. The key is to find the right amount of activity based on what you can do now and what you want to do in the future.’

Emphasise the overall health benefits of being physically active. For example:

‘Staying active is the best way to look after your knee osteoarthritis. It keeps your bones, joints, and muscles stay healthy. It’s also good for your body and mind.’

‘It’s safe to move your knee, even if it’s a bit sore at the start.’

Avoid saying things like ‘reduced load’ through the knee. Patients may then believe that activity adds load on their knee, which does not communicate that physical activity and exercise are safe and important for joint health.⁴⁶

■ For healthcare services

Healthcare services should:

- Ensure that systems are in place for patients with knee osteoarthritis to receive advice and encouragement on how to achieve physical activity and exercise goals that are tailored to their needs
- Ensure that appropriate services are available to support patients achieve these goals, such as multidisciplinary allied health clinics, exercise programs or facilities
- Provide patients referred for surgery with access to a health professional who has expertise in exercise, such as a physiotherapist, exercise physiologist, or sport and exercise physician, and who can provide them with appropriate forms of physical activity to optimise their recovery and functional outcomes after the procedure.



Cultural safety and equity for Aboriginal and Torres Strait Islander people

Consider individual needs, cultural safety and local context when discussing physical activity and exercise.

Refer to [Recommendations](#) on page 8 for considerations when providing care for Aboriginal and Torres Strait Islander peoples.

Resources

See the Commission's [Osteoarthritis of the Knee Clinical Care Standard](#) webpage for more information and links to useful resources.



5

Quality statement 5 – Weight management and nutrition

A patient with knee osteoarthritis is advised of the impact of body weight on symptoms. The patient is offered support to manage their weight and optimise nutrition that is tailored to their priorities and preferences. The patient is encouraged to set weight management goals and is referred for any services required to help them achieve these goals.

Purpose

To minimise knee osteoarthritis symptoms, improve physical function and mobility, improve overall health and management of comorbidities, and limit the need for medicines or surgery by optimising a patient's nutrition and weight.

What this quality statement means

■ For patients

Everyone living with knee osteoarthritis benefits from a nutritious diet to maintain strong muscles and bones. A healthy diet can help you manage your knee osteoarthritis and reduce the need for medicines. How much it helps will differ for individuals (like many treatment options). You will be encouraged to set weight goals based on your priorities and preferences.

If you are living with knee osteoarthritis and have excess weight, losing weight will reduce knee pain. It can help with your mobility and improve your ability to do the activities most important to you. It will also help you manage any other health problems. Losing weight can also help delay surgery or even avoid it altogether. If you are living with excess weight or obesity, you may be offered a referral to a dietitian or weight management program to support you to lose weight.

Should you need knee surgery, and you are living with excess weight, lowering your weight will help to reduce your complications from surgery and anaesthetic and improve results after the operation.

■ For clinicians

Acknowledge to the patient the challenges of losing weight and any previous weight loss attempts. Communicate in a sensitive, empathetic, and non-judgemental way about how losing excess weight or maintaining weight will help them.

Loss of excess weight reduces knee pain and improves function for patients with knee osteoarthritis, and can improve other comorbidities.^{6,11,12} These changes may reduce the need for medicines or knee surgery.⁷²

If a patient living with excess weight is considering or seeking surgery, explain that weight loss can improve their eligibility for surgery, reduce risks, and improve outcomes.

Be aware of the complex factors that contribute to being above a healthy weight and encourage patients to set realistic and achievable weight goals based on their needs and preferences. If the patient is living with excess weight, advise them that a 5–10% or greater weight loss over a 20-week period is associated with reduced pain and improved quality of life.^{6,73}

Support patients to maintain a healthy, sustainable weight, and to optimise their nutrition by:

- Advising them on appropriate interventions such as dietary changes, access to healthy food, exercise, behavioural techniques, medicines or weight management services⁸
- Referring them to specific services, if desired by the patient, such as an accredited practicing dietitian or for bariatric surgery.^{6,11,74,75,76}

Encourage patients to include these strategies and their goals in their self-management plan. Body mass index (BMI) may not always be an appropriate measure for indicating whether a patient is above a healthy weight; other measures may be used, including body composition measurements or waist circumference

For patients who ultimately require surgery, preventing weight gain or losing weight if they are living with excess weight can help to reduce their anaesthetic risk, improve functional outcomes after the operation, and reduce the costs and treatment burden associated with recovery from knee replacement surgery.^{10,34,69}

Communicating with patients

Convey to patients that things that are good for overall health are also good for joint health. For example:

‘A nutritious diet and healthy eating are important for your general health, including your joint health. Would you like to work together on a plan to help you with this?’

Use non-stigmatising, encouraging language and avoid using terms such as ‘fat’ or ‘obese’ to talk to a patient about excess weight. For example:

‘Losing even a small amount of excess weight can improve your symptoms. Is that something you would like to consider?’

Avoid saying ‘Losing weight will reduce the load through your knee.’ Saying ‘reduced load’ through the knee may lead people to believe that activity adds load on their knee. This may prevent them from being active and does not fit with the message that being active is safe and important for joint health.⁴⁵

For healthcare services

Healthcare services should:

- Establish and maintain systems so that patients with knee osteoarthritis receive advice and encouragement on how to achieve weight management goals
- Have appropriate services and referral pathways available for patients to support a healthy weight, including dietetic and weight management services.



Cultural safety and equity for Aboriginal and Torres Strait Islander people

Consider cultural safety and equity for Aboriginal and Torres Strait Islander patients.

Refer to [Recommendations](#) on page 8 for considerations when providing care for Aboriginal and Torres Strait Islander peoples.

Resources

See the Commission's [Osteoarthritis of the Knee Clinical Care Standard](#) webpage for more information and links to useful resources.



6

Quality statement 6 – Medicines used to manage pain and mobility

A patient with knee osteoarthritis is offered medicines to manage their pain and mobility in accordance with the current version of the *Therapeutic Guidelines* or locally endorsed, evidence-based guidelines. A patient is not offered opioid analgesics for knee osteoarthritis because the risk of harm outweighs the benefits.

Purpose

To ensure medicines are used effectively for patients with knee osteoarthritis and that the risk of side effects is minimised.^{6,11}

What this quality statement means

■ For patients

Medicines do not cure knee osteoarthritis, but they can help manage your knee pain so that you can do the things that are important to you. Medicines should not replace other treatments such as healthy diet, exercise, and weight management if these are recommended.

If you need medicines to help manage your knee pain and mobility, you can expect to receive medicines that are recommended in a current, good-quality medical guideline.

Tell all healthcare providers about all the medicines you are taking, including any herbal medicines and vitamin supplements.

You can expect your healthcare provider to consider your symptoms, any other health problems you have, and any other herbal medicines, vitamin supplements, and over-the-counter medicines you take before recommending medicines for your knee osteoarthritis. They should also consider your preferences.

You can expect your healthcare provider to give you clear information about what each medicine is for, when to take it, how much to take, how long to take it for, and any possible side effects. They should tell you what to do if you experience side effects.

■ For clinicians

Explain to the patient that the goal of medicines is to reduce pain to support continuation of usual daily activities. Offer information on how medicines may be combined with physical activity and other self-management strategies to help the patient improve their function and mobility. Ensure they understand that medicines should not replace self-management strategies, including physical activity.

Use the current version of the *Therapeutic Guidelines*⁵ or an evidence-based, locally endorsed guideline when recommending or prescribing a medicine to manage knee osteoarthritis. Recommendations regarding use of medicines in knee osteoarthritis are described in [Table 2](#).

Provide clear information to the patient about the recommended medicine, including the expected benefits, dose, duration, possible side effects, and when treatment should be reviewed. Review all other prescription, over-the-counter, and complementary medicines they may be using.

Do not offer opioid analgesics to patients with knee osteoarthritis. Opioids have significant risk of harm, which outweigh potential benefits in pain management for knee osteoarthritis.

Opioid analgesics may have a role in very limited circumstances. For example, this may include short-term use in patients with severe persisting pain not relieved by first-line medicines and optimal non-surgical interventions, and who are awaiting non-general practitioner specialist review.⁵

If a patient is already using an opioid analgesic to treat knee osteoarthritis, discuss changes in therapy with them and explain the risks and need to start tapering the dose with a view to stopping the medicine.⁷⁷

Do not offer platelet-rich plasma (PRP), hyaluronan, stem cell treatments, medicinal cannabis, gabapentin or pregabalin, as they are not recommended in knee osteoarthritis.^{13,78,79,80}

Table 2: Recommendations for use of medicines in knee osteoarthritis^{5,13,77,78,79,80}

Medicine	Recommendation
Topical analgesia	Trial a topical NSAID or capsaicin as an adjunct to other treatment strategies and as part of short-term self-management.
Non-steroidal anti-inflammatory drugs (NSAIDs)	First-line treatment after an assessment of risks. Preferred to paracetamol due to greater efficacy. Use the lowest effective dose for the shortest time possible.
Paracetamol	Less effective than NSAIDs. Consider for patients at risk of harm from NSAID use. For example, people with risk factors for gastrointestinal, kidney or cardiovascular toxicity.
Duloxetine	May be considered as an adjunct treatment to oral NSAIDs where recommended treatment strategies are ineffective. Use for knee osteoarthritis is off-label and supported by limited evidence.
Corticosteroid injections	Intra-articular injections are approved as an adjunctive, short-term treatment for pain relief. Long-term use is not supported by current evidence and repeat injections may cause cartilage damage, further joint deterioration and reduce beneficial effects.
Opioid analgesics	Not recommended as the risks outweigh the benefits for most people.*
Medicinal cannabis, gabapentin, pregabalin	Not recommended due to potential for significant harm.
Intra-articular injections of platelet-rich plasma (PRP), hyaluronan, adipocyte cell suspensions or mesenchymal stem cells	Not recommended due to evidence that they provide no benefit and have a significant expense.
Complementary medicines including glucosamine, chondroitin, and fish oil	Not recommended due to evidence that they provide no benefit and have a cost to the consumer.

* Refer to the *Therapeutic Guidelines*⁵ for more information

Communicating with patients

Communicate the role of medicines for people with knee osteoarthritis.

For example:

‘Medicines can help to reduce pain so that you can exercise and do your usual activities. But medicines should not replace moving your body, doing exercises to strengthen your knee, or losing any excess weight.’

■ For healthcare services

Healthcare services should:

- Provide clinicians with access to the current version of the *Therapeutic Guidelines* or an evidence-based local guideline to support the quality use of medicines
- Establish and maintain systems to support clinicians in providing clear, information to patients about their treatment
- Ensure that patients have access to ongoing medicines advice when needed
- Monitor prescribing patterns and measure them against the current version of the *Therapeutic Guidelines* or a locally endorsed, evidence-based guideline
- Ensure locally endorsed guidelines, such as HealthPathways or hospital-based policies, are based on the *Therapeutic Guidelines* and have been through an approval process; and that any deviations from the *Therapeutic Guidelines* are accompanied by a clear rationale based on published clinical evidence.



Cultural safety and equity for Aboriginal and Torres Strait Islander people

Consider the variation in pharmacological pain management for Aboriginal patients, with studies showing Aboriginal patients are more than twice as likely to be prescribed opioids in primary care than non-Aboriginal patients.³¹

See also the [Recommendations](#) on page 8 for considerations when providing care for Aboriginal and Torres Strait Islander peoples.

Resources

See the Commission's [Osteoarthritis of the Knee Clinical Care Standard](#) webpage for more information and links to useful resources.



Indicator for local monitoring

Indicator 6a: Evidence of local arrangements to ensure patients with knee osteoarthritis are prescribed or recommended medicines in accordance with the current *Therapeutic Guidelines* or locally endorsed, evidence-based guidelines.

METEOR link: meteor.aihw.gov.au/content/790111

More information about this indicator and the definitions needed to collect and calculate indicator data can be found online at the above METEOR link.

7

Quality statement 7 – Patient review

A patient with knee osteoarthritis receives planned clinical review at agreed intervals, and management is adjusted for any changing needs. A patient who has worsening symptoms and severe functional impairment that persists despite optimal non-surgical management is referred for assessment to a non-general practitioner (GP) specialist or multidisciplinary service.

Purpose

To monitor a patient's symptoms, function, and psychosocial wellbeing so that management can be optimised to support the patient achieving their goals, and referral arranged when appropriate.

What this quality statement means

■ For patients

You can expect your healthcare provider to offer you planned check-ups and reviews to monitor your symptoms and wellbeing and adjust any treatments or medicines if needed. You can decide together how often you have these checkups and whether they will be face-to-face or telehealth consultations.

At a checkup, you can expect that you might discuss your self-management plan, including physical activity and any weight management goals. You may be referred to other healthcare providers who can help you achieve your goals, such as a physiotherapist, psychologist, dietitian, exercise physiologist, or specialist doctor.

If the cause of your symptoms is unclear or if you or your healthcare provider are concerned about your pain and mobility despite following your treatment plan, you will be referred for assessment to a doctor specialising in knee osteoarthritis for further assessment. Most often, this will be a rheumatologist, an orthopaedic surgeon, or a sports and exercise physician.

■ For clinicians

Decide with the patient how regularly they need a review of their knee osteoarthritis.

Dedicate an appointment to each review that includes:

- Undertaking a repeat history, physical examination, and psychosocial assessment
- Monitoring symptoms and response to treatment, using the same tools as used at the initial assessment (such as PROMs)
- Reviewing all prescription, over-the-counter, and complementary medicines the patient may be using
- Evaluating any side effects from treatment
- Monitoring and evaluating healthcare goals included in the patient's self-management plan, such as physical activity and weight management goals with adjustments as necessary to optimise treatment outcomes
- Offering further education, coaching or behaviour change support for patients to help them maintain or change their management approaches^{6,47}
- Discussing other treatment options as necessary or as requested by the patient.

Refer a patient with worsening symptoms and severe persistent functional impairment despite optimal non-surgical management for:

- Weight-bearing X-ray imaging of the knee
- Non-general practitioner specialist assessment, such as a rheumatologist, orthopaedic surgeon, or sports and exercise physician. If referring to an orthopaedic surgeon for assessment, follow recommendations for referral in the RACGP [*Guideline for the management of knee and hip osteoarthritis*](#).¹¹

Communicating with patients

Use language that communicates hope and reassures people that they can be supported to live well with knee osteoarthritis. For example:

'There is good evidence that most people who are physically active and maintain a healthy weight can be healthy and strong and participate in the activities they enjoy without ever needing surgery.'

Indicate likely timeframes as this can be helpful for people as they work towards their goals. It is important to communicate that those who do progress to surgery have not 'failed', and that adopting healthy, active lifestyle choices will support them to participate in the activities they enjoy after surgery. For example:

'Within a few months you should find you are able to do more. Most people can look after knee osteoarthritis without surgery.'

'For a small number of people, surgery can help. If you do have surgery, it is still important to work on your physical activity and weight management goals as this will help you after surgery.'

Avoid saying:

'It is likely that you will need a knee replacement at some time down the track.'

People who believe a knee replacement is inevitable can perceive that non-surgical management is futile.^{45,66}

For healthcare services

Healthcare services should:

- Establish and maintain systems to support and coordinate clinicians to monitor the symptoms, function, and psychosocial wellbeing of patients with knee osteoarthritis and adjust treatment goals as needed
- Provide support for timely access to non-general practitioner specialist doctors, such as rheumatologists, orthopaedic surgeons, or sports and exercise physicians, for further assessment and care when non-surgical management has been optimised but the patient is still experiencing worsening symptoms and severe functional impairment
- Consider supporting systems for clinicians to use tools during appointments dedicated to patient review, such as PROMs
- Establish and maintain systems for referrals for consideration of knee replacement surgery in accordance with the RACGP [*Guideline for the management of knee and hip osteoarthritis*](#)¹¹ in general practice and other primary care services.



Cultural safety and equity for Aboriginal and Torres Strait Islander people

Be flexible in the way you deliver your service to optimise attendance and support the development of trust with individual Aboriginal and Torres Strait patients and communities. Include opportunities for patients to have a carer, family member or friend involved in all aspects of care delivery, including the decision-making and management planning process.

Provide care that is close to home wherever possible, with service environments that consider the specific needs of the population, including their age, mobility, and cultural needs.

Consider the use of telehealth or outreach models to support access to health care for people living in rural and remote communities.

See also the **Recommendations** on page 8 for considerations when providing care for Aboriginal and Torres Strait Islander peoples.

Resources

See the Commission's [Osteoarthritis of the Knee Clinical Care Standard](#) webpage for more information and links to useful resources.



Indicator for local monitoring

Indicator 7a: Proportion of patients with knee osteoarthritis with a documented timeframe for review.

METEOR link: meteor.aihw.gov.au/content/790114

More information about this indicator and the definitions needed to collect and calculate indicator data can be found online at the above METEOR link.

8

Quality statement 8 – Surgery

A patient with knee osteoarthritis who has severe functional impairment despite optimal non-surgical management is considered for timely joint replacement surgery or joint-conserving surgery. The patient receives comprehensive information about the procedure and potential outcomes to inform their decision. Arthroscopic procedures are not offered to treat uncomplicated knee osteoarthritis.

Purpose

To ensure that patients with knee osteoarthritis who are not responding to non-surgical management and have severe impairment are offered appropriate surgical options and adequate information to help them make an informed decision about surgery.

What the quality statement means

■ For patients

Most people who are physically active and manage their weight can delay or avoid surgery. If you still have severe pain after you have tried other treatments such as exercises and physical activity recommended by an exercise healthcare professional, or if your knee osteoarthritis is causing you a lot of difficulty, your healthcare provider might suggest you see a surgeon to discuss surgery.

Your surgeon will explain the surgery for you, including the risks, benefits, and results you can expect. It is important for you to have all the information so that you can make the best decision for your treatment. The types of procedures offered will vary depending upon your suitability for surgery and your preferences. Depending on your other medical conditions, you may also need a specialist anaesthetic consultation beforehand.

Knee replacement is a common option. For some people, another type of surgery may be possible that does not remove your knee joint and is known as joint-conserving surgery. The usual type of joint-conserving surgery is called an osteotomy and involves realigning the knee to take pressure off the damaged area.

Arthroscopy is keyhole surgery using a small camera to look inside your knee and remove part of your meniscus. It is not recommended for knee osteoarthritis because there is no evidence that it will help you.

■ For clinicians

Assess whether the patient has undertaken optimal non-surgical management, such as 12 weeks of optimal physical activity and exercise.

Provide patients with clear and comprehensive information about suitable procedures for them, including the risks and benefits of those procedures, in a way that they can understand. This ensures they can be actively involved in making treatment decisions. Explain the expected:

- Level of sedation, such as regional or general anaesthetic
- Time for recovery and rehabilitation.

Use PROMs before and after all surgical interventions.

Do not offer arthroscopic procedures as treatment for uncomplicated knee osteoarthritis.^{6,12,34} Arthroscopic procedures, including debridement and partial meniscectomy, provide little or no clinically significant benefit in pain or function and are not indicated as a primary treatment in the management of uncomplicated knee osteoarthritis.^{6,34,81}

Uncomplicated knee osteoarthritis is not accompanied by true mechanical locking, septic arthritis, or inflammatory arthropathy. Meniscal changes, such as tears identified by imaging, do not warrant arthroscopy. This is because patients with knee osteoarthritis often have changes to the meniscus of their knee as part of the condition. Arthroscopy may be indicated if the patient has an alternate diagnosis such as true mechanical locking, septic arthritis, or inflammatory arthropathy requiring synovectomy.³⁴

Communicating with patients

Use **simple, jargon-free terms** to explain the risks and benefits of having surgery.

Emphasise that healthy lifestyle behaviours such as physical activity, nutritious diet, and healthy eating can help to improve functional outcomes after the operation and optimise the patient's recovery.^{11,43} For example:

'If you meet the criteria for surgery, knee replacement can support you to participate in the activities they enjoy. Being healthy and strong before surgery will help you recover afterwards.'

Consider numeric literacy when offering information on risks and benefits. Statements like 'one in five people don't benefit from knee replacement surgery' are easier for consumers and clinicians to understand than percentages.

■ For healthcare services

Healthcare services should:

- Establish and maintain systems and referral networks to provide patients with access to appropriate non-surgical care, so that patients have the best chance of delaying or avoiding surgery
- Establish and maintain systems to provide patients with clear evidence-based information about the potential benefits and harms of joint-conserving and joint replacement surgery, including information about recovery from surgery
- Have patient information available in a variety of formats
- Enable measurement of PROMs before and after all surgical interventions
- Establish and maintain systems for patients to receive timely surgical intervention when it is indicated
- Have a process to support appropriate, safe, and effective decision making about surgical procedures⁸²
- Have policies and procedures that specify arthroscopic procedures are not offered for treating uncomplicated knee osteoarthritis.^{12,34}



Cultural safety and equity for Aboriginal and Torres Strait Islander people

Consider the needs of a patient who has to travel away from home for surgery and ensure that they have access to adequate support and advocacy whilst in hospital.

Enable as many steps as possible in the surgical care pathway to take place 'under one roof'. This can support Aboriginal and Torres Strait Islander people to use specialist services and prevent patients from falling through the transition gaps that exist within this care pathway.⁸³

See also the [Recommendations](#) on page 8 for considerations when providing care for Aboriginal and Torres Strait Islander peoples.

Resources

- [Decision support tool: making a decision about knee osteoarthritis](#)⁴² (National Health Service, UK)
- [Arthritis: Should I Have Knee Replacement Surgery?](#) (Healthwise, US)

See the Commission's [Osteoarthritis of the Knee Clinical Care Standard](#) webpage for more information and links to useful resources, including information on the selection and use of [patient-reported outcome measures \(PROMs\)](#) and a list of validated PROMs.

Indicator for local monitoring

Indicator 8a: Number of patients who have undergone arthroscopic procedures to treat uncomplicated knee osteoarthritis.

METEOR link: meteor.aihw.gov.au/content/790117

More information about this indicator and the definitions needed to collect and calculate indicator data can be found online at the above METEOR link.

Appendix A: Updates in the 2024 Standard

Section	Action	Description
Quality statement 1	Amended	Renamed 'Comprehensive assessment and diagnosis'. Added information on appropriate assessment.
Quality statement 2	Amended	Renamed 'Appropriate use of imaging'. Added emphasis on minimising unnecessary imaging in diagnosing knee osteoarthritis – particularly MRI, CT or ultrasound, and indicates X-ray is preferred in the limited circumstances in which imaging is indicated.
Quality statement 4	Amended	Renamed 'Physical activity and exercise'. Weight management and nutrition content removed to new Quality statement 5.
Quality statement 5	New	Named 'Weight management and nutrition'. Weight management and nutrition content included and expanded from existing Quality statement 4.
Quality statement 6	Amended	Renamed 'Medicine used to manage pain and mobility'. Amended with greater emphasis on avoiding opioid analgesics.
Quality statements 7 and 8	Amended	Amended to include cultural safety and equity considerations for clinicians and healthcare services.
Indicator 3 (now 3a)	Amended	Added all patients.
Indicator 3c	New	Proportion of patients with knee osteoarthritis who are overweight whose individualised self-management plan includes documented advice on weight management.
Indicator 4a (now 3b)	Amended	Amended to reflect the changes to the of focus on physical activity and the need to include information in the individual self-management plan.
Indicator 6a (now 7a)	Amended	Amended wording from 'required a date for review' to 'required a timeframe for review'.
Indicator 7a (now 8a)	Amended	Amended to focus on counting procedures to treat uncomplicated knee osteoarthritis.
Indicator 1a	Retired	Local arrangements to ensure that patients newly diagnosed with knee osteoarthritis have a comprehensive assessment.
Indicator 2a	Retired	Local arrangements for clinically based diagnosis of knee osteoarthritis without use of imaging for people with knee pain and other symptoms suggestive of osteoarthritis.

Section	Action	Description
Indicator 4b	Retired	Proportion of patients with knee osteoarthritis who were overweight or obese who lost weight.
Indicator 5b	Retired	Proportion of patients with knee osteoarthritis prescribed oral non-steroidal anti-inflammatory drugs (NSAIDs) with documented assessment of risks.
Indicator 5c	Retired	Proportion of patients prescribed opioids for longer than three months for the management of pain associated with knee osteoarthritis.
Indicator 6b	Retired	Proportion of patients with knee osteoarthritis with evidence of pain and function assessments within the previous 12 months.
Indicator 6c	Retired	Proportion of patients with knee osteoarthritis who have documented pain level reduction of at least 20%, 12 months after initiation or change of treatment.
Indicator 6d	Retired	Proportion of patients with knee osteoarthritis with a functional limitation who have a 10% or greater improvement in function 12 months after initiation or change of treatment.

Glossary

Refer also to the Commission's glossary for terms used in this standard. Specific terms used in this document include:

Term	Definition
arthroscopic procedures or arthroscopy	Procedures that involve the use of a device known as an arthroscope, which is inserted through a small cut in the skin to examine a joint, wash it out (lavage), or remove damaged tissue (debridement). ⁸⁴
anaesthetic	A substance that produces a complete or partial loss of feeling, especially one injected or applied as a preliminary to a medical procedure.
conservative management	See non-surgical management .
daily activities	Tasks performed by a person in a typical day to allow independent living, including eating, dressing, maintaining personal hygiene, and movement. Also known as activities of daily living (ADL).
excess weight	Overweight or obese. See obesity and overweight .
exercise	Structured or planned physical activity, such as weight training, swimming, walking, or jogging. ⁷³
joint protection	Strategies or devices used to limit strain on a joint such as restrictions on high-impact activities or the use of walking aids, braces, and appropriate footwear.
locked or locking knee	When the leg becomes stuck in a position and cannot be straightened or bent. Mechanical or true locking is when something physically stops the knee from moving, for example, a loose fragment of bone, or a meniscal tear. ⁸⁵ Pseudo-locking is more common and is when the knee cannot be fully extended because of swelling or pain.
METEOR	METEOR (Metadata Online Registry) is Australia's web-based repository for national metadata standards for health, housing and community services statistics and information. Hosted by the Australian Institute of Health and Welfare (AIHW), METEOR provides users with a suite of features and tools, including online access to a wide range of nationally endorsed data and indicator definitions. The AIHW METEOR website contains more information about this indicator set and the definitions needed to collect and calculate indicator data. Links are provided with the relevant quality statements.
multidisciplinary care	Care involving a range of clinicians in one or more organisations, working together to deliver comprehensive care that addresses as many of a patient's health and other needs as possible. ⁸⁶

Term	Definition
non-surgical management	For knee osteoarthritis this includes interventions that are: <ul style="list-style-type: none"> ■ Non-pharmacological, including patient education and self-management, weight loss where necessary, and exercise ■ Pharmacological interventions, including use of medicines such as analgesics and non-steroidal anti-inflammatory drugs.
nurse practitioner	An experienced registered nurse (RN) with an additional master's degree and endorsement as a nurse practitioner by the Nursing and Midwifery Board of Australia (NMBA).
obesity	A body mass index (BMI) above 30 kg/m ² . The risk of developing chronic disease is increased if waist circumference is over 94 cm for men and over 80 cm for women. See AIHW information on overweight and obesity in Australia . ⁸⁷
osteoarthritis	A clinical syndrome of joint pain accompanied by varying degrees of functional limitation and reduced quality of life. Pain, reduced function and effects on a person's ability to carry out their daily activities can be important consequences. It is characterised pathologically by localised loss of cartilage from the end of the bones (articular cartilage), inflammation, and changes to bone and other joint structures. ⁵
overweight	A body mass index (BMI) of 25 kg/m ² or above. The risk of developing chronic disease is increased if waist circumference is over 94 cm for men and over 80 cm for women. See AIHW information on overweight and obesity in Australia . ⁸⁷
pacing	Incorporating intermittent exercise sessions and periods of rest into the day's activities. ⁵
pain management	Strategies to address a patient's individual pain using medicinal, physical and cognitive therapies. For people with osteoarthritis, this may include pain relief medication such as analgesics and non-steroidal anti-inflammatory drugs (NSAIDs), specific exercises, cognitive behavioural therapy or other forms of psychological management.
physical activity	Movement that increases breathing and heartrate, including incidental movement, exercise, sport, and muscle-strengthening activity. ⁷³
primary health care	Health care people seek first in their community, such as health services provided by allied health professionals, pharmacies, and Aboriginal health services that include health promotion, prevention, early intervention, treatment of acute conditions, and management of chronic conditions. ²
psychosocial assessment	An evaluation of a person's mental and emotional health, social wellbeing, and perception of their ability to function in the community.

Term	Definition
quality of life	The general wellbeing of a person in terms of health, comfort, functional status, and happiness.
self-management	A person's management of their healthcare needs on a day-to-day basis involving informed decisions about their care.
self-management plan	A written plan, mutually agreed between the patient and the clinician that reflects the patient's preferences and includes agreed decisions for care.
uncomplicated knee osteoarthritis	<p>Knee osteoarthritis that is not accompanied by true mechanical locking, septic arthritis, or inflammatory arthropathy.</p> <p>See locked or locking knee.</p> <p>See osteoarthritis.</p>

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The above artwork used throughout the document was designed by Ms Lani Balzan, a Wiradjuri artist from the south coast of New South Wales. The central symbol is the logo for the clinical care standards program, which began at the Commission in 2013. The outer four circles of the artwork represent the four priority areas of patient safety; partnering with patients, consumers and communities; quality, cost and value; and supporting health professionals to provide care that is informed, supported and organised to deliver safe and high-quality health care. The outer dots represent growth, healing, change, and improvement.





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