NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Joint replacement (primary): hip, knee and shoulder

NICE quality standard

Draft for consultation

15 November 2021

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| **This quality standard covers** care for adults before, during and after primary elective hip, knee or shoulder joint replacement. It describes high-quality care in priority areas for improvement. It does not cover joint replacement as immediate treatment following fracture or as treatment for primary or secondary cancer affecting the bones. It does not consider revision of joint replacement.This is the draft quality standard for consultation (from 15 November to 13 December 2021). The final quality standard is expected to publish in March 2022. |

# Quality statements

[Statement 1](#_Quality_statement_1:) Adults having hip or knee replacement are given advice on preoperative rehabilitation when they are listed for surgery.

[Statement 2](#_Statement_2:_Choice) Adults with isolated medial compartmental osteoarthritis are given the choice of partial or total knee replacement.

[Statement 3](#_Statement_3:_Tranexamic) Adults having hip or knee replacement are given tranexamic acid during surgery.

[Statement 4](#_Quality_statement_4:) Adults having hip, knee or shoulder replacement have 2 ‘stop moments’ during surgery so that implant details and the compatibility of all components are checked.

[Statement 5](#_Statement_5:_Post-discharge) Adults who have had hip, knee or shoulder replacement are given advice on postoperative rehabilitation before discharge.

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| Questions for consultation Questions about the quality standard**Question 1** Does this draft quality standard accurately reflect the key areas for quality improvement?**Question 2** Are local systems and structures in place to collect data for the proposed quality measures? If not, how feasible would it be for these to be put in place?**Question 3** Do you think each of the statements in this draft quality standard would be achievable by local services given the net resources needed to deliver them? Please describe any resource requirements that you think would be necessary for any statement. Please describe any potential cost savings or opportunities for disinvestment.Questions about the individual quality statements **Question 4** Please comment on whether surgical protocols and checklists will enable the 2 ‘stop moments’ being carried out and their timing to be documented, to support the structure and process measures. |

# Quality statement 1: Preoperative rehabilitation advice for hip and knee replacement

## Quality statement

Adults having hip or knee replacement are given advice on preoperative rehabilitation when they are listed for surgery.

## Rationale

Giving preoperative rehabilitation advice to adults when they are listed for their hip or knee replacement operation supports them with optimising their health while waiting for surgery. Preoperative rehabilitation helps prepare adults for surgery, increases their ability to manage any complications of surgery, promotes understanding of and engagement with postoperative rehabilitation and prepares them for life with a joint replacement.

## Quality measures

The following measures can be used to assess the quality of care or service provision specified in the statement. They are examples of how the statement can be measured, and can be adapted and used flexibly.

### Structure

Evidence of local arrangements to ensure that adults who are having hip or knee replacement surgery are given advice on preoperative rehabilitation when they are listed for surgery.

**Data source:** No routinely collected national data for this measure has been identified. Data can be collected from information recorded locally by provider organisations, for example from clinical protocols, which may include early or enhanced recovery programmes.

### Process

Proportion of adults having hip or knee replacement who are given advice on preoperative rehabilitation when they are listed for surgery.

Numerator – the number in the denominator who are given advice on preoperative rehabilitation when they are listed for surgery.

Denominator – the number of adults having hip or knee replacement.

**Data source:** No routinely collected national data for this measure has been identified. Data can be collected from information recorded locally by healthcare professionals and provider organisations, for example, from patient records.

### Outcome

a) Average health gain and improvement rate associated with patient-reported outcome measures (PROMs) for hip and knee replacement.

**Data source:** [NHS Digital’s patient-reported outcome measures (PROMs)](https://digital.nhs.uk/data-and-information/publications/statistical/patient-reported-outcome-measures-proms/finalised-hip-and-knee-replacement-april-2019---march-2020/) collect data from patients having elective inpatient hip and knee replacement funded by NHS England. Health gain is reported at national, clinical commissioning group and provider levels. Improvement rates are reported at national and provider levels.

b) The percentage of patients reporting the results of their hip or knee replacement as ‘excellent’ or ‘very good’ and that their problems are ‘much better’ or a ‘little better’ after their operation.

**Data source:** Success and satisfaction scores are collected postoperatively (6 months after surgery) as part of [NHS Digital’s PROMs questionnaires](https://digital.nhs.uk/data-and-information/publications/statistical/patient-reported-outcome-measures-proms/finalised-hip-and-knee-replacement-april-2019---march-2020/). Success and satisfaction scores are reported at national level.

## What the quality statement means for different audiences

**Service providers** (secondary care services) ensure that local arrangements are in place and staff are available to give advice on preoperative rehabilitation to adults when they are listed for hip or knee replacement surgery.

**Healthcare professionals** (such as physiotherapists, occupational therapists or specialist nurses) ensure they know what preoperative rehabilitation advice to give to adults when they are listed for hip or knee replacement surgery. They ensure that they have training on how to deliver the advice effectively.

**Commissioners** (clinical commissioning groups or integrated care systems) ensure that they commission services that give advice on preoperative rehabilitation to adults when they are listed for hip or knee replacement surgery.

**Adults who are to have a hip or knee joint replacement operation** are given advice on how they can look after their health and wellbeing while they are waiting to have their operation and after they have had it.

## Source guidance

[Joint replacement (primary): hip, knee and shoulder. NICE guideline NG157](https://www.nice.org.uk/guidance/ng157/) (2020), recommendations 1.1.3, 1.1.4 and 1.2.1

## Definition of terms used in this quality statement

### Advice on preoperative rehabilitation

This includes advice on:

* exercises to do before and after surgery that will aid recovery
* lifestyle, including weight management, diet and smoking cessation
* wellbeing, including physical and mental health, and emotional wellbeing (see [NICE’s guidance on lifestyle and wellbeing](https://www.nice.org.uk/guidance/lifestyle-and-wellbeing))
* maximising functional independence and quality of life before and after surgery.

[[NICE’s guideline on joint replacement (primary)](https://www.nice.org.uk/guidance/ng157/), recommendation 1.2.1 and evidence review C]

### Listed for surgery

When they have been added to the surgical waiting list and before the operation itself is scheduled. Preoperative rehabilitation advice is typically delivered from at least 6 weeks before surgery.

[[NICE’s guideline on joint replacement (primary)](https://www.nice.org.uk/guidance/ng157/), recommendation 1.1.3, evidence review C and expert opinion]

## Equality and diversity considerations

Providers should make reasonable adjustments to support adults with additional needs so that they can participate in preoperative rehabilitation sessions which help them prepare for surgery and postoperative recovery. These additional needs include physical, sensory or learning disabilities, or cognitive impairment. Adults with communication difficulties or who do not speak or read English should also be supported. Adults should be invited to bring a relative, friend or carer to sessions, or have access to an interpreter (including British Sign Language) or advocate if needed. Adults with cognitive impairment may need more time to process information. Advice should be given in a way that is culturally appropriate.

# Statement 2: Choice between partial and total knee replacement

## Quality statement

Adults with isolated medial compartmental osteoarthritis are given the choice of partial or total knee replacement.

## Rationale

Discussing the risks and benefits of partial and total knee replacement with adults who have isolated medial compartmental osteoarthritis ensures that they can choose which operation is most suitable for them. Their choice of procedure should be based on their personal circumstances and preferences, and clinical assessment.

## Quality measures

### Structure

a) Evidence of local processes to support a discussion that includes the risks and benefits of partial and total knee replacement with adults with isolated medial compartmental osteoarthritis who will be having primary knee replacement surgery.

**Data source:** No routinely collected national data for this measure has been identified. Data can be collected from information recorded locally by provider organisations, for example from service protocols.

b) Evidence of service specifications to ensure that both total and partial knee replacements are available to adults with isolated medial compartmental osteoarthritis.

**Data source:** No routinely collected national data for this measure has been identified. Data can be collected from information recorded locally by provider organisations, for example from service specifications.

### Outcome

The proportion of primary knee replacements that are partial knee replacements.

**Data source:** The National Joint Registry (NJR) collects data from providers on the surgical approach used in primary knee replacements ([NJR Minimum Data Set: unicondylar knee replacement - medial](https://www.njrcentre.org.uk/njrcentre/Healthcare-providers/NJR-data-set)). [The NJR also reports annually on the proportion of all primary elective knee replacements that are unicondylar knee replacements (Knees – Primary Procedures – Surgical techniques: characteristics of surgical practice for primary knee replacement procedures – primary unicondylar).](https://reports.njrcentre.org.uk/knees-primary-procedures-surgical-technique/K11v1NJR?reportid=26BB5DE6-C479-40EA-984C-0C7FE83E3285&defaults=DC__Reporting_Period__Date_Range=%22MAX%22,J__Filter__Calendar_Year=%22MAX%22,H__Filter__Joint=%22Knee%22)

## What the quality statement means for different audiences

**Service providers** (secondary care services) ensure that adults with isolated medial compartmental osteoarthritis are given the choice of either partial or total knee replacement if both options are suitable. This is after discussion of the risks and benefits of both operations and consideration of personal circumstances and preferences, and clinical assessment.

**Healthcare professionals** (members of the orthopaedic multidisciplinary team) ensure that they allow time to discuss the benefits and risks of partial and total knee replacement with adults who have isolated medial compartmental osteoarthritis and for whom both options are suitable. The choice of operation should take account of the adult’s personal circumstances and preferences, and clinical assessment. Healthcare professionals work with colleagues to ensure that adults having primary knee replacement have the operation they have chosen.

**Commissioners** (clinical commissioning groups or integrated care systems) ensure that they commission services that provide both partial and total knee replacements. They should ensure the services provide an opportunity for adults with isolated medial compartmental osteoarthritis to discuss the risks and benefits of each operation.

**Adults who have isolated medial compartmental osteoarthritis and could have either a partial or total knee replacement** discuss the risks and benefits of both operations, and their circumstances and preferences, with a member of the orthopaedic team. This is to help them decide whether to have only the affected part of their knee joint replaced, or the entire joint. Their choice of operation also takes account of their clinical circumstances and relevant aspects of their condition.

## Source guidance

[Joint replacement (primary): hip, knee and shoulder. NICE guideline NG157](https://www.nice.org.uk/guidance/ng157/) (2020), recommendation 1.7.1

## Definitions of terms used in this quality statement

### Partial knee replacement

This operation involves replacing the affected part of the knee only, that is, the medial compartment.

[[NICE’s guideline on joint replacement (primary)](https://www.nice.org.uk/guidance/NG157/evidence/), Methods – Glossary]

### Total knee replacement

This operation involves replacing both sides of the knee joint. Patella resurfacing may be done as part of a total knee replacement. A separate patella implant is attached to the back of the kneecap to connect and fit smoothly with the femoral implant.

[[NICE’s guideline on joint replacement (primary)](https://www.nice.org.uk/guidance/NG157/evidence/), Methods – Glossary]

# Statement 3: Tranexamic acid during hip and knee replacement

## Quality statement

Adults having hip or knee replacement are given tranexamic acid during surgery.

## Rationale

Tranexamic acid helps to minimise blood loss during hip and knee replacement surgery and can reduce the need for blood transfusion.

## Quality measures

The following measures can be used to assess the quality of care or service provision specified in the statement. They are examples of how the statement can be measured, and can be adapted and used flexibly.

### Structure

Evidence of clinical protocols to ensure that adults who are having hip or knee replacement are given tranexamic acid during surgery.

**Data source:** No routinely collected national data for this measure has been identified. Data can be collected from information recorded locally by provider organisations, for example, from clinical protocols.

### Process

Proportion of hip or knee replacement operations during which tranexamic acid is given.

Numerator – the number in the denominator during which tranexamic acid is given.

Denominator – the number of hip or knee replacement operations.

**Data source:** No routinely collected national data for this measure has been identified. Data can be collected from information recorded locally by healthcare professionals and provider organisations, for example, from patient records.

### Outcome

Blood transfusion rates associated with hip or knee replacement surgery.

**Data source:**No routinely collected national data for this measure has been identified. Data can be collected from information recorded locally by healthcare professionals and provider organisations, for example, from patient records and electronic prescribing systems.

## What the quality statement means for different audiences

**Service providers** (secondary care services) ensure that systems are in place so that adults having hip or knee replacement are given tranexamic acid during surgery.

**Healthcare professionals** (anaesthetists and orthopaedic surgeons) give tranexamic acid to adults who are having hip or knee replacement surgery. This is administered intravenously at the start of surgery by anaesthetists and topical tranexamic acid is applied before wound closure by the orthopaedic surgeon.

**Commissioners** (clinical commissioning groups or integrated care systems) ensure that they commission services that give tranexamic acid to adults who are having hip or knee replacement surgery.

**Adults who are having hip or knee replacement surgery** are given tranexamic acid during their operation. This helps blood to clot and reduces blood loss during surgery.

## Source guidance

[Joint replacement (primary): hip, knee and shoulder. NICE guideline NG157](https://www.nice.org.uk/guidance/ng157/) (2020), recommendation 1.4.1

## Definitions of terms used in this quality statement

### Tranexamic acid

The administration and dose varies according to whether or not adults having hip or knee replacement have renal impairment.

If there is no renal impairment:

* give intravenous tranexamic acid, and
* apply 1 g to 2 g of topical (intra-articular) tranexamic acid diluted in saline after the final wash-out and before wound closure. Ensure that the total combined dose of tranexamic acid does not exceed 3 g.

For adults with mild to moderate renal impairment give a dose of intravenous tranexamic acid on its own that is reduced according to their serum creatinine level, as defined in product literature.

Tranexamic acid is contraindicated for people with severe renal impairment.

[[NICE’s guideline on joint replacement (primary)](https://www.nice.org.uk/guidance/ng157/), recommendation 1.4.1]

In November 2021, topical (intra articular) use of tranexamic acid was off label. See [NICE’s information on prescribing medicines](https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/nice-guidelines/making-decisions-using-nice-guidelines#prescribing-medicines).

# Quality statement 4: Preventing implant selection errors

## Quality statement

Adults having hip, knee or shoulder replacement have 2 ‘stop moments’ during surgery so that implant details and the compatibility of all components are checked.

## Rationale

‘Stop moments’ to check implant (prosthesis) details and the compatibility of all components before implantation and wound closure provides 2 opportunities to prevent implant selection errors before the operation is completed. This can avoid the need for revision surgery because of implant selection or component incompatibility errors, and surgical ‘never events’ resulting from the wrong implant or prosthesis being used.

## Quality measures

The following measures can be used to assess the quality of care or service provision specified in the statement. They are examples of how the statement can be measured, and can be adapted and used flexibly.

### Structure

Evidence from surgical protocols that 2 ‘stop moments’ to check implant details and the compatibility of all components are carried out and documented.

**Data source:**No routinely collected national data for this measure has been identified. Data can be collected from information recorded locally by provider organisations, for example from surgical protocols.

### Process

Proportion of hip, knee or shoulder replacement operations during which there are 2 ‘stop moments’ to check implant details and the compatibility of all components.

Numerator – the number in the denominator during which there are 2 ‘stop moments’ to check implant details and the compatibility of all components.

Denominator – the number of hip, knee or shoulder replacement operations.

**Data source:** No routinely collected national data for this measure has been identified. Data can be collected from information recorded locally by provider organisations, for example, completed surgical checklists.

### Outcome

The number of surgical ‘never events’ resulting from wrong implant or prosthesis incidents during hip, knee or shoulder replacement operations.

**Data source:**  [NHS England and Improvement provides official statistics on never events.](https://www.england.nhs.uk/patient-safety/never-events-data/)

## What the quality statement means for different audiences

**Service providers** (secondary care services) ensure that they have effective systems to support carrying out and documenting 2 ‘stop moments’ during surgery to check implant details and the compatibility of all components. They monitor and report surgical ‘never events’ resulting from wrong implant or prothesis incidents during hip, knee or shoulder replacement operations locally and to national reporting systems.

**Healthcare practitioners** (surgeons and operating theatre staff) carry out and document 2 ‘stop moments’ during surgery in which they check implant details and the compatibility of all components, first before implantation and then before wound closure. They report surgical ‘never events’ resulting from wrong implant or prothesis incidents during hip, knee or shoulder replacement operations locally and to national reporting systems.

**Commissioners** (clinical commissioning groups or integrated care systems) ensure that they commission services from providers who have protocols in place for carrying out and documenting 2 ‘stop moments’ during surgery in which implant details and the compatibility of all components are checked. They report and monitor surgical ‘never events’ resulting from wrong implant or prothesis incidents during hip, knee or shoulder replacement operations, along with monitoring existing safety checks.

**Adults having hip, knee or shoulder replacements** are cared for by healthcare professionals who stop twice during the operation to check that the correct implants and compatible components have been used before the operation finishes.

## Source guidance

[Joint replacement (primary): hip, knee and shoulder. NICE guideline NG157](https://www.nice.org.uk/guidance/ng157/) (2020), recommendation 1.6.1

## Definitions of terms used in this quality statement

### 2 ‘stop moments’

The first ‘stop moment' is carried out before prosthesis implantation and the second is carried out before wound closure.

## Question for consultation

Please comment on whether surgical protocols and checklists will enable the 2 ‘stop moments’ being carried out and their timing to be documented, to support the structure and process measures.

# Statement 5: Postoperative rehabilitation

## Quality statement

Adults who have had hip, knee or shoulder replacement are given advice on postoperative rehabilitation before discharge.

## Rationale

Discussion with a member of the physiotherapy or occupational therapy team before discharge from hospital enables adults who have had hip, knee or shoulder replacement to be given advice on postoperative rehabilitation. This will help optimise their recovery. The advice might include arrangements for supervised group or individual outpatient rehabilitation, depending on their specific needs.

## Quality measures

The following measures can be used to assess the quality of care or service provision specified in the statement. They are examples of how the statement can be measured, and can be adapted and used flexibly.

### Structure

a) Evidence of clinical protocols to ensure that adults who have had hip, knee or shoulder replacement are given advice on postoperative rehabilitation before they are discharged from hospital.

**Data source:** No routinely collected national data for this measure has been identified. Data can be collected from information recorded locally by provider organisations, for example, from clinical protocols.

b) Evidence of the availability of members of the physiotherapy or occupational therapy teams to have a discussion with adults who had hip, knee or shoulder replacement, to give advice on postoperative rehabilitation.

**Data source:** No routinely collected national data for this measure has been identified. Data can be collected from information recorded locally by provider organisations, for example, from staff rotas.

### Process

Proportion of adults who had hip, knee or shoulder replacement who are given advice on postoperative rehabilitation through a discussion with a member of the physiotherapy or occupational therapy team, before discharge from hospital.

Numerator – the number in the denominator who are given advice on postoperative rehabilitation during a discussion with a member of the physiotherapy or occupational therapy team, before discharge from hospital.

Denominator – the number of adults who have had hip, knee or shoulder replacement who are discharged from hospital.

**Data source:** No routinely collected national data for this measure has been identified. Data can be collected from information recorded locally by healthcare professionals and provider organisations, for example, from patient records.

### Outcome

a) Average health gain and improvement rate associated with patient-reported outcome measures (PROMs) for hip and knee replacement.

**Data source:** [NHS Digital’s patient-reported outcome measures (PROMs)](https://digital.nhs.uk/data-and-information/publications/statistical/patient-reported-outcome-measures-proms/finalised-hip-and-knee-replacement-april-2019---march-2020/) collect data from patients having elective inpatient hip and knee replacement funded by NHS England. Health gain is reported at national, clinical commissioning group and provider levels. Improvement rates are reported at national and provider levels.

b) The percentage of patients reporting the results of their hip or knee replacement as ‘excellent’ or ‘very good’ and that their problems are ‘much better’ or a ‘little better’ after their operation.

**Data source:** Success and satisfaction scores are collected postoperatively (6 months after surgery) as part of [NHS Digital’s PROMs questionnaires](https://digital.nhs.uk/data-and-information/publications/statistical/patient-reported-outcome-measures-proms/finalised-hip-and-knee-replacement-april-2019---march-2020/). Success and satisfaction scores are reported at national level.

c) The percentage of patients reporting improvement following shoulder replacement.

**Data source:** [Data is collected using the Oxford Shoulder Score (OSS) to assess patients’ self-reported pain and function by the National Joint Registry (NJR)](https://www.njrcentre.org.uk/njrcentre/Healthcare-providers/NJR-data-set). Overall changes between pre-and postoperative (at 6 months) scores using rolling data collected by the registry for primary elective shoulder replacement are published in [NJR annual reports](https://www.njrcentre.org.uk/njrcentre/Reports-Publications-and-Minutes/Annual-reports).

## What the quality statement means for different audiences

**Service providers** (secondary care services) ensure that systems are in place for adults who have had hip, knee or shoulder replacement to have a discussion with a member of the physiotherapy or occupational therapy team. During this they are given advice on postoperative rehabilitation based on their specific needs before being discharged from hospital.

**Healthcare professionals** (members of the physiotherapy and occupational team, such as physiotherapists, occupational therapists, or specialist rehabilitation support workers, supervised by a physiotherapist or occupational therapist) ensure that they have a discussion with adults who have had hip, knee or shoulder surgery, to give advice on postoperative rehabilitation before they are discharged from hospital. They offer supervised group or individual outpatient rehabilitation to adults, based on their specific needs.

**Commissioners** (clinical commissioning groups or integrated care systems) ensure that they commission services that have the capacity for a member of the physiotherapy or occupational therapy team to have a discussion with adults who have had hip, knee or shoulder replacement, to give advice on postoperative rehabilitation. The advice is based on the adult’s specific needs and given before they are discharged from hospital.

**Adults who have had hip, knee or shoulder replacement** are given postoperative rehabilitation advice based on their specific needs. The advice is given by a member of the physiotherapy or occupational therapy team, in person, and before they leave hospital.

## Source guidance

[Joint replacement (primary): hip, knee and shoulder. NICE guideline NG157](https://www.nice.org.uk/guidance/NG157) (2020), recommendations 1.10.2, 1.10.3, 1.10.4 and 1.10.5.

## Definitions of terms used in this quality statement

### Advice on postoperative rehabilitation

An assessment of postoperative rehabilitation needs is done during the hospital stay, led by physiotherapy and occupational therapy teams but supported by the whole multidisciplinary team. The rehabilitation team should decide whether adults should be offered supervised group or individual outpatient rehabilitation based on their clinical and personal situation.

Adults who have had hip or knee replacement are given advice on self-directed rehabilitation.

Adults who have had shoulder replacement are given advice on:

* self-directed rehabilitation or
* supervised group rehabilitation or
* individual rehabilitation.

Supervised group or individual outpatient rehabilitation is offered to adults who have had hip, knee or shoulder replacement surgery who:

* have difficulties managing activities of daily living or
* have ongoing functional impairment leading to specific rehabilitation needs or
* find that self-directed rehabilitation is not meeting their rehabilitation goals.

The advice is given before discharge from hospital and should consider the needs of adults with cognitive impairment, for whom supervised group or individual outpatient rehabilitation should be considered.

Advice on self-directed rehabilitation includes:

* a clear understanding of rehabilitation goals and the importance of doing the exercises prescribed to achieve these goals
* a point of contact for advice and support.

For adults who have had hip replacement surgery, the advice may include observing precautions recommended by the surgical team to prevent dislocation of the new, artificial joint. An example is advice on joint position behaviours, dependent on daily activities, such as getting in or out of a car.

[[NICE’s guideline on joint replacement (primary)](https://www.nice.org.uk/guidance/ng157), recommendations 11.10.2, 1.10.3,.10.4, 1.10.5, 1.10.6 and the [Royal College of Occupational Therapists’ practice guideline on occupational therapy for adults undergoing total hip replacement (second edition)](https://www.rcot.co.uk/practice-resources/rcot-practice-guidelines/hip), recommendations 21 and 22]

## Equality and diversity considerations

Adults with cognitive impairment who have had hip, knee or shoulder replacement may need supervised group or individual outpatient rehabilitation.

It is important for providers to make reasonable adjustments to support adults with additional needs. These additional needs include physical, sensory or learning disabilities, or cognitive impairment. Adults with communication difficulties or who do not speak or read English should also be supported. Adults should have access to an interpreter (including British Sign Language) or advocate if needed. Adults with cognitive impairment may need more time to process information.

Advice should be delivered in a way that is culturally appropriate.

# About this quality standard

NICE quality standards describe high-priority areas for quality improvement in a defined care or service area. Each standard consists of a prioritised set of specific, concise and measurable statements. NICE quality standards draw on existing NICE or NICE-accredited guidance that provides an underpinning, comprehensive set of recommendations, and are designed to support the measurement of improvement.

Expected levels of achievement for quality measures are not specified. Quality standards are intended to drive up the quality of care, and so achievement levels of 100% should be aspired to (or 0% if the quality statement states that something should not be done). However, this may not always be appropriate in practice. Taking account of safety, shared decision-making, choice and professional judgement, desired levels of achievement should be defined locally.

Information about [how NICE quality standards are developed](https://www.nice.org.uk/standards-and-indicators/timeline-developing-quality-standards) is available from the NICE website.

See our [webpage on quality standard advisory committees](http://www.nice.org.uk/Get-Involved/Meetings-in-public/Quality-Standards-Advisory-Committee) for details of standing committee 3 members who advised on this quality standard. Information about the topic experts invited to join the standing members is available from the [webpage for this quality standard](https://www.nice.org.uk/guidance/indevelopment/gid-qs10090/documents).

This quality standard has been included in the [NICE Pathway on joint replacement](https://pathways.nice.org.uk/pathways/joint-replacement) which brings together everything we have said on a topic in an interactive flowchart.

NICE has produced a [quality standard service improvement template](https://www.nice.org.uk/about/what-we-do/into-practice/measuring-the-uptake-of-nice-guidance) to help providers make an initial assessment of their service compared with a selection of quality statements. This tool is updated monthly to include new quality standards.

NICE guidance and quality standards apply in England and Wales. Decisions on how they apply in Scotland and Northern Ireland are made by the Scottish government and Northern Ireland Executive. NICE quality standards may include references to organisations or people responsible for commissioning or providing care that may be relevant only to England.

## Resource impact

NICE quality standards should be achievable by local services. The potential resource impact is considered by the quality standards advisory committee, drawing on resource impact work for the source guidance. Organisations are encouraged to use the [resource impact report](https://www.nice.org.uk/guidance/ng157/resources) [and resource impact template](https://www.nice.org.uk/guidance/ng157/resources/resource-impact-template-excel-8708808925) for the NICE guideline on joint replacement (primary): hip, knee and shoulder to help estimate local costs.

## Diversity, equality and language

Equality issues were considered during development and [equality assessments for this quality standard](https://www.nice.org.uk/guidance/indevelopment/gid-qs10090) are available. Any specific issues identified during development of the quality statements are highlighted in each statement.

Commissioners and providers should aim to achieve the quality standard in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity and foster good relations. Nothing in this quality standard should be interpreted in a way that would be inconsistent with compliance with those duties.

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