Renal replacement therapy services for adults

Quality standard
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Quality statements

Statement 1 Adults preparing for or receiving renal replacement therapy, and their family members or carers, undertake individualised education programmes at specialist renal centres.

Statement 2 Adults who will need renal replacement therapy are offered a pre-emptive kidney transplant, if they are medically suitable.

Statement 3 Adults on dialysis are offered a kidney transplant, if they are medically suitable.

Statement 4 This statement has been removed. For more details see update information.

Statement 5 Adults who need long-term dialysis are offered home-based dialysis.

Statement 6 This statement has been removed. For more details see update information.

Statement 7 Adults who have a suspected acute rejection episode have a transplant kidney biopsy carried out and reported on within 24 hours.

Statement 8 Adults receiving haemodialysis have their vascular access monitored and maintained using systematic assessment.
Quality statement 1: Education programmes

Quality statement

Adults preparing for or receiving renal replacement therapy, and their family members or carers, undertake individualised education programmes at specialist renal centres.

Rationale

Renal education programmes can improve patients' (and their family members' or carers') knowledge and understanding of the condition, and can help people to choose the treatment options that are most suitable for them. The benefits of pre-dialysis education include improved wellbeing and physical functioning, as well as positively contributing to better planning and successfully starting dialysis, improved vascular access, delaying the need for starting dialysis and an increased likelihood of patients choosing self-care.

Evidence also suggests that education is important to ensure that these benefits are maintained and that the person's involvement (including full participation of families and/or carers) in their care and treatment choices is optimised. This includes adults who start dialysis in an unplanned way.

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 that adults preparing for or receiving renal replacement therapy, and their family members or carers, undertake individualised education programmes at specialist renal centres.
Data source: Local data collection.

Process

a) Proportion of adults preparing for renal replacement therapy who undertake individualised education programmes at specialist renal centres.

Numerator – the number in the denominator who undertake individualised education programmes at specialist renal centres.

Denominator – the number of adults preparing for renal replacement therapy.

Data source: Local data collection.

b) Proportion of adults receiving renal replacement therapy who undertake individualised education programmes at specialist renal centres.

Numerator – the number in the denominator who undertake individualised education programmes at specialist renal centres.

Denominator – the number of adults receiving renal replacement therapy.

Data source: Local data collection.

c) Proportion of family members or carers of adults preparing for renal replacement therapy who undertake individualised education programmes at specialist renal centres.

Numerator – the number in the denominator who undertake individualised education programmes at specialist renal centres.

Denominator – the number of family members or carers of adults preparing for renal replacement therapy.

Data source: Local data collection.

d) Proportion of family members or carers of adults receiving renal replacement therapy who undertake individualised education programmes at specialist renal centres.
Numerator – the number in the denominator who undertake individualised education programmes at specialist renal centres.

Denominator – the number of family members or carers of adults receiving renal replacement therapy.

Data source: Local data collection.

Outcome

Patient satisfaction feedback from adults preparing for or receiving renal replacement therapy (and their family members and carers) about their individualised education programmes on renal replacement therapy at specialist renal centres.

Data source: Local data collection.

What the quality statement means for different audiences

Service providers (specialist renal centres) ensure that they provide individualised education programmes for adults who are preparing for or receiving renal replacement therapy, and their family members or carers.

Healthcare professionals ensure that they offer individualised education programmes to adults who are preparing for or receiving renal replacement therapy, and their family members or carers.

Commissioners (NHS England area teams) ensure that individualised education programmes are in place with clear referral pathways for adults preparing for or receiving renal replacement therapy, and their family members or carers.

Adults who are preparing for or receiving renal replacement therapy (including those who start dialysis in an unplanned way), and their family members or carers, are offered an education course to improve their knowledge and understanding of the condition, and to help them choose the most appropriate options for treatment. The course will be adapted to the person’s situation and preferences for learning, and will continue after treatment has started.
Source guidance

- Renal replacement therapy and conservative management. NICE guideline NG107 (2018), recommendations 1.8.1, 1.8.3 to 1.8.5, 1.8.7, 1.8.9 and 1.8.10

- Planning, initiating and withdrawal of renal replacement therapy. UK Kidney Association clinical practice guideline (2014), recommendations 4.1 to 4.3

Definitions of terms used in this quality statement

Education programmes

Education programmes are aimed at improving patient and (if appropriate) family or carer knowledge, understanding of the condition and helping to choose from among the treatment options. The education programme should be tailored to the needs of the individual and be designed to support patient choice.

A range of teaching methods can be used within 1 session to allow learning to take place irrespective of the learning style. The information should be specifically designed to support decision-making regarding treatment options. This should be relevant to the person, their disease stage and treatment options available to them, with the method, scale, pace and scope of the delivery being suited to the individual's learning style, capacity and preferences.

A variety of approaches should be available. These include:

- individual conversations
- group work
- written materials
- DVD/CDs and internet resources
- decision-making aids
- access to expert patients with appropriate training.

The education programme should be offered to adults who are preparing for renal
replacement therapy (adults with severe chronic kidney disease [stage 5 and progressive stage 4]), and to adults who present late and start dialysis in an unplanned way, and to their families or carers, if appropriate.

The programme should also provide continuing education for adults receiving dialysis, and their family members or carers (if appropriate), with the aims of reviewing the original choice made by the patient, optimising patient involvement in their own care, improving treatment adherence, and fostering good communication and collaborative relationships with caregivers.

[Adapted from the UK Kidney Association's clinical practice guideline on planning, initiating and withdrawal of renal replacement therapy, recommendations 4.1 to 4.3, including rationale]

Equality and diversity considerations

Information should be provided in an accessible format (particularly for people with physical, sensory or learning disabilities and those who do not speak or read English) and educational materials should be translated where appropriate.
Quality statement 2: Transplantation – pre-emptive

Quality statement

Adults who will need renal replacement therapy are offered a pre-emptive kidney transplant, if they are medically suitable.

Rationale

Evidence shows that transplant outcomes are better for adults who have not been on dialysis (that is, pre-emptive transplantation) than those who have, and that transplant survival is negatively influenced by the duration of conventional dialysis before transplantation.

It is recommended that adults with progressive deterioration in kidney function for whom transplantation is an option should be placed on the national transplant list within 6 months of their anticipated dialysis start date. Pre-emptive transplantation should be considered as the treatment of choice for all suitable patients when a living donor is ideally available because this provides most people with the best chance of long-term rehabilitation.

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 local arrangements to ensure that adults who will need renal replacement therapy have their suitability for kidney transplantation assessed at the earliest opportunity.
Data source: Local data collection.

b) Evidence of local arrangements to ensure that adults who will need renal replacement therapy receive a pre-emptive kidney transplant, if they are medically suitable.

Data source: Local data collection.

Process

a) Proportion of adults who will need renal replacement therapy who are assessed for transplant suitability.

Numerator – the number in the denominator who are assessed for transplant suitability.

Denominator – the number of adults who will need renal replacement therapy.

Data source: Local data collection.

b) Proportion of adults who will need renal replacement therapy and are medically suitable for pre-emptive kidney transplantation, who receive a pre-emptive kidney transplant.

Numerator – the number in the denominator receiving a pre-emptive kidney transplant.

Denominator – the number of adults who will need renal replacement therapy and are medically suitable for pre-emptive kidney transplantation.

Data source: Local data collection. NHS Digital’s Hospital Episode Statistics contains data on kidney transplantation. Also contained in the UK Kidney Association’s clinical practice guideline on planning, initiating and withdrawal of renal replacement therapy, audit measure 4.

What the quality statement means for different audiences

Service providers (hospitals and specialist renal centres) work together to ensure that adults who will need renal replacement therapy are offered pre-emptive kidney transplantation if they are medically suitable.
Healthcare professionals ensure that they assess adults who will need renal replacement therapy for transplant suitability, and offer pre-emptive kidney transplantation to adults who are medically suitable.

Commissioners (NHS England area teams) ensure that they work together to commission services for adults who will need renal replacement therapy and are medically suitable for transplantation to receive pre-emptive kidney transplantation.

Adults who have kidney failure are offered a kidney transplant, if it is a suitable treatment for them, before they need to start dialysis. Kidney transplant involves replacing a kidney with one from a person who has recently died or from a relative.

Source guidance

Renal replacement therapy and conservative management. NICE guideline NG107 (2018), recommendation 1.3.6

Definitions of terms used in this quality statement

Pre-emptive transplantation

Pre-emptive kidney transplantation is carried out for adults who are medically suitable before dialysis is needed. A kidney may be used from a living or deceased donor, although a living donor is preferred.

[Adapted from NICE’s guideline on renal replacement therapy and conservative management]

Equality and diversity considerations

People with a BMI greater than 30 should not be excluded from transplantation based on BMI alone.
Quality statement 3: Transplantation – on dialysis

Quality statement

Adults on dialysis are offered a kidney transplant, if they are medically suitable.

Rationale

Transplant survival has been shown to be negatively influenced by the duration of dialysis before transplantation. Therefore, it is important that adults who are on dialysis continue to be supported to receive a kidney transplant if it is medically suitable for them. This includes adults for whom pre-emptive transplantation was not possible and also those starting dialysis in an unplanned way.

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 local arrangements to ensure that adults on dialysis have their suitability for kidney transplantation assessed at the earliest opportunity.

Data source: Local data collection.

b) Evidence of local arrangements to ensure that adults on dialysis receive a kidney transplant, if they are medically suitable.

Data source: Local data collection.
Process

a) Proportion of adults receiving dialysis that was started in a planned way (excluding those presenting late in advanced chronic kidney disease) who are medically suitable and active on the kidney transplant waiting list within 6 months of starting dialysis.

Numerator – the number in the denominator active on the kidney transplant waiting list within 6 months of starting dialysis.

Denominator – the number of adults receiving dialysis that was started in a planned way who are medically suitable for kidney transplantation.

Data source: Local data collection.

b) Proportion of adults receiving dialysis that was started in an unplanned way who are medically suitable and active on the kidney transplant waiting list within 12 months of starting dialysis.

Numerator – the number in the denominator active on the kidney transplant waiting list within 12 months of starting dialysis.

Denominator – the number of adults receiving dialysis that was started in an unplanned way who are medically suitable for kidney transplantation.

Data source: Local data collection.

c) Proportion of adults previously or currently on dialysis who are medically suitable for, and who receive, a kidney transplant.

Numerator – the number in the denominator who receive a kidney transplant.

Denominator – the number of adults previously or currently on dialysis, who are medically suitable for a kidney transplant.

Data source: NHS Digital’s Hospital Episode Statistics contains data on kidney transplantation.

What the quality statement means for different
audiences

Service providers (specialist renal centres) ensure that they offer a kidney transplant to adults on dialysis, if they are medically suitable.

Healthcare professionals ensure that they assess adults on dialysis for kidney transplant suitability and offer a transplant to adults, if they are medically suitable.

Commissioners (NHS England area teams) ensure that they commission services that offer adults on dialysis a kidney transplant, if they are medically suitable.

Adults who are already on dialysis are offered a kidney transplant as soon as possible, if it is a suitable treatment for them.

Source guidance

Renal replacement therapy and conservative management. NICE guideline NG107 (2018), recommendations 1.3.3 to 1.3.6
Quality statement 4: Dialysis access preparation

This statement has been removed. For more details, see update information.
Quality statement 5: Home-based dialysis

Quality statement

Adults who need long-term dialysis are offered home-based dialysis.

Rationale

When dialysis is needed long-term it is important to offer home-based dialysis. People should be supported to consider the pros and cons of different treatment options and the potential impact on their lifestyle so that they can make an informed choice.

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 on long-term dialysis are offered the option of home-based dialysis.

Data source: Local data collection.

Process

Proportion of adults on long-term dialysis have a recorded discussion about the option of home-based dialysis.

Numerator – the number in the denominator who have a recorded discussion about the option of home-based dialysis.

Denominator – the number of adults on long-term dialysis.
Data source: Local data collection.

**What the quality statement means for different audiences**

**Service providers** (specialist renal centres) ensure that systems are in place to offer home-based dialysis to adults on long-term dialysis.

**Healthcare professionals** ensure that they review people on long-term dialysis, offer them home-based dialysis and provide support to help them make an informed decision.

**Commissioners** (NHS England area teams) ensure that they commission services that offer adults on long-term dialysis the opportunity to choose home-based dialysis.

**Adults on long-term dialysis** are offered the option of having dialysis at home, which they can carry out by themselves. They should be supported to consider the pros and cons before they make a decision.

**Source guidance**

Renal replacement therapy and conservative management. NICE guideline NG107 (2018), recommendation 1.3.8
Quality statement 6: Patient transport

This statement has been removed. For more details, see update information.
Quality statement 7: Transplantation – rapid access to a specialist histopathology service

Quality statement

Adults who have a suspected acute rejection episode have a transplant kidney biopsy carried out and reported on within 24 hours.

Rationale

Adults who have had a kidney transplant who are suspected of having an acute rejection episode should have a biopsy within 24 hours in order to inform treatment decisions. It is important that treatment for acute rejection is guided by the transplant biopsy results and is started as soon as possible. This relies on rapid access to a specialist histopathology service so that the transplant dysfunction can be established.

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 have a suspected acute rejection episode have a transplant kidney biopsy carried out and reported on within 24 hours.

Data source: Local data collection.
Process

Proportion of adults with a suspected acute rejection episode who have a transplant kidney biopsy carried out and reported on within 24 hours.

Numerator – the number in the denominator who have a transplant kidney biopsy carried out and reported on within 24 hours.

Denominator – the number of adults with a suspected acute rejection episode.

Data source: Local data collection.

What the quality statement means for different audiences

Service providers (specialist histopathology services) ensure that they provide rapid access (within 24 hours) to transplant kidney biopsies so that transplant dysfunction can be established quickly after a suspected acute rejection.

Healthcare professionals ensure that adults who have a suspected acute rejection episode receive a transplant kidney biopsy that is carried out and reported on within 24 hours.

Commissioners (NHS England area teams) ensure that they commission services for adults who have a suspected acute rejection episode to have a transplant kidney biopsy that is carried out and reported on within 24 hours.

Adults who have had a kidney transplant who may have had an ‘acute transplant rejection’ (which is when the body's immune system attacks the donated kidney) have a procedure called a kidney biopsy to remove, test and report on a small sample of the kidney. This should be carried out within 24 hours of the possible rejection.

Source guidance

Planning, initiating and withdrawal of renal replacement therapy. UK Kidney Association clinical practice guideline (2014), recommendation 4.1
Quality statement 8: Haemodialysis access – monitoring and maintaining vascular access

Quality statement

Adults receiving haemodialysis have their vascular access monitored and maintained using systematic assessment.

Rationale

Maintaining vascular access using systematic assessment (clinical monitoring on each access use and consideration of advanced surveillance) ensures that it works well for as long as possible and so prevents obstruction, infection and other complications such as rupture. Early recognition of a failing access is crucial to inform appropriate intervention, to avoid the need for emergency access and to plan for further access surgery in a timely way. Urgent access-related complications should be treated by a multidisciplinary team in line with locally agreed protocols and supported by the UK Kidney Association’s clinical practice guideline on vascular access for haemodialysis.

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 local arrangements to ensure that adults receiving haemodialysis have their vascular access monitored and maintained using systematic assessment.

Data source: Local data collection.
b) Evidence of a local protocol to ensure that complications of vascular access are recorded and regularly reviewed within the unit.

**Data source:** Local data collection.

**Process**

Proportion of adults receiving haemodialysis who have their vascular access monitored and maintained using systematic assessment.

Numerator – the number in the denominator who have a documented plan recording the monitoring and maintenance of their vascular access using systematic assessment.

Denominator – the number of adults receiving haemodialysis.

**Data source:** Local data collection.

**Outcomes**

a) Infection rates (by vascular access type: arteriovenous fistula, arteriovenous graft, non-tunnelled line, tunnelled line).

**Data source:** Local data collection. The [UK Renal Registry](https://www.ukrenalregistry.org) details renal centre-specific infection rates by access type as reported to Public Health England where completion of renal failure and dialysis information is available.

b) Rupture of vascular access (fistula and graft).

**Data source:** Local data collection.

c) Catheter patency.

**Data source:** Local data collection.

d) Interventions needed for non-functioning or inadequately functioning access.

**Data source:** Local data collection.
What the quality statement means for different audiences

Service providers (specialist renal centres) ensure that systems and local protocols are in place so that adults receiving haemodialysis have their vascular access monitored and maintained using systematic assessment.

Healthcare professionals ensure that adults receiving haemodialysis have their vascular access monitored and maintained using systematic assessment.

Commissioners (NHS England area teams) ensure that service providers monitor and maintain vascular access using systematic assessment in adults receiving haemodialysis.

Adults receiving haemodialysis have regular, structured checks of their vascular access (where the dialysis machine is connected to their blood vessels by a needle or tube) to keep it working properly.

Source guidance

Vascular access for haemodialysis. UK Kidney Association clinical practice guideline (2015), recommendations 6.3 and 6.5

Definition of terms used in this quality statement

Systematic assessment

Systematic assessment should be based on UK Kidney Association clinical practice guideline on vascular access for haemodialysis, which highlights the need for appropriate dialysis interventions, systematic observation and advanced surveillance to predict and prevent vascular access failure, and ensuring regular review and audit in line with locally agreed protocols by the multidisciplinary team.

[Adapted from UK Kidney Association clinical practice guideline on vascular access for haemodialysis and expert opinion]
Update information

October 2018: Changes have been made to align this quality standard with the NICE guideline on renal replacement therapy and conservative management. Statement 4 was withdrawn because it was not in line with the NICE guideline. Statement 6 was withdrawn because there was no longer a valid evidence source. References and links to source guidance throughout have also been updated.

January 2015: Changes to the data sources sections for quality statements 2, 3, 5 and 6 to remove incorrect references to the UK Renal Registry.
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 is available from the NICE website.

See our webpage on quality standards advisory committees for details about our standing committees. Information about the topic experts invited to join the standing members is available from the webpage for this quality standard.

NICE has produced a quality standard service improvement template 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.

Diversity, equality and language

Equality issues were considered during development and equality assessments for this quality standard are available. Good communication between healthcare professionals and
adults receiving renal replacement therapy, and their families or carers (if appropriate), is essential. Treatment, care and support, and the information given about it, should be culturally appropriate. It should also be accessible to adults with additional needs such as physical, sensory or learning disabilities, and to adults who do not speak or read English. Adults receiving renal replacement therapy services should have access to an interpreter or advocate if needed.

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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Endorsing organisation

This quality standard has been endorsed by NHS England, as required by the Health and Social Care Act (2012)

Supporting organisations

Many organisations share NICE's commitment to quality improvement using evidence-based guidance. The following supporting organisations have recognised the benefit of the quality standard in improving care for patients, carers, service users and members of the public. They have agreed to work with NICE to ensure that those commissioning or providing services are made aware of and encouraged to use the quality standard.

- Kidney Care UK
- National Kidney Federation
- British Renal Society
- Royal College of Pathologists