Renal replacement therapy services for adults

Quality standard
Published: 28 November 2014
nice.org.uk/guidance/qs72
# Contents

Introduction ................................................................................................................................. 6

Why this quality standard is needed .......................................................................................... 6

How this quality standard supports delivery of outcome frameworks ........................................ 7

Patient experience and safety issues ........................................................................................... 9

Coordinated services .................................................................................................................. 9

List of quality statements ........................................................................................................... 11

Quality statement 1: Education programmes ............................................................................ 12

Quality statement ....................................................................................................................... 12

Rationale ..................................................................................................................................... 12

Quality measures ....................................................................................................................... 12

What the quality statement means for service providers, healthcare professionals and commissioners .......................................................................................................................... 14

What the quality statement means for patients, service users and carers ................................ 14

Source guidance .......................................................................................................................... 14

Definitions of terms used in this quality statement ..................................................................... 15

Equality and diversity considerations .......................................................................................... 16

Quality statement 2: Transplantation – pre-emptive ................................................................. 17

Quality statement ....................................................................................................................... 17

Rationale ..................................................................................................................................... 17

Quality measures ....................................................................................................................... 17

What the quality statement means for service providers, healthcare professionals and commissioners .......................................................................................................................... 18

What the quality statement means for patients, service users and carers ................................ 19

Source guidance .......................................................................................................................... 19

Definitions of terms used in this quality statement ..................................................................... 19

Quality statement 3: Transplantation – on dialysis ................................................................. 20

Quality statement ....................................................................................................................... 20

Rationale ..................................................................................................................................... 20

Quality measures ....................................................................................................................... 20
# Quality statement 8: Haemodialysis access – monitoring and maintaining vascular access

## Quality statement

| Quality statement 8: Haemodialysis access – monitoring and maintaining vascular access | 33 |
| Quality statement | 33 |
| Rationale | 33 |
| Quality measures | 33 |
| What the quality statement means for service providers, healthcare professionals and commissioners | 34 |
| What the quality statement means for patients, service users and carers | 35 |
| Source guidance | 35 |
| Definition of terms used in this quality statement | 35 |
| Using the quality standard | 36 |
| Quality measures | 36 |
| Levels of achievement | 36 |
| Using other national guidance and policy documents | 36 |
| Information for the public | 36 |
| Diversity, equality and language | 37 |
| Development sources | 38 |
| Evidence sources | 38 |
| Policy context | 38 |
| Related NICE quality standards | 40 |
| Published | 40 |
| Future quality standards | 40 |
| Quality Standards Advisory Committee and NICE project team | 41 |
| Quality Standards Advisory Committee | 41 |
| NICE project team | 43 |
| Changes after publication | 44 |
Introduction

This quality standard covers renal replacement therapy services for kidney failure in adults. For more information see the renal replacement topic overview.

The quality standard for renal replacement therapy services partially updates the NICE quality standard for chronic kidney disease. Quality statements 2 to 6 update and replace quality statements 11 to 15 in the quality standard for chronic kidney disease.

Why this quality standard is needed

Renal replacement therapy is a life-long treatment for people with end-stage kidney disease. For adults who wish to progress with renal replacement therapy, treatment choices include:

- dialysis (either haemodialysis or peritoneal dialysis)
- kidney transplantation (from a living or deceased donor).

Two main types of dialysis are available: haemodialysis and peritoneal dialysis. The main factors that determine the choice of dialysis type are patient preference to suit their lifestyle, individual clinical factors and contraindications, and the local availability of treatment within a service. Kidney transplantation is not suitable for all people receiving dialysis.

The quality standard is expected to contribute to improvements in the following outcomes:

- preventing adults from dying prematurely
- enhancing quality of life for adults with long-term conditions
- ensuring that adults have a positive experience of care
- treating and caring for adults in a safe environment and protecting them from avoidable harm.
How this quality standard supports delivery of outcome frameworks

NICE quality standards are a concise set of prioritised statements designed to drive measurable quality improvements within a particular area of health or care. They are derived from high-quality guidance, such as that from NICE or other sources accredited by NICE. This quality standard, in conjunction with the guidance on which it is based, should contribute to the improvements outlined in the following outcomes framework published by the Department of Health:

- NHS Outcomes Framework 2014/15

Table 1 shows the outcomes, overarching indicators and improvement areas from the frameworks that the quality standard could contribute to achieving.

Table 1 NHS Outcomes Framework 2014/15

<table>
<thead>
<tr>
<th>Domain</th>
<th>Overarching indicators and improvement areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Preventing people from dying prematurely</td>
<td>Overarching indicator</td>
</tr>
<tr>
<td></td>
<td>1a Potential Years of Life Lost (PYLL) from causes considered amenable to healthcare</td>
</tr>
<tr>
<td></td>
<td>i Adults</td>
</tr>
<tr>
<td></td>
<td>1b Life expectancy at 75</td>
</tr>
<tr>
<td></td>
<td>i Males ii Females</td>
</tr>
</tbody>
</table>

© NICE 2017. All rights reserved. Subject to Notice of rights (https://www.nice.org.uk/terms-and-conditions#notice-of-rights).
| 2 Enhancing quality of life for people with long-term conditions | **Overarching indicator**  
2 Health-related quality of life for people with long-term conditions**

**Improvement areas**

Ensuring people feel supported to manage their condition

2.1 Proportion of people feeling supported to manage their condition

Reducing time spent in hospital by people with long-term conditions

2.3 Unplanned hospitalisation for chronic ambulatory care sensitive conditions (adults)

| 4 Ensuring that people have a positive experience of care | **Overarching indicator**  
4b Patient experience of hospital care

**Improvement areas**

Improving hospitals' responsiveness to personal needs

4.2 Responsiveness to in-patients' personal needs

Improving people's experience of accident and emergency services

4.3 Patient experience of A&E services

| 5 Treating and caring for people in a safe environment and protecting them from avoidable harm | **Overarching indicator**  
5a Patient safety incidents reported

5b Safety incidents involving severe harm or death

5c Hospital deaths attributable to problems in care

**Improvement areas**

Reducing the incidence of avoidable harm

5.4 Incidence of medication errors causing serious harm |
**Alignment across the health and social care system**

* Indicator complementary with Adult Social Care Outcomes Framework (ASCOF)

**Patient experience and safety issues**

Ensuring that care is safe and that people have a positive experience of care is vital in a high-quality service. It is important to consider these factors when planning and delivering services relevant to renal replacement therapy.

NICE has developed guidance and an associated quality standard on patient experience in adult NHS services (see the NICE pathway on patient experience in adult NHS services), which should be considered alongside this quality standard. They specify that people receiving care should be treated with dignity, have opportunities to discuss their preferences, and be supported to understand their options and make fully informed decisions. They also cover the provision of information to patients and service users. Quality statements on these aspects of patient experience are not usually be included in topic-specific quality standards. However, recommendations in the development sources for quality standards that impact on patient experience and are specific to the topic are considered during quality statement development.

**Coordinated services**

The quality standard for renal replacement therapy services specifies that services should be commissioned from and coordinated across all relevant agencies encompassing the whole renal replacement therapy service care pathway. A person-centred, integrated approach to providing services is fundamental to delivering high-quality care to adults receiving renal replacement therapy services.

The Health and Social Care Act 2012 sets out a clear expectation that the care system should consider NICE quality standards in planning and delivering services, as part of a general duty to secure continuous improvement in quality. Commissioners and providers of health and social care should refer to the library of NICE quality standards when designing high-quality services. Other quality standards that should also be considered when choosing, commissioning or providing a high-quality renal replacement therapy service are listed in Related quality standards.

**Training and competencies**

The quality standard should be read in the context of national and local guidelines on training and competencies. All healthcare professionals involved in assessing, caring for and treating adults
receiving renal replacement therapy should have sufficient and appropriate training and competencies to deliver the actions and interventions described in the quality standard. Quality statements on staff training and competency are not usually included in quality standards. However, recommendations in the development sources on specific types of training for the topic that exceed standard professional training are considered during quality statement development.

**Role of families and carers**

Quality standards recognise the important role families and carers have in supporting adults receiving renal replacement therapy. If appropriate, healthcare professionals should ensure that family members and carers are involved in the decision-making process about investigations, treatment and care.
List of 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.** Adults with established kidney failure who are starting planned dialysis have a functioning arteriovenous fistula or peritoneal dialysis catheter.

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

**Statement 6.** Adults using transport services to attend for dialysis are collected from home within 30 minutes of the allotted time and collected to return home within 30 minutes of finishing dialysis.

**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

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.

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 service providers, healthcare professionals and commissioners**

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.

**What the quality statement means for patients, service users and 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**

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.
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

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. The Health and Social Care Information Centre Hospital Episode Statistics contains data on kidney transplantation. The Office of population censuses and survey classification of surgical operations and procedures (4th revision) codes for this are M01 Transplantation of kidney (subcategories 1–5, 8, 9) and M17 Interventions associated with transplantation of kidney (subcategories 1–5, 8, 9), which includes live kidney donor screening. Also contained in The Renal Association's Clinical practice guideline: assessment of the potential kidney transplant recipient, audit criterion 4, and Clinical practice guideline: planning, initiating and withdrawal of renal replacement therapy, audit measure 4.

**What the quality statement means for service providers, healthcare professionals and commissioners**

**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** (clinical commissioning groups and 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.
**What the quality statement means for patients, service users and carers**

**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**


**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 dead donor, although a living donor is preferred.

[Adapted from The Renal Association (2011) *Clinical practice guideline: assessment of the potential kidney transplant recipient*]

**Adults who are medically suitable (for pre-emptive transplantation)**

Medically suitable people should include those whose transplant workup has been delayed by poor access to appropriate investigations such as coronary angiography.

[Adapted from The Renal Association (2011) *Clinical practice guideline: assessment of the potential kidney transplant recipient*]
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

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. Transplant status is also contained within The Renal Association's Clinical practice guideline: assessment of the potential kidney transplant recipient, audit criterion 6.

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. Transplant status is also contained within The Renal Association's Clinical practice guideline: assessment of the potential kidney transplant recipient, audit criterion 6.

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.

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. Also contained within The Renal Association's Clinical practice guideline: assessment of the potential kidney transplant recipient, audit criteria 3 and 5.

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:** The Health and Social Care Information Centre Hospital Episode Statistics contains data on kidney transplantation. The Office of population censuses and survey classification of surgical operations and procedures (4th revision) codes for this are M01 Transplantation of kidney (subcategories 1–5, 8, 9) and M17 Interventions associated with transplantation of kidney (subcategories 1–5, 8, 9), which includes live kidney donor screening.

**What the quality statement means for service providers, healthcare professionals and commissioners**

**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.

What the quality statement means for patients, service users and carers

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

Quality statement 4: Dialysis access preparation

Quality statement

Adults with established kidney failure who are starting planned dialysis have a functioning arteriovenous fistula or peritoneal dialysis catheter.

Rationale

Dialysis access is an increasingly important marker of clinical care. Where clinically indicated, functioning arteriovenous fistulas are regarded as the best form of vascular access for adults receiving haemodialysis. This is because they last longer, need less maintenance and carry less risk of complications than other types of vascular access. Whenever possible, a working fistula should be established for adults starting haemodialysis treatments.

Appropriate planning allows sufficient time to establish a working fistula for haemodialysis or to insert a peritoneal catheter for peritoneal dialysis and avoids the need for emergency access.

Quality measures

Structure

Evidence of local arrangements to ensure that catheter insertion for peritoneal dialysis is performed at least 2 weeks before peritoneal dialysis starts or, where clinically indicated, via a functioning arteriovenous fistula when adults start haemodialysis.

Data source: Local data collection.

Process

a) Proportion of adults with established kidney failure more than 90 days after referral who start dialysis with a functioning arteriovenous fistula or other vascular access with documented valid clinical reasons for the need for non-fistula access.

Numerator – the number in the denominator with a functioning arteriovenous fistula or other vascular access with documented valid clinical reasons for the need for non-fistula access.

Denominator – the number of adults with established kidney failure more than 90 days after referral who start dialysis.
**Data source:** Local data collection.

b) Proportion of adults starting long-term haemodialysis within 90 days of referral with intravenous vascular access who have a planned date for arteriovenous fistula surgery or other permanent vascular access with documented clinical reasons for the need for non-fistula access.

Numerator – the number in the denominator who have a planned date for arteriovenous fistula surgery or other permanent vascular access with documented clinical reasons for the need for non-fistula access.

Denominator – the number of adults starting long-term haemodialysis within 90 days of referral with intravenous vascular access.

**Data source:** Local data collection.

c) Proportion of adults starting peritoneal dialysis who have a peritoneal catheter inserted at least 2 weeks before starting dialysis.

Numerator – the number in the denominator who have a peritoneal catheter inserted at least 2 weeks before starting dialysis.

Denominator – the number of adults starting peritoneal dialysis.

**Data source:** Local data collection.

**Outcomes**

a) Staphylococcus aureus (MRSA and MSSA) bacteraemia rate in adults under the care of renal services.

**Data source:** Local data collection.

b) Dialysis-associated infection rates.

**Data source:** Local data collection.
What the quality statement means for service providers, healthcare professionals and commissioners

Service providers (specialist renal centres) ensure that systems are in place for a functioning arteriovenous fistula to be established, if clinically indicated, or a peritoneal dialysis catheter inserted in adults with established kidney failure who are starting planned dialysis. Systems should be in place for catheter insertion to be carried out at least 2 weeks before peritoneal dialysis starts.

Healthcare professionals ensure that a functioning arteriovenous fistula is established, if clinically indicated, or a peritoneal dialysis catheter is inserted in adults with established kidney failure who are starting planned dialysis. Catheter insertion should be carried out at least 2 weeks before peritoneal dialysis starts.

Commissioners (NHS England area teams) ensure that services establish functioning arteriovenous fistulas, if clinically indicated, or insert peritoneal dialysis catheters in adults with established kidney failure who are starting planned dialysis. Catheter insertion should be carried out at least 2 weeks before peritoneal dialysis starts.

What the quality statement means for patients, service users and carers

Adults starting dialysis have a procedure carried out in advance to prepare them for dialysis. This should be done by connecting an artery to a vein (arteriovenous fistula) usually in the forearm, or by inserting a tube (a peritoneal catheter) into the abdomen, depending on the situation and type of dialysis.

Source guidance

Quality statement 5: Home-based dialysis

Quality statement

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

Rationale

All adults should be encouraged to carry out home-based dialysis if possible. Research suggests that given appropriate education and choice, many adults would choose home-based dialysis (peritoneal dialysis or home haemodialysis) in preference to hospital-based dialysis because of improved experience of care and quality of life. However, this is not reflected in the actual number of people receiving dialysis at home.

Quality measures

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 who carry out home-based dialysis.

Numerator – the number in the denominator who carry out dialysis at home.

Denominator – the number of adults on long-term dialysis.

Data source: Local data collection.

What the quality statement means for service providers, healthcare professionals and commissioners

Service providers (specialist renal centres) ensure that systems are in place to provide adults on long-term dialysis with home-based dialysis.
Healthcare professionals ensure that they review people on long-term dialysis, offer them home-based dialysis if possible, and provide support.

Commissioners (NHS England area teams) ensure that they commission services that offer adults on long-term dialysis the opportunity to receive home-based dialysis if possible, and that provide support.

**What the quality statement means for patients, service users and carers**

Adults on long-term dialysis are offered the option of having dialysis at home, which they can carry out by themselves.

**Source guidance**


- The Renal Association (2010) Clinical practice guideline: peritoneal dialysis, recommendations 3.2, 3.3 (rationale) and 4.2.


- Peritoneal dialysis (2011) NICE guideline CG125, recommendations 1.1.9 and 1.1.11.
Quality statement 6: Patient transport

Quality statement

Adults using transport services to attend for dialysis are collected from home within 30 minutes of the allotted time and collected to return home within 30 minutes of finishing dialysis.

Rationale

Patient transport is an essential part of patient experience for adults receiving hospital- or satellite-based dialysis, which requires frequent travel between their home and the treatment centre. Poor transport can undermine good dialysis care and can have a major impact on a person's quality of life. This also applies to adults who are training for home-based therapies and may need to travel to a regional renal centre.

Quality measures

Structure

Evidence of local arrangements to ensure that adults using transport services to attend for dialysis are collected from home within 30 minutes of the allotted time and collected to return home within 30 minutes of finishing dialysis.

Data source: Local data collection.

Process

a) Proportion of adults using transport services to attend for dialysis who are collected from home within 30 minutes of their allotted time.

Numerator – the number in the denominator who are collected from home within 30 minutes of their allotted time.

Denominator – the number of adults using transport services to attend for dialysis.

Data source: The patient transport survey (2010) examines, at a unit level, the provision of patient transport services.
b) Proportion of adults using transport services to attend for dialysis who are collected to return home within 30 minutes of finishing dialysis.

Numerator – the number in the denominator collected to return home within 30 minutes of finishing dialysis.

Denominator – the number of adults using transport services to attend for dialysis.

**Data source:** The patient transport survey (2010) examines, at a unit level, the provision of patient transport services. Also contained within The Renal Association's Clinical practice guideline: haemodialysis, audit measure 2.

**Outcomes**

(a) Patient satisfaction.

**Data source:** Local data collection. Patient transport survey (2010).

(b) Missed appointments.

**Data source:** Local data collection.

**What the quality statement means for service providers, healthcare professionals and commissioners**

**Service providers** (transport service providers, specialist renal units and hospitals) ensure that they provide reliable transport for adults receiving dialysis in a treatment centre or who are training for home-based dialysis.

Specialist renal units and hospitals ensure that dialysis treatments and training for home-based dialysis take place on time so that transport schedules can be upheld.

**Healthcare professionals** ensure that dialysis treatments and training for home-based dialysis take place on time so that transport schedules are upheld.

**Commissioners** (clinical commissioning groups) commission services that provide reliable transport for adults receiving dialysis in a specialist renal unit or hospital, or who are training for home-based dialysis. They review local transport arrangements, including the use of ambulances, taxis,
volunteer drivers, and other private transport providers, and determine whether appropriate systems and processes are in place, and if any service redesign is necessary.

**What the quality statement means for patients, service users and carers**

Adults receiving dialysis or training for dialysis at home in a specialist renal unit or hospitals are provided with reliable transport to and from the unit or hospital. They should not have to wait for more than 30 minutes to be picked up or wait for more than 30 minutes to return home.

**Source guidance**


**Equality and diversity considerations**

For adults using transport services to attend for dialysis, provision should be available to facilitate access to services for those who may find it difficult to travel long distances due to disability, financial barriers or other characteristics.
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

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 service providers, healthcare professionals and commissioners

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 (clinical commissioning groups and 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.

What the quality statement means for patients, service users and carers

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

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 Renal Association's Clinical practice guideline: vascular access for haemodialysis.

Quality measures

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 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. See also service audit markers 1–3 for infection episodes in The Renal Association's *Clinical practice guideline: vascular access for haemodialysis,* recommendation 1.3.

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

**Data source:** Local data collection. See also service audit marker 4 for infection episodes in The Renal Association's *Clinical practice guideline: vascular access for haemodialysis,* recommendation 1.3.

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 service providers, healthcare professionals and commissioners**

**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.

What the quality statement means for patients, service users and carers

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


Definition of terms used in this quality statement

Systematic assessment

Systematic assessment should be based on The Renal Association's Clinical practice guideline: 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 The Renal Association (2011) Clinical practice guideline: vascular access for haemodialysis and expert opinion]
Using the quality standard

Quality measures

The quality measures accompanying the quality statements aim to improve the structure, process and outcomes of care in areas identified as needing quality improvement. They are not a new set of targets or mandatory indicators for performance management.

We have indicated if current national indicators exist that could be used to measure the quality statements. These include indicators developed by the Health and Social Care Information Centre through its Indicators for Quality Improvement Programme. If there is no national indicator that could be used to measure a quality statement, the quality measure should form the basis for audit criteria developed and used locally.

See NICE's What makes up a NICE quality standard? for further information, including advice on using quality measures.

Levels of achievement

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, NICE recognises that this may not always be appropriate in practice, taking account of safety, choice and professional judgement, and therefore desired levels of achievement should be defined locally.

Using other national guidance and policy documents

Other national guidance and current policy documents have been referenced during the development of this quality standard. It is important that the quality standard is considered alongside the documents listed in Development sources.

Information for the public

NICE has produced information for the public about this quality standard. Patients, service users and carers can use it to find out about the quality of care they should expect to receive; as a basis for asking questions about their care, and to help make choices between providers of social care services.
Diversity, equality and language

During the development of this quality standard, equality issues have been considered and equality assessments 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.
Development sources

Further explanation of the methodology used can be found in the quality standards Process guide on the NICE website.

Evidence sources

The documents below contain recommendations from NICE guidance or other NICE-accredited recommendations that were used by the Quality Standards Advisory Committee to develop the quality standard statements and measures.

Primary source

- [Peritoneal dialysis](2011) NICE guideline CG125
- [Clinical practice guideline: vascular access for haemodialysis](2011) The Renal Association
- [Clinical practice guideline: assessment of the potential kidney transplant recipient](2011) The Renal Association
- [Clinical practice guideline: peritoneal dialysis](2010) The Renal Association
- [Clinical practice guideline: haemodialysis](2009) The Renal Association
- [Clinical practice guideline: peritoneal access](2009) The Renal Association
- [Clinical practice guideline: planning, initiating and withdrawal of renal replacement therapy](2014) The Renal Association
- [Guidance on home compared with hospital haemodialysis for patients with end-stage renal failure](2002) NICE technology appraisal guidance 48

Policy context

It is important that the quality standard is considered alongside current policy documents, including:

- [Renal care – health building note 07–02: main renal unit](2013) Department of Health
- [Renal care – Health building note 07–01: satellite dialysis unit](2013) Department of Health
- [2013/14 NHS standard contract for renal dialysis: peritoneal (adult)](2013) NHS England
- National kidney care audit, vascular access (2011) Health and Social Care Information Centre
Related NICE quality standards

Published

- Infection control (2014) NICE quality standard 61
- Patient experience in adult NHS services (2012) NICE quality standard 15
- Chronic kidney disease (2011) NICE quality standard 5

Future quality standards

This quality standard has been developed in the context of all quality standards referred to NICE, including the following topics scheduled for future development:

- Acute kidney injury.
- Renal stones.

The full list of quality standard topics referred to NICE is available from the quality standards topic library on the NICE website.
Quality Standards Advisory Committee and NICE project team

Quality Standards Advisory Committee

This quality standard has been developed by Quality Standards Advisory Committee 1. Membership of this committee is as follows:

Mr Lee Beresford
Director of Strategy and System Development, NHS Wakefield Clinical Commissioning Group

Dr Gita Bhutani (Vice Chair)
Professional Lead, Psychological Services, Lancashire Care NHS Foundation Trust

Mrs Jennifer Bostock
Lay member

Dr Helen Bromley
Locum Consultant in Public Health, Cheshire West and Chester Council

Dr Hasan Chowhan
GP, NHS North East Essex Clinical Commissioning Group

Mr Phillip Dick
Psychiatric Liaison Team Manager, West London Mental Health Trust

Ms Phyllis Dunn
Clinical Lead Nurse, University Hospital of North Staffordshire

Dr Nourieh Hoveyda
Consultant in Public Health Medicine, London Borough of Richmond Upon Thames

Dr Ian Manifold
Consultant Oncologist, Quality Measurement Expert, National Cancer Action Team

Dr Colette Marshall
Consultant Vascular Surgeon, University Hospitals Coventry and Warwickshire
Mr Gavin Maxwell
Lay member

Mrs Juliette Millard
UK Nursing and Health Professions Adviser, Leonard Cheshire Disability

Ms Robyn Noonan
Lead Commissioner Adults, Oxfordshire County Council

Ms JoAnne Panitzke-Jones
Quality Assurance and Improvement Lead, South Devon and Torbay Clinical Commissioning Group

Dr Bee Wee (Chair)
Consultant and Senior Clinical Lecturer in Palliative Medicine, Oxford University Hospitals NHS Trust and Oxford University

Ms Karen Whitehead
Strategic Lead Health, Families and Partnerships, Bury Council

Ms Alyson Whitmarsh
Programme Head for Clinical Audit, Health and Social Care Information Centre

Ms Jane Worsley
Chief Operating Officer, Advanced Childcare Limited

Dr Arnold Zermansky
GP, Leeds

The following specialist members joined the committee to develop this quality standard:

Mr Adrian Edward Coleman
Lead Pharmacist for Renal Services, East Kent Hospitals University NHS Foundation trust

Dr Mark Devonald
Consultant Nephrologist, Nottingham University Hospitals NHS Trust

Mrs Gerry Endall
Peritoneal Dialysis Nurse Specialist, Wessex Renal and Transplant Service
Ms Mumtaz Goolam  
Senior Nurse (Renal), Heart of England NHS Foundation Trust

Dr Daljit K Hothi  
Consultant Nephrologist and Lead for Home Haemodialysis, Great Ormond Street Hospital for Children Foundation Trust

Dr Andrew Lewington  
Consultant Renal Physician, Leeds Teaching Hospitals

Mrs Angie Beale  
Lay member

Mr Nick Flint  
Lay member

NICE project team

Dylan Jones  
Associate Director

Shirley Crawshaw  
Consultant Clinical Adviser

Rachel Neary-Jones  
Programme Manager

Terence Lacey and Craig Grime  
Technical Advisers

Sabina Keane  
Lead Technical Analyst

Esther Clifford  
Project Manager

Lee Berry and Lisa Nicholls  
Coordinators
Changes after publication

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.

The methods and processes for developing NICE quality standards are described in the quality standards process guide.

This quality standard has been incorporated into the NICE pathway for chronic kidney disease.

NICE produces guidance, standards and information on commissioning and providing high-quality healthcare, social care, and public health services. We have agreements to provide certain NICE services to Wales, Scotland and Northern Ireland. Decisions on how NICE guidance and other products apply in those countries are made by ministers in the Welsh government, Scottish government, and Northern Ireland Executive. NICE guidance or other products may include references to organisations or people responsible for commissioning or providing care that may be relevant only to England.

Copyright

© National Institute for Health and Care Excellence 2014. All rights reserved. NICE copyright material can be downloaded for private research and study, and may be reproduced for educational and not-for-profit purposes. No reproduction by or for commercial organisations, or for commercial purposes, is allowed without the written permission of NICE.

ISBN: 978-1-4731-0856-1

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.

- British Kidney Patient Association
- British Renal Society
- National Kidney Federation
- Royal College of Pathologists