Consultation Draft: Clinical Care Standard for Stroke

March 2014
Acknowledgements

Many individuals and organisations have freely given their time, expertise and documentation in the development of this paper. In particular, the Commission wishes to thank the Stroke Topic Working Group and other key experts who have given their time and advice. The involvement and willingness of all concerned to share their experience and expertise is greatly appreciated.
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Clinical Care Standard for Stroke

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<sup>a</sup> The evidence base for these statements is provided in supporting documentation that can be accessed at [www.safetyandquality.gov.au](http://www.safetyandquality.gov.au).
Introduction

The Australian Commission on Safety and Quality in Health Care (the Commission) is seeking feedback on two draft Clinical Care Standards.

The development of the Clinical Care Standards is a priority area in the Commission’s 2013-16 work plan as approved by Health Ministers in 2013.

The Clinical Care Standards will support:

- people who are receiving care by assisting them to know what to expect from their healthcare system
- healthcare professionals to make decisions about appropriate care
- healthcare services to examine the performance of their organisation and make improvements in the care they provide.

A Clinical Care Standard provides a small number of quality statements that describe the clinical care that a patient should be offered for a specific clinical condition.

In collaboration with consumers, clinicians, researchers and health organisations, the Commission has developed draft Clinical Care Standards for Stroke.

The draft Clinical Care Standard for Stroke was developed by a Topic Working Group\(^b\) which used the most up-to-date clinical guidelines and standards, their professional expertise and consideration of issues that were important to consumers. In addition, existing national, state and territory work was also taken into account to ensure the draft Clinical Care Standard for Stroke complements existing efforts supporting the delivery of appropriate care, such as state-wide stroke clinical networks.

It is intended that this draft Clinical Care Standard for Stroke and the associated consultation process (refer to page 12) will provide an opportunity to elicit feedback which will allow the Commission to refine and finalise this Clinical Care Standard, and identify mechanisms that can support its practical application.

\(^b\) see Appendix 1 for the Topic Working Group membership list
Context

Stroke occurs when the blood supply to part of the brain is suddenly disrupted, either by blockage of an artery (ischaemic stroke) or by bleeding within the brain (haemorrhagic stroke). Stroke entails sudden and unexpected damage to brain cells that causes symptoms that last for more than 24 hours. In contrast, a transient ischaemic attack is a ‘mini’ stroke, with temporary problems in speech or paralysis that last for 24 hours or less.

In Australia, stroke is the second leading cause of death and a major cause of disability. Receiving the right care at the right time can significantly improve an individual’s chance of surviving a stroke and recovering to a full and independent life. The degree of damage caused by a stroke is dependent on the amount of time the brain tissue is denied blood supply. This ‘time is brain’ concept means that avoiding delays in diagnosis and treatment of stroke is a priority. In Australia, only 36% of people present to hospital within 3 hours of stroke onset and 41% within 4.5 hours.

Key to the provision of timely care is people recognising the early signs of stroke. The National Stroke Foundation is raising public awareness of the symptoms of stroke with its ‘FAST’ campaign (Face, Arm, Speech and Time) for people to recognise the signs of stroke and call 000 for an ambulance.

The Clinical Care Standard for Stroke focuses on the recognition, rapid assessment, early management and early initiation of an individualised rehabilitation plan for a patient with stroke.

The Clinical Care Standard does not override personal choice or a clinician’s judgement of a patient’s individual care or treatment needs.

Patients and carers can use information in the Clinical Care Standard to know what care to expect and make informed treatment decisions in partnership with their clinician. Clinicians and health services can use the Standard to support the delivery of high-quality care.

This document contains:

- the scope, which defines the extent of care covered by the Clinical Care Standard
- the goal, which defines what the Clinical Care Standard aims to accomplish
- seven quality statements, which describe the care a patient should receive.

Then, for each quality statement, it contains:

- the purpose, which describes the intended outcome of each quality statement
- information about what the quality statements mean for patients, clinicians and health services.

Scope

This Clinical Care Standard relates to the care an adult patient with suspected stroke should receive from the onset of symptoms to the completion of their treatment in hospital.

Goal

To improve the early assessment and management of an adult with stroke so as to increase their chance of surviving a stroke, maximise their recovery and reduce their risk of a future stroke.

Monitoring

Health services need to be aware of how well the treatment they provide matches the Clinical Care Standards. Monitoring of the performance of the clinical services provided by a health service organisation is a key part of the National Safety and Quality Health Service (NSQHS) Standards, particularly Standard 1: Governance for Safety and Quality.

Organisations are likely to already have mechanisms in place that monitor the care provided. However if additional measures are needed then a number of suggested indicators have been developed and can be found at Appendix 2.

Emerging models

Health systems in Australia and internationally have developed clinical networks that are increasing the proportion of people with stroke who receive their care in a stroke unit. With the development of such networks, a variety of approaches have arisen in response to local circumstances such as distance, population concentration and pre-existing services. Various models of network development are being used within Australia for care provision in metropolitan, rural and remote areas.

Emerging evidence of the impact of further refinements in metropolitan stroke networks such as the development of 'hyper-acute stroke units' is encouraging. In London, eight specialist centres provide the first 72 hours of treatment for anyone with a stroke. These immediate care units are designated as "hyper-acute stroke units" (HASUs) and are situated across the city with ambulance and transport protocols established so that anyone who suffers a stroke is rapidly taken to the nearest HASU for immediate care. This model allows for the appropriate support of imaging, thrombolysis and other therapies in a smaller number of units, providing coverage on a 24/7 basis.

Recent analysis has demonstrated that this centralised model for acute stroke care across the entire metropolitan city of London appears to have reduced mortality for a reduced cost per patient, predominately as a result of reduced hospital length of stay.

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Quality statement 1 – Stroke assessment

A stroke can be caused by bleeding (haemorrhagic stroke) or a blood clot (ischaemic stroke). A patient with suspected stroke is immediately assessed using a validated stroke screening tool at first clinical contact, such as the Face, Arm, Speech and Time (FAST) tool.

FACE: Check their face. Has their mouth drooped?

ARMS: Can they lift both arms?

SPEECH: Is their speech slurred? Do they understand you?

TIME: Time is critical. If you see any of these signs call 000 now.

Purpose

To improve the early and appropriate assessment of a patient with suspected stroke at any point of initial clinical contact. This includes ambulance services, emergency departments, general practitioners and other primary care providers.

What this quality statement means for:

- **Consumers.** If it is thought that you might be having a stroke, the first person to provide your care will immediately assess you by using a tool such as the Face, Arm, Speech and Time (FAST) tool.
- **Clinicians.** Use a validated screening tool to determine if a patient has had a stroke.
- **Health services.** Ensure clinicians have immediate access to a validated stroke screening tool and are trained on how to use it.
Quality statement 2 – Thrombolysis

A patient with stroke who is potentially eligible for thrombolysis (administration of a clot-busting medicine) is rapidly transported to a hospital able to provide thrombolysis. If eligible, the patient has treatment offered and administered within 60 minutes of arrival to hospital.

**Purpose**

To ensure adult patients who are eligible for thrombolysis are in the right place and within the right time frame to have the opportunity to be considered for this choice of treatment.

Thrombolysis should be offered to eligible patients as early as possible within the 4.5 hour time window after symptom onset, and preferably within 60 minutes of arrival to that hospital.

The Stroke Topic Working Group (TWG) took into account the importance of speed in preserving visible brain tissue and considered current guidelines in developing this consensus-based statement.

**What this quality statement means for:**

- **Consumers.** If you have suffered a stroke as a result of a blood clot and you are able to be treated with a clot-busting medicine, you will have the opportunity to consider this treatment in consultation with your clinician. If this treatment is appropriate for you, it will be offered in the right time frame.

- **Clinicians.** Discuss treatment options with patients who are eligible for thrombolysis. If they are eligible for thrombolytic treatment, then it should be administered within 60 minutes of their arrival at a hospital able to provide thrombolysis.

- **Health services.** Ensure systems are in place to urgently transport thrombolysis-eligible patients to a hospital that is able to provide thrombolysis. Ensure processes are in place to enable clinicians to offer and administer thrombolysis within 60 minutes of the patient’s arrival.
Quality statement 3 – Acute stroke care

A patient with stroke receives treatment in a stroke unit through an organised formal stroke network.

Purpose

To ensure a patient with stroke receives evidence-based organised stroke care that takes into consideration the configuration of services in regional and rural areas. This might be achieved by establishing formal networks, written agreements, clinical pathways and transfer protocols.

Health systems in Australia and internationally have developed clinical networks that are increasing the proportion of people with stroke who receive their care in the stroke unit. Various models of network development are being used within Australia for care provision in metropolitan, rural and remote areas.

What this quality statement means for:

- **Consumers.** If you have a stroke, you can expect that there will be an established network of people, services and hospitals to make sure that your treatment will be provided in the right place, at the right time.

- **Clinicians.** All patients with stroke receive stroke unit care through a formal network of stroke services.

- **Health services.** Ensure that the systems, infrastructure and resources are in place for patients with stroke to be treated in a formal network of stroke services that includes a designated stroke unit.
Quality statement 4 – Initiation of rehabilitation

A patient’s rehabilitation needs and goals are assessed within 24 hours of admission to hospital and this directs rehabilitation therapy that starts during the acute hospital admission.

**Purpose**

To provide early assessment and rehabilitation while a patient with stroke is in hospital.

**What this quality statement means for:**

- **Consumers.** If you have had a stroke, your rehabilitation needs and goals will be assessed and your therapy will start within 24 hours of your stay in hospital.

- **Clinicians.** Assess the rehabilitation goals and needs of patients with stroke within 24 hours of admission and start rehabilitation therapy during the acute phase of their hospital stay.

- **Health services.** Ensure processes are in place so that patients with stroke are assessed within 24 hours of admission and rehabilitation therapy starts during their initial stay in hospital, and liaison with hospitals and other rehabilitation providers which may be responsible for follow up care.
Quality statement 5 – Stroke prevention

A patient with stroke receives assessment, treatment and education to reduce their risk of a future stroke before they leave the hospital.

Purpose
To ensure patients receive advice and education on how to reduce their risk of a future stroke.

What this quality statement means for:

- **Consumers.** To reduce your future risk of a stroke, you will be assessed and provided with medicines or advice on lifestyle changes that may reduce that risk.
- **Clinicians.** Assess, treat and educate patients about their future risk of stroke.
- **Health services.** Provide systems, processes and resources for clinicians to assess, treat and educate patients about reducing their future risk of stroke.
Quality statement 6 – Carer training and support

A carer of a patient with stroke is given practical training to enable them to provide care, support and assistance to a patient with stroke with everyday activities of living.

Purpose

To provide carers with the skills and knowledge on how to support and care for a patient with stroke.

What this quality statement means for:

• Consumers. If you are the carer of a patient with stroke, you can expect to receive practical training on how to provide care, support and assistance for that person before they leave hospital.

• Clinicians. Ensure carers of patients with stroke receive practical training on how to provide care, support and assistance for a patient with stroke before they leave the hospital.

• Health services. Ensure systems, processes and resources are in place to provide practical training to carers on how they can provide care, support and assistance to a patient with stroke before the patient leaves the hospital.
Quality statement 7 – Individualised care plan

Before a patient with stroke leaves the hospital, they are involved in developing an individualised care plan that identifies and addresses their recovery and rehabilitation goals, their risk factors, any equipment they need, and the contact details for ongoing support services available in their community. This plan is also provided to the patient’s general practitioner.

Purpose

To ensure all patients with stroke have an individualised care plan before they leave the hospital.

What this quality statement means for:

• **Consumers.** Before you leave hospital, you will be involved in a discussion about recovery and rehabilitation goals. A tailored care plan will be developed with you and this will include information on your risk factors, any equipment you need, and the contact details of ongoing support services available in your community. A copy of this plan will also be provided to your general practitioner.

• **Clinicians.** Before a patient with stroke leaves the hospital, develop an individualised care plan in consultation with the patient. This care plan will include information about the patient’s risk factors, equipment required, and the contact details of ongoing support and services available in their community. Take active steps to provide a copy of the plan to the patient’s general practitioner.

• **Health services.** Ensure systems and policies are in place to enable the development of an individualised care plan for a patient with stroke before they leave the hospital. Ensure clinicians take active steps to provide a copy of the plan to the patient’s general practitioner.
Consultation Process

The Commission is now initiating a phase of public consultation, seeking comments on the consultation draft of the Clinical Care Standard for Stroke before it is finalised in 2014.

The consultation process aims to:

- determine if the quality statements within each Clinical Care Standard identify the key components of care a patient should be offered for a specific clinical condition, or defined part of a patient journey
- determine if the suggested indicators will assist local health services to monitor their progress in meeting the Clinical Care Standards
- identify activities that will support the use of the Clinical Care Standards (e.g. tools, resources, processes and strategies).

The following supplementary information is available on the Commission’s website:

- a summary of evidence sources used to support the development of each Clinical Care Standard
- consumer and health services fact sheets for the consultation drafts of each Clinical Care Standard
- draft indicator specifications for each Clinical Care Standard
- a section on frequently asked questions (FAQs), that have been developed for use by patients, carers, clinicians and health services.

The Commission welcomes any feedback on these documents as part of the public consultation process.

Questions of particular interest include:

1. How well does each quality statement cover the key aspects of care that it describes? Please provide any comments you may have, and evidence to support any modification to a quality statement.

2. What factors currently prevent the care described in the Clinical Care Standard from being achieved?

3. What factors will support the practical application of this Clinical Care Standard?

4. How relevant are the suggested indicators in supporting the monitoring of the quality statements at the local health service level? Please provide any comments you may have, and evidence to support any modifications.

5. How should the Clinical Care Standard be disseminated (e.g. web based resources, printed resources, etc)?

6. Do you have any general comments in relation to each Clinical Care Standard?
Submissions

Submissions can be sent by post, email or by completing an online survey.

Written submissions

Submissions can be sent by post or email. All written submissions should be received by close of business on Friday 23 May 2014 to be considered in the consultation process.

Submissions should include:

- name, organisation (if relevant) and contact details
- responses to the consultation questions
- any general comments
- additional information, for example, any technical or research-based evidence the Commission should be made aware of that supports the views or comments.

Written submissions marked ‘Consultation Paper on the Clinical Care Standards’ can be posted to:

   Consultation on the Draft Clinical Care Standards  
   Australian Commission on Safety and Quality in Health Care  
   GPO Box 5480  
   SYDNEY NSW 2001

Submissions can also be emailed to CCS@safetyandquality.gov.au.

Feedback via online survey

Feedback on the Clinical Care Standards can also be submitted via an online survey which is available at http://www.safetyandquality.gov.au

The survey can be accessed by either clicking on the link, or by copying and pasting the address into your Internet browser. The survey questions will take approximately 20 minutes to complete. This survey will close on Friday 23 May 2014.

Outcome of the consultation

The results of this consultation process will be used to further refine the Clinical Care Standards. Feedback will also contribute to the identification of existing tools, and where necessary development of additional resources, which aim to assist with the implementation of the Clinical Care Standards.

Further Information

Any questions relating to the submission process should be directed via email to CCS@safetyandquality.gov.au or by calling the Commission on (02) 9126 3600.
Glossary

**Antithrombotics**: Anti-clotting medicines used to prevent and treat blood clots; these include anticoagulant medicines (e.g. warfarin) and antiplatelet medicines (e.g. low-dose aspirin).  

**Antihypertensive**: A medicine that reduces blood pressure.

**Atrial fibrillation**: A condition where the heart beats irregularly. The heartbeat is outside its usual rhythm and is often faster than normal.

**Care plan**: An agreement between a consumer and health professional (and/or social services) to help manage day-to-day health. It can be a written document or something recorded in patient notes.

**Carer**: A person who provides unpaid care and support to family members and friends who have a disease, disability, mental illness, chronic condition, terminal illness or general frailty. A carer includes parents and guardians caring for children.

**Clinician**: A healthcare provider, trained as a health professional. Clinicians include registered and nonregistered practitioners, or a team of health professionals providing health care who spend the majority of their time providing direct clinical care.

**Face, Arm, Speech and Time (FAST) test**: A test used to screen for the diagnosis of stroke or transient ischaemic attack.

**Haemorrhagic stroke**: A type of stroke caused by bleeding from a ruptured artery (or blood vessel) in the brain or its surrounding.

**Hospital**: A licensed facility providing healthcare services to patients for short periods of acute illness, injury or recovery.

**Ischaemic stroke**: A type of stroke due to a reduced or blocked supply of blood in the brain.

**Medicine**: A chemical substance given with the intention of preventing, diagnosing, curing, controlling or alleviating disease, or otherwise improving the physical or mental welfare of people. Prescription, non-prescription and complementary medicines, irrespective of their administration route, are included.

**Rehabilitation**: Restoration to optimal physical and psychological functional independence of a person with a disability.

**Risk factor**: Any variable (e.g. smoking, obesity) that is associated with a greater risk of a health disorder, or other unwanted condition or event.

**Statins**: A cholesterol-lowering medicine that reduces the risk of heart attack or stroke.

**Stroke**: Sudden and unexpected damage to brain cells that causes symptoms that last for more than 24 hours in the parts of the body controlled by those cells. Stroke happens when the blood supply to part of the brain is suddenly disrupted, either by blockage of an artery or by bleeding within the brain.
**Stroke unit:** Co-located beds within a geographically defined unit that is staffed by a dedicated, multidisciplinary team who specialise in stroke management, meet once a week to discuss patient care, and receive regular programs of staff education and training related to stroke.\(^\text{11}\)

**Thrombolysis:** The breakdown of blood clots by medicine treatment. It is colloquially referred to as ‘clot busting’.

**Thrombolysis-eligible patients:** Those patients able to receive thrombolysis treatment. Indications for thrombolysis treatment include time from symptom onset within 4.5 hours, measurement and clinically significant deficit on the NIH Stroke Scale examination, exclusion of haemorrhagic stroke, and patient’s age > 18 years.\(^\text{3}\) For a list of thrombolysis inclusion and exclusion criteria, please refer to the current Australian guidelines for stroke management.\(^\text{3}\)

**Transient ischaemic attack:** A ‘mini’ stroke, with temporary problems in speech or paralysis that last for 24 hours or less, and often only for minutes. It is a strong warning sign of a more severe stroke.\(^\text{1}\)

**Validated screening tool:** Valid and reliable assessment of any health condition is a necessary precursor to effective treatment. Screening tools are particularly beneficial because they can form part of routine clinical management and inform further assessment and care. Examples of stroke screening tools include the Face, Arm, Speech, Time (FAST) tool and Recognition of Stroke in the Emergency Department (ROSIER) tool.
## Appendix 1 – Membership of the Clinical Care Standard Stroke Topic Working Group

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
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<tbody>
<tr>
<td>Professor Richard Lindley (co-chair)</td>
<td>Geriatrician/Stroke Specialist (NSW)</td>
</tr>
<tr>
<td>Associate Professor Julie Bernhardt (co-chair)</td>
<td>Physiotherapist (Vic)</td>
</tr>
<tr>
<td>Ms Brenda Booth</td>
<td>Consumer (NSW)</td>
</tr>
<tr>
<td>Associate Professor Dominique Cadilhac</td>
<td>Public Health Researcher (Vic)</td>
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<tr>
<td>Dr Helen Castley</td>
<td>Neurologist (Tas)</td>
</tr>
<tr>
<td>Dr Rohan Grimley</td>
<td>Geriatrician/Stroke Specialist (Qld)</td>
</tr>
<tr>
<td>Mr Patrick Groot</td>
<td>Stroke Liaison Nurse/Clinical Nurse Consultant (Vic)</td>
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<tr>
<td>Ms Eleanor Horton</td>
<td>Consumer (Qld)</td>
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<tr>
<td>Dr Jim Jannes</td>
<td>Neurologist (SA)</td>
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<tr>
<td>Dr Andrew Lee (proxy for Dr Jim Jannes for meetings 1 and 2)</td>
<td>Stroke Neurologist (SA)</td>
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<tr>
<td>Professor Chris Levi</td>
<td>Neurologist (NSW)</td>
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<tr>
<td>Dr Erin Lalor (observer)</td>
<td>CEO, National Stroke Foundation</td>
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<tr>
<td>Dr Chris May</td>
<td>Emergency Physician (Qld)</td>
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<tr>
<td>Professor Sandy Middleton</td>
<td>Director, Nursing Research Institute (NSW)</td>
</tr>
<tr>
<td>Mr Bruce Paddock</td>
<td>Paramedic (NSW)</td>
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Health services need to be aware of how well the treatment they provide matches the Clinical Care Standards. Monitoring of the performance of the clinical services provided by an organisation is a key part of the National Safety and Quality Health Service (NSQHS) Standards, particularly Standard 1: Governance for Safety and Quality.

Organisations are likely to already have mechanisms in place that monitor care provided. However if additional measures are needed then the following indicators are suggested.

The detailed specifications for these indicators are provided in Indicator Specification: Consultation Draft Clinical Care Standard for Stroke. This supporting documentation can be accessed at http://www.safetyandquality.gov.au.

**Quality statement 1 – Stroke assessment**

- CCS.Stroke.1a: Proportion of patients with suspected stroke who are assessed using a validated stroke screening tool by ambulance services
- CCS.Stroke.1b: Proportion of patients admitted to hospital following presentation to the emergency department (ED) with a final diagnosis of stroke who were screened for stroke in hospital using a validated stroke screening tool

**Quality statement 2 – Thrombolysis**

- CCS.Stroke.2a: Proportion of patients with a final diagnosis of stroke who were transported to a hospital able to provide thrombolysis (if arrival time is within 3.5 hours of symptom onset)
- CCS.Stroke.2b: Proportion of patients with a final diagnosis of ischaemic stroke who were thrombolysed
- CCS.Stroke.2c: Proportion of patients with a final diagnosis of ischaemic stroke who were thrombolysed within 60 minutes of hospital arrival
- CCS.Stroke.2d: Proportion of patients with ischaemic stroke presenting to hospital within 4.5 hours of symptom onset, with documentation that intravenous thrombolysis was administered
- CCS.Stroke.2e: Time from onset of symptoms to thrombolysis for patients with a final diagnosis of ischaemic stroke

**Quality statement 3 – Acute stroke care**

- CCS.Stroke.3a: Proportion of patients with a final diagnosis of acute stroke who have documented treatment in a stroke unit at any time during their hospital stay
- CCS.Stroke.3b: Proportion of patients with a final diagnosis of stroke who spend at least 90% of their acute hospital admission on a stroke unit
### Quality statement 4 – Initiation of rehabilitation

- CCS.Stroke.4a: Proportion of patients with a final diagnosis of stroke with a documented physiotherapy assessment within 24 hours of presentation to hospital
- CCS.Stroke.4b: Proportion of patients with a final diagnosis of stroke who commence rehabilitation therapy within 48 hours of initial assessment
- CCS.Stroke.4c: Proportion of patients with a final diagnosis of stroke who undergo a treatment by a therapist for an identified and documented rehabilitation goal during their acute hospital admission

### Quality statement 5 – Stroke prevention

- CCS.Stroke.5a: Proportion of patients with a final diagnosis of haemorrhagic stroke discharged on antihypertensive medication
- CCS.Stroke.5b: Proportion of patients with a final diagnosis of ischaemic stroke who are discharged on statin therapy, antihypertensive and/or antithrombotic medication
- CCS.Stroke.5c: Proportion of ischaemic stroke patients with atrial fibrillation discharged on anticoagulants
- CCS.Stroke.5d: Proportion of stroke patients who, before leaving the hospital, have documented evidence of advice on risk factor modification relating to both medications and lifestyle.

### Quality statement 6 – Carer training and support

- CCS.Stroke.6a: Proportion of patients with a final diagnosis of stroke who require assistance with activities of daily living and whose carer(s) has received relevant training prior to discharge from hospital
- CCS.Stroke.6b: Proportion of patients with a final diagnosis of stroke whose carer(s) have a documented formal needs assessment.

### Quality statement 7 – Individualised care plan

- CCS.Stroke.7a: Proportion of patients with a final diagnosis of stroke with evidence that a documented plan for their ongoing care in the community was developed with and provided to the patient/family prior to discharge.
References


