Acute Stroke Clinical Care Standard

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Clinical Care Standards

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strokefoundation

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Disclaimer

The Australian Commission on Safety and Quality in Health Care has produced this Clinical Care Standard to support the delivery of appropriate care for a defined condition. The Clinical Care Standard is based on the best evidence available at the time of development. Healthcare professionals are advised to use clinical discretion and consideration of the circumstances of the individual patient, in consultation with the patients and/or their carer or guardian when applying information contained within the Clinical Care Standard. Consumers should use the information in the Clinical Care Standard as a guide to inform discussions with their healthcare professional about the applicability of the Clinical Care Standard to their individual condition.

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4 A patient's rehabilitation needs and goals are assessed by staff trained in rehabilitation within 24–48 hours of admission to the stroke unit. Rehabilitation is started as soon as possible, depending on the patient's clinical condition and their preferences.

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Introduction

Clinical Care Standards aim to support the delivery of appropriate care, reduce unwarranted variation in care, and promote shared decision making between patients, carers and clinicians.

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

- people to know what care may be offered by their healthcare system, and make informed treatment decisions in partnership with their clinician
- clinicians to make appropriate decisions about care
- health services to examine the performance of their organisation and make improvements in the care they provide.

This Clinical Care Standard was developed by the Australian Commission on Safety and Quality in Health Care (the Commission) working in collaboration with consumers, clinicians, researchers and health organisations.[a] It complements existing efforts supporting the delivery of appropriate care, such as national initiatives led by the National Stroke Foundation and the Australian Stroke Coalition, and state and territory-based initiatives led by stroke networks.

For more information about the development of this Clinical Care Standard, visit **www.safetyandquality.gov.au/ccs**.

Context

Stroke occurs when the supply of blood to the brain is suddenly interrupted. This may result in part of the brain dying, leading to a sudden impairment that can affect a range of activities such as speaking, swallowing, thinking, moving and communicating.[1] 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 about 80 per cent of people who have a stroke, an artery supplying blood to the brain suddenly becomes blocked (ischaemic stroke).[1] In the remaining 20 per cent, an artery begins to bleed (haemorrhagic stroke).[1]

In Australia, stroke is the second leading cause of death and a major cause of disability.[2] Its impact is greater in some communities than in others, with higher prevalence rates in Aboriginal and Torres Strait Islander peoples compared with non-Indigenous Australians, and in people from the lowest socio-economic group compared with those from the highest socio-economic group.[1]

Receiving the right care at the right time in the right place can significantly improve an individual's chance of surviving a stroke and recovering to lead a full and independent life.[3, 4]

Timely care can only occur if people recognise the early symptoms of stroke. In 2013, only 49 per cent of Australians with stroke presented to hospital within three hours of stroke onset and 58 per cent within four-and-a-half hours.[5] The National Stroke Foundation is raising public awareness of the symptoms of stroke with its F.A.S.T. campaign (Face, Arm, Speech and Time), to help people recognise the signs of stroke and call 000 for an ambulance.[b]

This Acute Stroke Clinical Care Standard aims to ensure that patients with stroke receive optimal treatment during the acute phase of management. Clinicians and health services can use the Clinical Care Standard to support the delivery of high-quality care.

Central to the delivery of patient-centred care identified in this Clinical Care Standard is an integrated, systems-based approach supported by health services and networks of services.

a The evidence base for these statements is available at **www.safetyandquality.gov.au/ccs**.

b National Stroke Foundation. Signs of stroke – F.A.S.T. Available at **http://strokefoundation.com.au/what-is-a-stroke/signs-of-stroke**.

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Key elements of this approach include:

- an understanding of the capacity and limitations of each component of the healthcare system across metropolitan, regional and remote settings, including pre-hospital, within and across hospitals, through to community and other support services
- clear lines of communication across components of the healthcare system
- appropriate coordination so that people receive timely access to optimal care regardless of how or where they enter the system.

Scope

This Clinical Care Standard relates to the care that patients should receive when they are having, or are suspected of having, a stroke. It covers recognition of stroke, rapid assessment, early management and early initiation of an individualised rehabilitation plan. Ongoing rehabilitation and support are important to the recovery of patients with stroke, but are outside the scope of this Clinical Care Standard.

Goal

To improve the early assessment and management of patients with stroke to increase their chance of surviving the stroke, to maximise their recovery and to reduce their risk of another stroke.

Local monitoring

The Commission has developed a set of indicators to support clinical teams and health services at a local level to identify and address areas that require improvement (see Appendix).

Use of these indicators is optional.

Monitoring the implementation of the Clinical Care Standards will assist in meeting some of the requirements of the National Safety and Quality Health Service (NSQHS) Standards.

The *Indicator Specification: Acute Stroke Clinical Care Standard* can be found at www.safetyandquality.gov.au/ccs.

Supporting documents

The following supporting information for this Clinical Care Standard is available on the Commission's web site at www.safetyandquality.gov.au/ccs:

- a consumer fact sheet
- a clinician fact sheet
- an indicator specification.

Patient-centred care

Patient-centred care is health care that is respectful of, and responsive to, the preferences, needs and values of patients and consumers.[6]

Clinical Care Standards support the key principles of patient-centred care, namely[7]:

- treating patients with dignity and respect
- encouraging and supporting consumer participation in decision making
- communicating and sharing information with consumers about clinical conditions and treatment options
- providing consumers with information in a format that they understand so they can participate in decision making.

Carers and family members

Carers and family members have a central role in the prevention, early recognition, assessment and recovery relating to a patient's health conditions. They often know the patient very well, and can provide detailed information about the patient's history, routines or symptoms, which may assist in determining treatment and ongoing support.[6]

Each quality statement in the Clinical Care Standard should be understood to mean that carers are involved in clinicians' discussions with patients about their care, if carer involvement is preferred by the patient.

Quality statement 1 – Early assessment

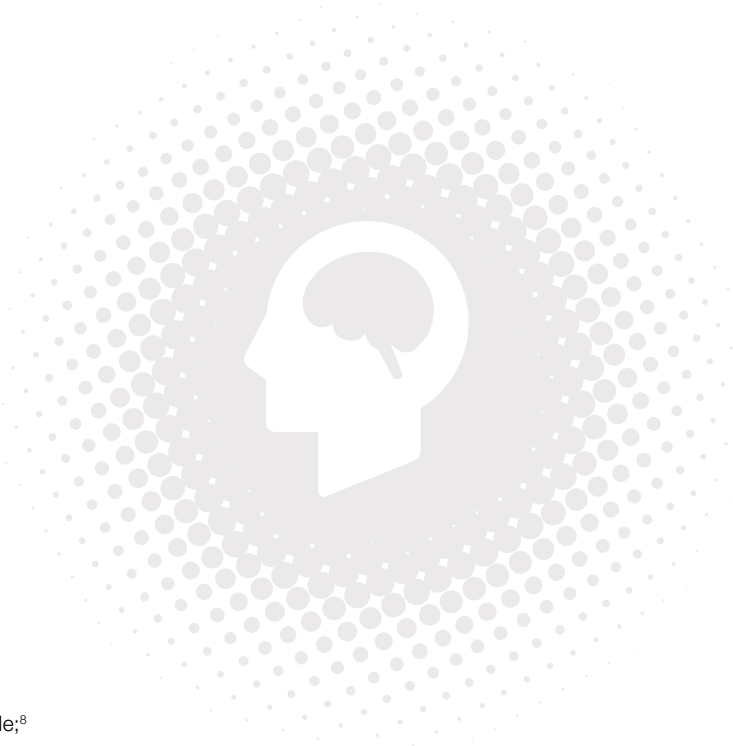
A person with suspected stroke is immediately assessed at first contact using a validated stroke screening tool, such as the F.A.S.T. (Face, Arm, Speech and Time) test.

Purpose

To reduce the time to treatment for people with suspected stroke.

What the quality statement means

- **For people.** If you or someone else is experiencing any of the signs below, call 000 for an ambulance immediately because you or someone else may be having a stroke.
  - Face – check their face. Has their mouth drooped?
  - Arms – can they lift both arms?
  - Speech – is their speech slurred? Do they understand you?
  - Time – is critical. If you see any of these signs call 000 straight away.
- **For clinicians.** Assess all people with suspected stroke using a validated screening tool to guide diagnosis of stroke.[c]
- **For health services.** Ensure that a validated screening tool is available in pre-hospital and hospital settings to guide the diagnosis of people with stroke, and that it is used by clinicians.



c Other validated stroke screening tools for consideration:
  i. the Recognition of Stroke in the Emergency Room (ROSIER) Scale;[8]
  ii. the Melbourne Ambulance Stroke Screen (MASS).[9]

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Quality statement 2 – Time-critical therapy

A patient with ischaemic stroke for whom reperfusion treatment is clinically appropriate, and after brain imaging excludes haemorrhage, is offered a reperfusion treatment in accordance with the settings and time frames recommended in the *Clinical guidelines for stroke management*.[3]

Purpose

To ensure patients, for whom reperfusion treatment is indicated, have the opportunity to be considered for this choice of treatment.

What the quality statement means

- **For patients.** If you have a stroke due to a blood clot blocking a blood vessel and if an urgent treatment to restore blood flow may benefit you, your clinician gives you information about it and the opportunity to consider it. Treatments that restore blood flow (e.g. a blood clot-dissolving medicine) are not suitable for everyone with this type of stroke. Only about a third of patients may benefit and can be offered the clot-dissolving medicine.[10-12] If the treatment is suitable, you are offered it as soon as possible.
- **For clinicians.** Urgently assess and arrange imaging for all patients with suspected stroke. Using clinical judgement and taking into consideration patient comorbidities, patient circumstances and patient preferences, discuss the risks and benefits of treatment options with each patient. Following discussion with the patient, if it is clinically indicated and the patient's preferred option, offer reperfusion treatment (e.g. intravenous thrombolysis) within the time frames recommended in the *Clinical guidelines for stroke management*.[3] If a patient has a haemorrhagic stroke, consider time-critical therapies, such as blood pressure control.
- **For health services.** Ensure systems and processes are in place and services adequately resourced for clinicians to offer a reperfusion treatment to patients for whom it is clinically indicated at a hospital with staff trained in the delivery and monitoring of such treatments and within the time frames recommended in the *Clinical guidelines for stroke management*.[3]

Quality statement 3 – Stroke unit care

A patient with stroke is offered treatment in a stroke unit as defined in the *Acute stroke services framework*.[13]

Purpose

To ensure patients with stroke receive multidisciplinary stroke care in a stroke unit.

The configuration of services in regional and rural areas must be considered. While all efforts are made to transfer patients to the nearest stroke unit, the safety and preferences of the patient need to be taken into account.

What the quality statement means

- **For patients.** Being treated in a stroke unit by a specialised team of health professionals increases your chance of a good recovery. A specialised team may include doctors, nurses, a physiotherapist, a speech pathologist, an occupational therapist, a dietitian, a social worker and a pharmacist. You have the opportunity to discuss with your clinician your wishes regarding transfer to a place where this care can be provided.
- **For clinicians.** Ensure that patients with stroke are offered multidisciplinary care in a stroke unit as defined in the *Acute stroke services framework*.[13]
- **For health services**. Ensure that the systems, infrastructure and resources are in place for patients with stroke to be treated in a stroke unit, as recommended in the *Acute stroke services framework*.[13] For rural and remote services, this may mean provision of rapid transport to a stroke unit, where safe to do so, or care at a locally-agreed alternative, bearing in mind the wishes of the patient.

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Quality statement 4 – Early rehabilitation

A patient's rehabilitation needs and goals are assessed by staff trained in rehabilitation within 24–48 hours of admission to the stroke unit. Rehabilitation is started as soon as possible, depending on the patient's clinical condition and their preferences.

Purpose

To assess patients with stroke for rehabilitation and start rehabilitation while the patients are in hospital.

The initial plan may change as the condition of the patient changes. The ongoing assessment and management of rehabilitation needs is continued once the patient leaves the hospital or moves from the stroke unit to another place for their care as indicated by the *Clinical guidelines for stroke management*.[3] Liaison with rehabilitation physicians and/or geriatricians can facilitate good rehabilitation planning.

What the quality statement means

- **For patients.** If you have a stroke, your rehabilitation needs and goals are assessed within 24–48 hours of your arrival at the hospital. Rehabilitation activities, if beneficial for you, start as soon as you are able to participate.
- **For clinicians.** Assess the rehabilitation needs and goals of patients with stroke within 24–48 hours of admission to the hospital, using a validated tool,[d] and start rehabilitation during the acute phase of care. Complete the sections of the assessment relevant to your practice (e.g. medical, nursing, physiotherapy, speech therapy) or complete the assessment together in a multidisciplinary team meeting or ward round.
- **For health services.** Ensure processes and resources are in place so that the rehabilitation needs of patients with stroke are assessed within 24–48 hours and for rehabilitation to start as soon as possible in hospital. Processes should also include liaison with other rehabilitation providers responsible for continuing care as guided by the *Rehabilitation stroke services framework*.[14]

d Australian Stroke Coalition Rehabilitation Working Group. Assessment for rehabilitation: pathway and decision-making tool, 2012. Melbourne, Australia.

Quality statement 5 – Minimising risk of another stroke

A patient with stroke, while in hospital, starts treatment and education to reduce their risk of another stroke.

Purpose

To ensure a patient with stroke starts treatment and education on how to reduce their risk of another stroke.

The initial plan may change as the patient's recovery continues.

What the quality statement means

- **For patients.** You are assessed and provided with medicines, written information, and advice on lifestyle changes that may reduce your risk of another stroke. Reducing your risk of another stroke is dependent on making changes to your lifestyle (e.g. stopping smoking, having a balance diet, increasing physical activity where appropriate) and following medical treatment as recommended.
- **For clinicians.** Assess, treat and educate patients with stroke about their risk of another stroke. This includes discussing risk factors, providing written information and prescribing medicines. It may also include important interventions that are time limited (e.g. carotid endarterectomy).
- **For health services.** Ensure processes and resources are in place for clinicians to assess, treat and educate patients about reducing their risk of another stroke and improve adherence to stroke management recommendations.

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Quality statement 6 – Carer training and support

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

Purpose

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

What the quality statement means

- **For patients.** If you are the carer of a patient with stroke, you are offered education on stroke, practical training on how to provide care, as well as contact details of support services before the patient with stroke leaves hospital.
- **For clinicians.** Support carers by offering them education on stroke, practical training on how to provide care, contact details of support services, and other information to support their own wellbeing before patients with stroke leave hospital.
- **For health services.** Ensure processes and resources are in place to provide carers with education about stroke, practical training on how to provide care, access to support services (e.g. respite care), and other information to support carers before patients with stroke leave hospital.

Quality statement 7 – Transition from hospital care

Before a patient with stroke leaves the hospital, they are involved in the development of an individualised care plan that describes the ongoing care that the patient will require after they leave hospital. The plan includes rehabilitation goals, lifestyle modifications and medicines needed to manage risk factors, any equipment they need, follow-up appointments, and contact details for ongoing support services available in the community. This plan is provided to the patient before they leave hospital, and to their general practitioner or ongoing clinical provider within 48 hours of discharge.

Purpose

To ensure patients with stroke have an individualised care plan before they leave hospital. This is separate to a clinical discharge summary.

What the quality statement means

- **For patients.** Before you leave hospital, your doctors, nurses and therapists discuss your recovery with you. They help develop a plan with you that may change as your condition changes. You and your regular general practitioner get a copy of this plan, which sets out:
  - your goals
  - the changes you may need to make to your lifestyle
  - the medicines you may need to take
  - the equipment you may need
  - follow-up appointments
  - the rehabilitation services, prevention services and other community support services you are referred to.
- **For clinicians.** Develop an individualised care plan (e.g. using *My stroke care plan*[e]) with each patient and provide it to them in writing before they leave hospital. Provide a copy to their general practitioner or ongoing clinical provider within 48 hours of the patient leaving hospital. The individualised care plan is separate to a clinical discharge summary and includes information about the patient's rehabilitation goals, their risk factors, lifestyle modification and medicines, any equipment they need, follow-up appointments, and contact details for ongoing support services available in the community.
- **For health services.** Ensure processes and resources are in place so that clinicians can develop an individualised care plan with patients with stroke before they leave hospital, and can provide it to them and their general practitioner or ongoing clinical provider within 48 hours of discharge.

e National Stroke Foundation. My Stroke Care Plan, 2013. Melbourne, Australia.

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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).[15]

Antihypertensive: A medicine that reduces blood pressure.[15]

Atrial fibrillation: A condition where the heart beats irregularly. The heartbeat is outside its usual rhythm and is often faster than normal.[15]

Care plan (individualised): A written agreement between a consumer and health professional (or social services) to help manage day-to-day health.[16] This information is identified in a health record.

Carer: A person who provides unpaid care and support to a family member or friend who has a disease, disability, mental illness, chronic condition, terminal illness or general frailty. A carer includes a parent or guardian caring for a child.[17]

Clinician: A healthcare provider, trained as a health professional. Clinicians include registered and non-registered practitioners, or a team of health professionals providing health care who spend the majority of their time providing direct clinical care.[17]

Face, Arm, Speech and Time (F.A.S.T.) test: A test used to screen for the diagnosis of stroke or transient ischaemic attack.[18]

First contact: The time when the person with stroke symptoms first encounters someone who can help. This can be a member of the community, a clinician, or a carer.

Haemorrhagic stroke: A type of stroke caused by bleeding from a ruptured artery (or blood vessel) in the brain or its surrounding.[1]

Health record: Information about a patient held on paper or electronically. The health record may be made up of clinical records (such as medical history, treatment notes, observations, correspondence, investigations, test results, photographs, prescription records, medication charts), administrative records (such as contact and demographic information, legal and occupational health and safety records) and financial records (such as invoices, payments and insurance information).[17]

Health service: A service responsible for the clinical governance, administration and financial management of units providing health care. A service unit involves a grouping of clinicians and others working in a systematic way to deliver health care to patients, and can be in any location or setting, including pharmacies, clinics, outpatient facilities, hospitals, patients' homes, community settings, practices and clinicians' rooms.[17]

Hospital: A licensed facility providing healthcare services to people for short periods of acute illness, injury or recovery.[19]

Individualised care plan: See care plan.

Ischaemic stroke: A type of stroke due to a reduced or blocked supply of blood in the brain.[1]

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.[15]

Multidisciplinary care: integrated use of medical, nursing and allied health skills, along with social, educational and vocational services, to provide individual assessment, treatment, regular review, discharge planning and follow-up.[3]

Rehabilitation: Restoration to optimal physical and psychological functional independence of a person with a disability.[3]

Reperfusion treatments: Treatments that restore blood flow (and therefore oxygen supply) to an area of the brain that has been deprived of blood flow for a period of time. An example is intravenous thrombolysis (a blood clot-dissolving medicine given into a vein).

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.[3]

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 a part of the brain is suddenly disrupted, either by blockage of an artery or by bleeding within the brain.[3]

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 a patient's care, and receive regular programs of staff education and training related to stroke.[13]

Thrombolysis: Emergency blood clot-dissolving (or 'clot-busting') medicine for a heart attack or stroke.[1]

Validated screening tool: A tool that has been shown to accurately and rapidly help identify people with a certain medical condition. Examples of stroke screening tools include the Face, Arm, Speech, Time (F.A.S.T.) test, the Melbourne Ambulance Stroke Screen (MASS) and the Recognition of Stroke in the Emergency Department (ROSIER) tool.

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Appendix

The Commission has developed a set of indicators to support clinical teams and health services at a local level to identify and address areas that require improvement.

Monitoring the implementation of the Clinical Care Standards will assist in meeting some of the requirements of the National Safety and Quality Health Services Standards.

Full details of these indicators can be found in the *Indicator Specification: Acute Stroke Clinical Care Standard* available from **www.safetyandquality.gov.au/ccs**.

Quality statement 1 – Early assessment

- **1a:** Proportion of patients with suspected stroke who are assessed using a validated stroke screening tool by ambulance services.
- **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 the emergency department using a validated stroke screening tool.

Quality statement 2 – Time-critical therapy

- **2a:** Proportion of patients with a final diagnosis of stroke who were transported by ambulance to a hospital able to provide thrombolysis.
- **2b:** Proportion of patients with a final diagnosis of ischaemic stroke who were thrombolysed.
- **2c:** Proportion of patients with ischaemic stroke presenting to hospital within 4.5 hours (i.e. within 270 minutes) of symptom onset, with documentation that reperfusion was administered.
- **2d:** Proportion of patients with a final diagnosis of ischaemic stroke who were thrombolysed within 60 minutes of hospital arrival.
- **2e:** Time from onset of symptoms to thrombolysis for patients with a final diagnosis of ischaemic stroke.

Quality statement 3 – Stroke unit care

- **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, in the reference Local Hospital Network (LHN) or other stroke network.
- **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 – Early rehabilitation

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

Quality statement 5 – Minimising risk of another stroke

- **5a:** Proportion of patients with a final diagnosis of haemorrhagic stroke discharged on antihypertensive medication, where not contraindicated.
- **5b:** Proportion of patients with a final diagnosis of ischaemic stroke who are discharged on statin, antihypertensive and antithrombotic medications, where not contraindicated.
- **5c:** Proportion of ischaemic stroke patients with atrial fibrillation discharged on oral anticoagulants, where not contraindicated.
- **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

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

Quality statement 7 – Transition from hospital care

- **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 and/or their carer prior to discharge.

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