

Operational definitions and guidance for ASI collection

Version	Date	Authors	Comment
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Introduction

This guidance is intended to enhance comprehension of the operational definitions for the Accelerating Stroke Improvement (ASI) measures. This guidance builds on and includes the points raised in Accelerating Stroke Improvement measures frequently asked questions document.

There have been no changes to the measures themselves, the denominators or the numerators, but those collecting the data based on the previous guidance are advised to check measures are being accurately collected based on this current guidance.

This guidance covers the rationale, evidence (where possible), enhanced definitions and further guidance for each of the ASI measures.

The aspirations for the measures will remain the same in 2011-12 as they were in 2010-11 and for this reason the timeframes for achievement of the measures have been removed. The measures provide an aim to which good stroke services would be expected to aspire based on the available evidence, clinical opinion, national clinical standards and guidance.

All of the measures apply to adult stroke services, so only include patients aged 18 or older at the time of the stroke.

The expectation is that all measures are collected on a monthly basis. This is in order to keep the emphasis on regular collection and monitoring of data.

Reporting from providers should include both the numerator and denominator, not just proportions or percentages. This is to allow for aggregate network and quarterly or annual data summaries to be produced. Reporting is advised at a hospital/provider level.

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ASI 1: Preventable Stroke

Proportion of patients presenting with stroke with new or previously diagnosed atrial fibrillation who are anti-coagulated on discharge.

How does this help patients?

The intention of ASI 1 is that on leaving hospital all patients who presented with new stroke and also with AF are discharged with a management plan for anti-coagulation, unless this is clinically contraindicated. The key point is that patients with new stroke and in AF will need a plan for secondary prevention.

Background to the measure

Atrial fibrillation is an important risk factor for stroke and is associated with about 15% of all strokes.

- Optimal treatment of AF in the population could reduce overall stroke risk by 10%
- Anticoagulation is highly effective in reducing stroke risk in patients with AF by approximately 70%

Aspiration and rationale

60% of patients will be on anticoagulation or have a plan for anti-coagulation in the medical notes or discharge letter.

The RCP National Sentinel Audit 2008 demonstrated that only 24% of patients with atrial fibrillation (AF) were discharged on warfarin and only a further 9% of people were planned to receive it in the future. Thus only a third of people with AF were likely to be anti-coagulated. There are some good reasons not to anti-coagulate (severe stroke, likely difficulties with compliance etc) but it would not be expected to account for more than about a third of the stroke population at most.

A high risk of falls is sometimes cited as a contraindication to anti-coagulation, but the evidence says that for anti-coagulation to pose a significant risk, frequency of falls would need to occur more than 300 times in a year (Man-Son-Hing et al Arch Intern Med. 1999;159 (7):677-8).

Anti-coagulants are much better than anti-platelets at preventing further stroke in people with AF (see ACTIVE W and AVERROES trials).

Further evidence can be found in the [AF Commissioning document 2009](#)¹ and the European Society of Cardiology [Guidelines for the management of atrial fibrillation](#) September 2010.²

Denominator

The number of patients discharged from hospital after an admission with a confirmed new stroke and with atrial fibrillation.

- Include patients admitted with diagnosis of stroke and new or previously diagnosed atrial fibrillation
- Include patients who have a new stroke whilst in hospital, who may have been admitted with a different primary diagnosis
- Include patients with intra-cerebral haemorrhage
- Exclude patients with TIA
- Exclude deceased patients
- Exclude patients who are admitted with a different diagnosis, with pre existing stroke

¹

[http://www.improvement.nhs.uk/heart/Portals/0/documents2009/AF Commissioning Guide v 2.pdf](http://www.improvement.nhs.uk/heart/Portals/0/documents2009/AF_Commissioning_Guide_v2.pdf)

² <http://www.escardio.org/guidelines-surveys/esc-guidelines/GuidelinesDocuments/guidelines-afib-FT.pdf>

Numerator

The number of patients in the denominator, who were also discharged on anticoagulation, or who had a plan to commence anti-coagulation clearly stated in the discharge letter or medical notes.

Tolerance

The metric has already taken into account the proportion likely to be ineligible for anti-coagulation, for example, patients in whom anti-coagulation is contraindicated or who decline. Patients who decline or are clinically contraindicated should remain in the denominator.

Further guidance and detail

Anti-coagulation refers to treatment with an anti-coagulant such as warfarin or phenindione, and not an antiplatelet such as aspirin or clopidogrel.

A plan for anti-coagulation may consist of direction to the GP to review the patient for warfarin. This should be clear in the discharge letter or summary.

Patients with TIA are excluded to simplify data collection and because treatment of high risk TIA is included in metric 5.

Patients coded with haemorrhagic stroke should be included in the denominator. A tolerance for strokes with contraindications is built in to the metric so it is important to get the figure for proportion of all strokes with AF who are anti-coagulated. The use of anti-coagulants is fundamentally a clinical decision, not to be influenced by the need to collect information on the practice.

ASI 2: Direct admission to a stroke unit

Proportion of patients admitted directly to an acute stroke unit within four hours of hospital arrival.

How does this help patients?

This indicator is to focus attention on reducing the time it takes for a stroke patient to arrive at a stroke unit, and to avoid time spent on a medical assessment unit or general medical ward.

Background to the measure

Patients presenting with symptoms of stroke need to be assessed rapidly and treated in an acute stroke unit by a multi-disciplinary clinical team which will fully assess, manage and respond to their complex care needs, including planning and delivering rehabilitation from the moment they enter hospital, and maximise their potential for recovery. [DH PbR guidance 2011-12³](#)

Aspiration and rationale

90% of patients with confirmed stroke will be admitted to a stroke unit within four hours of arrival at hospital.

Evidence based best practice shows that patient outcomes are greatly improved if admitted directly to a stroke unit. Patients presenting with symptoms of stroke should not be admitted to a medical assessment unit (MAU). They should be admitted to the acute stroke unit either directly from A&E or by the ambulance service or via brain imaging. [DH PbR guidance 2011-12³](#)

All stroke patients should have prompt access to a high-quality acute stroke unit and spend the majority of their time (which, with direct admission, should be close to 100%) in hospital in a stroke unit with high quality stroke specialist care. [DH PbR guidance 2011-12³](#)

Timely access to acute stroke units prevents death and increases independence. [National Stroke Strategy 2007⁴](#)

Patients with suspected stroke are admitted directly to a specialist stroke unit and assessed for thrombolysis, receiving it if clinically indicated. [NICE Quality Standard for Stroke 2010⁵](#)

Denominator

The number of patients presenting at hospital with a stroke.

- Exclude patients who have a stroke whilst in hospital
- Include patients with confirmed stroke
- Record the time of arrival at hospital

Numerator

The number of patients in the denominator, directly admitted to an acute stroke unit bed within four hours after arrival at hospital.

For each patient with confirmed stroke, record the date and time patient arrived at the acute stroke unit.

- Exclude patients admitted via an MAU bed or a bed on another ward

³

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_124356

⁴

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_081062

⁵ <http://www.nice.org.uk/guidance/qualitystandards/stroke/strokequalitystandard.jsp>

Tolerance

The 10% tolerance allows for patients:

- in whom stroke diagnosis is delayed due to atypical presentation. Waiting for test results is not a reason to delay admission to a stroke unit for the majority of patients for whom there are adequate clinical reasons to support a stroke diagnosis
- who are FAST and ROSIER negative
- who die between arrival at the hospital and the acute stroke unit
- appropriately directly admitted to ITU/CCU/tertiary centre

Patients admitted via MAU are not included in the tolerance as this is not considered good practice

Further guidance and detail

'Directly' in this context means that the patient goes straight to the acute stroke unit without spending time on another ward, including assessment units. The metric allows for up to four hours to be spent in A&E or in the imaging department en route to the stroke unit.

An acute stroke unit is one that provides high dependency care including physiological and neurological monitoring and rapid treatment of stroke and associated complications, early rehabilitation and palliative care. Hyper-acute stroke services should provide, as a minimum, 24 hour, 7 day access to brain imaging, expert interpretation and the opinion of a consultant stroke specialist (using telemedicine where appropriate), with thrombolysis given to those who can benefit. [DH PbR guidance 2011-12](#)³

The intention is for patients to get rapidly from the point of arrival at hospital to the acute/hyper-acute stroke unit. Whilst it is equally imperative they are also subsequently repatriated directly to an appropriate stroke unit, this process is not recorded by this measure. So although clinically the rapid transfer of the patient from the first stroke unit to subsequent stroke unit is supported, the measure only asks for the *time from arrival at hospital to the time of arrival at the first stroke unit*.

ASI 3: Acute stroke care

Proportion of patients spending 90% of their time on an acute stroke unit

This measure is a DH vital sign measure. Please consult the DH guidance and [FAQ](#) for further details.

<http://www.improvement.nhs.uk/stroke/MeasuringforImprovement/Nationalstrokedataandaudit/tabid/186/Default.aspx>

Further guidance for this measure will follow once the 2011-12 guidance is defined

ASI 4a: Access to brain imaging

Proportion of stroke patients scanned within one hour of hospital arrival

How does this help patients?

Rapid imaging can significantly improve outcomes for some people with stroke. The measure is designed to improve pathways of stroke care to ensure those patients who require urgent imaging have rapid access to a system which can provide it.

Background to the measure

Brain imaging should be performed immediately for defined groups of people with acute stroke. [RCP National Clinical Guidelines for Stroke](#)⁶, [NICE Guideline for stroke and TIA](#)⁷ and [National Stroke Strategy](#)⁴

In the RCP National Sentinel Audit 2008, 21% of patients, for whom both times are known, are scanned within three hours of stroke. This was an improvement over the last audit but nowhere near high enough if patients are to achieve the best outcomes.

NICE recommendations for imaging are that brain imaging should be performed immediately for people with acute stroke if any of the following apply:

- indications for thrombolysis or early anti-coagulation treatment
- on anti-coagulant treatment
- a known bleeding tendency
- a depressed level of consciousness (Glasgow Coma Score below 13)
- unexplained progressive or fluctuating symptoms
- papilloedema, neck stiffness or fever
- severe headache at onset of stroke symptoms

'Immediately' is defined as 'ideally the next slot and definitely within one hour, whichever is sooner', in line with the National Stroke Strategy.

Aspiration and rationale

50% of all patients with confirmed stroke will have a scan within an hour after arrival at hospital.

50% of patients presenting with stroke symptoms are estimated to need an urgent scan based on NICE criteria:

- 10% of stroke patients should be thrombolysed, who would all need immediate scans
- 20% of patients would be considered for thrombolysis (and therefore need an immediate scan) but not meet all the criteria for thrombolysis
- 10% of stroke patients have haemorrhages, and are likely to have a depressed level of consciousness and/or be on warfarin
- 10% of patients will have unexplained or fluctuation symptoms

Denominator

Number of patients arriving at hospital with a stroke or patients who have a new stroke whilst in hospital.

- Include patients with confirmed stroke
- Include all patients, irrespective of the level of urgency for imaging
- Exclude patients who decline
- Exclude patients not scanned or had a delayed scan for clinical reasons. For example, patients who are excessively agitated after intracerebral haemorrhage or patients who stroke during surgery
- Exclude patients initially admitted to a hospital out of area and then transferred to your stroke unit

⁶ <http://bookshop.rcplondon.ac.uk/details.aspx?e=250>

⁷ <http://www.nice.org.uk/CG68>

For each patient with confirmed stroke, record the date and time patient arrived at the hospital.

Numerator

Number of patients in the denominator who are imaged within one hour of hospital arrival or within one hour of stroke presentation if stroke occurs in hospital.

For each patient with confirmed stroke, record the date and time the patient was imaged.

Tolerance

The 50% aspiration allows for patients who do not require urgent imaging, in line with the estimation of numbers meeting NICE criteria.

Further guidance and detail

Locally, some providers may have information on the patients eligible for urgent imaging, based on NICE criteria, and may prefer to report locally on the proportion of eligible patients who receive a scan within one hour. However the aspiration for this measure is based on the estimated proportion of all stroke patients who could be eligible for urgent scan (estimated as 50%).

ASI 4b: Access to brain imaging

Proportion of stroke patients scanned within 24 hours of hospital arrival.

How does this help patients?

All patients with stroke benefit from imaging to define the type of stroke they have had and their subsequent management. The measure is designed to improve pathways of stroke care to ensure all stroke patients have access to imaging within 24 hours.

Background to the measure

People without indications for immediate imaging should be scanned as soon as possible (within a maximum of 24 hours) after onset of symptoms. [RCP National Clinical Guidelines for Stroke](#)⁶, [NICE Guideline for stroke and TIA](#)⁷ and [National Stroke Strategy](#)⁴

The RCP National Sentinel Audit 2008 showed that 65% of patients, for whom both times were known, were scanned within 24 hours of stroke. This was an improvement over the previous audit but nowhere near high enough for patients to achieve the best outcomes.

Aspiration and rationale

100% of patients with a confirmed stroke will be scanned within 24 hours of arrival at hospital.

All patients with stroke for whom there is no contraindication for imaging should be scanned as soon as possible, but within a maximum of 24 hours of presentation at hospital.

Denominator

Number of patients arriving at hospital with a stroke or patients who have a new stroke whilst in hospital.

- Include patients with confirmed stroke
- Include all patients, irrespective of the level of urgency for imaging
- Exclude patients who decline
- Exclude patients not scanned or had a delayed scan for clinical reasons. For example, patients who are excessively agitated after intracerebral haemorrhage or patients who stroke during surgery.

For each patient with confirmed stroke, record the date and time patient arrived at the hospital.

Numerator

Number of patients in the denominator who are imaged within 24 hours of hospital arrival, or within 24 hours of stroke presentation (if stroke occurs in hospital).

Do not exclude patients scanned within one hour (as measured in 4a).

For each patient with confirmed stroke, record the date and time the patient was imaged.

Tolerance

Patients who decline, or for whom a scan is delayed for clinical reasons, can be excluded from the denominator, so that it is possible to achieve the aspiration of 100%.

Further guidance and detail

Typically the value for the denominator will be the same as the previous (4a) denominator. However, please note that if a patient is excluded from the one hour denominator for clinical reasons, but is eligible for a scan in the 24 hour period, they should remain in the denominator for 4b. Patients could be excluded from the denominator of 4a but still be eligible to be included in the denominator of 4b.

ASI 5: Management of high risk TIA

Proportion of high risk TIA patients investigated and treated within 24 hours of first contact with a health professional.

This measure is a DH vital sign measure. Please consult the guidance and FAQ for further details.

Further guidance for this measure will follow once the 2011-12 guidance is defined

ASI 6: Timely access to psychological support

Proportion of patients who have received psychological support for mood, behaviour or cognitive disturbance by six months after stroke.

How does this help patients?

Current services for psychological care after stroke are very poorly provided. The measure aims to improve identification and appropriate management of psychological problems after stroke.

Background to the measure

Both the National Audit Office report in 2010 and the Care Quality Commission review of stroke services in 2011 demonstrated that there was a great deal of room for improvement in the provision of psychological care for stroke survivors and families.

[The NICE Quality Standards](#)⁵ for Stroke included the quality statement: 'All patients after stroke are screened within 6 weeks of diagnosis, using a validated tool, to identify mood disturbance and cognitive impairment.'

Both the RCP National Clinical Guidelines 2008 and the British Psychological Society briefing paper '[Psychological services for stroke survivors and their families](#)⁸ guidance' make the recommendations that patients should be routinely screened for depression, anxiety and cognitive problems, and receive the emotional support they need. Recommendations for further management of identified problems by appropriately trained staff are made.

Aspiration and rationale

40% of patients with confirmed stroke will have been seen by a psychology service within six months of their stroke.

Evidence for incidence of post stroke depression, anxiety and poor cognition were taken from the South London Stroke Register.

Denominator

Number of patients with confirmed stroke.

- Exclude patients who did not survive to be seen by the psychological service by six months post stroke
- Exclude patients who decline the assessment/intervention
- Include patients who were seen by the psychological service within six months then who subsequently died

The denominator is likely to be measured for the cohort of patients in the acute stroke service but determination of denominator will be determined by the local pathway.

Numerator

Number of patients who have been screened/assessed using validated tools to recognise anxiety, depression and cognitive problems by a service *capable of appropriately managing* mood, behaviour or cognitive disturbance. The assessment must occur within the six month period after the stroke.

Assessment of the individual in isolation isn't enough to enable the patient's inclusion in the numerator. To count towards the numerator the assessment needs to take place in a service where identified psychological needs can be managed.

The numerator requires patients to have been seen by the psychology service within six months after their stroke. To simplify this, a monthly cohort approach may be used to record assessments in each of the six months after the stroke.

⁸ http://www.bps.org.uk/downloadfile.cfm?file_uuid=B394090F-1143-DFD0-7E33-EA34F35DECF0&ext=pdf

Denominator	Numerator	Reporting month
Patients with stroke during the month	Months where patient's psychological assessment may take place	When to report, to allow for data collection and validation
January	January, February,..., June, July	End of August
February	February, March, ... , July, August	End of September
...
December	December, January, ..., May, June	End of July

Examples of calculation for this measure:

Date of stroke	Date of assessment	When to report
Patient has stroke on 31st December, so is included in December cohort	Has assessment on 30th June (At six month limit)	End July (Which allows one month for data collection/validation)
Patient stroke on 15th December	Has assessment in January	End July
Patient stroke on 15th December	Patient dies in January before receiving assessment, so exclude patient from measure	Exclude
Patient stroke on 15th December	Patient Assessed in January, but dies in February.	Include in July report

- Exclude patients who die prior to their assessment from the denominator and numerator
- Include patients who have an assessment and subsequently die, in the numerator and denominator

The intention is that all networks will report after the six month period has completed.

Tolerance

The measure accounts for the proportion of patients unlikely to need psychological intervention at six months post stroke

Further guidance and detail

Service providing psychological support for mood, behaviour or cognitive disturbance

The need for psychological care should be identified by healthcare professionals competent in assessment of psychological need, using a recognised assessment/screening tool.

Healthcare professionals can comprise staff with competence to assess psychological need such as clinical psychologist, psychiatrist, primary care mental health worker or could be stroke specialists with additional expertise in managing people with these needs e.g. stroke specialist counsellor, stroke specialist practitioner, occupational therapist.

Services which might provide lower level support could comprise befriending and peer support, conversation groups, counselling, and multi-disciplinary team emotional support from appropriately competent staff.

Services which might provide a higher level of support could comprise psychological interventions provided by more highly skilled staff with expertise in managing psychological need such as clinical psychologist, mental health nurse, psychiatrist, mental health trained occupational therapist or other healthcare professional who can demonstrate competence.

Competence will be defined locally according to the needs of the post, but would ideally be based on the requirements, knowledge and skills defined for psychological and emotional support in the [Stroke Specific Educational Framework](#).⁹

Mood, behaviour or cognitive disturbance could include anxiety, emotionalism, depression, adjustment, denial and difficulty coping emotionally and psychologically, which impedes recovery, problems with orientation and memory and inappropriate behaviour.

An appropriate time to collect information about this measure might be at the six month review.

Further information and resources to develop and improve psychological care after stroke services, including the Stroke Specific Educational Framework, can be found on the [Stroke Improvement Programme website](#)¹⁰.

9

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_098352

¹⁰ <http://www.improvement.nhs.uk/stroke/>

ASI 7: Joint health and social care management

Proportion of patients and carers with joint care plans on discharge from hospital.

How does this help patients?

The intention of this measure is that health and social care work together with the stroke survivor and their family to ensure their ongoing health and social care needs are considered as they make the transition from hospital to their future place of residence.

Background to the measure

People should receive safe and coordinated care when they move between providers or receive care from more than one provider, and patients can expect to always be involved in discussions about their care and treatment. [Care Quality Commission Essential Standards of Quality and Safety - Health and Social Care Act 2008 \(Regulated Activities\) Regulations 2010.](#)¹¹

The National Clinical Guidelines for Stroke 2008 state that patients and carers should be adequately informed about the treatment they receive in hospital and ongoing requirements for treatment and rehabilitation.

The National Audit Office patient survey showed that patients still do not feel that they are informed effectively about many post-hospital needs. [NAO Progress in improving stroke care 2010.](#)¹²

Aspiration

85% of patients with confirmed stroke will *have a copy* of their joint care plan on discharge from hospital.

Everyone with a long term condition should be offered a care plan by 2010 (Our health, Our Say) and all primary care trusts and local authorities will need to have established joint health and social care managed networks/teams to support this. [National Stroke Strategy 2007](#)⁴.

Denominator

The number of confirmed stroke patients discharged from hospital.

- Exclude patients who are deceased
- Exclude patients who are documented as having only a health *or* a social care need
- Exclude patients who do not meet the eligibility criteria for social care
- Exclude patients not resident in the UK
- Exclude patients who refuse a health and/or social care assessment or intervention

Base the cohort of patients for the denominator on those patients discharged from their final hospital stay. This could be the acute or rehabilitation stroke unit.

Numerator

Number of patients in the denominator (or their carers) *who have a copy* of their joint care plan on discharge from hospital.

Tolerance

Allowance has been made for individuals for whom it would not be appropriate to share sensitive information and those for whom the information would be incomprehensible.

Further guidance and detail

The word *joint* in joint care plan refers to jointly between health and social care and the stroke survivor and not just joint between the stroke survivor and healthcare staff. A decision about a lack of identified need can be made by a multi-disciplinary healthcare team, though clearly if social care input is needed then the plan should be agreed jointly between health and social care, and patient and carer.

¹¹ <http://www.cqc.org.uk>

¹² <http://www.nao.org.uk/publications/0910/stroke.aspx>

The Single Assessment Process (SAP) or Common Assessment Framework (CAF) paperwork can only be considered as joint care plans if they are used following the principles outlined below.

Principles of joint care planning

- Representatives from both health and social care who are aware of the individual's impairments and aspirations should be involved in the development of the care plan with the individual
- The plan should be owned by the individual (or their carer if the individual is unable to participate) who must be involved in its development. The document should support the empowering of individuals to have ownership of their own care. The individual should have a copy of the joint care plan
- The plan should consider whole person and encompass all of their ongoing issues including their relationships, finances, leisure etc not just management of the stroke
- The individual and carer should receive the right information, in a format they can understand and at the right time to make informed decisions about what their care plan should comprise
- No stroke survivor should leave hospital without one, unless it is clearly documented there are no ongoing health and/or social care needs. All individuals should have the same assessment of need regardless of potential needs
- The care plan should be written in plain English and contain no jargon, abbreviations or medical/ social care terminology
- Joint care planning will be enhanced by early active involvement by a representative from social care
- The joint care plan written on discharge from hospital should be an evolving document to be developed as the individual's needs change in conjunction with community providers, primary care, the voluntary sector and social care
- The joint care plan differs from the transfer of care document in that its primary function is to describe the plan of care the individual needs to continue an optimal quality of life after hospital discharge rather than the transfer of information between health care professionals about services the individual will receive

Principles of joint care planning, SIP Website.

Further information and **examples of joint care plans** can be found on the [SIP website](http://www.improvement.nhs.uk/stroke/)¹³.

¹³ <http://www.improvement.nhs.uk/stroke/>

ASI 8: Assessment and review

Proportion of stroke patients that are reviewed six months after leaving hospital.

How does this help patients?

Once people have returned home their needs and circumstances continue to change. People may need support to adjust their lifestyles, to reduce the chance of another stroke, to return to work, to cope with altered roles and relationships and the emotional and psychological impact of stroke.

Background to the measure

The National Stroke Strategy recognises that people who have had a stroke, either living at home or in care homes, should be offered a review of their health and social care status and secondary prevention needs. It sets out a framework for reviews to take place six weeks after leaving hospital following a stroke, and again after six months, and then annually.

The National Audit Office (NAO) found variation in approaches to these reviews and a lack of clarity about who should lead them, their objectives, where they are recorded, the role of GPs in the reviews, and how they were implemented.

Aspiration and rationale

95% of patients with confirmed stroke will be reviewed at six months after discharge from hospital.

Local projects have demonstrated that effective review processes can deliver a range of benefits, including reducing emergency readmissions, improving secondary prevention and providing better support for stroke survivors and their carers.¹⁴ The RCP Sentinel Audit 2008 found that 30% of patients were not given a follow up appointment within six weeks of discharge from hospital. The NAO report, 'Progress in improving stroke care' showed that there is no data available on the proportion of patients who have had six months and annual follow ups.

Denominator

Number of people discharged from hospital with a confirmed stroke, who are alive six months following discharge from hospital.

- Exclude patients who have died
- Exclude patients who decline the review or who do not attend an appointment offered
- Exclude patients who live out of the area
- Include all patients, regardless of place of residence (i.e. home, care home intermediate care)

Numerator

Number of patients in the denominator who were reviewed at six months post hospital discharge.

Examples of calculation for this measure:

Date of stroke	Date of 6m review	When to report
Patient is discharged from hospital on 10 th January	Has GP assessment any time between 10 th June and 10 th August (6 months +/- 1 month)	End August

¹⁴ See the Community Stroke Resource tool published by South Central Cardiovascular Network – available on the [SIP website](#) - and the GM-SAT tool developed by [CLAHRC for Greater Manchester](#) - <http://clahrc-gm.nihr.ac.uk/2010/10/15/post-stroke-review-pilot-project-in-collaboration-with-the-stroke-association>

Tolerance

It is acceptable for the six month review to take place between five and seven months post discharge.

Further guidance and detail

Calculation of six months should be from the date of discharge from the last inpatient setting for acute care or rehabilitation to the patient's final place of residence. If the patient is receiving care only rather than rehabilitation, even if resident in an intermediate care location, the date of discharge from the last *rehabilitation* setting should be used.

If there was an inpatient stay in an acute unit and then a rehabilitation unit, the six months should start from the date of discharge from the rehabilitation unit, regardless of whether the review team who see them cover both units.

The review should be offered to all stroke survivors, even those who may not appear to have a residual impairment.

Ideally the six month review should be undertaken by an individual with stroke specialist competencies and training and be part of a locally tailored system. A standardised form will ensure that every review in your area covers the same information, regardless of who delivers it.¹⁴

Reviews should be a multifaceted assessment of need and should encompass:

- Medicines/general health needs
- Ongoing therapy and rehabilitation needs
- Mood, memory cognitive and psychological status
- Social care needs, carer wellbeing, finances and benefits, driving, travel and transport

A review which included only stroke secondary prevention would not be considered to be acceptable.

Reviews could be carried out at home or in a primary care setting, and could be carried out by social care, however the model of service delivery will need to be decided locally and the content of the review a multifaceted assessment of need.

For continuity, link the information from six week, six month and annual reviews so each reviewer can build on previous discussions. Patients/carers should be given a copy of the outcome of the review and provided with contact details of who to contact for more information.

Include measures that can be used to identify change over time, both for the individual and for the service.

Further information about reviews can be found on the Stroke Improvement Programme website. www.improvement.nhs.uk/stroke/

ASI 9: Access to and availability of ESD services

Part a: Presence of a stroke skilled Early Supported Discharge team

Part b: Proportion of patients supported by a stroke skilled Early Supported Discharge team

How does this help patients?

Early Supported Discharge (ESD) can reduce long term dependency and admission to institutional care, as well as releasing hospital beds by reducing length of stay. This measure aims to increase access and availability of Early Supported Discharge services.

Background to the measure

Early Supported Discharge to a comprehensive stroke specialist and multidisciplinary team (which includes social care) in the community but with a similar level of intensity to stroke unit care, can reduce mortality and institution rates. [National Stroke Strategy 2007](#)⁴

The CQC stroke review reported that:

- 18% of PCTs had an ESD service with access to the full range of specialist staff in place across all or most of their area
- 27% of PCTs had made some progress, but did not have the full range of recommended specialists across their area
- 55% of PCTs reported that very limited progress had been made – although work was under way to implement ESD, building on existing community stroke teams

The best results are likely to be seen with well resourced and coordinated ESD teams and with patients with less severe stroke symptoms. [Langhorne et al 2007](#).¹⁵

Aspiration and rationale

40% of patients with confirmed stroke will be supported to leave hospital by an early supported discharge team.

The Cochrane systematic review 'services for reducing duration of hospital care for acute stroke patients' ([Early Supported Discharge Trialists](#))¹⁶ showed that ESD services, provided by specialist multidisciplinary teams, to a selected group (median 41%) of stroke patients admitted to hospital, reduced long term dependency and admission to institutional care, as well as shortening hospital stays. The greatest benefits were seen in the trials evaluating a coordinated multidisciplinary ESD team, and in stroke patients with mild to moderate disability.

Modelling by the National Audit Office suggests that increasing the availability of Early Supported Discharge from its current level, around 20% of patients, to a more optimal level of 43% of patients, with all stroke units providing ESD, would be cost effective over a ten year time frame. ([NAO Progress in improving stroke care 2010](#))¹⁷

Response (Part a)

Is there an Early Supported Discharge Service? (according to the guidance given below)

This is reported as Yes/No.

To answer Yes the service must have seen at least one patient for early supported discharge.

If No, please report from the following:

- Intention to implement ESD service in next month
- Intention to implement ESD service in next three months
- Intention to implement ESD service in next six months
- No intention to implement ESD service

¹⁵ <http://www.ncbi.nlm.nih.gov/pubmed/17351690>

¹⁶ <http://www.uio.no/studier/emner/medisin/med/MEDSEM8/v06/Utskrivning%5B1%5D.slag.pdf>

¹⁷ <http://www.nao.org.uk/publications/0910/stroke.aspx>

'Intention to implement' requires business case and service specification in place and agreement for the service to be commissioned.

Denominator (Part b)

Number of confirmed stroke patients discharged from hospital.

The denominator is likely to be measured for the cohort of patients in the acute stroke service but determination of denominator will be determined by the local pathway.

Numerator (Part b)

Number of patients in the denominator discharged with a plan to be seen and managed by the ESD team.

Tolerance

The metric has already taken into account the proportions for whom ESD would not apply, such as individuals who are eligible but who decline, who reside outside the UK and those not eligible for clinical reasons. The availability or capacity of an Early Supported Discharge team is not a reason to exclude patients from the denominator.

Further guidance and detail

An ESD service should be one component of a stroke specific community rehabilitation service available to stroke survivors on hospital discharge.

The CLAHRC ESD research team at the University of Nottingham have developed a [Consensus Document](#)¹⁸ on ESD by working with ESD trialists that contributed to a 2005 Cochrane systematic review (Langhorne 2005). This document makes research findings accessible to commissioners and service providers and promotes evidence based practice (Fisher et al. 2011).

ESD team composition and model of team working

ESD trialists agreed that multidisciplinary, specialist stroke ESD teams should plan and coordinate both discharge from hospital and provide rehabilitation in the community. For a notional 100 patient caseload per year (whole time equivalent values given in brackets), ESD teams should comprise:

- physiotherapist (1.0)
- occupational therapist (1.0)
- speech and language therapist (0.4)
- nurse (0-1.2)
- physician (0.1)
- social worker (0-0.5).

ESD teams should be organised by a coordinator and have a secretary. It was agreed that ESD teams should meet on a weekly basis and that each patient should be assigned a key-worker (a specific staff member responsible for them).

The effectiveness of the ESD service relies on cooperative and collaborative decision making between ESD and acute services. Coordinated continuity and handover of care from ESD to community based services also needs to be planned carefully.

Intervention

It was agreed by ESD trialists that both hospital staff and ESD team staff should identify patients for ESD. Specific eligibility criteria (safety, practicality, medical stability, disability) need to be followed to ensure that the service is provided for mild to moderate stroke patients who can benefit from ESD. Most patients eligible for ESD would have a Barthel score of between 10/20 and 17/20. Patients eligible for ESD would be able to transfer safely from bed to chair i.e. can transfer safely with one (e.g. an able carer), or independently if living alone.

¹⁸ <http://www.improvement.nhs.uk/stroke/ESD/tabid/160/Default.aspx>

Stroke skilled

The RCP definition of specialist stroke team applies in this instance.

'A specialist team or service is defined as a group of specialists who work together regularly managing people with a particular group of problems (stroke) and who between them have the knowledge and skills to assess and resolve the majority of problems. At a minimum any specialist team or service must be able to fulfil all the relevant recommendations made in the RCP National Clinical Guidelines 2008. The team does not have to manage stroke exclusively, but should have specific experience of and knowledge about people with stroke.' The spirit of this guidance is that individuals should be managed by stroke specific or neurological rehabilitation teams to whom appropriate stroke patients in a particular area are referred, but not by generic teams who also manage patients with non-neurological conditions..

An ESD service may be described in a different way, for example as assisted or supported discharge teams. If these teams carry out identical functions to those of an ESD team the service can be considered in the same way.

What is early?

It is not possible to suggest a specific number of days to define early discharge or prolonged stay as this is dependent upon clinical issues and creates an artificial cut off point which may not be clinically relevant. The principle has to be based on common sense, in that if the individual went home at a significantly earlier stage than they would have done had ESD not been available, this could be considered to be 'early'. Current research by CLAHRC however suggests that ESD teams need to be *responsive and agile* (i.e. not operating a waiting list) with ESD team members proactively facilitating discharge from hospital wards.

'Prolonged' could be taken to mean a length of stay of a period of more than several weeks, or where the individual could not be considered for early transfer out of hospital due to limited pace of recovery, significant impairment or other issues.