Minimum data set

Metric Ref.	Indicator	Metric	Operational Definition	Rationale	Quality Marker	Pathway Stage	Data Source	Notes
1	Preventable Strokes	Proportion of patients presenting with stroke with AF anti-coagulated on discharge (60% by April 2011)	This measure refers to secondary prevention. Proportion of patients presenting with new stroke with atrial fibrillation who are discharged on anticoagulation. Denominator- number of patients admitted with a stroke also with atrial fibrillation (newly diagnosed on this admission or previously diagnosed) Numerator- the number of these patients who were discharged on anticoagulation or who had a plan for anticoagulation to start, when clinically appropriate, in the discharge letter or medical notes. Record the number of patients admitted with confirmed stroke with atrial fibrillation. Record the number of patients who are discharged on anticoagulation and the number who have a plan for anticoagulation to start in the next month in the discharge letter. Tolerance- The metric has already taken into account the proportion likely to be excluded ie patients in whom anticoagulation is contraindicated or who decline. **Anticoagulation** refers to treatment with an anticoagulant such as Warfarin and not an antiplatelet such as Aspirin or Clopidogrel.	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% 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 anticoagulated. There are some good reasons not to anticoagulate (high risk of falls, 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. Warfarin is twice as effective as aspirin at preventing further stroke in people with AF. The rate of use has to be increased.	2	Prevention	Acute Trusts / New data	
2	Direct admission to a stroke ward	Proportion of patients admitted directly to an acute stroke unit within 4 hours of hospital arrival (90% by April 2011)	Denominator- number of patients with confirmed stroke Numerator- number of patients with confirmed stroke in an acute stroke unit bed at 4 hours after arrival at hospital. For each patient with confirmed stroke record date and time patient arrived in hospital and date and time patient arrived in a designated stroke bed. **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 the Emergency Room/ Accident and Emergency or in the imaging department en route to the stroke unit. Tolerance- The 10% tolerance allows for patients in whom stroke diagnosis is delayed due to atypical presentation, those who are FAST and ROSIER negative, and those patients appropriately directly admitted to ITU/CCU/tertiary centre. Exceptions- Exclude from the denominator patients who have a stroke whilst in hospital.	Timely access to acute stroke units prevents death and increases independence. National Stroke Stategy.	9	Acute	SINAP	
3	Acute stroke care	Proportion of patients spending 90% of their stay on a stroke ward (80% by April 2011)	Definition and guidance as the DH VSMR guidance Other guidance as DH FAQs	Reported as a DH Vital sign	9	Acute	DH Vital Sign data. SINAP	

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4	Access to brain imaging	i) Proportion of stroke patients scanned within one hour of hospital arrival (50% by April 2011) ii) Proportion of stroke patients scanned within 24 hours of hospital arrival (100% by April 2011)	Needs to be collected as two metrics; one for patients who require immediate imaging (i) and one for patients who do not (ii). i) Proportion of patients scanned within one hour of hospital arrival Denominator - Number of patients admitted with acute stroke Numerator- Number of these patients who are imaged within one hour of hospital arrival (see criteria for urgent imaging).. ii) Proportion of patients scanned within 24 hours of hospital arrival. Denominator-Number of patients admitted with acute stroke as i) above. Numerator- Number of these patients imaged within 24 hours of arrival (this number will include those scanned within one hour). Record number of patients admitted with stroke. Record the date and time of admission. Record date and time of first brain imaging. Exceptions- Exclude patients not scanned or had a delayed scan for clinical reasons and patients who declined. **NICE recommendations for imaging** i) Brain imaging should be performed immediately for people with acute stroke if any of the following apply: • indications for thrombolysis or early anticoagulation treatment • on anticoagulant 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 1 hour, whichever is sooner', in line with the National Stroke Strategy. ii)For all people with acute stroke without indications for immediate brain imaging, scanning should be performed as soon as possible. 'As soon as possible' is defined as 'within a maximum of 24 hours after onset of symptoms'.	Brain imaging should be performed immediately for defined groups of people with acute stroke. For people without indications for immediate imaging, scanning should be performed as soon as possible.(within a maximum of 24 hours after onset of symptoms) RCP National Clinical Guidelines for Stroke. NICE Guideline for stroke and TIA and National Stroke Strategy RCP National Sentinel Audit 2008 21% of patients, for whom both times are known, are scanned within 3 hours of stroke which is an improvement over the last audit but nowhere near high enough if patients are to achieve the best outcomes. The same comment applies to the figure of 65% scanned within 24 hours.	8	Acute	PACS Sentinel Audit, SINAP, Best Practice Tariff	
5	Management of high risk TIA patients - Clinic Appointment	Proportion of high risk TIA patients investigated and treated within 24hours of first contact with a health professional (60% by April 2011)	Definition and guidance as the DH VSMR guidance Other guidance as DH FAQs		5 and 6	TIA	DH Vital sign data	
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. (40 % by April 2011)	Denominator - number of patients with stroke, alive at 6 months post stroke. Numerator- number of patients who have been seen (assessed and /or treated) by a service providing psychological support capable of managing mood, behaviour or cognitive disturbance by six months post stroke. **Service providing psychological support for mood, behaviour or cognitive disturbance**- This service should be capable of assessing and managing individuals with mood, behaviour and cognitive disturbance and should comprise staff with special expertise and competence in assessing, treating and monitoring people with these needs eg clinical psychologist, psychiatrist, primary care mental health worker or be stroke specialists with additional expertise in managing people with these needs eg stroke specialist counsellor, stroke specialist practitioner eg occupational therapist Mood, behaviour or cognitive disturbance might include anxiety, emotionalism, depression, denial and difficulty coping emotionally and pychologically with the stroke which impedes recovery, problems with orientation and memory and inappropriate behaviour. Exceptions: Exclude patients who have died, patients who decline the assessment/intervention. Tolerance- 40% reflects evidence of likely numbers of individuals post stroke who could be expected to have problems with mo behaviour and cognition.	People who have strokes access high quality rehabilitation. Targeted interventions can help specific problems. National Stroke Strategy. Patients receive the …emotional support they need. Carers should be able to access the help and support they need.RCP National Clinical Guidelines for Stroke. Evidence for depression, anxiety and poor cognition rates from the South London Stroke Register.	10, 13	Rehabilitation, Life after stroke	New data. Could be collected at six week and six month review.	
7	Joint health and social care management	Proportion of patients and carers with joint care plans on discharge from hospital (85% by April 2011)	Denominator- number of stroke patients discharged alive Numerator - number of these patients (or their carers) who have a copy of their joint care plan on discharge from hospital **Joint care plan**- documented evidence of an assessment and management plan which takes into account the patients and carers health and social care needs. The content of the care plan should be jointly decided by both health and social care staff. Exceptions: Exclude patients who have no documented health or social care needs, patients not resident in the UK and patients who refuse a health/social care assessment or intervention. 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	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 -social care managed networks/teams to support this. National Stroke Strategy	12	Life after stroke	New Data	

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8	Assessment and review	Proportion of stroke patients that are reviewed six months after leaving hospital (95% by April 2011)	Number of stroke patients reviewed at 6 months post hospital discharge Denominator-number of people with stroke discharged alive who are still alive at 6 months Numerator- number of stroke patients reviewed at 6 months post hospital discharge **Review-** should be a multifaceted assessment of need and should encompass the individuals: -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 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 as long as the content of the review is a multifaceted assessment of need. Exceptions: Exclude patients who have died, patients who decline the review or patients who live out of the area. The review should be offered to all stroke survivors even those who may not appear to have residual impairment. Tolerance: It is acceptable for the six month review to take place between five and seven months post discharge	People who have had strokes either living at home or in care homes, are offered a review from primary care services of their health and social care status and secondary prevention needs, typically at 6 weeks and 6 months after leaving hospital. This is followed by an annual health and social care check. National Stroke Strategy. Ideally the 6 week review would be carried out by a stroke specialist who could be a doctor, or specialist nurse or AHP	10, 14	Rehabilitation, Life after stroke	New Data	
9	Access to and availability of ESD services	i) Presence of a stroke skilled Early Supported Discharge team	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 select from the following Intention to implement ESD service in next month Intention to implement ESD service in next 3 months Intention to implement ESD service in next 6 months No intention to implement ESD service 'Intention to implement' requires business case and service specification in place and agreement for the service to be commissioned.	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 uniit care, can reduce mortality and institution rates. National Stroke Strategy. The best results are likely to be seen with well resourced and co-ordinated ESD teams and with patients with less severe stroke symptoms Langhorne et al 2007	10, 12	Rehabilitation, transfer of Care	New data	
		ii) Proportion of patients supported by a stroke skilled Early Supported Discharge team (40% by April 2011)	Proportion of patients supported by an Early Supported Discharge team Denominator- number of stroke patients discharged alive Numerator- number of patients 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 or who reside outside the UK and those not eligible for clinical reasons. The availability or otherwise of an Early Supported Discharge team is not a reason to exclude patients from the denominator. **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 experi 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 as well as stroke and neurology. **Early supported discharge service**- a comprehensive stroke skilled multidisciplinary team who manage patients at their place of residence and who are able to provide rehabilitation of similar intensity to that of a stroke unit. Composition of the team would usually include a co-ordinator/manager, physiotherapist, occupational therapist, speech and language therapist with support from nursing and social care. **Eligiblity for ESD-** no clinical guidance is yet available but review of the literature and of existing services refers to eligible patients as those able to carry out a functional transfer safely with one, if living with an able carer, or independently if living alone, has a moderate disability (initial Barthel more than 9), and is able to manage other problems safely at home. Patients to be included will be those whom in the opinion of the multidisciplinary team will benefit from early discharge from hospital supported by therapy at home. It would not be appropriate to include patients with no functional deficit, or those who have had a prolonged inpatient stay.include patients discharged to services which carry out the functions of an ESD service as described above but who have a different name -assisted or supported discharge team for example. An ESD service should be one component of a stroke specific community rehabilitation service available to stroke survivors on hospital discharge.					