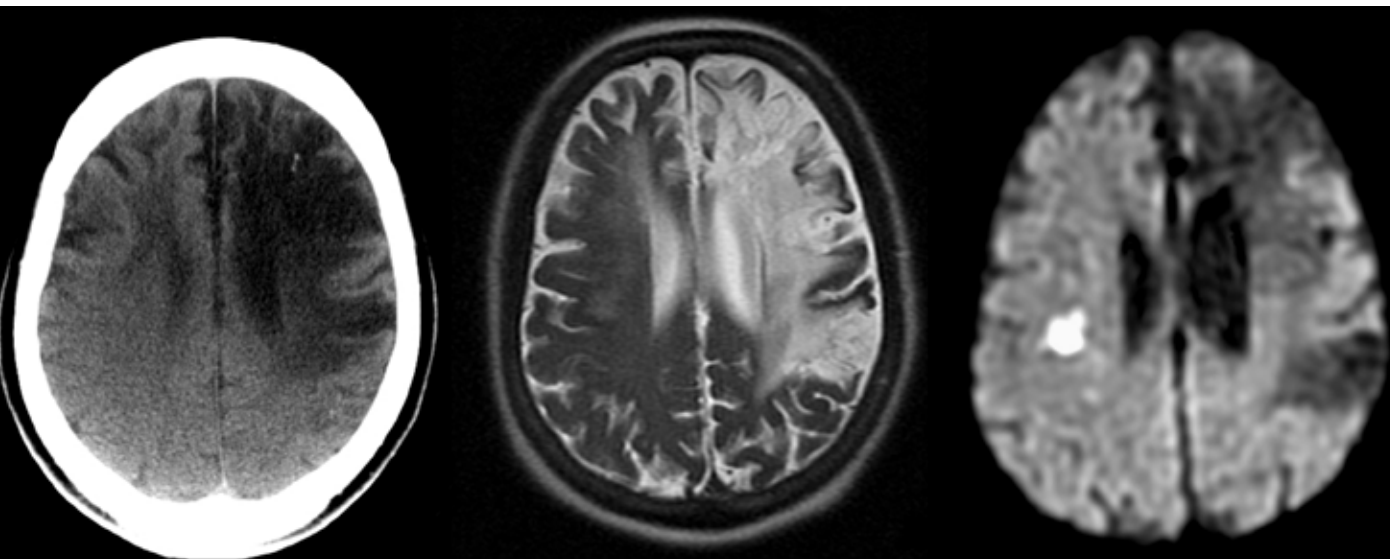




Scottish Stroke Care Audit 2009 National Report

Stroke Services in Scottish Hospitals
Data relating to 2007 -2008

Executive Summary



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یہ طبع مختلف زبانوں اور بڑے چھاب میں دستیاب کی جاسکتی ہے، برائلی (صرف انگریزی میں)۔ اپنی کمیونٹی کے زبان میں اس طبع کے ترجمے کے بارے میں معلومات حاصل کرنے کے لئے، براہ کرم مندرجہ ذیل نمبر پر فون کیجئے۔

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Introduction

There is strong evidence that well organised stroke care improves the outcome for stroke patients. In Scotland, SIGN and NHS Quality Improvement Scotland (NHSQIS) have developed guidelines and standards aimed at delivering that care. NHSQIS published the Clinical Standards for Stroke Services: Care of the Patient in the Acute Setting in March 2004. NHSQIS have updated the standards in June 2009 to take account of SIGN 108.

The Scottish Stroke Care Audit monitors the quality of care provided by the hospitals in all NHS Boards by collating data collected by the Managed Clinical Networks (MCNs). These data are used by the Scottish Government Health Department to monitor progress against the NHSQIS standards for stroke, its CHD & Stroke Strategy and now its Heart and Stroke Action Plan. NHS Boards are expected to identify aspects of their stroke services which do not meet National Standards and to work with their stroke MCNs to improve their performance.

This latest National Report includes data describing the quality of stroke care in each acute hospital grouped by NHS Board from 2007 to 2008. This allows each hospital and NHS Board not only to compare their performance with national standards, but also with other organisations. Hospitals with less satisfactory performance can learn from those where services are of higher quality. The main report has been circulated widely and is available online (<http://www.strokeaudit.scot.nhs.uk/>).

This Executive Summary aims to provide a very brief overview of the results of the audit. We have tabulated the main results for Scotland overall and for each hospital grouped by NHS Board. We have also shown 2007 performance in brackets after the 2008 data, 2008 (2007), to indicate whether performance is improving, stagnant or deteriorating.

A second table is included to measure the hospitals against those new standards which were introduced in 2009, and for which data are currently available.

The key standards with both current and new versions are:

Admission to a Stroke Unit

Stroke unit care is associated with reduced risk of dying and disability after a stroke

Current Standard (2004-2008): 70% of all patients admitted to hospital with a diagnosis of stroke are admitted to the stroke unit within 24 hours of presentation at hospital, and remain in specialist stroke care until in-hospital rehabilitation is complete.

New Standard (2009):

- 60% of all patients admitted to hospital with a diagnosis of stroke are admitted to the stroke unit on the day of presentation (Day 0), and remain in specialist stroke care until in-hospital stroke-related needs are met.
- 90% of all patients admitted to hospital with a diagnosis of stroke are admitted to the stroke unit on the day of admission, or the day following presentation at hospital, and remain in specialist stroke care until in-hospital stroke related needs are met.

Swallow Screen

About half of all stroke patients will not be able to swallow safely on admission to hospital. If given fluids or food inappropriately patients may develop, and possibly die from, pneumonia and if not treated appropriately they may become dehydrated and malnourished which may lead to slowed recovery and/ or worse outcome. This standard remains unchanged, although the wording of the standard has changed.

Current Standard (2004-2008): All patients have an initial swallow screen test performed on day of admission, unless there is a documented contraindication.

New Standard (2009): All patients are screened by a standardised assessment method to identify any difficulty in swallowing safely due to low conscious level and/ or the presence of signs of dysphagia. This is carried out on the day of admission and before giving food/ drink and oral medications and is clearly documented.

Scanning

A brain scan is essential to confirm the diagnosis of stroke and to distinguish stroke due to ischaemia (a blocked blood vessel) or a haemorrhage (burst blood vessel). Treatments for a blocked blood vessel are very dangerous to those with a burst blood vessel.

Current Standard (2004-2008): 80% of patients have CT/ MRI imaging within 48 hours of admission, unless there is a documented contraindication.

New Standard (2009): 80% of patients have CT/ MRI imaging on day of admission, unless there is a documented contraindication.

Aspirin for Ischaemic strokes

Aspirin given within 48 hours of stroke onset reduces the proportion of patients having recurrent strokes and residual disability.

Current Standard (2004-2008): Aspirin treatment is initiated within 48 hours of admission for all patients in whom a haemorrhagic stroke, or other contraindication, has been excluded.

New Standard (2009): Aspirin treatment is initiated on the day of admission or the following day and continued for all patients in whom a haemorrhagic stroke, or other contraindication, as specified in the British National Formulary, has been excluded.

Mini strokes (transient ischaemic attack), who do not need immediate admission, assessed in a specialist neurovascular clinic

The risk of a stroke within the first week is at least 10%. Appropriate treatment can halve this risk but only if started very early.

Current Standards: 80% of new patients are seen within 14 days of receipt of referral to the neurovascular clinic. With a desired criterion of 80% of new patients are seen within 7 days of receipt of referral to the neurovascular clinic

New Standard (2009): 80% of new patients with a stroke or TIA are seen within 7 days of receipt of referral to the neurovascular clinic.

Two new aspects of patient care now have standards to be met. The national audit has been extended in 2009 to capture data to measure hospitals performance against these new standards.

Thrombolysis

Thrombolysis can significantly improve patient outcomes if started within 4.5 hours of first stroke symptoms.

Standard 1: The MCN monitors the use of thrombolysis for acute ischaemic stroke and will administer this according to current SIGN guidelines to at least five patients per 100,000 population each year.

Standard 2: 80% of patients receive the bolus within one hour of arrival.

Carotid stenosis

The effectiveness of carotid endarterectomy has been shown to be dramatically reduced if performed more than 2 weeks post event.

Standard 1: 80% of patients undergoing carotid endarterectomy for symptomatic carotid stenosis have the operation within 14 days of the stroke event.

Standard 2: All patients with carotid artery territory TIA or ischaemic stroke who are candidates for carotid endarterectomy have carotid duplex (or other non-invasive imaging technique) unless there is a documented contraindication.

Understanding the Performance indicators

How a centre performs with respect to these five indicators, and the many others available in the main report, will usually reflect the actual performance of the service. However, if the audit methodology is not strictly adhered to, the local data may be misleading – most likely they will give a reassuringly good measure of performance. For instance, if the audit does not include patients managed out with the stroke unit an overly optimistic view of the quality of the service will result. In the long run this will harm patients.

Complete data for patients is not available until after their hospital discharge. Therefore, it is almost impossible to have complete data which reflects performance for patients admitted within the last few months. The audit methodology has changed in 2009 to use partial data on the initial (acute) stages of care to allow the audit to provide much more up to date data. For some indicators the NHSQIS standard (swallow screen and aspirin) is virtually impossible to meet (**Green**) since it requires ALL patients to receive the specified care. In these cases it is important to look for year on year improvement towards achieving the standards.

NHSQIS Standards, Summary Table

Green Meet or exceed National Standards

Red Do not meet National Standards but are no worse in 2008 than 2007. This also includes centres which have data for only 2008, as having data is an improvement over no data being collected.

Black Do not meet National Standards and are performing worse in 2008 than in 2007 or are failing to provide data (n/a).

The Figures presented are data from 2008 with data from 2007 where available in parentheses.

Hospital	Admitted to SU ≤ 1 day %	Swallow on day of admission %	Brain scan ≤ 2 days %	Aspirin ≤ 2 days %	NV clinic ≤ 7 days %	NV clinic ≤ 14 days %
NHSQIS Standard	70	100	80	100	80	80
Scotland – wide	57 (56)	46 (42)	89 (87)	76 (69)	59 (44)	81 (65)
Aberdeen Royal Infirmary	67 (71)	54 (53)	81 (81)	75 (68)	69 (57)	89 (82)
Dr Grays, Elgin	NR	13	93	78	n/a	n/a
Ninewells Hospital	56 (59)	52 (50)	88 (86)	71 (57)	n/a	n/a
Perth Royal Infirmary	2 (5)	58 (34)	84 (78)	62 (50)	55 (51)	75 (93)
Stracathro Hospital	NR*	NR*	NR*	NR*	83 (83)	97 (98)
Royal Infirmary Edinburgh	45 (41)	45 (39)	93 (88)	83 (61)	NR	NR
St Johns Hospital (Livingston)	39 (39)	50 (72)	89 (87)	71 (67)	22 (3)	58 (13)
Western General Hospital	72 (68)	62 (57)	95 (94)	75 (77)	93 (89)	97 (96)
Glasgow Royal Infirmary	54 (49)	n/a	92 (92)	90 (86)	20 (3)	46 (20)
Stobhill Hospital	55 (26)	n/a	97 (98)	90 (94)	66 (30)	98 (59)
Western Infirmary Glasgow	74 (90)	n/a	97 (98)	86 (90)	24 (5)	52 (11)
Southern General Hospital	75 (78)	79 (68)	95 (94)	79 (79)	44 (25)	85 (66)
Victoria Infirmary Glasgow	NR*	NR*	NR*	NR*	63 (85)	99 (96)
Inverclyde Royal Hospital	36 (38)	21 (59)	88 (89)	72 (68)	4 (13)	21 (20)
Royal Alexandra Hospital	49 (56)	n/a	76 (83)	63 (53)	88 (78)	100 (89)
Vale of Leven (Dumbarton)	30 (30)	n/a	89 (87)	69 (67)	NR	NR

ERRATUM

A clerical error was discovered with the cell for Crosshouse Hospital's 2008 swallow screening percentage. This was corrected to 71% from the previously published figure of 31%.

Hospital	Admitted to SU ≤ 1 day %	Swallow on day of admission %	Brain scan ≤ 2 days %	Aspirin ≤ 2 days %	NV clinic ≤ 7 days %	NV clinic ≤ 14 days %
NHSQIS Standard	70	100	80	100	80	80
Ayr Hospital	67 (75)	64 (65)	89 (86)	61 (58)	72 (39)	99 (73)
Crosshouse Hospital	63 (62)	71 (70)	82 (84)	69 (68)	65 (74)	90 (95)
Hairmyres Hospital	60 (59)	50 (46)	86 (83)	82 (65)	65 (30)	96 (63)
Monklands Hospital	79 (73)	46 (31)	79 (73)	81 (66)	97 (70)	99 (96)
Wishaw General Hospital	70 (50)	67 (38)	91 (88)	80 (78)	96 (91)	98 (98)
Forth Valley Hospital	46 (46)	67 (72)	90 (89)	74 (69)	28 (9)	53 (18)
Borders General Hospital	52 (63)	54 (58)	95 (91)	78 (71)	47 (56)	90 (96)
Dumfries & Galloway Royal Infirmary	68 (71)	71 (68)	92 (84)	82 (69)	92 (52)	99 (86)
Stranraer	NR	58 (45)	79 (64)	47 (36)	NR	NR
Raigmore Hospital	44 (38)	44 (36)	88 (83)	60 (53)	43 (20)	71 (55)
Lorn & Islands (Oban)	77 (68)	70 (50)	82 (76)	78 (66)	88 (77)	93 (95)
Belford Hospital (Fort William)	NR	72 (86)	87 (79)	54 (54)	NR	NR
Caithness Hospital	NR	75 (50)	33 (13)	70 (53)	NR	NR
Queen Margaret Hospital*	n/a (45)	n/a (32)	n/a (80)	n/a (55)	n/a (11)	n/a (50)
Victoria Hospital, Kirkcaldy*	n/a (38)	n/a (23)	n/a (86)	n/a (51)	n/a (14)	n/a (31)
Orkney	24 (48)	41 (44)	12 (48)	57 (72)	NR	NR
Shetland	NR	53 (33)	50 (37)	74 (46)	NR	NR
Western Isles	72 (32)	81 (46)	86 (66)	81 (56)	NR	NR

* Data for Fife is not available for 2008 due to problems with staffing.

n/a = not available (hospital does not collect or has not reported the data)

NR = not relevant (usually because service does not exist)

NR* = Inpatient rehab service only, recorded as part of the local acute hospital service

New NHSQIS Standards, Summary Table – 2008 data

Hospitals were not measured against the new Standards in 2008. However this table provides a preview of hospitals current performances against the new standards. **Green** highlights those that already meet the new standards.

Hospital	Admitted to SU day of admission %	Admitted to SU <= 1 day %	Brain scan day of admission %	Aspirin <= 1 days %
NHSQIS Standard	60	90	80	100
Scotland – wide	35	57	41	63
Aberdeen Royal Infirmary	59	67	29	67
Dr Grays, Elgin	NR	NR	56	76
Ninewells Hospital	20	56	28	62
Perth Royal Infirmary	2	2	37	51
Royal Infirmary Edinburgh	19	45	57	73
St Johns Hospital (Livingston)	21	39	56	60
Western General Hospital	45	72	59	65
Glasgow Royal Infirmary	23	54	35	72
Stobhill Hospital	19	55	30	79
Western Infirmary Glasgow	60	74	57	78
Southern General Hospital	67	75	66	69
Inverclyde Royal Hospital	19	36	32	52
Royal Alexandra Hospital	21	49	30	41
Vale of Leven (Dumbarton)	30	29	40	55

Hospital	Admitted to SU day of admission %	Admitted to SU <= 1 day %	Brain scan day of admission %	Aspirin <= 1 days %
NHSQIS Standard	60	90	80	100
Ayr Hospital	50	67	24	41
Crosshouse Hospital	43	63	17	39
Hairmyres Hospital	40	60	38	62
Monklands Hospital	42	79	26	67
Wishaw General Hospital	28	70	42	69
Forth Valley Hospital	26	46	53	63
Borders General Hospital	26	52	49	66
Dumfries & Galloway Royal Infirmary	33	68	36	70
Stranraer	NR	NR	11	41
Raigmore Hospital	19	44	45	50
Lorn & Islands (Oban)	68	77	27	61
Belford Hospital (Fort William)	NR	NR	54	51
Caithness Hospital	NR	NR	5	67
Queen Margaret Hospital	n/a	n/a	n/a	n/a
Victoria Hospital, Kirkcaldy	n/a	n/a	n/a	n/a
Orkney	12	24	6	57
Shetland	NR	NR	13	71
Western Isles	58	72	47	68

n/a = not available (hospital does not collect or has not reported the data)
NR = not relevant (usually because service does not exist)

Measures to Improve Performance

At a National Meeting in June 09 clinicians, MCN managers and audit staff shared their experiences of changing services to improve performance. Some of the changes are listed below.

Increasing the proportion of stroke patients admitted to a Stroke Unit within 1 day of admission to hospital.

- Reorganising patient pathway so that identified strokes are admitted directly to the stroke unit
- Stroke team visiting acute assessment area to assess patients and divert them to stroke unit
- Ensuring adequate numbers of stroke unit beds
- Closer working with bed management – ensuring that the bed managers are aware of the NHSQIS standard
- Ring fencing stroke unit beds
- Clinicians actively involved in managing capacity on the stroke unit
- Cooperation between hospitals in same area to ensure all stroke unit capacity is used optimally.

Increasing the proportion having a documented Swallow screen on day of admission.

- Direct admission to stroke unit where staff are trained to assess swallowing
- Training of nursing staff in the stroke unit, in medical assessment and in other wards
- Using a protocol and integrated care pathway to document assessment – the problem is that the screen is sometimes done but not recorded clearly

Increasing the proportion having a brain scan within 2 days of admission.

- Direct admission to stroke unit
- Protocol for scanning developed jointly with radiology
- Appropriate priority given to stroke patients
- Scanning available at weekends
- No need for routine immediate reporting by radiologist out of hours
- Introduction of electronic transmission of scans and reports, improving availability and permitting remote interpretation

Increasing the proportion of patients with ischaemic stroke who receive aspirin within 2 days of admission.

- Direct admission to stroke unit
- Early brain scanning
- Protocol or integrated care pathway
- Nurse prescribed aspirin

Increasing the proportion of patients with a mini stroke (transient ischaemic attack), who do not need immediate admission, assessed in a specialist neurovascular clinic within 14 and 7 days of receipt of referral.

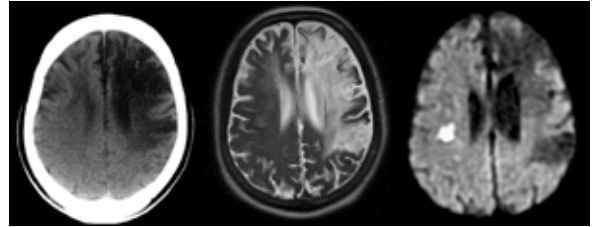
- Public campaign to make people more aware of the importance of transient neurological symptoms
- TIA hotlines for GPs, and out of hours services to obtain specialist input and an early hospital appointment
- More flexible clinics allowing patients to be seen at almost any time rather than during restricted periods
- Electronic referrals via SCI Gateway
- Filtering patients to prioritise those at highest risk of early strokes e.g. using the ABCD2 score
- Area wide planning for neurovascular clinics to allow staff to cross cover each others leave periods

Reducing the delays for patients receiving carotid surgery

- Joint clinics between surgeons and stroke physicians
- Agreed assessment protocols so that patients are fully assessed prior to referral
- Telephone and faxed referrals where split site working occurs
- Involvement of sufficient numbers of surgeons to ensure adequate capacity is maintained even during leave periods
- Appropriate prioritisation of carotid surgery – surgeons need to agree with those responsible for waiting lists that carotid surgery is clinically more urgent than some other operations even when waiting time targets may be breached

Conclusions

The introduction of the Stroke Strategy has been associated with significant improvement in stroke services across Scotland. However, the quality of stroke services varies greatly across Scotland. Further action is required in most NHS Boards since areas of poor performance are likely to be reflected in worse outcomes (more deaths and more disability) for their patients. In addition, poor care leads to longer lengths of hospital stay, greater residual dependency and thus higher costs to health services. No hospital meets all the NHSQIS standards, so all need to strive to improve their stroke services.



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