



# Scottish Stroke Care Audit

## **PUBLIC SUMMARY** **of 2013 National Report** Stroke Services in Scottish Hospitals

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### Translation Service

If you would like this leaflet in a different language, large print or Braille (English only), or would like information on how it can be translated into your community language, please phone 0131 275 6665.

This booklet is a shorter version of the full-length report:

**Scottish Stroke Care Audit**  
**2013 National Report**  
Stroke Services in Scottish Hospitals

It gives you some of the information in the full report but in much less detail.

It aims to help people with communication difficulties, for example difficulty concentrating, remembering, reading small print or understanding what you are reading.

Fewer and shorter words are used with larger print and spacing. We have also used bolded text to highlight important words.

If you have aphasia you may like to have someone with you to support you and help you understand the information in the booklet.

We are grateful to Chest Heart & Stroke Scotland, the Stroke Association, Speakability, the patient/ carer groups and health professionals that provided feedback on the 2012 Public Summary and those involved in viewing the drafts of the 2013 Public Summary.

If you would like to print more copies of this booklet or look at the full-length report you can find both at <http://www.strokeaudit.scot.nhs.uk/Reports.html>.



**STROKE?**

Think **FAST** & save a life  
CALL 999

**F** ace – Can they smile?  
Does one side droop?

**A** rm – Can they lift both  
arms? Is one weak?

**S** peech – Is their speech  
slurred or muddled?

**T** ime – To call 999.

If you see these signs call 999 **FAST**.

Chest Heart & Stroke Scotland [www.chss.org.uk](http://www.chss.org.uk) healthier scotland SCOTTISH GOVERNMENT

Chest Heart & Stroke Scotland and CHSS are operating names of The Chest Heart & Stroke Association Scotland, a registered Charity No. SC018761



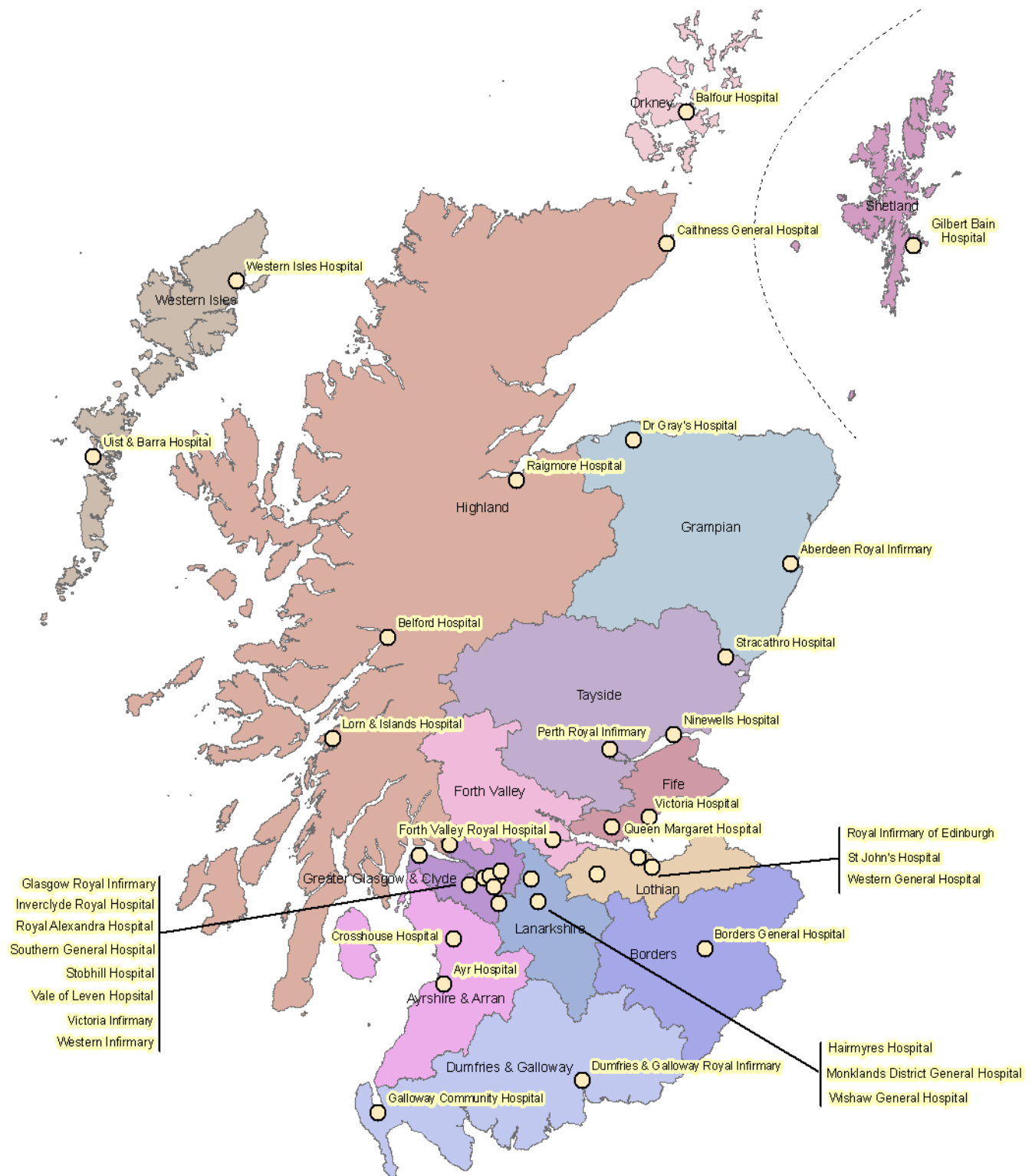
Stroke patients could get to hospital quicker thanks to a new smartphone App

The FAST test app - the first of its kind - has been devised by Graeme Heron and Dr. William Whiteley in the Division of Clinical Neurosciences University of Edinburgh, funded by Chest Heart & Stroke Scotland, to provide people with a simple test to spot stroke.



Scan with QR code reader

## Map of Scotland showing all hospitals in NHS Boards contributing to the Scottish Stroke Care Audit





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This section tells you about the **Scottish Stroke Care Audit** and how the **information is collected and stored**.

## What is the Scottish Stroke Care Audit?

The Scottish Stroke Care Audit **checks the quality of stroke care in hospitals** in Scotland.

The Scottish Stroke Care Audit **monitors the quality of care** of over **13,000 people seen in hospitals** in Scotland each year. There is strong evidence that **well organised stroke care improves the outcome** for stroke patients.

**Hospitals across Scotland routinely collect information about stroke.**



How many people have a new stroke?

How quickly do people go to hospital?

Do they go to a Stroke Unit?

When do they have a brain scan?

When do they start on medical treatment (for example aspirin)?

## Who keeps the information?



Each hospital in Scotland **gives the information to the health information service**.

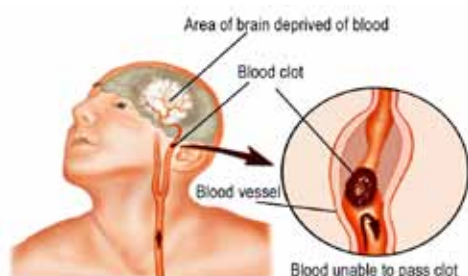
The information is stored **in keeping with the law** (Data Protection Act 1998).

People can ask to have their information removed from the audit.



## This section tells you about **Stroke** and **Transient Ischaemic Attack**.

### What is a stroke?



A stroke happens when **blood flow** to part of the **brain** is **stopped**.

This can be caused by

- a **blocked** blood vessel (a **blood clot** - **ischaemic stroke**)
- or a **burst** blood vessel which leads to bleeding into the brain (a **bleed** - **haemorrhagic stroke**)

### Stroke can affect people in different ways.

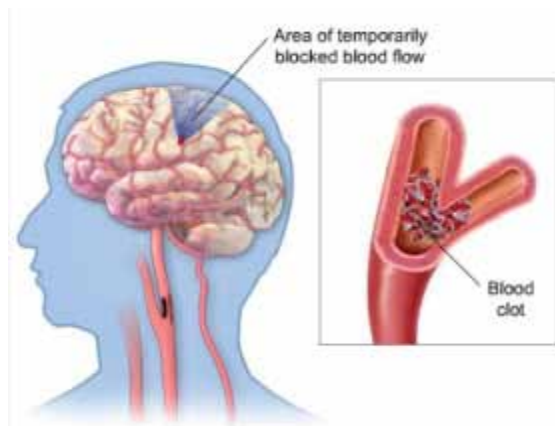


**Stroke can cause**

- **paralysis** and/ or **muscle weakness**, causing
  - **difficulty** in **getting around**;
  - **lack of movement**; and
  - **mobility problems**.
- **difficulty** with:
  - **speech** and **communication**;
  - **eating** and **drinking**;
  - **vision**; and
  - **thinking** and **planning**.



## Transient Ischaemic Attack (TIA)



Some people have a **TIA**, sometimes called a **mini stroke**.

A TIA **is like a stroke** except that in a TIA the **symptoms last less than a day** and then the person is **back to normal**.

People who have TIAs are **at risk of having a full stroke** and they should be **referred to a specialist neurovascular (stroke) clinic** immediately.

This section tells you about the **target/standards for stroke care** in Scotland and how **hospitals** in Scotland performed in 2012 compared to 2011.

Current guidelines on the management of patients with stroke or TIA emphasise the **importance of getting patients to specialist stroke services quickly** to allow prompt diagnosis and treatment.

A **HEAT target** related to admission to Stroke Unit was **introduced on 1st April 2011** as at this point none of the Health Boards had met the standards for admission to a Stroke Unit.

### What are HEAT targets?

HEAT targets are a set of **objectives, targets and measures** for NHS Scotland. They are **set by the Scottish Government** and **reviewed** throughout the year **with individual Health Boards**.

The **key targets fall into four main areas**:

**Health Improvement** – improving health and life expectancy;

**Efficiency and Governance Improvements** – continuously improving the effectiveness and efficiency of the NHS in Scotland;

**Access to services** – recognising patients' need for quicker and easier use of NHS services; and

**Treatment appropriate to individuals** – ensuring patients receive high quality services that meet their needs.

The HEAT target relating specifically to admission to a Stroke Unit reads:

***“To improve stroke care, 90% of all patients admitted with a diagnosis of stroke will be admitted to a Stroke Unit on the day of admission, or the day following presentation by March 2013.”***

By March 2013 the following Health Boards had achieved the stroke admission HEAT target of 90%:

Shetland (100%)
Ayrshire & Arran (96%)
Lanarkshire (93%)
Borders (91%)
Tayside (90%)

For more information on the HEAT target and Health Board/ hospital performance please refer to the 2013 Scottish Stroke Care Audit National Report which can be found at <http://www.strokeaudit.scot.nhs.uk/Reports.html>.



NHS Quality Improvement Scotland (NHS QIS) was part of the National Health Service. It set **standards of care** for NHS hospitals to meet. Until recently, NHS QIS set the standards for stroke care, last updating them in June 2009.

Healthcare Improvement Scotland took over the responsibilities of NHS QIS on 1st April 2011.

The Scottish Stroke Care Audit Steering Committee in collaboration with stroke colleagues across Scotland and the National Advisory Committee for Stroke at the Scottish Government **reviewed and updated the stroke standards in 2012**. The updated **Scottish Stroke Care Standards** were **launched in January 2013**. Detail of the new Scottish Stroke Care Standards can be found at [http://www.strokeaudit.scot.nhs.uk/Quality/Scottish\\_Stroke\\_Care\\_Standards.html](http://www.strokeaudit.scot.nhs.uk/Quality/Scottish_Stroke_Care_Standards.html).

The tables in this section of the report show **how hospitals in Scotland performed in 2012 compared to 2011 against the NHS QIS stroke care standards (2009)**.



There has been statistically significant improvement in performance since 2011



There has been no statistically significant change in performance since 2011



There has been a statistically significant decline in performance since 2011

NB: To find out where the hospitals are located please refer to the map on page 3.

For more **detailed information** on the contents of any of the tables please refer to the 2013 Scottish Stroke Care Audit National Report which can be found at

<http://www.strokeaudit.scot.nhs.uk/Reports.html>.

## Standards 1 and 2: Admission to Stroke Unit



**Stroke Unit** care can **reduce the risk of dying and disability** after a stroke.

1. **At least 60%** of all patients who come to hospital with a stroke should be **admitted to the Stroke Unit on the day they come in.**
2. **At least 90%** of all patients who come to hospital with a stroke should be **admitted to the Stroke Unit on the day they come in, or the day after.**

Performance in relation to Stroke Unit admission is described in the HEAT target section on page 10.

Changes to Scottish Stroke Care Standards (January 2013).

- **Standard 1 was removed**

- **Standard 2 remains the same - At least 90% of all patients who come to hospital with a stroke should be admitted to the Stroke Unit on the day they come in, or the day after.**

Standard 1 was removed for patient safety reasons because it is not always appropriate to move patients immediately to the Stroke Unit (for example, if the patient requires intensive care).

### Standard 3: Swallow Screen and/ or Test



3. All patients (**100%**) should be checked to **see if they can swallow safely.**

This check should be carried out **on the day the person comes into hospital** - and **before** they are given **food, drink or medicines.**

The **results** of the swallow check should be **clearly written** in the **patient's notes.**

About half of all stroke patients **can't swallow safely** when they come to hospital.

If they have food or drink it may go 'down the wrong way' and **cause a chest infection** or they may **become dehydrated** if they cannot eat or drink.

**Standard 3** – No hospitals have **achieved** standard 3

The table below details hospitals who have **not achieved** standard 3 indicating if they have **improved** (😊), **stayed the same** (😐) or **declined** (😞) (see key on page 11)

Gilbert Bain Hospital, Shetland (96%)	😐
Lorn & Islands Hospital, Oban (90%)	😐
Wishaw General Hospital (90%)	😊
Monklands Hospital, Coatbridge (86%)	😊
Ninewells Hospital, Dundee (83%)	😐

Galloway Community Hospital, Stranraer (83%)	☹️
Perth Royal Infirmary (82%)	☹️
Balfour Hospital, Orkney (81%)	☹️
Hairmyres Hospital, East Kilbride (80%)	😊
Ayr Hospital (79%)	☹️
Caithness General Hospital, Wick (79%)	☹️
Crosshouse Hospital, Kilmarnock (79%)	☹️
Forth Valley Royal Hospital, Larbert (77%)	😊
Dumfries & Galloway Royal Infirmary (76%)	☹️
Aberdeen Royal Infirmary (75%)	☹️
Belford Hospital, Fort William (74%)	☹️
Borders General Hospital, Melrose (74%)	☹️
Southern General Hospital, Glasgow (73%)	☹️
Inverclyde Royal Hospital, Greenock (69%)	☹️
St John's Hospital, Livingston (69%)	☹️
Raigmore Hospital, Inverness (64%)	☹️
Western Isles Hospital, Stornoway (63%)	☹️
Victoria Hospital, Kirkcaldy (63%)	☹️
Western General Hospital, Edinburgh (60%)	☹️
Uist & Barra Hospital (60%)	😊
Royal Infirmary of Edinburgh (56%)	☹️
Dr Gray's Hospital, Elgin (56%)	😊
Western Infirmary Glasgow (50%)	☹️
Glasgow Royal Infirmary (50%)	☹️
Victoria Infirmary Glasgow (37%)	☹️
Royal Alexandra Hospital, Paisley (33%)	😊

Changes to Scottish Stroke Care Standards (January 2013).

- Standard 3 was revised – At least 90% of patients should be checked to see if they can swallow safely on the day they are admitted to hospital.**



Standard 3 was changed to accommodate patients admitted late at night who may have their swallow screen/test after midnight. It is clearly stated in the information provided with the standards that it is important that **all patients** should have their swallowing assessed before being given anything to eat or drink.

## Standard 4: Brain Scan



4. **At least 80%** of patients should have a **brain scan on the day they come into hospital.**

A **brain scan** shows whether the stroke is due to a **blocked blood vessel** or a **burst blood vessel** (see page 7).

This is important so that the person can have the **correct medication** as soon as possible.

**Standard 4** – Hospitals that have **achieved** standard 4

Western Isles Hospital, Stornoway (85%)
---

Southern General Hospital, Glasgow (83%)
--

The table below details hospitals who have **not achieved** standard 4 indicating if they have **improved** (😊), **stayed the same** (😐) or **declined** (😞) (see key on page 11)

Caithness General Hospital, Wick (77%)	😞
Perth Royal Infirmary (76%)	😞
Royal Infirmary of Edinburgh (76%)	😞
Western Infirmary Glasgow (76%)	😞
St John's Hospital, Livingston (75%)	😞
Galloway Community Hospital, Stranraer (72%)	😞
Dr Gray's Hospital, Elgin (71%)	😞
Western General Hospital, Edinburgh (71%)	😞



Hairmyres Hospital, East Kilbride (69%)	☹
Victoria Hospital, Kirkcaldy (67%)	😊
Borders General Hospital, Melrose (64%)	☹
Aberdeen Royal Infirmary (64%)	☹
Belford Hospital, Fort William (63%)	☹
Forth Valley Royal Hospital, Larbert (59%)	☹
Dumfries & Galloway Royal Infirmary (56%)	☹
Lorn & Islands Hospital, Oban (55%)	☹
Wishaw General Hospital (55%)	☹
Glasgow Royal Infirmary (53%)	☹
Raigmore Hospital, Inverness (51%)	☹
Ninewells Hospital, Dundee (49%)	☹
Monklands Hospital, Coatbridge (47%)	☹
Gilbert Bain Hospital, Shetland (46%)	☹
Inverclyde Royal Hospital, Greenock (42%)	☹
Victoria Infirmary Glasgow (41%)	☹
Crosshouse Hospital, Kilmarnock (39%)	☹
Ayr Hospital (37%)	☹
Royal Alexandra Hospital, Paisley (29%)	☹
Balfour Hospital, Orkney (5%) <i>(Do not have a CT scanner)</i>	☹
Uist & Barra Hospital (0%) <i>(Do not have a CT scanner)</i>	☹

Changes to Scottish Stroke Care Standards (January 2013).

- **Standard 4 was revised – At least 90% of patients should have a brain scan within 24 hours of being admitted to hospital.**

Standard 4 was revised because we are now able to record the time of scan electronically. Brain scanning as soon as possible continues to be recommended.

## Standard 5: Medication



5. Patients with **blocked blood vessels** should have **aspirin** on the **day they come into hospital or the day after**.

If people have **aspirin as soon as possible** after a stroke this can **reduce the risk** of **another stroke** and **reduce disability**.

**Aspirin is only given to people who have a stroke due to a blocked blood vessel, not a burst one** (see page 7).

People who have had a stroke **should only take aspirin on the advice of a doctor** since it is not always appropriate.

Some people **can't have aspirin** but may be able to have an **alternative medication**.

**Standard 5 – No hospitals have achieved standard 5**

The table below details hospitals who have **not achieved** standard 5 indicating if they have **improved** (😊), **stayed the same** (😐) or **declined** (😞) (see key on page 11)

Gilbert Bain Hospital, Shetland (95%)	😐
Balfour Hospital, Orkney (92%)	😐
Wishaw General Hospital (92%)	😐
St John's Hospital, Livingston (90%)	😐
Ninewells Hospital, Dundee (89%)	😐
Perth Royal Infirmary (87%)	😐
Forth Valley Royal Hospital, Larbert (87%)	😐
Hairmyres Hospital, East Kilbride (86%)	😐
Monklands Hospital, Coatbridge (83%)	😐

Aberdeen Royal Infirmary (83%)	☹
Borders General Hospital, Melrose (80%)	☹
Galloway Community Hospital, Stranraer (80%)	☹
Victoria Hospital, Kirkcaldy (80%)	☹
Southern General Hospital, Glasgow (79%)	☹
Dr Gray's Hospital, Elgin (78%)	☹
Lorn & Islands Hospital, Oban (77%)	☹
Raigmore Hospital, Inverness (77%)	☹
Inverclyde Royal Hospital, Greenock (76%)	☹
Royal Infirmary of Edinburgh (76%)	☹
Ayr Hospital (75%)	☹
Caithness General Hospital, Wick (73%)	☹
Dumfries & Galloway Royal Infirmary (73%)	☹
Western General Hospital, Edinburgh (73%)	☹
Victoria Infirmary Glasgow (68%)	☹
Crosshouse Hospital, Kilmarnock (68%)	☹
Glasgow Royal Infirmary (67%)	☹
Western Infirmary Glasgow (63%)	☹
Western Isles Hospital, Stornoway (57%)	☹
Belford Hospital, Fort William (55%)	☹
Royal Alexandra Hospital, Paisley (40%)	☹
Uist & Barra Hospital (0%) ( <i>Data from 2011 were included in Western Isles data</i> )	☹

Changes to Scottish Stroke Care Standards (January 2013).

- **Standard 5 remains the same** - Patients with **blocked blood vessels** should have **aspirin** on the **day they come into hospital or the day after**.

## Standard 6: Specialist neurovascular (stroke) clinic



6. **At least 80%** of new patients with a **TIA** should be seen **within 7 days** from when the referral is received by the clinic.

If people with a **TIA don't need to be admitted into hospital**, they should be seen at a specialist neurovascular (stroke) clinic as soon as possible.

There is a **10% risk of having another stroke** in the first week following a TIA.

**Early treatment can reduce this risk by half.**

**Standard 6 – Hospitals who have achieved standard 6**

Ninewells Hospital, Dundee (100%)
Western Isles Hospital, Stornoway (100%)
Wishaw General Hospital (98%)
Western General Hospital, Edinburgh (98%)
Monklands Hospital, Coatbridge (98%)
Ayr Hospital (97%)
Hairmyres Hospital, East Kilbride (97%)
Forth Valley Royal Hospital, Larbert (95%)
Borders General Hospital, Melrose (95%)
Crosshouse Hospital, Kilmarnock (93%)
Stracathro Hospital, Brechin (92%)
Perth Royal Infirmary (91%)
Dumfries & Galloway Royal Infirmary (89%)
Aberdeen Royal Infirmary (86%)
Lorn & Islands Hospital, Oban (83%)
Victoria Hospital, Kirkcaldy (82%)
Queen Margaret Hospital, Dunfermline (81%)
St John's Hospital, Livingston (80%)

The table below details hospitals who have **not achieved** standard 6 indicating if they have **improved** (😊), **stayed the same** (😐) or **declined** (😞) (see key on page 11)

Raigmore Hospital, Inverness (79%)	😐
Dr Gray's Hospital, Elgin (26%)	😊

The following hospitals either do not provide specialist neurovascular (stroke) clinics or do not currently collect or submit data to the Scottish Stroke Care Audit.

Balfour Hospital, Orkney
Belford Hospital, Fort William
Caithness General Hospital, Wick
Galloway Community Hospital, Stranraer
Gilbert Bain Hospital, Shetland
Glasgow Royal Infirmary
Inverclyde Royal Hospital, Greenock
Royal Alexandra Hospital, Paisley
Royal Infirmary of Edinburgh
Southern General Hospital, Glasgow
Uist & Barra Hospital
Victoria Infirmary Glasgow
Western Infirmary Glasgow

Changes to Scottish Stroke Care Standards (January 2013).

- **Standard 6 was revised – At least 80%** of new patients with a TIA should be seen **within 4 days** from when the referral is received by the clinic.

Standard 6 was made more challenging because the risk of suffering another TIA (or stroke) is highest in the two days after the TIA. The earlier treatment can be started, the more strokes can be avoided.

## Standards 7 and 8: Thrombolysis



Hospitals should use **thrombolysis** in line with **current guidelines**.

7. Hospitals should aim to treat **at least 5 patients** per **100,000 persons** per **year** in their area.

8. **At least 80%** of patients should receive the first dose of the drug **within 1 hour** of **arrival at hospital**.

Thrombolysis is a drug that **breaks up clots** in blood vessels.

It **works if given within 4½ hours** of the first signs of stroke.

It can only be **used** in people who have had a **stroke due to a blood clot**.

It is not a cure but can **reduce disability** in some people.

### Standards 7 and 8

All Health Boards are exceeding the requirements of 5 patients per 100,000 population other than NHS Orkney. Patients from NHS Orkney are airlifted to NHS Grampian and some patients will arrive in time to have thrombolysis, but they are included in the NHS Grampian data as they are admitted to Aberdeen Royal Infirmary for treatment.

All hospitals providing a thrombolysis service continue to strive to meet the 1 hour door to needle time of standard 8. For further details of thrombolysis services please refer to the tables and chart in the Scottish Stroke Care Audit National Report which can be accessed on the audit website ([www.strokeaudit.scot.nhs.uk](http://www.strokeaudit.scot.nhs.uk)).

Changes to Scottish Stroke Care Standards (January 2013).

- **Standard 7 was removed**
- **Standard 8 remains the same - At least 80%** of patients should receive the first dose of the drug **within 1 hour** of **arrival at hospital**.

Standard 7 was removed because all Health Boards have already achieved this level and the standard has achieved its purpose (to encourage development of thrombolysis services in every Health Board).

## Standard 9: Carotid Endarterectomy



**If people need to have a carotid endarterectomy**

**9. At least 80% of patients should have the operation within 14 days of their stroke event.**

Carotid endarterectomy is an **operation to clear a narrowing of the blood vessels in the neck** that could cause a further stroke.

### Standard 9

Data relating to carotid intervention have been collected since July 2012 in all Health Boards. This is the first attempt at reporting carotid intervention within the SSCA National Report and the data collection process is new and incomplete (approximately 50% of cases are included in the audit from July-Dec 2012). Therefore the findings should be treated with caution.

The only part of the process to be reported is the proportion of cases performed within 14 days of the patient having a stroke. For the six months to December 2012 the proportion of cases operated within 14 days of the presenting event was 40% (48/119). This may reflect ongoing developments in the carotid pathway and data collection processes in each of the Health Boards.

Changes to Scottish Stroke Care Standards (January 2013).

- **Standard 9 remains the same - At least 80% of patients should have the operation within 14 days of their stroke event.**



## This section tells you how hospitals in Scotland have performed over the past 8 years in relation to the **NHS QIS standards for stroke care (2009)**.

There have been **notable improvements** since 2005 in the number of patients admitted to a Stroke Unit at any time during their admission, an increase from **71% to 90%**. SU admission by day following admission improved from **49%** (2005) to **63%** (2010). Following introduction of the HEAT target in 2011 it improved from **71%** (2010/11) to **80%** (2012/13).

Standards 1 and 2 are reported in the HEAT Target section of the National Report. For further details see <http://www.strokeaudit.scot.nhs.uk/Reports.html>.

There are also **improvements in all of the other standards** for stroke care since 2005.

	2005	2012
<b>Standard 3:</b> More patients <b>have a brain scan</b> on the day they come into hospital.	27%	59%
<b>Standard 4:</b> More patients <b>have a swallow screen</b> on the day they come into hospital.	47%	68%
<b>Standard 5:</b> More patients with a blocked blood vessel <b>have aspirin</b> by the day after they come into hospital.	41%	76%
<b>Standard 6:</b> More patients are <b>seen within 7 days</b> from referral at a specialist neurovascular (stroke) clinic.	30%	91%

<b>Data relating to Standard 7 have been collected since 2008</b>	2008	2012
<b>Standard 7:</b> More patients are being treated with thrombolysis (number per <b>100,000 persons</b> per year in their area).	5	12

<b>Data relating to Standard 8 have been collected since 2010</b>	2010	2012
<b>Standard 8:</b> More patients receive the first dose of the drug <b>within 1 hour of arrival at hospital</b> .	18%	29%



Data relating to Standard 9 (**at least 80%** of patients should have the operation **within 14 days of their stroke event**) have been collected since July 2012 and will be reported in the 2014 National Report.

The **standards for stroke care** are based on **evidence** that **certain treatments improve outcomes**.

Hospitals are expected to:

- **improve their stroke services as quickly** as possible; and
- meet as **many** of these **standards** as possible.

Some of the standards require **all patients** to receive the care (for example, swallow screen/test and aspirin). This is possible but it is important to also **look for improvements** each year.

## This section tells you how **Stroke Managed Clinical Networks (MCNs)** are working to **improve stroke services across Scotland**.



Every region in Scotland has a **Stroke Managed Clinical Network (MCN)**.

Stroke MCNs are **groups of staff and people who have had a stroke who work together to improve stroke services** in their **local area**.

For further details about the work of your **local Stroke MCN** contact your local MCN manager/co-ordinator (page 33).

MCNs use the Scottish Stroke Care Audit data to **monitor performance** in their local area against the stroke care standards. They are able to identify individual patients who have not been treated in line with the standards and the reasons why. This allows them to **implement change in the stroke care pathway leading to improvement** in the delivery of stroke care locally.

Below are **listed some examples of changes Stroke MCNs** across Scotland are making to **improve stroke care** in their local areas in general and against the various standards.

### **General improvements**

- **regular feedback to staff** in the Stroke Unit and other related wards and units about performance, change and improvements; and
- use of **Incident Forms** to highlight when appropriate standards of patient care are not being delivered.

## Stroke Unit admission

- development of an acute '**outreach service**' – a senior nurse monitors patients in Accident & Emergency and the Medical Admitting Units/wards and ensures they are transferred to the Stroke Unit as soon as possible; and
- **arranging daily meetings** to ensure that all stroke patients are admitted to the Stroke Unit and appropriate patients are discharged or moved to rehabilitation beds to allow Stroke Unit beds to become available.

## Swallow Screen/ Test

- **reviewing the protocols and forms** used to record swallow screen/test; and
- **developing** an acute '**outreach service**' – nurses from the Stroke Unit contact admitting/other wards with stroke patients that cannot be moved to the Stroke Unit and either prompt a swallow screen or attend the ward to swallow screen the patients.

## Brain scan

- **increasing the amount of time** the brain scanner is **available** to include out of hours time and access to the scanner when needed, not at fixed times; and
- **examining how patients are referred** for brain scans and **identifying delays** in this referral process.

## Medication

- ensuring that patients are **prescribed aspirin as soon as the scan result is known** (rather than the next day); and
- **ensuring** that the **correct protocol** for prescribing aspirin and other related medications **is followed**.

## Specialist neurovascular (stroke) clinic

- increasing the number of available **appointments** at clinics to ensure that **clinics do not run on only one day of the week**; and
- **reviewing referral processes from General Practitioners (GPs – family doctors)** and **setting up a hotline** for GPs to contact stroke doctors directly.

## Thrombolysis

- **agreeing pre-hospital procedures** with the Scottish Ambulance Service. **Paramedics** can now **contact stroke doctors directly** in some areas; and
- using **Telemedicine** (see page 29) when local stroke doctors are not available to give advice.

## Carotid Endarterectomy

- **development of pathways** to support **rapid access** for brain scanning and carotid artery imaging; and
- **increased and quicker access** to surgical assessment and operating theatres.

## Summary

There has been **an improvement in stroke services** across Scotland in the past year.








Hospitals are **making progress towards meeting the stroke care standards**.


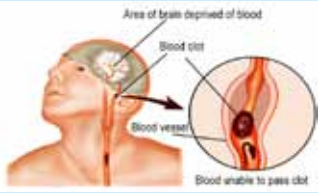





The **quality** of stroke services **still varies** across Scotland.

**No hospital** meets **all of the NHS QIS stroke care standards (2009)**, so **all** need to **try to improve stroke services**.

The **Scottish Stroke Care Audit team** are **working closely** with the **Stroke Managed Clinical Networks** across Scotland to identify areas where changes could be made to **improve performance** against the **standards** and **improve stroke care**.

This section gives a brief **explanation** of some of the **key words** used in this booklet.

	<p><b>Antiplatelets</b> - A medicine which reduces the risk of clots forming in your blood. This reduces your risk of having a stroke or heart attack.</p>
	<p><b>Aphasia</b> - When people have problems with talking, understanding, reading and writing.</p>
	<p><b>Blood Clot</b> - Cause of ischaemic stroke. The other cause of stroke is bleeding in the brain (haemorrhagic stroke).</p>
	<p><b>Brain Scan</b> - Sometimes referred to as CT scan or imaging (Computerised Tomography). It is an x-ray to look at someone's brain to help diagnose any problems. (Sometimes an MRI scan is also mentioned – Magnetic Resonance Imaging)</p>
	<p><b>Carotid Endarterectomy</b> - An operation to clear narrowing of the blood vessels in the neck that could cause a further stroke.</p>
	<p><b>Data Protection</b> - If you handle personal information about people, you have a number of legal obligations to protect that information under the Data Protection Act 1998. This is a United Kingdom Act of Parliament which defines UK law on the processing of data on identifiable living people.</p>
	<p><b>Managed Clinical Network (MCN)</b> - Groups of staff and people with stroke who work together to improve stroke services in their local area.</p>

	<p><b>Specialist neurovascular (stroke) clinic</b> - An outpatient clinic for patients with TIA (mini stroke) to investigate causes and help prevent stroke.</p>
	<p><b>Stroke</b> - A condition that happens when blood flow to part of the brain is stopped.</p>
	<p><b>Stroke Units</b> - hospital wards where the doctors, nurses, and other staff have been trained specifically to provide care for acute stroke patients. Care in Stroke Units has been shown to improve a patient's chance of recovery and independent living.</p>
	<p><b>Swallow Screen/ Test</b> - An assessment carried out to check if a person can swallow safely.</p>
	<p><b>Telemedicine</b> - Stroke doctors use computers and telephone links. They discuss results and treatment with local doctors. This means that patients can have treatment more quickly.</p>
	<p><b>Thrombolysis</b> - Treatment with a drug that breaks down blood clots (sometimes referred to as a clot busting drug)</p>
	<p><b>Transient Ischaemic Attack (TIA)</b> – a less serious or mini stroke, where the effects pass quickly and leave no damage.</p>

## This section tells you **who** was involved in the **development** of this **booklet**.

Many people have helped to write this report:

- patients who have suffered a stroke who have given medical information to the audit;
- staff at all hospitals involved in the audit;
- the Audit Team; and
- the Report Writing Group.

This Summary was written by Hazel Dodds, Lee Barnsdale, Professor Martin Dennis, Professor Peter Langhorne, Moranne MacGillivray, Dr Mary-Joan Macleod, Dr Christine McAlpine, David Murphy and Alan Reekie with contributions from NHS Boards and voluntary organisations.

Some of the material used in this report was from the National Advisory Committee for Stroke documents:

*Royal College of Physicians National Stroke Audit 2008 – Organisation of Care*

*What's new in stroke and aphasia?*

*Easy Access Version of Better Heart Disease and Stroke Action Plan (2009)*

These were written by Annette Cameron, Speech & Language Therapist with help from a group of people with aphasia across Scotland and designed by Medical Illustration Department, Aberdeen University.

The various images throughout the document have come from the following websites:

[www.bing.com](http://www.bing.com)

[www.chss.org.uk/](http://www.chss.org.uk/)

[www.medicimage.co.uk/Index.asp](http://www.medicimage.co.uk/Index.asp)

Chest Heart and Stroke Scotland provided the Swallow Screen/Test photograph.



This section tells you **who you can contact to find out more** about stroke and organisations that can provide you with further information.



### **Chest Heart & Stroke Scotland**

3rd Floor, Rosebury House  
9 Haymarket Terrace, Edinburgh, EH12 5EZ  
telephone: 0131 225 6963  
advice line: 0845 077 6000  
email: [admin@chss.org.uk](mailto:admin@chss.org.uk)  
website: [www.chss.org.uk](http://www.chss.org.uk)



### **The Stroke Association**

Links House, 15 Links Place  
Edinburgh, EH6 7EZ  
telephone: 0131 555 7240  
stroke helpline: 0303 3033 100  
email: [scotland@stroke.org.uk](mailto:scotland@stroke.org.uk)  
website: [www.stroke.org.uk](http://www.stroke.org.uk)



### **Different Strokes**

9 Canon Harnett Court  
Wolverton Mill  
Milton Keynes, MK12 5NF  
telephone: 0845 130 7172  
email: [webcontact@differentstrokes.co.uk](mailto:webcontact@differentstrokes.co.uk)  
website: [www.differentstrokes.co.uk](http://www.differentstrokes.co.uk)



## **Speakability**

1 Royal Street

London, SE1 7LL

telephone: 080 8808 9572

(Helpline Monday to Friday 10am - 4pm)

email: [speakability@speakability.org.uk](mailto:speakability@speakability.org.uk)

website: [www.speakability.org.uk](http://www.speakability.org.uk)



## **Aphasia Help**

Explains about stroke and aphasia

[www.aphasiahelp.org](http://www.aphasiahelp.org)

## **AphasiaNow**

For people with aphasia

[www.aphasianow.org](http://www.aphasianow.org)

**This section tells you who you can contact to find out more about the Scottish Stroke Care Audit, Stroke Care in general and Stroke Care in your local area.**

If you have any general questions about stroke care in your local area please contact your local Stroke Managed Clinical Network.

Health Board	Contact Name	Phone Number	Email Address
Ayrshire & Arran	Denise Brown	01563 825818	<a href="mailto:denise.brown@aaaht.scot.nhs.uk">denise.brown@aaaht.scot.nhs.uk</a>
Borders	Sandi Haines	01896 831869	<a href="mailto:sandi.haines@borders.scot.nhs.uk">sandi.haines@borders.scot.nhs.uk</a>
Dumfries & Galloway	Christine Cartner	01387 244227	<a href="mailto:christine.cartner@nhs.net">christine.cartner@nhs.net</a>
Fife	Morag Maillie	01592 226841	<a href="mailto:moragmaillie@nhs.net">moragmaillie@nhs.net</a>
Forth Valley	David Munro	01786 457220	<a href="mailto:david.munro@nhs.net">david.munro@nhs.net</a>
Grampian	Lorraine Urquhart	01224 558606	<a href="mailto:lorraine.urquhart@nhs.net">lorraine.urquhart@nhs.net</a>
Greater Glasgow & Clyde	Camilla Young	0141 232 7789	<a href="mailto:camilla.young@nhs.net">camilla.young@nhs.net</a>
Highland	Christian Goskirk	01408 664078	<a href="mailto:christian.goskirk@nhs.net">christian.goskirk@nhs.net</a>
Lanarkshire	Katrina Brennan	01236 707724	<a href="mailto:katrina.brennan@lanarkshire.scot.nhs.uk">katrina.brennan@lanarkshire.scot.nhs.uk</a>
Lothian	Morag Medwin	0131 537 9208	<a href="mailto:morag.medwin@nhslothian.scot.nhs.uk">morag.medwin@nhslothian.scot.nhs.uk</a>
Orkney	Nickie Milne	01856 888023	<a href="mailto:nichola.milne@nhs.net">nichola.milne@nhs.net</a>
Tayside	Gail Smith	01307 474157	<a href="mailto:gailsmith@nhs.net">gailsmith@nhs.net</a>
Shetland	Kerry Russell	01595 743632	<a href="mailto:kerry.russell@nhs.net">kerry.russell@nhs.net</a>
Western Isles	Chrisanne Campbell	01851 704704	<a href="mailto:chrisanne.campbell@nhs.net">chrisanne.campbell@nhs.net</a>

Please refer questions on this report to **Hazel Dodds** and questions relating to data included in the report to **David Murphy**.

For general questions about the Scottish Stroke Care Audit contact **Hazel Dodds**.

### **Hazel Dodds**

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email: <a href="mailto:hazeldodds@nhs.net">hazeldodds@nhs.net</a>	Edinburgh, EH12 9EB

### **David Murphy**

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phone: 0131 275 6624	1 South Gyle Crescent,
email: <a href="mailto:david.murphy2@nhs.net">david.murphy2@nhs.net</a>	Edinburgh, EH12 9EB

If you have general questions about stroke care in Scotland please contact **Professor Martin Dennis**, Chair of the Scottish Stroke Care Audit and the National Advisory Committee for Stroke.

### **Professor Martin Dennis**

Clinical Lead	University of Edinburgh
phone: 0131 537 1719	Division of Clinical Neurosciences
email: <a href="mailto:martin.dennis@ed.ac.uk">martin.dennis@ed.ac.uk</a>	Bramwell Dott Building, Western General Hospital, Crewe Road, Edinburgh, EH4 2XU









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