



Scottish Stroke Care Audit

PUBLIC SUMMARY
of 2011 National Report
Stroke Services in Scottish Hospitals

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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
2011 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 2010 Public Summary and the drafts of the 2011 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>.

Think **FAST** & save a life

A stroke is a medical emergency.

To check if someone is having a stroke, use the F-A-S-T test.

Face: Can they smile? Does one side droop?

Arm: Can they lift both arms? Is one weak?

Speech: Is their speech slurred or muddled?

Time: to call 999.

If you see these signs call 999 immediately.

The faster you react, the better their chances of recovery.



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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?



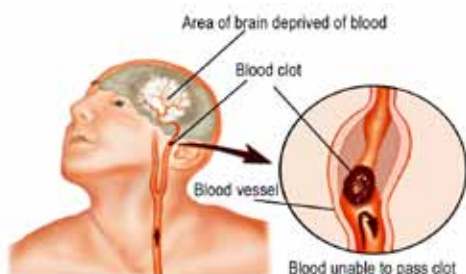
Each hospital in Scotland **gives the information to the health information service**.

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**)
- or a **burst** blood vessel which leads to bleeding into the brain (a **bleed**)

Stroke can affect people in different ways.



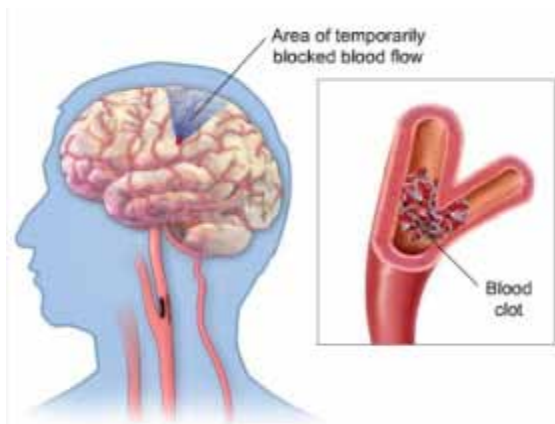
Stroke can cause

- **paralysis** and/ or **muscle weakness**, causing
 - **difficulty** in **getting around**;
 - **lack of movement**; and
 - **mobility problems**.



- **difficulty** with:
 - **speech** and **communication**;
 - **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 mini strokes are **at risk of having a full stroke** and they should be **referred to a specialist neurovascular clinic** as soon as possible.

This section tells you about the **standards for stroke care in Scotland.**



NHS Quality Improvement Scotland (NHS QIS)* is part of the National Health Service. It sets **standards of care** that NHS hospitals should meet.

*NB: Healthcare Improvement Scotland took over responsibilities of NHS QIS on 1st April 2011.

The standards for stroke care were updated in June 2009.

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.**

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 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 **blockage** of the **blood vessel** or a **burst blood vessel.**

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

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.

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 6: Specialist neurovascular 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 go into hospital**, they should be seen at a specialist neurovascular 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.

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.

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 **stroke**.

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

This section tells you how hospitals in Scotland are performing in relation to the **current standards for stroke care**.

There have been **significant improvements** since 2005 in the number of patients admitted to a Stroke Unit at any time during their admission, an increase from **71% to 82%**.

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

	2005	2010
Standard 1: More patients go to a Stroke Unit on the day they come into hospital.	28%	39%
Standard 2: More patients go to a Stroke Unit by the day after they come into hospital.	49%	63%
Standard 3: More patients have a brain scan on the day they come into hospital.	27%	52%
Standard 4: More patients have a swallow screen on the day they come into hospital.	47%	61%
Standard 5: More patients with a blocked blood vessel have aspirin by the day after they come into hospital.	41%	73%
Standard 6: More patients are seen within 7 days from referral at a specialist neurovascular clinic.	30%	82%

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 (e.g. swallow screen/ test and aspirin).

This is possible but it is important to **look for improvements** each year.

This section shows how hospitals in Scotland performed in 2010 compared to 2009 against the current standards.

-  = **Meets or does better than the standard**
 = **Does not meet the standard, but stays the same or has improved since 2009.**
 = **Does not meet the standard, and the service is worse than in 2009.**

A revision (R) was made to the column "Standard 5" in August 2011 because of an error in the calculations which resulted in under estimating the 2009 percentages. As a result of this revision, some of the symbols in this column have changed from a ☹ to a 😊. For further information refer to the Revisions Log at www.strokeaudit.scot.nhs.uk

Health Boards and Hospitals	Number of stroke patients admitted to hospital in 2010	Standards for stroke care – June 2009					
		Standard 1: Stroke Unit on day of admission (60%)	Standard 2: Stroke Unit up to day after admission (90%)	Standard 3: Swallow Screen/ Test on day of admission (100%)	Standard 4: Brain Scan on day of admission (80%)	Standard 5: Aspirin up to day after admission (100%) ^R	Standard 6: Specialist clinic within 7 days (80%)
Scotland wide	8459	😊	😊	😞	😊	😊	😊
NHS Ayrshire and Arran	663	😊	😊	😊	😊	😊	😊
Ayr Hospital	311	😊	😊	😊	😞	😊	😊
Crosshouse Hospital	352	😊	😊	😊	😊	😞	😊
NHS Borders (Borders General Hospital)	242	😊	😊	😊	😊	😊	😊
NHS Dumfries & Galloway	261	😞	😞	😞	😊	😞	😊
Dumfries & Galloway Royal Infirmary	227	😞	😞	😞	😊	😞	😊

Health Boards and Hospitals	Number of stroke patients admitted to hospital in 2010	Standards for stroke care – June 2009					
		Standard 1: Stroke Unit on day of admission (60%)	Standard 2: Stroke Unit up to day after admission (90%)	Standard 3: Swallow Screen/ Test on day of admission (100%)	Standard 4: Brain Scan on day of admission (80%)	Standard 5: Aspirin up to day after admission (100%) ^R	Standard 6: Specialist clinic within 7 days (80%)
Galloway Community Hospital	34	☺	☺	☹	☹	☹	NR
NHS Fife	529	☹	☹	☹	☹	☹	☺
Queen Margaret Hospital	231	☹	☹	☹	☹	☹	☺
Victoria Hospital Kirkcaldy	298	☹	☹	☹	☹	☹	☺
NHS Forth Valley (Stirling Royal Infirmary)	564	☹	☹	☹	☹	☹	☺
NHS Grampian	702	☹	☹	☹	☹	☹	☹
Aberdeen Royal Infirmary	617	☹	☹	☹	☹	☹	☺
Dr Grays Hospital	85	☹	☹	☹	☹	☹	☹
NHS Greater Glasgow & Clyde	2205	☹	☹	☹	☹	☹	☹
Glasgow Royal Infirmary	321	☹	☹	☹	☹	☹	☹
Inverclyde Royal Hospital	221	☹	☹	☹	☹	☹	☹
Royal Alexandra Hospital	317	☹	☹	☹	☹	☹	☹
Southern General Hospital	591	☺	☹	☹	☹	☹	☺

Health Boards and Hospitals	Number of stroke patients admitted to hospital in 2010	Standards for stroke care – June 2009					
		Standard 1: Stroke Unit on day of admission (60%)	Standard 2: Stroke Unit up to day after admission (90%)	Standard 3: Swallow/ Test on day of admission (100%)	Standard 4: Brain Scan on day of admission (80%)	Standard 5: Aspirin up to day after admission (100%) ^R	Standard 6: Specialist clinic within 7 days (80%)
Stobhill Hospital	204	☹	☹	☹	☹	☹	☹
Vale of Leven	64	☹	☹	☹	☹	☹	☹
Western Infirmary	487	☹	☹	☹	☹	☹	☹
NHS Highland	487	☹	☹	☹	☹	☹	☹
Belford Hospital	23	☹	☹	☹	☹	☹	n/a
Caithness Hospital	60	☹	☹	☹	☹	☹	n/a
Lorn & Islands	33	☺	☹	☹	☹	☹	☺
Raigmore Hospital	371	☹	☹	☹	☹	☹	☹
NHS Lanarkshire	914	☹	☹	☹	☹	☹	☺
Hairmyres Hospital	277	☹	☹	☹	☹	☹	☺
Monklands Hospital	310	☹	☹	☹	☹	☹	☺
Wishaw General Hospital	327	☹	☹	☹	☹	☹	☺
NHS Lothian	1155	☹	☹	☹	☹	☹	☹
Royal Infirmary of Edinburgh	513	☹	☹	☹	☹	☹	NR
St Johns Hospital	188	☹	☹	☹	☹	☹	☹

Health Boards and Hospitals	Number of stroke patients admitted to hospital in 2010	Standards for stroke care – June 2009					
		Standard 1: Stroke Unit on day of admission (60%)	Standard 2: Stroke Unit up to day after admission (90%)	Standard 3: Swallow/ Test on day of admission (100%)	Standard 4: Brain Scan on day of admission (80%)	Standard 5: Aspirin up to day after admission (100%) ^R	Standard 6: Specialist clinic within 7 days (80%)
Western General Hospital	454	☹️	☹️	☹️	☹️	☹️	☺️
NHS Orkney (Balfour Hospital)	40	☹️	☹️	☹️	☹️	☹️	n/a
NHS Shetland (Gilbert Bain Hospital)	49	☹️	☹️	☹️	☹️	☹️	NR
NHS Tayside	608	☹️	☹️	☹️	☹️	☹️	☹️
Ninewells Hospital	402	☹️	☹️	☹️	☹️	☹️	NR
Perth Royal Infirmary	206	☹️	☹️	☹️	☹️	☹️	☹️
Stracathro Hospital	NR*	NR*	NR*	NR*	NR*	NR*	☺️
NHS Western Isles (Western Isles Hospital and Uist & Barra)	40	☺️	☹️	☹️	☹️	☹️	☺️

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

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

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

For more detailed information on the contents of this table please refer to the 2011 Scottish Stroke Care Audit National Report which can be found at <http://www.strokeaudit.scot.nhs.uk/Reports.html>

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 with stroke who work together to improve stroke services in their local area.**

For further details about the work of **your local Stroke MCN** see Appendix A of the full-length report at <http://www.strokeaudit.scot.nhs.uk/Reports.html>.

Below are **listed examples** of **changes Stroke MCNs** across Scotland have made to **improve stroke care** in their local areas.

For each of the **stroke care standards** there are a number of **general actions** being applied by MCNs, for example

- **regular feedback to relevant staff** in the Stroke Unit and other related wards and units on performance, change and re-audit and
- use of **Incident Forms** when appropriate to highlight that appropriate standards of care are not being given to patients.

Standards 1 and 2: Admission to Stroke Unit



To increase the number of stroke patients who go to a **Stroke Unit within 1 day** of coming into hospital, some Stroke MCNs have:

- reviewed the **number of stroke beds** and where they are situated;
- changed **admission pathways** to allow **direct admission** to the Stroke Unit;
- kept a **'protected' bed** at all times in the Stroke Unit to allow direct admission of stroke patients;
- developed 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;
- **arranged daily meetings** to ensure that all appropriate patients are discharged or moved to rehabilitation beds to allow Acute Stroke Unit beds to become available each day; and
- reviewed **discharge** and **rehabilitation pathways**.

Standard 3: Swallow Screen/ Test



To make sure more **stroke patients** have their **swallowing checked on the day they come into hospital**, some Stroke MCNs have:

- provided continuing **training programmes** for nurses who perform the swallow screen/ test in relevant areas;
- **reviewed the protocols and forms** used to record swallow screen/ test; and
- **displayed posters** raising awareness of swallow screen/ test in all relevant wards and units.

Standard 4: Brain Scan



To make sure more **stroke patients** have a **brain scan on the day they come into hospital**, some Stroke MCNs have put in place:

- **training programmes** for medical staff;
- agreements with Accident & Emergency staff to **order brain scans earlier**; and
- **increased the amount of time** the brain scanner is **available** to include some out of hours time.

Standard 5: Medication



To make sure more **patients with clots have aspirin** within **1 day of coming into hospital**, some Stroke MCNs have:

- provided continuing **training programmes** for nursing and medical staff;
- arranged with x-ray departments that **brain scan reports** are **available as soon as possible**; and
- **raised awareness** with 'Time to Aspirin' **posters**.

Standard 6: Specialist neurovascular clinic



To make sure more patients with a TIA are seen in a **specialist clinic within 7 days** of referral, some Stroke MCNs have:

- **increased** the number of available **appointments** at clinics; and
- **set up a hotline** for GPs to contact stroke doctors directly.

Standards 7 and 8: Thrombolysis



To make sure more patients receive **thrombolysis**, some Stroke MCNs have:

- **provided training programmes** for hospital and community doctors and nurses and the Scottish Ambulance Service (SAS);
- used **Telemedicine** (see page 24) when local stroke doctors are not available to give advice;
- worked with Chest, Heart & Stroke Scotland on a **FAST Campaign** – provided in most health boards areas; and
- **agreed pre-hospital protocols** with the SAS. **Paramedics** can now **contact stroke doctors directly**.



Standard 9: Carotid Endarterectomy



To **reduce the delays** for **carotid endarterectomy**, some Stroke MCNs have **worked with surgeons** to ensure:

- **pathways are developed** that 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.



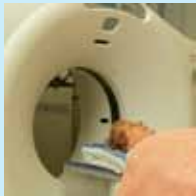



Hospitals are **making progress to meet the NHS QIS Stroke Care Standards** published in June 2009.


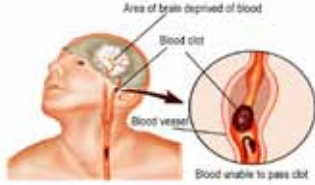





The **quality** of stroke services **still varies** across Scotland.

No hospital meets **all of the NHS QIS standards**, 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 ultimately **improve stroke care**.

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

	<p>Aphasia - When people have problems with talking, understanding, reading and writing.</p>
	<p>Blood Clot - One of the two causes of stroke. The other is bleeding in the brain.</p>
	<p>Brain Scan - Sometimes referred to as CT scan or imaging (Computerised Tomography). It is an x-ray to look at a problem in someone's brain to help diagnose any problems. (Sometimes an MRI scan is also mentioned – Magnetic Resonance Imaging)</p>
	<p>Carotid Endarterectomy - An operation to clear narrowing of the blood vessels in the neck that could cause a further stroke.</p>
	<p>Data Protection - 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>Managed Clinical Network (MCN) - Groups of staff and people with stroke who work together to improve stroke services in their local area.</p>

	<p>Specialist neurovascular clinic - An outpatient clinic for patients with TIA (mini stroke) to investigate causes and help prevent stroke.</p>
	<p>Stroke - A condition that happens when blood flow to part of the brain is stopped.</p>
	<p>Stroke Units - 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>Swallow Screen/ Test - An assessment carried out to check if a person can swallow safely.</p>
	<p>Telemedicine - 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>Thrombolysis - Treatment with a drug that breaks down blood clots (sometimes referred to as a clot busting drug)</p>
	<p>Transient Ischaemic Attack (TIA) – 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 with 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 Professor Martin Dennis, Hazel Dodds, Robin Flaig, David Murphy, Professor Peter Langhorne, Dr Christine McAlpine and Dr Mary-Joan Macleod, 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

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.

We would also like to thank Definitive Studio® Graphic Design and Communication for designing the new Scottish Stroke Care Audit logo as seen on the cover of this report.

Contact details:

studio: 01896 750867

email: hello@definitivestudio.co.uk

website: www.definitivestudio.co.uk

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

www.bing.com

www.chss.org.uk/

www.medicimage.co.uk/Index.asp

www.stretchmarksreport.com/stretch-marks-pregnancy/preventing-stretch-marks-during-pregnancy.html

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
website: 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
website: www.stroke.org.uk/scotland



Different Strokes

9 Canon Harnett Court
Wolverton Mill
Milton Keynes, MK12 5NF
telephone: 0845 130 7172
email: webcontact@differentstrokes.co.uk
website: www.differentstrokes.co.uk



Speakability

1 Royal Street

London, SE1 7LL

telephone: 080 8808 9572

(Helpline Monday to Friday 10am - 4pm)

email: speakability@spekability.org.uk

website: www.spekability.org.uk



Aphasia Help

Explains about stroke and aphasia

www.aphasiahelp.org

AphasiaNow

For people with aphasia

www.aphasianow.org

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	denise.brown@aaaht.scot.nhs.uk
Borders	Sandra Pratt	01896 820728	sandra.pratt@borders.scot.nhs.uk
Dumfries & Galloway	David Potter	01567 205520	dpotter@nhs.net
Fife	Morag Maillie	01592 226841	moragmaillie@nhs.net
Forth Valley	Derek Blues	01786 457256	derek.blues@nhs.net
Grampian	Lorraine Urquhart	01224 555379	lorraine.urquhart@nhs.net
Greater Glasgow & Clyde	Camilla Young	0141 314 0220	camilla.young@nhs.net
Highland	Christian Goskirk	01408 664078	christian.goskirk@nhs.net
Lanarkshire	Katrina Brennan	01236 707724	katrina.brennan@lanarkshire.scot.nhs.uk
Lothian	Morag Medwin	0131 537 9208	morag.medwin@nhslothian.scot.nhs.uk
Orkney	Karen Crichton	01856 888153	karen.crichton@nhs.net
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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.**

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

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

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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.

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