

Newcastle JSNA – Management of Acute Myocardial Infarction and Stroke January 2008

Definitions

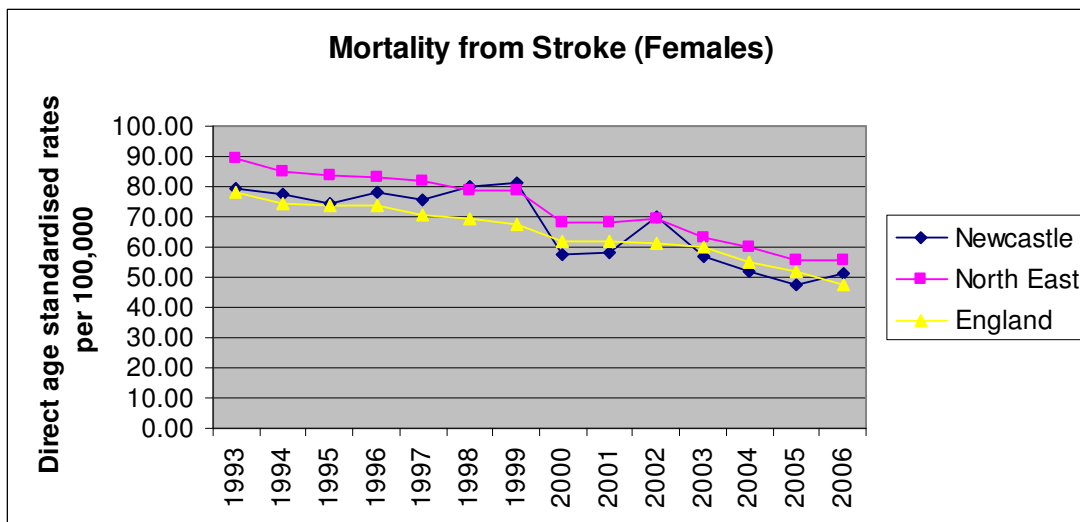
A **stroke** is a brain attack, it occurs when the blood supply to part of the brain is cut off. Blood carries essential nutrients and oxygen to the brain. Without a blood supply, brain cells can be damaged or destroyed and won't be able to do their job. (Stroke Association)

An **acute myocardial infarction** or heart attack occurs when an area of the heart muscle dies or is damaged due to an inadequate supply of oxygen. A blood clot forms in one of the coronary arteries, the blood vessels that supply blood to the heart. This clot prevents blood, and consequently, oxygen from reaching the heart cells in that area, leading to their death.

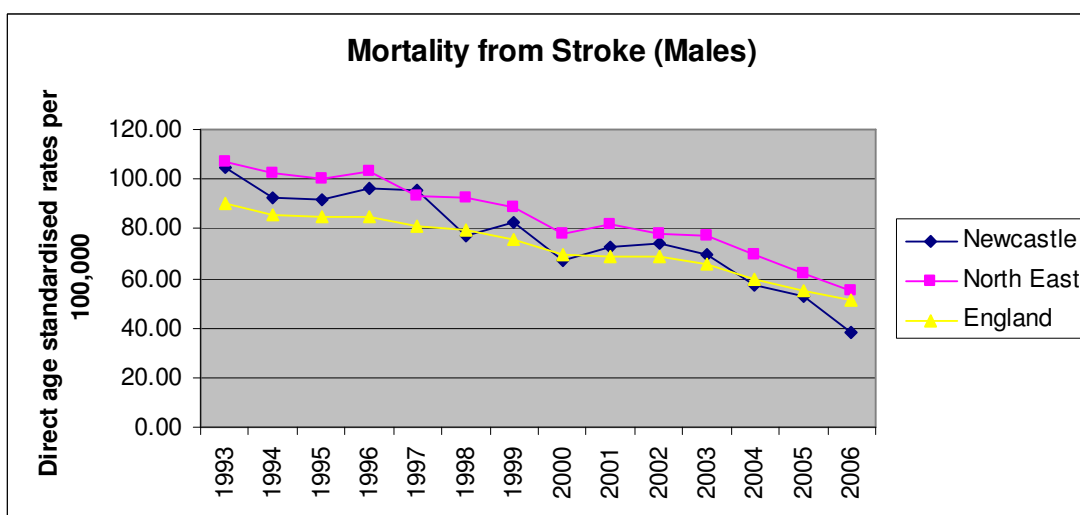
What do we know?

Facts and Figures

- Every year, an estimated 150,000 people in the UK have a stroke. That's one person every five minutes. Most people affected are over 65, but anyone can have a stroke, including children and even babies. Around 1000 people under 30 have a stroke each year. (Stroke Association)
- Stroke is the third most common cause of death in the UK. It is also the leading cause of severe disability. More than 250,000 people in the UK live with disabilities caused by stroke. (Stroke Association)
- Stroke incidence increases with more elderly populations and in areas of deprivation.
- The crude incidence of new strokes are around 1.8-2.3/1000 population per year (approx 560 expected per year in Newcastle).
- The crude incidence of suspected Transient Ischaemic Attack (TIA)/minor stroke is 2.0-2.8/1000 population per year (of whom 0.8/1000/yr will turn out not to be a stroke/TIA).
- GPs with a 2000 list size will see 4 suspected strokes, 2 minor strokes and 4 strokes a year.
- Prevalence of stroke disability in the North East is 18.9/1000. It is the highest in England (national average 17.3/1000 in 2004/5) - extrapolated 4150-5200 in Newcastle.



Source: The Information Centre for health and social care

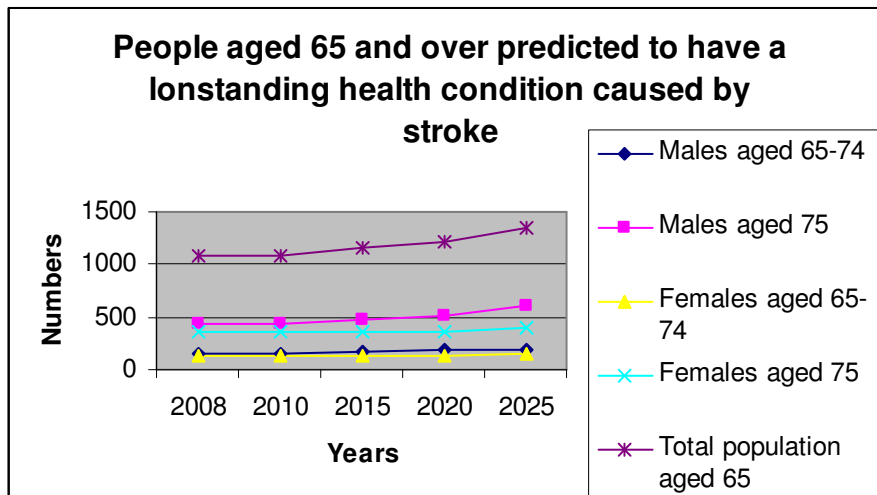


Source: The Information Centre for health and social care

Trends

The population of the UK is ageing.

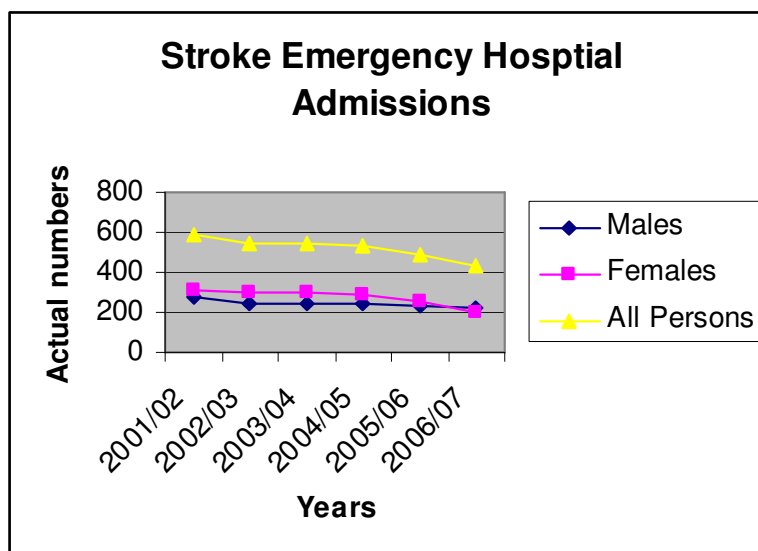
- Elderly (75+) was 12% in 2006 and predicted to rise to 20% by 2030.
- In Newcastle the 65+ population was 17% 2006 and is predicted to rise to 21% by 2011
- There is approximately a 5% increase per year in elderly high risk population



Source: [Projection Older People Population Information System](#)

Long term decline in age specific trends

- lower event rate in each age group but as groups increasing in size, not necessarily in total events



Source www.yhpho.org.uk

Absolute decline in stroke numbers in Newcastle is levelling off

- ?Transient (approx 15% decline per year until recently)
- 2003/2004: 650 approx.
- 2004/2005: 546
- 2005/2006: 471
- 2006/2007: no longer recorded accurately
- 2007/2008:

Performance

- **North east region best region for stroke service provision in England.** (See North East 10 year health launch May 2008 attended by Lord Darzi)
- **Newcastle, one of the best in stroke service provision in the North East and UK.**

In mid-2007, an exercise was undertaken across the three North of Tyne Primary Care Organisations which compared health expenditure and outcomes across a range of programmes including cancer. National programme budgeting data for 2005-06 was analysed alongside QOF data and the data from the National Centre for health Outcomes Development (NCHOD).

The results of the analysis were as follows:

Newcastle: High Cost: Good Outcomes

Primary Care Performance

The performance of primary care in relation to the management of Stroke can be assessed via the Quality and Outcomes Framework (QOF), a system that measures GP practice achievement against a range of evidence-based indicators, with points and payments awarded according to the level of achievement.

QOF Performance 2007/08

Primary care data analysis of the 2007/08 QOF data

The table below shows that Newcastle Primary Care Trust achieved above the national average on all of the QOF Stroke indicators in 2007/08.

	Stroke 5	Stroke 6	Stroke 7	Stroke 8	Stroke 10	Stroke 11	Stroke 12
England	97.0%	87.5%	91.5%	77.0%	89.5%	93.0%	94.1%
Newcastle PCT	97.6%	88.9%	93.0%	81.8%	91.4%	94.4%	95.9%

Stroke Performance in 2007/8

- 5 sessions/week-Transient Ischaemic Attack (TIA) assessment and intervention service
 1. Weekends : acute stroke on-call team,
 2. ABCD2 risk stratification (ABCD2 is a calculation to identify patients at high risk of stroke following a TIA)

based on age, blood pressure, clinical features, duration of symptoms and presence of diabetes)

3. Earlier carotid endarterectomy (Multi Disciplinary Team target 1 week)

- Majority strokes admitted to Acute Stroke Unit
- 85-90% head scan within 24 hours of admission
- Access to appropriate rehabilitation
 - Improved access to Cherryburn (20 bed specialist stroke rehab unit)
 - 79% of those requiring inpatient rehab admitted to Cherry Burn rehab unit
 - Insufficient therapists to all parts of service persist

Acute MI services

- Newcastle upon Tyne Hospitals NHS Foundation Trust, Freeman Road site is one of the tertiary centres delivering Percutaneous Coronary Intervention (PCI) services.
- Newcastle upon Tyne Hospitals NHS Foundation Trust completed a pilot of Primary PCI from January to June 2006 as a precursor to developing a service for the local population and subsequent roll out.
- Myocardial Infarction Audit Project (MINAP) data suggest high quality thrombolysis services with 75% of patients with ST segment elevation Myocardial Infarction (STEMI) having a call to needle time of less than 60 minutes in April 2007 to March 2008 and 77% in April 2006 to March 2007.
- Rapid Access Chest Pain Clinic (RACPC) performance was good as waiting time targets were met throughout the year for both 2006/7 and 2007/8.
- Locally and for the North of England Cardiovascular (NECV) Network procedure rates for revascularisation continue to remain below the target and the national average of 1400 per million population. The average for the two tertiary centres in the network, including Freeman hospital, was 1076 per million population. Even the Network's best average performance is considerably below future recommended rates for PCI; the British Cardiac Society recommendations are that we should be working towards 2200 – 3000 per million population.

Local views

The Primary Care Trust Rehabilitation and Intermediate Care Team held a listening event in November 2007 to inform people about new developments in PCT Rehabilitation and Intermediate Care Services which was attended by over 50 older people and carers. Some of the issues raised were:

- Older people and their families need information about the impact on their lifestyle and how to manage;
- The need to enable people, particularly those who have suffered a stroke, to access informal networks, social activities, groups and club;

- The PCT Stroke Discharge Team was particularly commended for the quality of its service. However, many people felt that the service was withdrawn too soon, leaving them without emotional support and access to activities. [View full report here](#)

National and local strategies

The main national guidelines and targets set for Stroke services are listed below.

- NICE guidelines and Royal College of Physicians (RCP) National Guidelines for stroke (update 2008 pending)
- National Service Framework (NSF) for older peoples – Standard 5
- National Stroke Strategy
- Implementing the National Stroke Strategy, an imaging guide (June 2008)
- NICE Technology Appraisal - Alteplase for Treatment of Acute Ischaemic Stroke. Treatment approved June 2007, and all acute Trusts therefore obliged to provide this treatment to appropriate patients.

Current Activity and Services

Infrastructure – North of Tyne

A review of the infrastructure and governance arrangements across North of Tyne for long term conditions was undertaken in 2007 and a proposal put forward to the Executive Director (Acute Commissioning) for a proposed North of Tyne model. Work is currently being progressed in this direction.

Newcastle stroke services

There is currently a robust and well functioning local multi-disciplinary stroke network in place. The Newcastle network exists under a long-standing Health Improvement Modernisation Plan (HIMP) structure and is led by a Consultant Physician/Geriatrician and covers secondary and primary care in Newcastle. The membership includes representatives from general practice, Newcastle Hospitals NHS Foundation Trust and Newcastle PCT.

The aim of the group is to help support and develop local stroke acute and rehabilitation services, to implement the National Service Framework (NSF) and to develop local stroke related guidelines. In addition, the North East Cardiovascular network led by the Strategic Health Authority (SHA) is planning future stroke development at a regional level.

Main Hospitals/Trusts involved in providing Stroke services in Newcastle are: Newcastle Upon Tyne NHS Trust, North East Ambulance Service NHS Trust (Newcastle PCT: Commissioners; Rehabilitation, Community Services), Freeman Hospital: Acute Stroke Unit, Royal Victoria Infirmary: Emergency Admission Unit (24 hours), Newcastle General Hospital: A&E and regional neurosurgical unit.

- Currently a world class service
- Major new acute care challenges ahead
- Appropriate and timely TIA imaging
- Early carotid endarterectomy
- Inequity persists in access but this has improved.
- The new National Stroke Strategy implications require a co-ordinated approach from all services (voluntary, Social Services, ambulance etc)

Acute Myocardial Infarction (MI)

The North of England Cardiovascular (NECV) Network was established in November 2007 as an amalgamation of the Coast to Coast Cardiac Network and the Northern Network of Cardiac Care. The NECV Network focuses on the patient pathways of cardiac and stroke care. The Network is 'committed to improve the patient's experience by enabling stakeholders in the network, to make sustained changes to service delivery'.

Primary Percutaneous Intervention (Primary PCI) as a reperfusion therapy for ST segment elevation Myocardial Infarction (STEMI) is increasingly routinely available in the UK. The publication of Mending Hearts and Brains by the Department of Health has raised the profile for the delivery of Primary PCI in specialist heart centres concentrating on the delivery of the right evidence-based treatment given in the appropriate setting. There is agreement across the clinical communities of both the Coast to Coast Cardiac Network (C2C) and the Northern Network of Cardiac Care (NNCC) that Primary PCI should be the first line treatment for STEMI. A phased roll out is therefore planned

The need for a whole system/community approach

- As can be seen; involvement from all sectors will be needed locally.
- The government has also allocated £45m from the DOH to Social Services - £99K per year for three years for stroke community services specifically.
- Gaps and overlap should be avoided, thus a coordinated approach from all stakeholders is needed.
- The SHA has also become directly involved via the Cardiovascular network (now incorporates stroke)

What is this telling us?

What are the key inequalities?

There is a need to understand the relationship between stroke, deprivation status, age and sex to identify the inequality issues relating to disease burden and access to services.

What are the gaps in knowledge and services?

Need to improve quality data and intelligence availability to inform commissioning, monitor inequalities, access quality and promote choice.

Joint commissioning with the PCT should be considered for:

- Stroke care co-ordinator;
- Communication disability support groups;
- Counselling and emotional well-being dealing with cognitive deficits support activity;
- Developing brokerage services;
- Re-enablement back into the community;
- Supporting re-enablement through vocational rehabilitation;
- Secondary prevention and access.

Is what we are doing working?

Stroke Newcastle: good practice

The FAST tool is now going to be adopted nationally in campaigns to increase awareness of stroke. The Community Stroke Teams and facilitated stroke discharge teams have been pioneers and continue to be leaders in their fields.

Stroke Conference: North of England Cardiovascular network

With the introduction of the National Stroke Strategy in December 2007 and the establishment of the new Network, the first Network Stroke Conference, 'Collaborative Strengths' was held on 28th February 2008. 'Five Top' Priorities for North of Tyne identified were

1. QM2 Managing risk
2. QM3 Information, advice and support
3. QM9 Treatment (Stroke)
4. QM13 Long term care and support
5. QM19 Workforce Review and Development

What is coming on the horizon?

There is projected to be an increase in the average age of Newcastle's Population and a greater increase in the older higher risk population.

What should we be doing next?

- 1) To investigate local/regional data for MI/Stroke broken down by deprivation status, age, sex etc. to identify the inequality issues relating to disease burden, access etc;

- 2) Identified weakness in the implementation of the community stroke pathway and the engagement of primary care. Workforce training and development issues identified;
- 3) Potential local sensitivities of the NECVN extending their remit to include stroke services and the implications to established local networks;
- 4) More effective engagement between primary care, secondary care, commissioners and public health in taking forward the Acute MI/Stroke issues highlighted in this report with particular emphasis on preventative steps;
- 5) Need to improve quality data and intelligence availability to inform commissioning, monitor inequalities, access quality and promote choice.

Key supporting documents

1 National Stroke Strategy: DOH December 2007 2 Improving stroke services: a guide for commissioners 3 Summary of Findings: From the first, North of England Cardiovascular (NECVN) 4 CHD Performance Report End of Year Summary – 2006/7 Joint C2C and NNCC report and 5 NECVN Cardiovascular Strategy 2008-2011, Part A – Coronary Heart Disease version 1.3