



National Audit Office

FEEDBACK REPORT

Ambulance Trust Feedback Report

Progress in improving stroke care

Progress in improving stroke care – Ambulance Trust Feedback Report

Introduction

In February 2010 we published a report on *Progress in improving stroke care*. As well as assessing the value-for-money of stroke services in England, the report made a number of recommendations for the Department of Health and NHS organisations. The sections of the report and recommendations directly related to ambulance services are included at Appendix A.

The report's fieldwork was carried out between March and November 2009. One aspect of our methodology was to undertake a structured telephone interview with every ambulance trust along with a supplementary data collection. All trusts participated in the telephone interview, and eleven of the twelve trusts provided us with a supplementary data return, and it is on that information that this report is based.

This Report

This document is designed to report the national picture for ambulance services we have built up as a result of our data gathering.

We are aware that many factors affect the responses that were submitted. Also, not all ambulance trusts were able to answer all questions (we have indicated the number of responses to each question within the text of the report). For these reasons, we do not intend for the information below to be used for direct, unqualified comparisons, but rather as a starting point for discussion and debate about the future of stroke care.

As you may already know, the Care Quality Commission (CQC) has recently started preparing quarterly feedback reports for ambulance trusts focusing on stroke indicators. These are available on their website www.cqc.org.uk.

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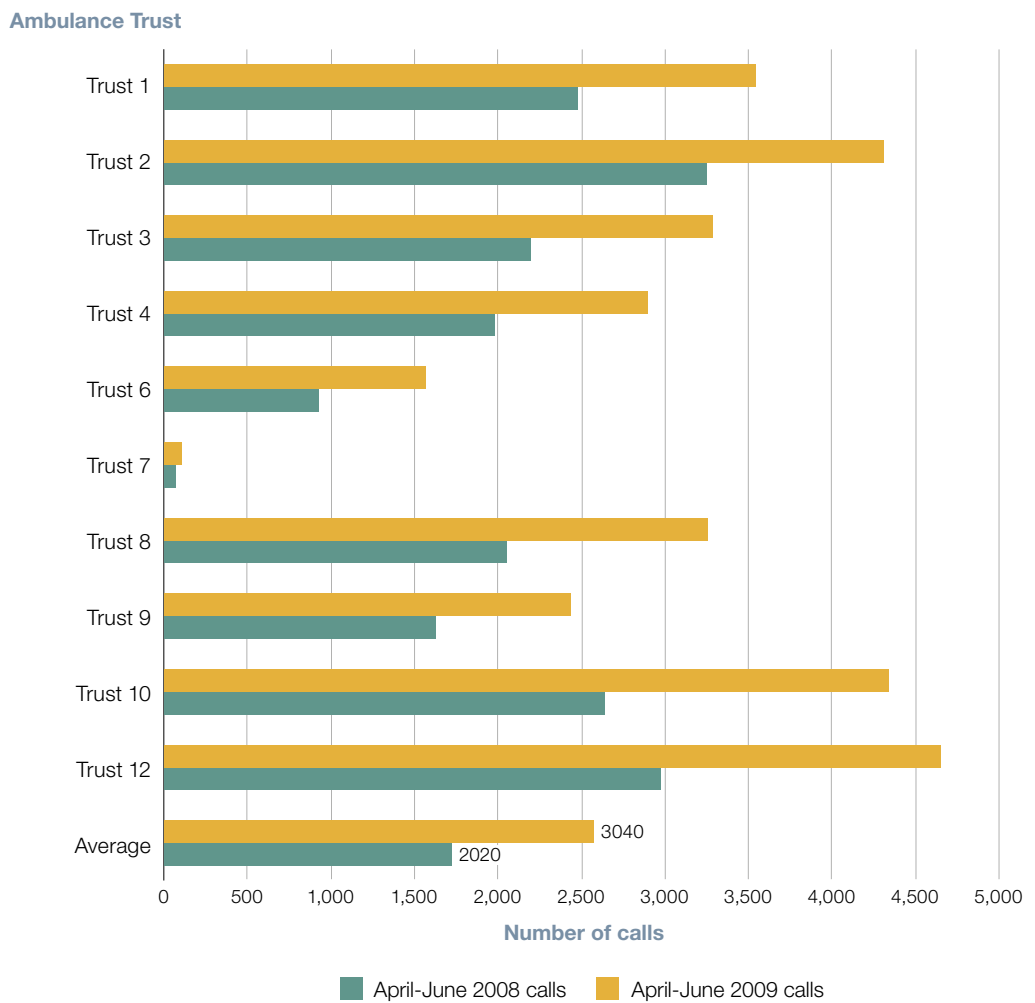
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Call numbers

Between April-June 2008 and April-June 2009, the number of calls received by ambulance trusts which were classified as stroke increased by an average of 50 per cent. Some of this increase could, for certain trusts, be due to a change in their ambulance dispatch system (to Advanced Medical Priority Dispatch System (AMPDS) v12, which includes features such as a telephone FAST-type stroke test, designed to improve sensitivity of the pre-arrival triage system to stroke). However, among the trusts who kept the same version of AMPDS throughout there was an increase of 54 per cent. The data was collected to evaluate the effect of the Stroke – Act F.A.S.T. campaign which was launched in February 2009.

Figure 1
Number of calls classified stroke by AMPDS

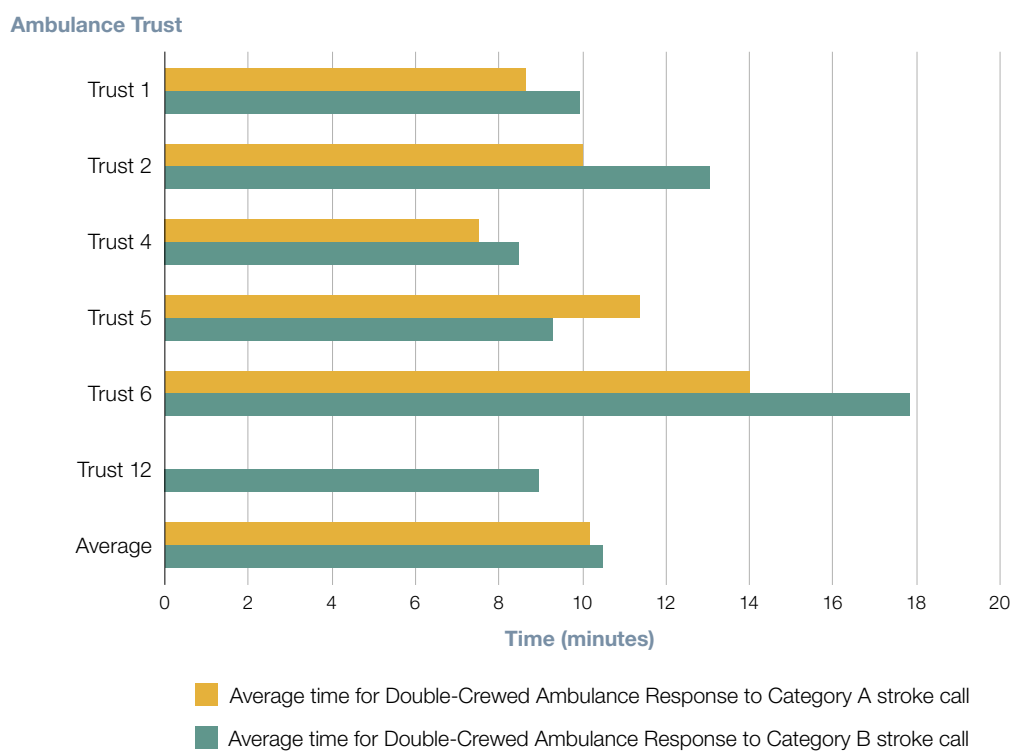


Response times

Of the six trusts who provided the data, the average time for a double-crewed ambulance response to a stroke call classed Category A was 10:11. Average time for a stroke call classed category B was 10:31. We collected information on response times to evaluate the timeliness of ambulance responses and to assess the appropriateness of the current targets for stroke care.

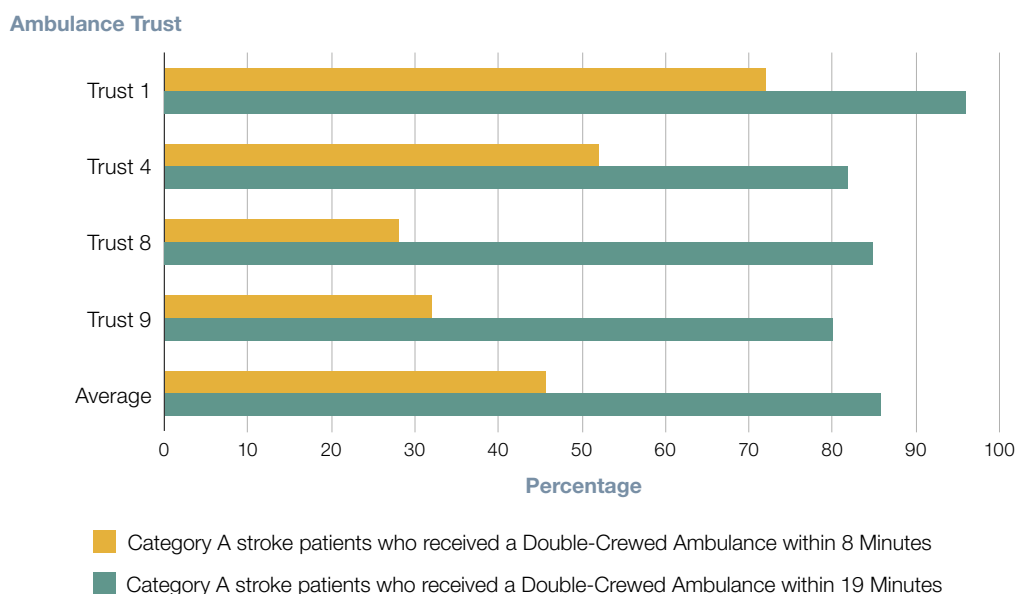
Figure 2

Average Double-Crewed Ambulance Response Time



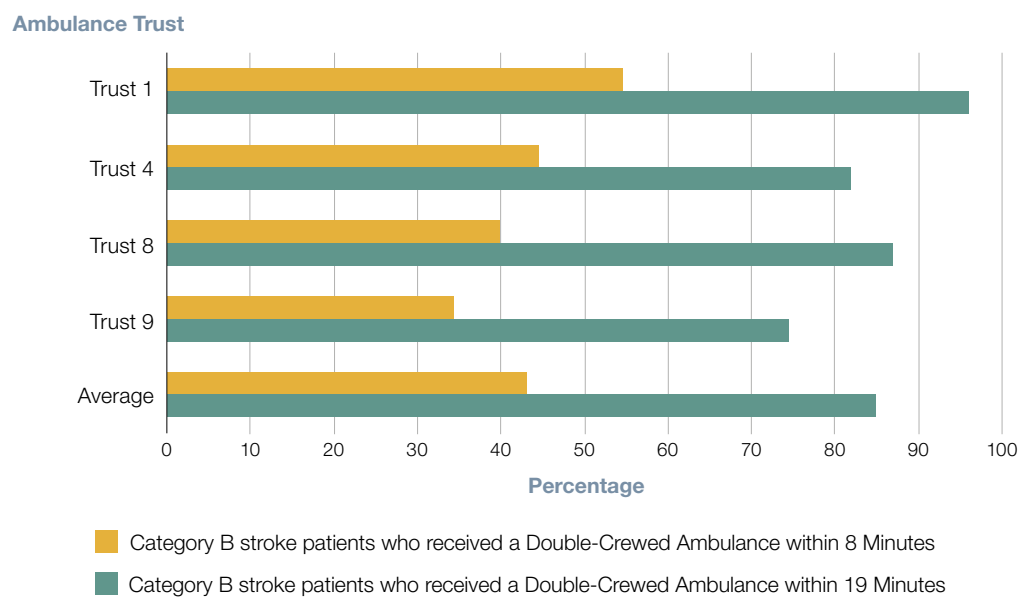
Among the four trusts who provided the data, on average there was a double-crewed ambulance with 46 per cent of category A stroke patients within 8 minutes and with 86 per cent within 19 minutes.

Figure 3
Percentage of Category A patients receiving a Double-Crewed Ambulance within 8 and 19 minutes



Among the four trusts who provided the data, on average there was a double-crewed ambulance with 43 per cent of Category B stroke patients within 8 minutes, and with 85 per cent within 19 minutes.

Figure 4
Percentage of Category B patients receiving a Double-Crewed Ambulance within 8 and 19 minutes

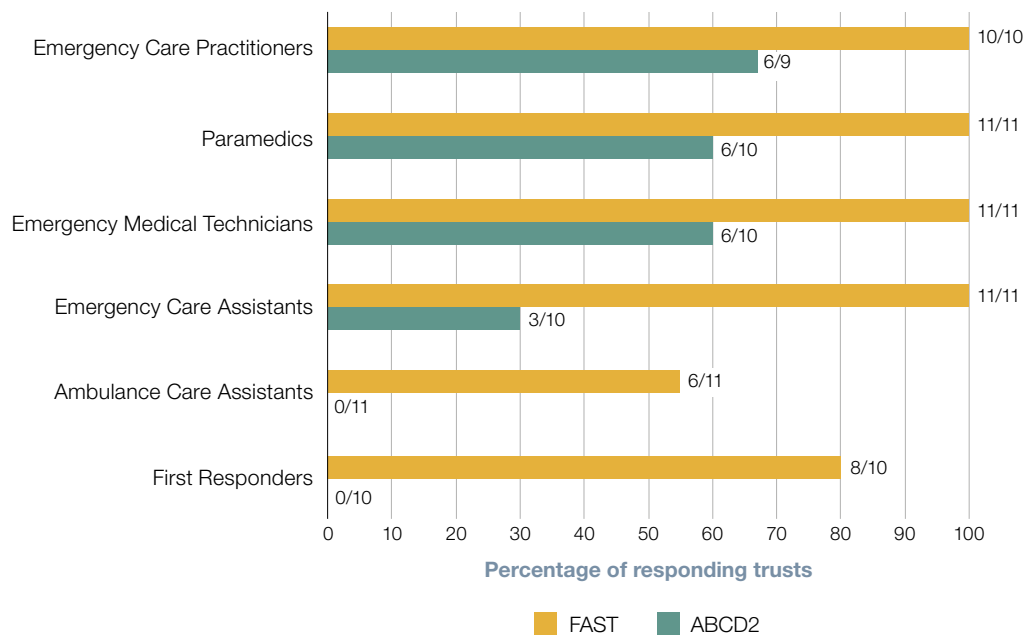


Diagnostic tools

- The graph below shows the proportions of respondents who train their staff members in the use of the FAST test (for stroke) and the ABCD2 test (for transient ischaemic attack, TIA).
- We also asked a question about other diagnostic tools used. Two trusts use a modified version of the ROSIER (Recognition of Stroke in the Emergency Room) test. Four more are currently considering it. One trust shortly intends to start using the MEND (Miami Emergency Neurological Deficit) diagnostic examination technique.

Figure 5
Diagnostic Tools which Staff are Trained in

Staff categories



Stroke coordinators

- All eleven trusts who provided the data now have a designated stroke lead. The amount of time they spend on this role ranges from 0-0.2 WTEs (Whole Time Equivalent) to more than 1 WTE.

Pathways

- All eleven trusts who provided the data have pathways in place for patients suffering suspected acute stroke. Some trusts were concerned that differences in protocols between adjacent Primary Care Trusts (for example, times of day during which patients would be accepted for thrombolysis) was confusing to ambulance crews.
- Of the twelve trusts who answered the question, nine said that they had no separate pathway for TIA. These trusts said they responded to it in the same way that they responded to stroke. Three trusts had a separate TIA pathway, which involved the patient being assessed at the scene using ABCD2. Depending on the score, patients were then either taken straight to hospital or referred to a TIA clinic.

Performance indicators

- All trusts who provided the data compile national clinical performance indicators. Other measures used /data gathered by some trusts include:
 - Proportion with call to admission to hyperacute stroke unit time of less than one hour
 - Performance against national stroke strategy quality markers
 - Whether oxygen has been administered where appropriate
 - Whether patient respiratory rate has been recorded
 - Whether the hospital has been pre-alerted where appropriate

Ongoing studies

Current studies which ambulance trusts are planning or currently involved in include:

- Trials of using the brain acoustic monitor for distinguishing between ischaemic and haemorrhagic stroke www.swirl.nhs.uk/resource/332
- The ESCORT study, which aims to improve telephone diagnosis of stroke
- A pilot of the Advanced Stroke Life Support course www.asls.net/introduction.html
- A trial of the efficacy of the ROSIER test (www.stroke.org.uk/research/research_we_fund/research_projects_programme_grants/research_purpose/acute_stroke_service/improving_stroke.html)
- The DASH (Developing and Assessing Services for Hyperacute Stroke) study at Newcastle University (www.ncl.ac.uk/ihs/research/project/2565)

Staff feedback

We found that:

- Several trusts tell staff about overall trust performance against CPIs (Clinical Performance Indicators), for example through the staff newsletter
- One trust has a system set up so that staff can log on to a webpage and see their own individual performance against CPIs

Awareness

Methods trusts have used to raise stroke awareness inside and outside the trust include:

- Covering ambulances with the FAST campaign materials
- Giving talks to groups such as community first responders, Women's Institutes, etc.
- Having hospitals put on an information evening for ambulance staff when they start to offer thrombolysis
- Internal memos
- Liaising with GPs, for example by giving presentations on the importance of treating stroke as an emergency. (However, some trusts felt that there were too many GPs in their area for them to do this, and that instead this sort of communication should be the role of the Royal College of General Practitioners (RCGP) or the PCT.)

Conclusion

The country's ambulance services and their clinicians have a pivotal role to play in delivering world-class outcomes for patients suffering stroke and TIA. There are many areas of good practice in UK ambulance trusts, and we hope that trusts will continue to learn from each other.

You may also be interested to read our Good Practice Guide, which contains in-depth case studies examining the methods by which different organisations have taken steps to improve stroke care in their region. This is available on the NAO website at www.nao.org.uk

We hope that you have found this document useful. Any further questions or comments may be sent to enquiries@nao.gsi.gov.uk

Appendix A – Extracts from the NAO report

Summary

“As well as responding to more calls, ambulance staff are now better trained in recognising the symptoms of stroke and, in some regions, travel longer distances to deliver patients to specialist urgent ‘hyper-acute’ stroke care. The improvements within ambulance trusts have been achieved without specific additional funding, although they have involved additional costs.”

Recommendations

“The Department of Health should consider whether ambulance trusts should use measures such as call-to-hospital time, as a way of evaluating the effectiveness of the emergency response to stroke. Primary Care Trusts, as part of their contracts with hospitals, should ensure that both individual and aggregated patient outcome data is fed back to ambulance trusts, to enable them to benchmark their performance and identify areas for improvement.”

Emergency response

“The Strategy set out the need for:

- *more paramedics (and other pre-hospital clinicians) to be trained in the recognition and treatment of stroke;*
- *higher prioritisation of 999 calls for stroke by Ambulance Trusts with improved speed of response; and*
- *the transfer of appropriate patients to a hospital able to offer hyper-acute services.*

Our audit of Ambulance Trusts showed that there has been progress in these areas.

All Ambulance Trusts now train paramedics, and most other pre-hospital clinicians, in the ‘FAST’ diagnostic tool for stroke, and the majority of trusts are developing their staff to appropriately risk-assess and refer TIA patients. In 2009, the software used for telephone triage of 999 calls was revised to better identify stroke patients. Further, stroke was assigned a higher priority so that more people with stroke would receive the highest priority (Category A) response. The national target is that 75 per cent of Category A calls should be attended within 8 minutes, and 95 per cent of Category B calls should be attended within 19 minutes.

To meet a Category A response, a paramedic on a motorbike could be dispatched, who would then need to wait for an ambulance if the patient needs transporting to hospital. For Ambulance Trusts that were able to provide data, the average time for a double-crewed ambulance to respond to stroke calls prioritised as Category A was 10 minutes 11 seconds while for Category B it was 10 minutes 31 seconds, and in one Trust the time for a double-crewed ambulance to arrive was actually longer for Category A than B calls. Our modelling suggests that reductions in ambulance response times would not significantly impact the overall outcomes of care.

Most Ambulance Trusts are unable to track patients after they arrive at hospital as ambulance and hospital information systems are not linked. Being able to assess the accuracy of paramedics' diagnoses could help Ambulance Trusts to measure the safety and quality of their pathway, improve clinicians' professional development and training, and help develop procedures, but at present they are unable to do so."

Acute Hospital Care

"In some regions, such as Greater Manchester and London, the ambulance service can take patients directly to designated hyper-acute stroke services, which can mean that stroke patients are not always taken to the nearest hospital. This approach may not be appropriate for all regions, such as those with geographically dispersed populations and hospitals. In 2009, nearly three-quarters (72 per cent) of hospitals had arrangements with their ambulance service to transfer patients directly, compared with 16 per cent at the time of our previous report; and five per cent of sites had arrangements so that their hospital could be by-passed. Ambulance Trusts, however, report that some pathways lack clarity, including the exact timings when some non-24 hour units will accept patients and where patients may have to travel across local boundaries."