

## **GREATER MANCHESTER 'EARLY HOURS' STROKE SERVICE**

### **REPORT TO ASSOCIATION OF GREATER MANCHESTER PCTS**

#### **Summary**

This is a proposal to plan for an early intervention stroke service for Greater Manchester to provide thrombolysis usually within three hours of a stroke. In addition to 100 people having a complete recovery who would otherwise become disabled, the cost savings to the NHS would be around £2 million and there would be savings to other parts of the whole system e.g. care services, carers support, and benefits. The Association of GM PCTs is recommended to approve the way forward as proposed in this paper.

#### **Introduction**

The National Audit Office (November 2005 - <http://www.nao.org.uk/stroke>) wrote that:

“A key component of effective treatment of stroke is that a suspected stroke should be treated as a medical emergency in the same way a suspected heart attack is.”

And

“Greater uptake of thrombolysis would improve stroke outcomes.”

The Department of Health is developing a National Stroke Strategy to be published in late 2007. A commissioning framework is expected in December 2006. It is expected that this will encourage the development of a thrombolysis service for stroke patients.

#### **Context**

Early thrombolysis should be seen as an important component of a comprehensive stroke service which includes acute stroke units and rehabilitation units in local hospitals and high quality long term care in the community all of which should comply with the standards set by the National Sentinel Audit for Stroke (Royal College of Physicians/Healthcare Commission). This provides an opportunity for Greater Manchester to demonstrate a “world class” service and outcomes for this costly condition.

#### **Number of patients who could benefit**

If thrombolysis is to make a significant impact, an ‘early hours’ stroke service needs to respond to people with a stroke (due to an infarct) within three hours of onset. In Greater Manchester, we might expect, based on data from previous years that about 5,000 people with suspected stroke will be brought by ambulance to a hospital each year. Based on experience in Newcastle, the majority will arrive within three hours and will not be moribund. For planning purposes, in Greater Manchester, the number is assumed to be 3,000 people of whom about 2,500 will be confirmed as having a stroke. In one hospital in Australia, they were able to thrombolysed 9% of this type of patient. However, if we designed a purpose built system we should aim for 20% or 500 patients per year to receive thrombolysis. About 100 of these patients would fully recover who would not do so without thrombolysis. There are

potential savings, based on the National Audit Office calculations, of around £2million per year for the health economy in Greater Manchester before taking into account the cost of thrombolysis and there would be very significant additional savings in social care costs due to the decrease in disability.

### **Characteristics of a service**

Paramedics would make a decision, using validated scales, that a person has probably had a stroke with an onset of less than three hours. These patients would go to a specialised - dedicated 'early hours' stroke service unit rather than other hospitals with acute stroke units. The paramedics will need to check that the CT scan is available for use prior to arriving at the hospital. If it is, the ambulance should be able to drive right up to the unit containing a 64 slice CT scanner with perfusion so that a scan can be undertaken without any delay. The patient will also need to be assessed by a suitably trained and experienced clinician. If the clinical diagnosis and the CT scan indicate an infarct without haemorrhage and there are no other contra-indications, thrombolysis will be started immediately and the patient transferred to a bed in the 'early hours' stroke service unit. Other patients would be transferred to a neurosurgical unit if they are considered a candidate for neurosurgery but otherwise would be transferred to the acute unit in their local hospital immediately. Patients who are given thrombolysis would stay on the 'early hours' unit for one day and then be returned to their local hospital.

### **Number of units in Greater Manchester**

The number of bed days will be about 500 but since this is for a very short length of stay, only 50% occupancy is realistic. This indicates that four beds would be required in Greater Manchester. It may be there should only be one unit in the conurbation but this would limit geographical access, allow no back-up facilities if the unit had to be closed at any time and would be in conflict of the views of the Calgary Unit who have been running such a service and consider that a unit should not serve more than a million population. The maximum number of units would therefore be three although the historically low rate of people being admitted to stroke during the middle of the night indicates that only one unit needs be open between 10pm and 8am.

### **Way forward**

Further planning should only take place if the Association of Greater Manchester PCTs agrees in principle by December 2006 that this is a development they would wish to see. If agreed, there will need to be discussion with local political leaders and other key stakeholders to determine whether there is support for such a specialist 'early hours' service (January – March 2007). Units wishing to provide such a service should be asked to develop proposals for serving a population of a million. They can also make proposals for serving a larger population but such proposals need to address the issues above. An option appraisal would consider the following issues:

- (i) existing expertise, capacity and resources
- (ii) geographical access and transport
- (iii) direct access to the CT scanner
- (iv) cost (recurrent and non-recurrent) and savings
- (v) demographic information about stroke patients including their geographical distribution

The resources for this service should be considered as part of the LDPs for 2008/9 (October – December 2007). If all steps were approved this would enable an early hours stroke service to begin in 2008.

It may be possible to undertake a pilot service before April 2008. There is some capacity within phase 2 IS scanners to divert some work from an existing scanner which could then be used for an 'early hours' service. The scanning and radiographer resources have already been made available for this but clinical resources to support such a service would still be needed. If the Association of GM PCTs were keen to develop this pilot service, it should be seen as only an interim solution unless it could lead to thrombolysis being done as quickly as envisaged in the main proposal.

### **Cost**

The revenue cost should be no more than the health care savings made across health economy. A 64 slice CT scanner with perfusion, including VAT, would cost about £700,000. There would be further capital costs to house the scanner and to have a dedicated in-patient unit.

### **Recommendation**

The Association of Greater Manchester PCTs approves the way forward described in this paper and they ask the Specialist Commissioning Service to work with the Stroke Network in overseeing the process.

Written by Peter Elton on behalf of the Stroke Network  
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