

BRIEFING NOTE

Acute stroke services

Acute stroke admissions in west, north and east Cumbria total approximately 700 per year, with 410 in Cumberland Infirmary Carlisle (CIC) and 290 in West Cumberland Hospital.

There is general agreement that continuing to run stroke services as we do currently is not an option. This is because, while we have been successful in making some improvements, we are not able to meet a number of the highest standards for stroke care due to limited access to stroke specialist staff and facilities, and an inability to provide full services seven days a week

Recruitment is a key issue, with national shortages in stroke consultants as well as workforce challenges in a number of other key areas. Our current services are extremely fragile; if one element were to disappear, such as an individual consultant leaving, the service is at risk of collapsing altogether.

Colleagues have been working extremely hard with commissioners and national experts to develop a viable model for west, north and east Cumbria which is now being proposed as part of consultation. The model is designed to improve patient safety, outcomes and quality of care for the overall population. It is also a model which stands a far higher chance of successful recruitment than to current services, which would be seen by prospective candidates as outdated and unattractive.

Stroke patients in west, north and east Cumbria would be expected to significantly benefit from the system-wide proposals for a single hyper-acute stroke unit (HASU) in Carlisle. This would be complemented by rehabilitative and supportive stroke unit services (including speech and language therapy, occupational therapy, physios, etc.) and effective multi-disciplinary teams on *both* sites, plus early supported discharge, ongoing rehabilitation, re-ablement and other after-hospital care services in community settings and people’s homes across the patch.

Much of the HASU benefit comes from access to the concentrated staffing levels and specialist skills available and also from early thrombolysis for patients who require it.

The key challenge for west, north and east Cumbria is to create stroke services which are sustainable and which have resilience. This is far more likely to be achieved by concentrating our scarce resources for acute care on to the one site rather than dissipating them across two.

*QUESTION: What is meant by the term re-ablement?*

Re-ablement is a term describing short-term intensive services which seeks to restore maximum independence to those in a period of recovery from illness or injury

*QUESTION: What evidence do you have that this would improve outcomes?*

We have sought advice from the National Stroke Tsar (Professor Tony Rudd) and from both the Northern and North West Clinical Senates (senior clinicians providing independent opinion to regional Trusts). There is unanimous opinion from these experts that a single HASU as part of a wider stroke pathway including rehabilitation is the best model for Cumbria.

We have also considered a range of research including some of the early research evidence in relation to HASUs in London as well as longer-standing evidence in relation to the benefit of stroke units. The table below shows the level of benefit that could be expected compared to outcomes where there is an absence of dedicated stroke service provision. It should be noted that, as we already have a number of elements of excellent stroke services, we will only stand to gain a proportion of these benefits; it is impossible to say exactly how much, although a HASU operating seven days per week against the current five-day consultant provision would be a marked improvement.

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| **Care component** | **Absolute gain per 600 stroke patients treated*****(Annual number of cases treated at NCUHT)***  | **Proportion of population eligible for treatment** | **Absolute gain for stroke patients treated at NCUHT** |
|  | Survivors | Independent survivors |  | Survivors | Independent survivors |
| Thrombolysis within 3 hours | **0** | **86** | **10%** | **0** | **9** |
| Comprehensive care in a stroke unit (HASU & ASU) | **26** | **43** | **70%** | **18** | **30** |
| Early supported discharge service | **5** | **43** | **30%** | **1** | **13** |

*QUESTION: Why can’t we have two HASUs in west, north and east Cumbria – one on each acute site?*

We currently run extremely fragile services from two sites. Our current arrangements are reliant on approximately 1.25 full-time-equivalent consultants despite our very best efforts to recruit more. This reliance on two over-stretched individuals is clearly inappropriate, and could result in either or both services ‘falling over’ at any minute.

The recommendations to run a stroke unit – or indeed any discrete specialist service – are that it requires at least six consultants to make it viable. Viability issues relate in part to on-call requirements and weekend cover for A&E, stroke unit/wards and specialist clinics such as TIA (transient ischaemic attack) clinics. The low volumes of patients across two sites also make it difficult to maintain skills. To run a proper unit we need specialist nurse and therapy staff who see sufficient numbers of patients each year to ensure they have well-maintained skills; this is demonstrated to result in better outcomes for patients.

We believe it is entirely unrealistic to think that we could provide HASUs from two sites, seven days a week, and that trying to do so would jeopardise all of our stroke services. After lengthy consideration, our clinicians are of the view that it would our patients would receive better outcomes if we were to concentrate what little resource we have on one site.

*QUESTION: Why can’t the single-site HASU be based at Whitehaven? This would be more central to the west, north and east Cumbria patch than Carlisle.*

This answer is chiefly because of the availability of additional services on the CIC site which can provide extra support where required for the sickest patients. For example, greater levels of weekday and weekend specialist and diagnostic support, substantive cover from acute care physicians, and a larger intensive care and critical care outreach service.

It also makes sense to choose the site closest to the tertiary centre – in our case in Newcastle – as sometimes patients develop difficulties which need more specialist input, for example neurosurgery.

*QUESTION: So, are you confident you can provide a HASU on one site?*

Recruitment of specialist staff, and in particular consultants, will be a major challenge, but we do however believe that we have a far better chance of recruitment by having a clear and agreed model in line with best practice. We are also looking at how we can link up with other providers to provide services through a networked and shared post approach. For example, neurologists from other trusts could deliver a number of aspects of stroke care, and some stroke consultants employed elsewhere may provide weekend support. If agreed following consultation, we would not intend to move to the new model until we have a critical mass of staff secured.

We also need to be sure that we have the right ‘protected’ bed capacity at CIC, which is not always the case at present, but this is an easier challenge to solve than recruitment, and work is already underway to help us achieve this.

*QUESTION: What is the impact on those living in areas such as south Copeland or south Eden?*

We have previously asked colleagues from Lancaster University to undertake simulation modelling to understand the impact of the changes on patients living in the south Copeland area. Based on a population of slightly less than 30,000, we would expect 30 patients to suffer strokes each year, of whom 10 would be assessed for thrombolysis. Of these, three would be assessed as potentially benefitting from thrombolysis. One of these patients would get some level of improvement and every other year one of the two would gain complete independence post-recovery as a result of thrombolysis.

We estimate that more than 20 people per year in south Copeland will receive net benefit from the new arrangements, although it is difficult to quantify precisely how much given that we already have a number of elements of good stroke services.

For patients in south Eden, as there will be no anticipated difference in journey times as a result of the proposals, some of these patients may continue to miss out on thrombolysis because of the narrow window of opportunity for thrombolysis coupled with long distances from hospital (either Carlisle or Lancaster). These patients will, however, benefit from swifter pathways, HASU arrangements and early discharge improvements.

*QUESTION: Why can’t we have thrombolysis more locally at WCH before transfer to CIC?*

This is an issue which our clinicians have looked at long and hard. The model for local thrombolysis prior to transfer is not currently used in the UK but *is* used in other parts of the world. However, such a model would not meet current national requirements of stroke best practice and patient safety.

Professor Tony Rudd, National Stroke Tsar, says:

“*Hyper-acute stroke services should be centralised on one site, potentially CIC site. To achieve this, the Trust needs to ensure that CIC is ready and able to offer a seven-day service. The pathway should be the simplest pathway possible. The option of a ‘Drip and Ship’\* model should only be considered once the pathway is well established.”*

*\*Term colloquially used to describe local thrombolysis followed by transfer to a more distant stroke unit*

Northern Clinical Senate says:

*“The worst possible pathway would be admission to one hospital A&E followed by transfer to a second hospital A&E.”*

These views relate to:

1. Risk in relation to increasing the complexity of decision-making for paramedic staff in choosing the most appropriate initial destination for the patient.
2. Difficulties in maintaining the necessary medical and nursing skills at WCH when there are much fewer thrombolysis cases (drop of likely 16 to three per year).

While thrombolysis support can be provided remotely via telemedicine to staff in relation to the itself, there does need to be rapid and intense control of patients’ blood pressure and monitoring for this and other deterioration which requires familiarity with acute stroke care, which is not fully supported by remote means. Decision-making about suitability for thrombolysis can also be more difficult remotely and may result in some patients not receiving treatment who could have benefitted, and vice versa. It also needs to be remembered that thrombolysis can, in itself, be a dangerous treatment.

The danger therefore is that, in our efforts to provide thrombolysis at WCH, we deliver a service that is unsafe, does not meet quality standards and which cannot be maintained; it could end up further disadvantaging the very population we are trying to help.

*QUESTION: Under these proposals, are there any other ways you will be supporting patients in the west to access thrombolysis?*

We have listened to patient concerns and propose that, should the proposals be implemented, we take early action – pre-establishment of the HASU - to work with academic partners in exploring the potential for setting up an approved national pilot. This pilot would carefully test the viability of a WCH thrombolysis and transfer model, and potentially other alternatives such as initial assessment – or even potentially thrombolysis - undertaken by paramedics in the ambulance with telemedicine support, in order to offset the impact of travel time delays.

It is, however, important that any pilot does not deplete the workforce necessary for HASU functioning and thus jeopardise its successful establishment.

*QUESTION: What else would improve care?*

In the proposals, early rehabilitation and re-ablement are core elements of the stroke pathway. Rehabilitation would continue on both sites where hospital-based care is still needed, but significant strengthening of the early supported discharge service would ensure patients can benefit from the advantages of this as an important part of our plans. This represents a particular improvement in care in the west of the county.

It is also critically important to look at prevention and early detection. Some recent research papers suggest that 90% of strokes are preventable through lifestyle changes such as control of diet and exercise and monitoring weight and blood pressure. Integrated Care Communities and developing health and well-being programmes are designed to enable this type of prevention.

Individuals and communities should also be aware of the warning signs of a possible stroke and know what action to take in calling for an ambulance to enable earliest possible treatment at an appropriate stroke unit/HASU.

It is important that individuals can take responsibility for many of these aspects of their care as these factors can have a far greater impact on reducing deaths and disability from stroke than treatments once at hospital.

Further reading

* [*Impact of centralising acute stroke care research paper (Aug 2014) – British Medical Journal*](http://www.wnecumbria.nhs.uk/wp-content/uploads/2016/09/Impact-of-centralising-acute-Stroke-care-research-paper-Aug-2014-BMJ.docx)
* [*National Clinical guidance for stroke (Sep 2014) – Royal College of Physicians*](http://www.wnecumbria.nhs.uk/wp-content/uploads/2016/09/National-clinicial-guidance-for-stroke-Sep-2014-Royal-College-of-Physicians.pdf)
* [*NCUH stroke review on behalf of Professor Tony Rudd, National clinical director for Stroke NHS England (Nov 2014)*](http://www.wnecumbria.nhs.uk/wp-content/uploads/2016/09/NCUHT-stroke-review-on-behalf-of-Professor-Tony-Rudd-National-Clinical-Director-for-Stroke-NHS-England-Nov-2014.pdf)
* [*Stroke Service Standards (Jun 2014) – British Association of Stroke Physicians*](http://www.wnecumbria.nhs.uk/wp-content/uploads/2016/09/Stroke-service-standards-Jun-2014-British-Association-of-Stroke-Physicians.pdf)

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