

## LEVEL 3

Seven day  
service provision  
within an  
organisation

## Cumbria and Lancashire Stroke Network

# Telemedicine enables 24/7 physician assessment, diagnostic, treatment and management of patients across rural and remote areas

### Overview

The Cumbria and Lancashire Telestroke Network is a collaboration between six acute trusts, across eight sites and nine CCGs to deliver 24/7 stroke thrombolysis service for patients in a rural area.

The Telestroke solution uses a combination of video-conferencing to enable a stroke specialist to assess the patient and enables the physician to review the CT head images. The physician can confirm the diagnosis, assess the severity of the stroke, exclude a haemorrhage on the CT head scan and advise the local team with the patient whether thrombolysis treatment would be of benefit. Telestroke takes the physician to the patient rather than moving the patient to the physician.

### Impact

#### Patients

There is availability of an out-of-hours stroke thrombolysis service for 2.2 million people in Cumbria and Lancashire, ensuring that all individuals needing it have access to treatment which reduces disability and death. As a result, over a 12 month period in Cumbria and Lancashire:

- 24 patients are alive who would have died
- 40 more patients a year with no symptoms or no significant disability
- 36 less patients a year who are dependent.

Lancashire and Cumbria (including Southport) have 3000 - 3500 new strokes per year. It is anticipated that 10% of these will be eligible for thrombolysis. As such, 300–350 patients per year will benefit from this treatment.

The Cumbria and Lancashire Telestroke service is an equitable solution to overcome the challenge of delivering specialist services to remote rural populations, as well as sharing the precious resource of stroke specialist knowledge. Development of pathways for all stroke patients has improved the journey and outcomes for all stroke patients.

#### Overall system

- The whole service depends on partnership working and collaboration. It crosses multiple organisations, including NHS Acute Trusts, CCGs and private companies (Virgin Media, Imerja Ltd, Multisense Communications). The service is dependent on receiving cooperation from multiple departments, disciplines and individuals within those organisations
- It entails cross boundary working for all the stroke physicians on the rota
- Radiology Clinical Leads and Imaging Managers at the majority of sites have had to implement next slot CT scans for patients in hours and within 60 minutes out of hours. This involved some sites training up radiographers to perform the scans, some sites to develop 24hr working patterns with no increase in workforce or financial resource
- Deployed the IT infrastructure to 16 homes and eight acute sites

- Development of an Acute Stroke CT Training and Assessment (ASTRACAT) programme was considered essential for the timely interpretation and assessment of stroke patients by the Stroke Physicians, therefore reducing the necessity of involving the on call radiologist at local sites and streamlining the stroke pathway. All consultants on the rota completed this training prior to the commencement of the service.

#### Challenges and solutions

- Job planning can be a lengthy process and needs to be done at each site to ensure services are not destabilised by altered rotas
- Gaining consensus of clinical opinion across all disciplines needs time and clear communication
- IT infrastructure and connectivity was a challenge due to the rural nature of the area. IT leads from each site provided timely, enthusiastic and technical support
- Radiologists originally had concerns that they would have increased out of hours work which was addressed by the training that was undertaken by the Stroke physicians

#### Emerging principles and themes

Technology can be used to deliver a service across a geographically challenged area which may be transferred to other clinical specialities with multiple staff groups working together to achieve a robust and effective pathway. The consultant training on the assessment and interpretation of CTs has been recognised as an RCP accredited course.

#### TOP TIPS

- **Get contracts signed up front for agreement for the project and funding**
- **Follow procurement advice for tendering of services**
- **Begin job planning at an early stage in the project**
- **Gain clinical consensus across all disciplines**

#### Contact

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