

Cumbria & Lancashire Cardiac & Stroke Network



About Cumbria & Lancashire Cardiac & Stroke Network

The 'Stroke – Act FAST' campaign has seen a tremendous increase in suspected stroke cases being quickly identified and the patients transferred to hospitals for diagnosis and treatment. However, there remains the requirement for A&E departments to have the necessary specialist consultant available to make the correct prognosis, which

is largely visual in nature, and implement the correct treatment plan for the patient. There is a significant cost involved with the initial treatment and ongoing care of stroke patients, and the NHS has been looking at how services could be improved to help reduce this at the same time the number of patients resented has increased.

The Problem

Correctly diagnosed, certain types of stroke can be treated by the patient being thrombolysed which helps to thin the blood and remove the clot causing the stroke. However, only specialist stroke clinicians are qualified to make the correct prognosis and prescribe the treatment. There is a critical period of 4 hours from the time of a stroke occurring to treatment being started in order to affect a positive outcome for the patient.

Typically, by the time a patient has been identified as a potential stroke victim, transferred to a hospital and admitted to the A&E department, an hour of this window has been lost leaving less than three hours for the consultation, prognosis and treatment to be prescribed.

In Cumbria & Lancashire hospitals are sufficiently resourced during the day time to quickly assess stroke patients, responding quickly to cases and meeting the government KPI. However, out of hours (OOH) there are not enough resources available to provide on-site stroke consultants across all sites all of the time.

Historically, one stroke consultant would typically be available on call OOH to respond to A&E admissions of suspected stroke.

The large geography across the Cumbria & Lancashire area, where the consultant lives and the location of the suspected stroke victim would all have a significant impact to any delay before a clinical prognosis could be given, potentially putting the patient at risk or denying them a consultation in the critical window if the on-call consultant was unable to conduct a visual diagnosis in time.

“Telestroke has transformed the way we deliver patient care. By harnessing the power of technology we’ve removed geographic obstacles, to allow our staff to bring our patients cutting edge medical care.”

— **Stroke Consultant**

Blackpool Teaching Hospitals
NHS Foundation Trust

“By taking the stroke specialists to the patient rather than vice versa, we’re saving critical sometimes lifesaving time, to get the right treatment as soon as possible. And, the new network also supports how healthcare is provisioned in the future, a truly exciting prospect.”

— **Stroke Consultant**

Blackpool Teaching Hospitals
NHS Foundation Trust

The Solution

Realising the significance of this issue if left unresolved, the Cumbria & Lancashire Stroke Network decided to proactively engage specialist service providers to try and find suitable solutions to address the challenge. Approaching Virgin Media Business and Intercity, an existing supplier partnership to the Lancashire Healthcare Trust, the Stroke Network wanted to find a way of making stroke clinicians available 24x7 so that stroke patients could receive the same level of service and care during the night as they do during the day.

A leading innovator in this area, approved N3 supplier and recognised specialist in delivering IT security solutions to the public sector, Intercity was responsible for the design, implementation and the delivery of the Cumbria & Lancashire Telestroke service, working in partnership with Polycom and Virgin Media Business.

The solution developed by Intercity harnessed existing technology, some of which was already deployed within hospital sites, to deliver a high definition videoconferencing service over a private network provided by Virgin Media Business.

A purpose built mobile telecart was deployed in each A&E department which can be accessed by clinicians so they can conduct a full consultation and diagnosis with suspected stroke patients directly from their homes or other location where they are able to access the secure network, such as another hospital site. Being a mobile unit, the telecart can be brought to the patient bedside, and the clinician can then immediately dial in from a laptop or tablet device to consult with the patient.

The telecart solution includes a 10x optical zoom, full pan and tilt camera which can be operated remotely by

the clinician. The system can also access PAC systems and present the remote clinician with test results in real time as the patient undergoes scans or other observations whilst in the A&E department. The private network to the clinician’s home also provides them with secure connectivity to services delivered over N3, including access to NHSmail and medical records.

Intercity’s secure telehealth Video-as-a-Service delivers a 24x7 managed service to proactively monitor the status of the telecarts and private network to ensure any faults are identified and dealt with quickly, such as a flat battery or failed codec requiring upgrade. This is complemented with a 24x7 help desk service so that no matter what time of day or night a telecart is called into use there is someone at the end of a phone to guide the user through the operation and use of the system.

Key successes

In the first 12 months of operation the Telestroke service achieved the following:

- 1 343 advice calls taken
- 2 319 telestroke assessments made
- 3 24 more patients survived
- 4 40 patients expected to have a full recovery
- 5 NHS saved over £8 million

About Intercity Technology

At Intercity Technology we believe in a people first approach to define and launch technology solutions.

We have over 30 years' experience in delivering services that allow you to work together, work securely and work from anywhere on a global basis.

With a genuine passion for technology and the businesses we work with, we offer innovative technologies in cloud, enterprise mobility, collaboration, security and managed services.

Intercity is accredited by a number of professional organisations with a suite of accreditations which confirms and evidences our commitment to security, quality, service management and environmental management. For a full list of our accreditations and frameworks please visit [intercitytechnology/accreditations](https://www.intercitytechnology.com/accreditations)

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