CaptureStroke, the market leading stroke clinical pathway software partnered with the North East Ambulance Service (NEAS) to develop an ‘Ambulance Service Gateway’ enabling the automatic flow of vital real time SSNAP Stroke data from the ambulance to the Acute Receiving Trust for patients with a suspected stroke.

The current process requires the Ambulance service and hospital to input clinical data on separate systems.

CaptureStroke enables the recording of data on patients with suspected strokes and tracks their journey from initial ambulance pick up, inpatient stay to discharge, and on to hospital follow-up appointments and community care. Using CaptureStroke, data can be inputted by the paramedic whilst in transit to the Acute Trust; this data can be viewed in real time by the Emergency Department of HyperAcute Stroke Unit team to inform patient triage.

The Case for Change

Historically, the NHS has been collecting audit data once a patient has been admitted into hospital.

However collecting valuable clinical data earlier in a patient’s pathway (for example, whilst in the care of the ambulance service) enables a complete picture of the patients care throughout the pathway.

Overview of Innovation

A technical proof of concept was produced that allowed for the automated look up and retrieval of ambulance service data and the subsequent return of outcome data from the hospital, sent securely over the NHS N3 network.

In 2018 Ambulance Trusts in England began entering key Stroke data onto SSNAP, including time of call for help, time of ambulance arrival at patient location, travel time to hospital and other key data, complementing the current SSNAP dataset and extending the data collection to pre-hospital.

The aim of the project was to explore mechanisms to enable data collection in the pre-hospital setting and to be as unobtrusive to paramedics and patients as possible.

Using CaptureStroke, data can now follow the patient, seamlessly and securely over NHS N3, across the pathway.

CaptureStroke’s initial proof of concept with North East Ambulance Service delivered a reduction of 75% in the time spent to collate, review and input current ambulance data items to the Stroke Audit web-portal compared to the existing manual process.

For a typical Stroke service this could equate to a saving of 67.5 man days per annum.

CaptureStroke delivers a reduction of 75% in administration of Stroke SSNAP Ambulance data
• This included full documentation and specification, NHS England accredited Interoperability Toolkit (ITK) end points to allow the secure data transfer and the addition of the associated user interfaces to the CaptureStroke application.

• The solution collected key patient demographics, medical history, assessment and care delivered ready for patient handover and SSNAP data upload.

• The solution was developed as a two-way process so the Ambulance Service could also receive outcome data back from the hospital setting to inform paramedic training and service improvement initiatives.

Benefits

• Based on the initial proof of concept, there has been a reduction of 75% in time spent collating, reviewing and inputting the current ambulance data items to the Stroke Audit portal compared to the existing manual process. For a typical Stroke Unit this could equate to a saving of 67.5 man days per year.

• Improved data quality to help inform patient care through the reduction in rekeying errors and missed data items.

• For paramedics, less duplication of data entry and potential to receive outcome data to help inform future training and process improvement, and confirmation of diagnosis.

• For hospital teams, timely access to accurate data relating to the initial stages of a patient’s condition from the point of ambulance pick up and before.

• CaptureStroke enables Stroke clinical data to be captured in real time and shared with the receiving Emergency Department. Access to real time clinical data is associated with significant clinical benefit.

Progress to Date

Following the successful proof of concept and completion of the assurance process, the aim is to make the Ambulance Service Gateway available to all CaptureStroke users and extend its use to other pathways over the coming months. The CaptureStroke team are working with the STPs to explore opportunities for wider roll out. The Gateway has also been enhanced to include real-time alerts and notifications capability to send e-mails, SMS or in-app alerts to all relevant parties.

Next Steps and Plans for the Future

• To explore opportunities to offer this solution to other hospitals, ambulance services, Stroke Integrated Care Systems and STP’s.