

2<sup>nd</sup> September 2021

## **Evaluation of temporary move of NUH Acute Stroke Service from the City Hospital Campus to the QMC Campus during COVID pandemic**

### **Briefing for Health Overview and Scrutiny Committee**

#### **1.0 Background**

Over 1.2 million people across the UK have had a stroke with many experiencing disabilities or other serious complications as a result. Stroke is the fourth single leading cause of death in the UK and the single largest cause of complex disability.

The Nottingham University Hospitals (NUH) stroke service is the second largest stroke service in the East Midlands region, seeing on average 1200 patients per year ranging from 95 to 128 patients per month.

In response to the covid-19 pandemic the Acute Stroke Services were temporarily moved to the QMC campus on the 14 July 2020, where they currently remain. The relocation enabled NUH to comply with the national directives related to nosocomial (hospital acquired) covid-19 infections: implementation of temporary new patient pathways with dedicated covid and non-covid areas - green (covid negative), yellow (suspected covid) and blue (covid positive) areas on the City Hospital campus.

There is a clear clinical case for the reconfiguration of stroke services and specifically for the centralisation of hyper acute stroke services. The change is aligned to regional and national stroke strategies and is a stated ambition of the local Clinical and Community Services Strategy review for stroke services. This review was underpinned by strong patient and public involvement with stroke survivors forming part of the work alongside staff and clinicians, and the Stroke Association supporting a number of patient engagement sessions.

The short timeframe within which the move had to be made, as well as the ongoing need to flex and respond to the covid-19 pandemic has resulted in some aspects of the stroke patient pathway development work which would normally be completed prior to relocation having to take place following the move. This work is on-going and consequently not all of the benefits associated with the co-location of Acute Stroke services have been fully realised at this time.

This paper provides a review of the impact of the change to Acute Stroke services at NUH.

#### **2.0 NUH Stroke Services**

Acute Stroke Services range from emergency assessment and treatments in the first few hours after stroke, through to rehabilitation. Current provision is:

- i. C4 - Hyper Acute Stroke Unit where all patients with a suspected new stroke are admitted for emergency assessment and treatment (QMC campus).
- ii. The Transient Ischemic Attack (TIA) Assessment Unit is a seven day services assessing possible new TIAs and minor strokes (QMC campus).
- iii. C5 - Acute Stroke Unit for patients who require continued acute care and medical and therapy assessment (QMC campus).
- iv. Daybrook Ward - Stroke Rehabilitation ward for patients who require a longer period of rehabilitation (City campus).

### 3.0 The importance of rapid diagnosis and treatment and geographical alignment

Rapid diagnosis and treatment is essential to ensure the best possible patient outcomes. The relocation of Acute Stroke Services to the QMC site ensures that key assessments, investigations and interventions take place in a timely manner.

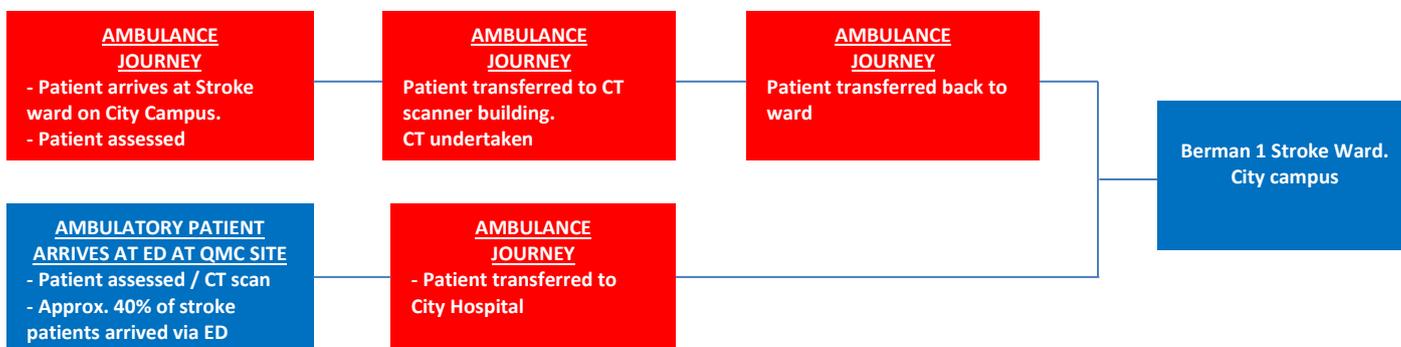
There are three main geographical alignments that are achieved through the relocation to the QMC site that are critical to patient outcomes:

#### 1. Acute Stroke Services are now geographically aligned with the CT scanner

Undertaking a CT scan for stroke patients as soon as possible after arrival at hospital is vital as it provides valuable clinical information that informs the patient pathway.

When on the City campus, Acute Stroke Services and CT scanning were in two different buildings resulting in additional ambulance journeys. These journeys added a delay into the patient pathway, and resulted in a poor patient experience. The following diagrams illustrate the potential number of ambulance transfers an individual patient might have to experience during this time-critical period:

#### Pre 14 July – Acute Stroke Services based on City Campus



#### Post 14 July – Acute Stroke Services based at QMC campus



#### 2. Acute Stroke Services are now geographically aligned with Medical Thrombectomy Services

The Medical Thrombectomy (MT) Service at QMC delivers services for the entire East Midlands area. Prior to the move to the QMC campus, the trust was one of only two Neurosciences Centres in the country that did not have a co-located hyper-acute stroke unit and Medical Thrombectomy Service

Medical Thrombectomy is a procedure to remove a clot from a patient’s artery. It aims to restore normal blood flow to the brain. A CT scan is required before the Mechanical Thrombectomy. It is therefore critical that a CT scan takes place in a timely manner to allow for a Mechanical Thrombectomy.

When stroke services were based on the City Hospital campus, there was a potential delay in getting patients requiring a MT to the QMC campus due to the need for an emergency ambulance service. The relocation of stroke services has completely eliminated the need for this.

### 3. Acute Stroke Services are now geographically aligned with other critical specialities such as ED, Neurology and Neuro-surgery

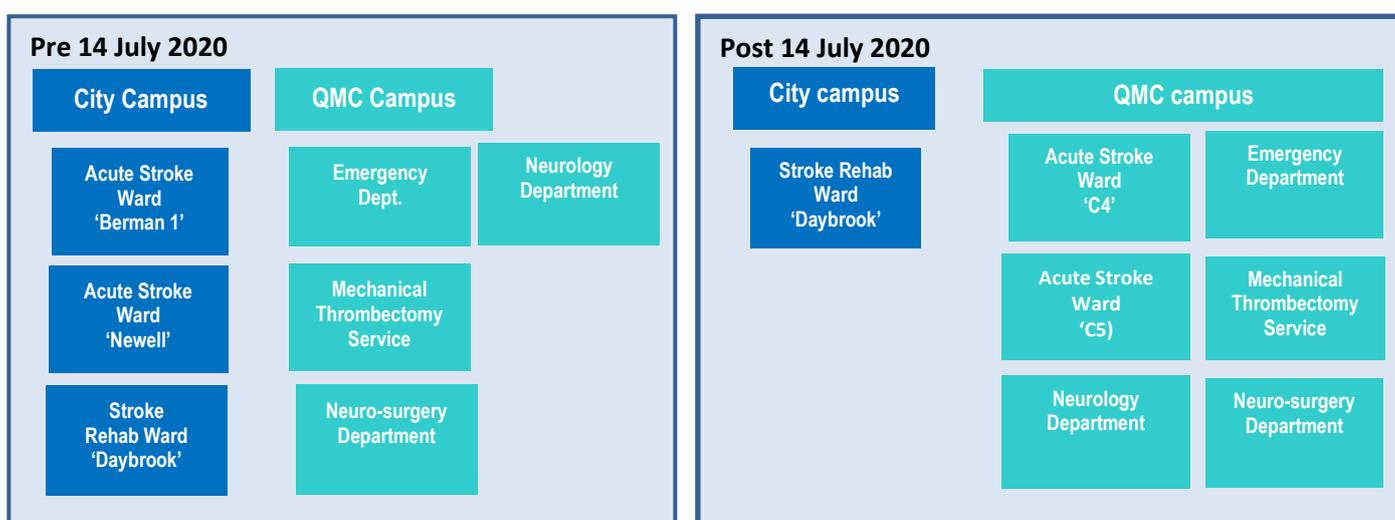
The proximity to other medical speciality services is key, particularly the Emergency Department, Neurology and Neuro-surgery departments. For example, 'stroke mimic' is a term used to distinguish patients presenting acutely with stroke like symptoms but turn out to have an alternative diagnosis, for example, a brain tumour. As Acute Stroke Services are now co-located on QMC sites alongside the Neurology and Neuro-surgery departments, this enables 'stroke mimic' patients to be identified and put on the correct (non-stroke) patient pathway earlier.

#### 4.0 Current status of Acute Stroke Services

The pathway for patients presenting in ED with stroke has now been reviewed to identify further improvements.

The following diagram illustrates the key services and their location pre and post the July 2020 move of Acute Stroke Services.

**Diagram Two**



#### 5.0 Outcomes for stroke patients

The Sentinel Stroke National Audit Programme (SSNAP) is the national healthcare quality improvement programme that measures the quality and organisation of stroke care in the NHS, measuring both the care provided to stroke patients, and the structure of stroke services against evidence based standards.

SSNAP data is collated quarterly and ratings range from A to E (with A being the highest score). NUH stroke services are currently scoring an overall score of 'B' (Jan-Mar 2021). If the Acute Stroke services remain on the QMC site the trust anticipate achieving an 'A' rating in the first 3-6 months of 2022 in light of the new patient pathways and improved data collection.

The SSNAP metrics reflect the clinical importance of ensuring timely assessments and interventions during the first 72 hours of a stroke to ensure the best possible patient outcomes. The critical time factor is the primary rationale for co-locating all Acute Stroke and supporting services on the QMC site.

#### 6.0 Quality Improvement benefits

The latest SSNAP data shows that there have been improvements in some key individual SSNAP metrics since the temporary service change including:

- Increase in the percentage of patients scanned within 1 hour clock start
- Increase in the percentage of patients directly admitted to a stroke unit with 4 hours of clock start
- Increase in the percentage of patients who were thrombolysed within 1 hour of clock start
- Reduction in hospital length of stay

## 7.0 Summary

Both the National 2019 GIRFT assessment and the Stroke ICS Clinical and Community Services Strategy review recommended the relocation of acute stroke services to the QMC campus.

The requirement to rapidly relocate of stroke services in 2020 was in response to the covid-19 pandemic and resulted in some of the necessary development work having to be completed after the relocation of services, particularly around data collection processes.

The move means that Acute Stroke Services are now co-located with specialisms that are critical to the provision of an effective patient pathway. With the reduction of covid-19 admissions the Medicine Division is now in a position to undertake the remaining developmental work and it is anticipated that we will see a positive upward trajectory for the stroke SSNAP metrics alongside improved patient outcomes.

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