NICE Guidelines ([CG68] 1.3.2.1) state that brain imaging should be performed immediately for people with acute stroke (in overs 16’s) if any of the following apply:

- indications for thrombolysis or early anticoagulation treatment
- on anticoagulant treatment
- a known bleeding tendency
- a depressed level of consciousness (GCS <13)
- unexplained progressive or fluctuating symptoms
- papilloedema, neck stiffness or fever
- severe headache at onset of stroke symptoms.

For all people with acute stroke without indications for immediate brain imaging, scanning should be performed as soon as possible (NICE Clinical guideline [CG68] 1.3.2.2).

Administration of Alteplase should be as early as possible and within 4.5 hours of onset of stroke symptoms. (Clinical guideline [CG68] 1.4.1.1)

**AIM**

To compare data to highlight improvement percentages of patients' receiving CT imaging within 1 hour and up to 12 hours, and to re-evaluate and confirm recommendations for further service improvement.

**CURRENT PRACTICE**

**ED ASSESSMENT OF ACUTE STROKE age 18 years or over**

**INDICATIONS:** All strokes in hours (0830-21:00)

- Complete the ATLAST form accurately and promptly and in particular
  - Narrow. Data of birth, Onset time, RTA
  - Inform Receptionists of details to pre-register patient (use eCRF if information is available)
  - Call the stroke team at ETA 4-15 minutes (see below)

**REGISTRATION OF PATIENT - RECEPTIONIST** (applicable to acute stroke patients only)

- Pre-register acute stroke patient using information provided in ATLAST as per protocol

**CLINICAL INFO / PRESENTATION BEFORE PATIENT ARRIVES**

- Generate a CT head request based on the pre-registered hospital ID provided by Receptionist
- Put ROSSIER stamp on CT request
- Scan request in CT ED Kaye
- 2222 (Switchboard) to activate Stroke Co-ordinator, Stroke Register & CT Radiographer

**ON PATIENT ARRIVAL**

- Meet the patient in the corridor and do ROSSIER check
- Confirm patient is same as pre-registered details, attend with band
- Confirm age, sex, size 18 (group), history of past anti-coagulant usage
- Confirm patient safe to go direct to CT (GCS ≥ 10)
- Direct patients with nurses escort to the CT scanner
- Paramedics hand-over patient to nurse escort, remove ambulance trolley once patient in scanner and depart, off-Medi-Med Smart out route back to vehicle

**RETURN FROM CT TO ED - NURSE CONTROLLER**

- Identifies a second bed for patient in anticipation of thrombolysis before they return from CT
- Arranges for trolley to be taken to CT, in preparation for patient to return to ED
- Sends EDIS to radiologist to order patient in Jesus, arrange for adequate time of arrival to be annotated and clinically confirm why there are differences in arrival times

**FOLLOW-UP**

- Nurse controller to send a trolley to collect patient from CT
- Stroke team to decide further treatment such as thrombolysis or reversal of anticoagulation
- Complete your documentation
- Request a Consultant (Acute Stroke Unit) bed for patient
- Hand over card to neurology team

**Acute stroke presenting between 2100 - 0830**

- Process pending in a similar way to the above
- Request CT head once patient is on EDG
- Sleep C006 (Duty medical registrar)
- Medical registrar to assess patient in ED after CT to decide treatment e.g. thrombolysis
- Request a Consultant (Acute Stroke Unit) bed for patient

**How has some of the recommendations from the CQC currently impacted the acute stroke care of PHNT?**

- It was recommended by CQC to implement a ‘Thrombolysis bag’ to aid in reducing delays in administering IV TPA.
- This has allowed for an increase of patients receiving thrombolysis on the CT scanner (when sufficient history and blood pressure etcetera has also been checked).
- Routine tasks such as ECG, changing patients clothes etcetera should be postponed until after thrombolysis.
- This is being carried out in addition to the assessment of the patient outside CT scanning room when in use and on entering CT scanning room.
- Weekly meetings are held maximising review and feedback to all
- Current employment of 3 specialist stroke nurses (in-hours)
- Education and awareness of the urgency of strokes (treated as urgent as trauma patients) amongst the imaging and emergency team

Our SSNAP score has increased from a D (Jan-March 2016) to a B (Dec 2016-March 2017)

**Recommendations to further increase improvement**

- Correct cannula siting on patient arrival to CT
- To develop a pathway in which CT Radiographers can e-vet CT head and CT Angiograms for strokes, reducing the time from request to e-vetting (IRMER2000 compliance).
- Continued use of the stroke bleep via switchboard.
- Continued clear communication between all members of staff involved in patient pathway, including that of stroke arrival time to CT and organising a trolley to take patients back to ED.
- Audit into reporting time out of hours compared to that of in hours.
- Mimic process of trauma patients – include a scribe and timer into the pathway.
- Standardise all stroke requests for potential stroke within 6 hours – lack of CTA request may give the impression that that request may be less urgent.
- Electronic EDIS system doesn’t talk to CRIS
- Undertake further audits of delays