INPATIENT

Acute Stroke Protocol

UHS/UTHSCSA

Neurologic changes in patient:
- New or acute change in mental status or LOC
- Sudden unilateral weakness or numbness of the face arm or leg
- Sudden trouble seeing in one or both eyes
- Sudden confusion, agitation or delirium
- Sudden trouble speaking, slurred speech, or understanding
- Sudden unexplained lethargy/difficulty to arouse
- New onset facial droop
- Sudden severe headache with no known cause
- Sudden loss of balance, coordination, or dizziness

Staff calls **8-2222** for **STROKE ALERT** activation and provides name of person initiating the call, patient location, and call back number. This will activate the **Stroke Team and Rapid Response Team (RRT).**

Neurologist provider assesses the patient, reviews history and places orders for: STAT non-contrast CT, ECG, CRITICAL stroke labs, finger stick glucose, start 2 IV's, obtain vital signs (treat if necessary), oxygen saturation, neuro checks, NIHSS, place in monitored bed, monitor airway, keep NPO, **obtain last known well and weight**. The Rapid Response Nurse is responsible for alteplase administration and remains with patient until completion of alteplase administration (full hour regardless of setting) and during the evaluation/assessment stages until admission to a stroke bed. Patient will go to a higher level of care as indicated by physician.

Inclusion criteria < 0-3 hrs and 3-4.5 hrs from symptom onset or patient last known well

* Diagnosis of ischemic stroke causing measurable neurological deficit
* Onset of symptoms < 3-4.5 hours before beginning treatment
* Aged ≥ 18 years

Exclusion criteria (contraindications) 0-3 hr and 3-4.5 hr treatment windows

* Symptoms suggest subarachnoid hemorrhage
* IV or IA thrombolysis/thrombectomy at an outside hospital prior to arrival
* Arterial puncture at non-compressible site in previous 7 days
* History of previous intracranial hemorrhage
* Intracranial neoplasm, arteriovenous malformation, or aneurysm
* Recent intracranial or spinal surgery or significant head trauma , or prior stroke in previous 3 months
* Elevated blood pressure (systolic > 185 mm Hg or diastolic > 110 mm Hg)
* Active internal bleeding
* Acute bleeding diathesis (low plt count, increased PTT, INR >1.7 or use of NOAC). This includes PLT count <100,000; Heparin received within 48 hours resulting in abnormally elevated aPTT greater than the limit or normal; currant use of anticoagulant with INR>1.7 or PT>15 seconds; current use of direct thrombin inhibitors or direct factor Xa inhibitors with elevated sensitive laboratory tests (such as aPTT, INR, platelet count, and ECT; TT; or appropriate factor Xa activity assays).
* Blood glucose concentration <50 mg/dL (2.7 mmol/L)
* CT demonstrates multi-lobar infarction (hypodensity > 1/3 cerebral hemisphere)

Relative exclusion criteria (warnings) 0-3 hr and 3-4.5 hr treatment windows

* Care team unable to determine eligibility

* Stroke severity too mild
* Pregnancy
* Seizure at onset with postictal residual neurological impairments
* Major surgery or serious trauma within previous 14 days
* Recent gastrointestinal or urinary tract hemorrhage (within previous 21 days)
* Recent acute myocardial infarction (within previous 3 months)
* Patient/family refusal
* Life expectancy <1 year or severe co-morbid illness or CMO on admission

Possible IV alteplase candidate:

Physician reviews patient condition with patient and/or family and discusses risks and benefits of IV alteplase. Discussion and criteria used to determine administration of IV alteplase are documented by the provider.

Not an IV alteplase candidate:

Document Inclusion/Exclusion criteria

Hemorrhagic Stroke:

Consider neurosurgery consult

Large Vessel Occlusion:

See Code Neuro pathway

IV alteplase is located in the EC, 5ICU PYXIS. IV alteplase is weight based and may be given by the Physician or Rapid Response RN. Call Pharmacy at **743-4047** for IV alteplase support if needed.

Continue neuro checks and consider anti-thrombotic therapy or neurosurgical intervention as needed. Admit to appropriate level of care

Consider insertion of NG tube, foley, central line or PICC prior to IV alteplase or hold until 24 hours post IV alteplase infusion. May place ≤ 24 hours if benefits > risks. Consult provider.

Document VS and neuro checks q 15 min for the first 2 hours after IV alteplase initiation, then every 30 minutes x 6 hours, then hourly x 16 hours (until 24 hours post IV alteplase initiation).

Patient is admitted to monitored Neuroscience bed.
ECG monitoring
Maintain SBP < 180 and DBP < 105 mm Hg.
No anticoagulants or antiplatelet medications for 24 hours post alteplase initiation.
Monitor for bleeding. Initiate anti-thrombotic therapy 24 hours after alteplase if appropriate.
Patient to remain NPO until after passed dysphagia screen.

If angioedema suspected, please reference the **"Management of Angioedema protocol"**

If ICH suspected, please reference **"Management of symtomatic intracranial bleeding after IV Alteplase"**

1. Powers, W. J., Rabenstein, A. A., Ackerson, T., *et al.* (2018). 2018 guidelines for the early management of patients with acute ischemic stroke: A guideline for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*, doi: 10.1161/STR.0000000000000158

2. Demaerschalk, B. M., Kleindorfer, D. O., Demchuk, A. M., *et al.* (2016). Scientific rationale for the inclusion and exclusion critieria for intravenous alteplase in acute ischemic stroke: A statement for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke,* doi: 10.1161/STR.0000000000000086

Revised by Stroke Committee: 11/2019