Treatment Protocol: STROKE / CVA / TIA **Ref. No. 1232**

Base Hospital Contact: Required prior to transport for all patients with suspected Stroke or TIA.

1. Assess airway and initiate basic and/or advanced airway maneuvers prn *(MCG 1302)*

2. Administer **Oxygen** prn *(MCG 1302)*

3. Initiate cardiac monitoring *(MCG 1308)*
   Perform 12-lead ECG if concern for cardiac ischemia or dysrhythmia

4. Establish vascular access prn *(MCG 1375)* ❶
   Establish IV in all patients with LAMS 4 or 5, large bore catheter (16g or 18g) preferred

5. Check blood glucose
   If < 60mg/dL or > 400mg/dL, treat in conjunction with *TP 1203, Diabetic Emergencies*

6. Assess for signs of trauma
   If traumatic injury suspected, treat in conjunction with *TP 1244, Traumatic Injury*

7. Perform Modified Los Angeles Prehospital Stroke Screen (mLAPSS) on all patients exhibiting local neurologic signs. ❷❸
   The mLAPSS is positive if **all** of the following criteria are met:
   i. No history of seizures or epilepsy
   ii. Age 40 years or older
   iii. At baseline, patient is not wheelchair bound or bedridden
   iv. Blood glucose between 60 and 400 mg/dL
   v. Obvious asymmetry-unilateral weakness with any of the following motor exams:
      a. Facial Smile/Grimace
      b. Arm Strength
      c. Grip Strength

8. If mLAPSS is positive, or your provider impression remains stroke despite negative mLAPSS ❷❸, calculate Los Angeles Motor Score (LAMS) from the mLAPSS motor items:
   i. Facial Droop
      a. Absent = 0
      b. Present = 1
   ii. Arm Drift
      a. Absent = 0
      b. Drifts down = 1
      c. Falls rapidly = 2
   iii. Grip Strength
      a. Normal = 0
      b. Weak grip = 1
      c. No grip = 2

9. Verify and document date and time of Last Known Well Time (LKWT) ❹

10. Determine patient destination based on mLAPSS, LAMS and LKWT: ❹
    mLAPSS positive, LAMS 4-5, LKWT ≤24 hours → Transport to Comprehensive Stroke Center (CSC) if within 30 min
    mLAPSS positive, LAMS ≤ 3, LKWT ≤24 hours → Transport to closest Stroke Center
    mLAPSS negative but acute stroke suspected → **CONTACT BASE** for destination

11. Transport with head of bed elevated 30-45 degrees ❺

SPECIAL CONSIDERATIONS

❶ If LAMS is 4 or greater, place 18 gauge IV if possible to facilitate advanced imaging studies at CSC.

❷ The Modified LAPSS (mLAPSS) is a validated tool that helps to identify stroke mimics and excludes patients that will not benefit from stroke care. Using a stroke scale, such as mLAPSS, increases the chances of diagnosing strokes. However, stroke scales do not catch all strokes, including presentations such as aphasia, ataxia and vertigo. For patients in whom you suspect stroke but are mLAPSS negative, calculate the LAMS and contact the Base to discuss the destination decision. History of prior stroke does not exclude the need to evaluate for possible new deficits. New findings in a patient with prior stroke should be managed similarly to first-time strokes and such patients should be routed to the closest appropriate approved stroke center per Ref. 521.

❸ In patients with suspected stroke, the LAMS is performed by verbally requesting movement of face, arm, and grip or, if the patient is aphasic, by non-verbally encouraging such movement via pantomime and/or by gentle placement of limbs (painful stimulation is avoided). In patients with suspected stroke with ALOC (e.g., GCS <9) attempt neurologic assessment as noted above; alternatively, for patients unable to perform movements, compare tone and strength through passive movement of the limbs.

❹ LKWT determines the patient's eligibility for TPA and/or interventional procedures for clot removal. Document the name and contact information of the family member, caregiver, or witness who can verify the patient's LKWT and report this information to ED providers. If possible, transport the witness with the patient.

❺ Whenever possible transport patients with suspected stroke with head of bed elevated 30-45 degrees. This reduces risk of aspiration and also reduces elevation in intracranial pressure.