Stroke (Cerebrovascular Accident) (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs.
2. Airway management, and appropriate oxygen therapy.

CFR STOP

EMT

3. Use a Glucometer to measure blood glucose level.
   a. If the Blood Glucose Level is 60 mg/dL or above, proceed to NYC S-LAMS evaluation.
   b. If the Blood Glucose Level is less than 60 mg/dL, see the Altered Mental Status (Adult and Pediatric) protocol.
   c. If neurologic deficits persist after treatment and the Blood Glucose Level is 60 mg/dL or above, proceed to NYC S-LAMS evaluation per Appendix Q.
4. Determine NYC S-LAMS score (for each element and total score) in the prehospital care report, and the **"Last Known Well"**; the **exact time** the patient was **last in his or her usual state of health and/or seen without symptoms** by interviewing the patient, family, and bystanders (this may be different than the **"Time of Symptom Onset"**).
5. Transport per Appendix Q.

EMT STOP

Paramedic

Paramedic STOP

Key Points / Considerations

1. If the historical/physical findings indicate an acute stroke, transport the patient to the closest appropriate Stroke Center as determined by Appendix Q, unless:
   a. The patient is in cardiac arrest or has an unmanageable airway
   b. The patient has other medical conditions that warrant transport to the nearest appropriate New York City 911 system ambulance destination emergency department as per protocol
2. If the patient has a **NYC S-LAMS score of ≤ 3**, transport the patient to the closest appropriate Primary Stroke Center.
3. If the patient has a **NYC S-LAMS score of ≥ 4**, contact OLMC for Transport Decision to the closest Thrombectomy Stroke Center*, unless one or more of the Stroke Exclusion Criteria below are met:
   a. Total time from onset of patient's symptoms to EMS patient contact is greater than 5 (five) hours.
   b. Patient is wheelchair or bed-bound.
   c. Seizure is cause of symptoms.
   d. Loss of Consciousness (LOC).
   e. Trauma is cause of symptoms.
   f. Transport time to Thrombectomy Stroke Center is > 30 minutes.
4. *See Appendix R for a list of Thrombectomy Stroke Center Hospitals.
5. Do not delay transport.
6. Request ALS assistance if BLS airway management is not adequate.

Stroke Patient Assessment Triage And Transportation

1. NYC S-LAMS Scale
   a. For patients exhibiting signs and symptoms of a stroke (CVA), utilize the NYC S-LAMS Stroke Scale:
      i. Assess for ***<u>Facial Droop</u>*** – have the patient show teeth or smile.
         1. <u>Absent</u> – if both sides of the face move equally, the score is **0**.
         2. <u>Present</u> – if one side of the face does not move as well as the other, the score is **1**.
      ii. Assess for ***<u>Arm Drift</u>*** – have the patient close eyes and hold both arms straight out with palms facing up for 10 seconds.
         1. <u>Absent</u> – if both arms remain up or move the same, the score is **0**.
         2. <u>Drifts down</u> – if one arm drifts slowly down compared to the other arm, the score is **1**.
         3. <u>Falls rapidly</u> – if one arm falls rapidly, the score is **2**.
      iii. Assess for ***<u>Speech Deficit</u>*** – have the patient say a simple sentence, for example, "you can't teach an old dog new tricks"
         1. <u>Normal</u> – if the patient uses correct words with no speech slurring, the score is **0**.
         2. <u>Present</u> – if the patient slurs words, uses the wrong words, or is unable to speak, the score is **1**.
      iv. Assess for hand ***<u>Grip Strength</u>*** – have the patient hold both of your hands and squeeze them at the same time.
         1. <u>Normal</u> – if they squeeze both hands equally, the score is **0**.
         2. <u>Weak grip</u> – if one hand has a weaker grip than the other, the score is **1**.
         3. <u>No grip</u> – if one hand does not grip at all, the score is **2**.
   b. Document the scores for each of the four S-LAMS elements and the total score in the PCR narrative (or PCR pre-assigned fields, if available).
   c. If any of the elements of the NYC S-LAMS Stroke Scale are positive, establish onset of signs and symptoms, and document in the PCR, by asking the following:
      i. To patient – "When was the last time you remember before you became weak, paralyzed, or unable to speak clearly?"
         AND / OR
      ii. To family or bystander – "When was the last time you remember before the patient became weak, paralyzed, or unable to speak clearly?"
         OR
      iii. If the patient woke with the deficit, the time of onset is the time patient went to sleep.