GENERAL OPERATING PROCEDURES

TRANSPORTATION PROCEDURES AND DECISIONS

Acute Stroke

If the historical/physical findings indicate an acute stroke, transport the patient to the closest appropriate Stroke Center as determined by Appendix Q, unless:

- Patient is in cardiac arrest or has an unmanageable airway
- Patient has other medical conditions that warrant transport to the nearest appropriate New York City 911 system ambulance destination emergency department as per protocol.

If the patient has a NYC S-LAMS score of ≤ 3, transport patient to the closest appropriate Primary Stroke Center.

If the patient has a NYC S-LAMS score of ≥ 4, contact OLMC for Transport Decision to the closest Thrombectomy Stroke Center*, unless Stroke Exclusion Criteria are met:

- Total time from onset of patient's symptoms to EMS patient contact is greater than 5 (five) hours
- Patient is wheelchair or bed-bound
- Seizure is cause of symptoms
- Loss of Consciousness (LOC)
- Trauma is cause of symptoms
- Transport time to Thrombectomy Stroke Center is > 30 minutes

* See Appendix R for list of Primary / Thrombectomy Stroke Center designated hospitals.

THE REGIONAL EMERGENCY MEDICAL SERVICES COUNCIL OF NEW YORK CITY

BASIC EMERGENCY MEDICAL TECHNICIAN PROTOCOLS

412: Suspected Stroke

1. Monitor the airway.
2. Administer oxygen.
3. Use Glucometer to measure blood glucose level.
   a. If ≥ 60 mg/dl, proceed to NYC S-LAMS evaluation.
   b. If <60 mg/dl, treat hypoglycemia.
      - *Conscious & swallowing patient*: if the conscious patient can swallow, and can drink without assistance then provide a glucose solution, fruit juice, or non-diet soda by mouth.
      - *Conscious / not-swallowing patient: i*f the conscious patient cannot drink without assistance or tolerate oral glucose, call ALS for further treatment. Do not give oral solutions to patients who cannot swallow.
      - *Unconscious patient:* call ALS for further treatment. Do not give oral solutions.
   c. If neurologic deficits have resolved after treatment, transport patient to closest appropriate 911-receiving hospital.
   d. If neurologic deficits persist after treatment and FSBG ≥ 60 mg/dl, proceed to NYC S-LAMS evaluation per Appendix Q.
4. Document NYC S-LAMS score (for each element and *total score*) in the prehospital care report.
5. Transport per Appendix Q:
   a. If score is 0-3, transport to the closest appropriate NYC 911 system Primary Stroke Center.
   b. If score is 4 or greater, and the patient does not meet the specific Stroke Exclusion Criteria for this score, contact OLMC for Transport Decision to the closest NYC 911 system Thrombectomy Stroke Center.
6. Do **not** delay transport.

Protocol Appendices

Appendix Q: Stroke Patient Assessment Triage and Transportation

1. NYC S-LAMS Scale

NYC S-LAMS		
Element	**Finding**	**Score**
Facial Droop	Absent	0
	Present	1
Arm Drift	Absent	0
	Drifts Down	1
	Falls Rapidly	2
Speech Deficit	Absent	0
	Present	1
Grip Strength	Normal	0
	Weak Grip	1
	No Grip	2
Total Score		0 → 6

A. For patients exhibiting signs and symptoms of a stroke (CVA), utilize the NYC S-LAMS Stroke Scale:
   1) Assess for ***Facial Droop*** - have the patient show teeth or smile
      Absent- if both sides of the face move equally, the score is **0**
      Present- if one side of the face does not move as well as the other, the score is **1**
   2) Assess for ***Arm Drift*** - have the patient close eyes and hold both arms straight out with palms facing up for 10 seconds
      Absent - if both arms remain up or move the same, the score is **0**
      Drifts down - if one arm drifts slowly down compared to the other arm, the score is **1**
      Falls rapidly - if one arm falls rapidly, the score is **2**
   3) Assess for ***Speech Deficit***- have the patient say a simple sentence, for example, "you can't teach an old dog new tricks"
      Normal - if the patient uses correct words with no speech slurring, the score is **0**
      Present - if the patient slurs words, uses the wrong words, or is unable to speak, the score is **1**

4) Assess for *hand* ***<u>Grip Strength</u>*** - have the patient hold both of your hands and squeeze them at same time
   <u>Normal</u> – if they squeeze both hands equally, the score is **0**
   <u>Weak grip</u> - if one hand has a weaker grip than the other, the score is **1**
   <u>No grip</u> – if one hand does not grip at all, the score is **2**

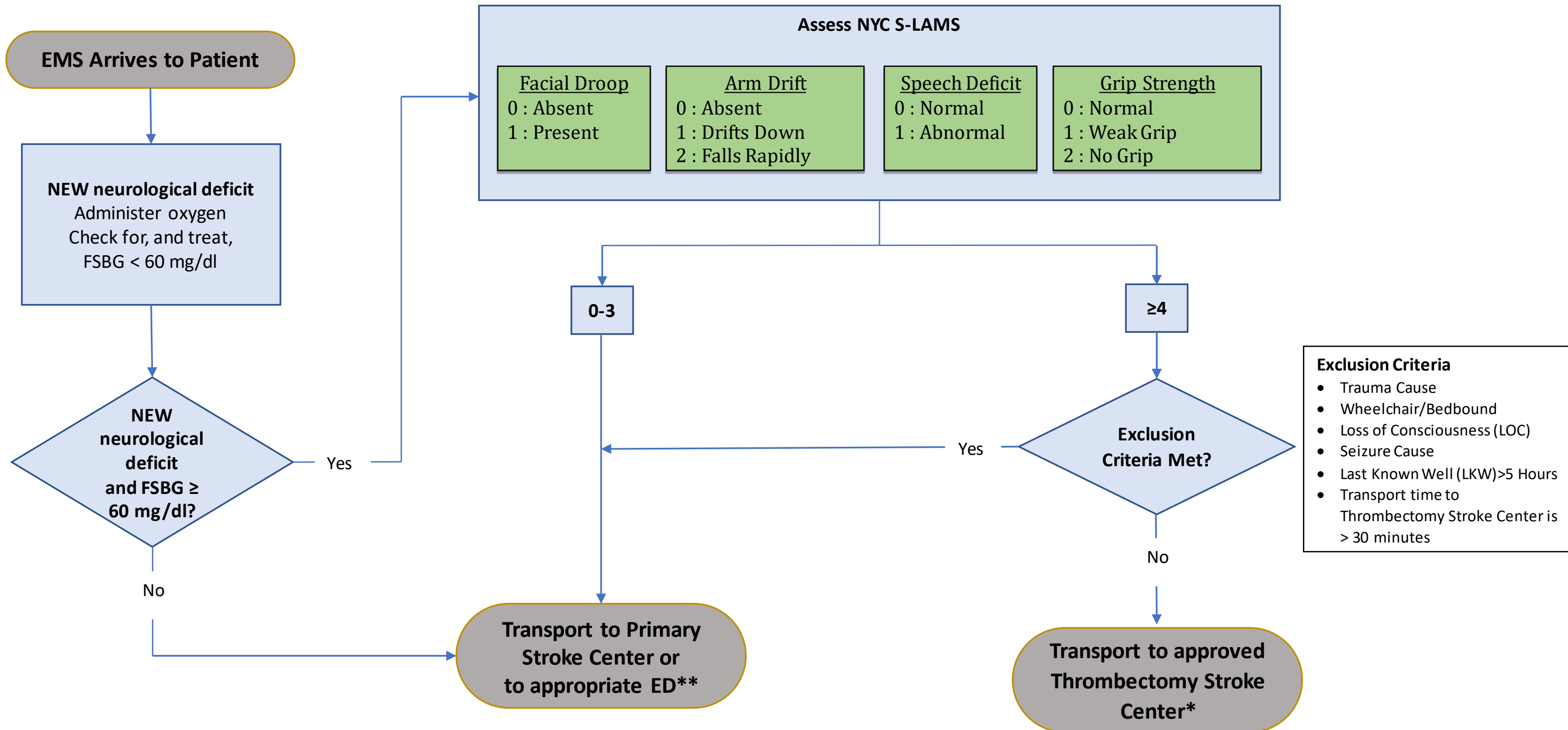
B. Document the scores for each of the four S-LAMS elements and the total score in the PCR narrative (or PCR pre-assigned fields, if available).

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:
   1) To patient – "When was the last time you remember before you became weak, paralyzed, or unable to speak clearly?"
      And / or
   2) To family or bystander – "When was the last time you remember before the patient became weak, paralyzed, or unable to speak clearly?"
      Or
   3) If the patient woke with the deficit, the time of onset is the time patient went to sleep.

2. Stroke Exclusion Criteria for NYC S-LAMS ≥ 4

If any of the criteria to the right are present on a patient with **NYC S-LAMS score ≥ 4**, transport should be to the closest appropriate New York City 911 system ambulance Primary Stroke Center	Total time from onset of patient's symptoms to EMS patient contact is greater than 5 (five) hours
	Patient is wheelchair or bed-bound
	Seizure is cause of symptoms
	Loss of Consciousness (LOC)
	Trauma is cause of symptoms
	Transport time to Thrombectomy Stroke Center is > 30 minutes

3. Stroke Triage & Transportation Algorithm



* Per OLMC direction if transport time ≤ 30 min

** e.g., trauma, treated hypoglycemia with resolved symptoms