THE REGIONAL EMERGENCY MEDICAL SERVICES COUNCIL OF NEW YORK CITY, INC.

NYC REMAC

Advisory No.	2019-01		
Title:	**Updated Stroke GOP, Protocol & Appendices Q & R**		
Issue Date:	February 19, 2019		
Effective Date:	April 1, 2019		
Supersedes:		Page:	1 of 11

The Regional Emergency Medical Advisory Committee (REMAC) of New York City is responsible to develop, approve and implement prehospital treatment and transport protocols for use within the five boroughs of the City of New York. The Regional Emergency Medical Advisory Committee (REMAC) of New York City operates under the auspices of Article Thirty of the New York State Public Health Law.

The Regional Emergency Medical Advisory Committee (REMAC) of New York City has revised and updated the regional Stroke Protocol. All protocols have been approved by the New York State Emergency Medical Advisory Committee for use in the NYC region.

The following are attached:

1. Training & Education Memo
    a. Training Program can be accessed at the REMSCO LMS (http://www.nycremsco.org/lms/)
2. REVISED General Operating Procedures: Transportation Procedures & Decisions – ACUTE STROKE
3. REVISED BLS Protocol 412: Suspected Stroke
4. REVISED Appendix Q: Stroke Patient Assessment Triage & Transportation
5. REVISED Appendix R: Thrombectomy Stroke Center List *(to be provided separately)*

PROTOCOLS ARE TO BE IMPLEMENTED April 1ST, 2019. **Agencies that require additional time for implementation must submit requests for extension in writing to the NYC REMAC. Requests can be emailed to mdiglio@nycremsco.org**

Current and Updated Protocols can be accessed at the Regional EMS Council website:
www.nycremsco.org.Owners/operators of Ambulance and ALS First Response Services providing prehospital medical treatment within the five boroughs of the City of New York are responsible to provide copies of the NYC REMAC Prehospital Treatment Protocols to their personnel, and to ensure that Service Medical Directors and EMS personnel are informed of all changes/updates to the NYC REMAC Prehospital Treatment Protocols.

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TRAINING & EDUCATION MEMO

Dear EMS Agency Administrators and Educators,

The New York City Stroke Protocol effective April 1, 2019 is a great achievement toward improving Stroke Systems of Care in our region. This protocol includes a new stroke assessment to facilitate identification of patients with severe strokes who are more likely to suffer from a large vessel occlusion (LVO), for which endovascular mechanical thrombectomy is the treatment of choice. Assessment results will expedite transportation decisions through online medical control to the hospital destination most beneficial for stroke patients. This protocol applies to all providers in the NYC Region. Training an entire region to follow a new stroke assessment paradigm is a challenging and time-intensive proposition.

The FDNY EMS Bureau of Training and NYC REMSCO Training and Education Committee have collaborated to produce a standardized training program that addresses the training needs of all EMS agencies and providers in the region. This will position the region for success by ensuring interoperability among all regional providers as all will receive the same training.

The training package consists of two modules:

Module A: Online training program available on REMSCO LMS. This consists of two videos totaling approximately 30 minutes. The first video discusses the changes and updates to Stroke Systems of Care in NYC and introduces the new assessment tool. The second video consists of a step-by-step walkthrough of the new stroke protocol and demonstration of the new assessment tool. Agencies may choose to offer this module to their providers for self-learning on LMS. To do this please email mdiglio@nycremsco.org identifying the LMS your agency uses and how this will be provided through your LMS. You will be required to submit completion rosters to the REMSCO office attesting to provider completion.

Module B: "Hands on" practice of new assessment with presentation to online medical control **to be performed at each agency**. Providers will be issued a certificate of completion upon successfully completing "Module A." This certificate must be produced by the provider to their agency training officer or designee to proceed with "Module B". Resources to successfully train your providers on "Module B" are

included with this advisory and can be sent again upon request. You may accept copies of skill sheets completed at other agencies as evidence of completion, hence, repeating this training is not necessary. Below are instructions to successfully complete this module at your agency.

Resources:

- Patient Description Cards (10 total)
- Skill Sheets

Who can conduct "Module B" training?

Module B training should be overseen by a NYS Certified Instructor Coordinator (CIC) or Certified Lab Instructor (CLI). The CIC/CLI may train designees to conduct training sessions. **How should training be conducted?**

Patient description cards should be duplicated double sided. Skill sheets must be completed for each provider. Completed skill sheets should be placed in provider training files and made available to them upon request to provide evidence of completion to other agencies with which they are affiliated.

Two methods to conduct the training have been identified:

- Group session (preferred):

  Time: 15-20 minutes

  Required: 4-5 providers with 1 facilitator, patient description cards, skill sheets, scrap paper.

  1. "Program" each provider using randomized patient description cards.
  2. Providers will take turns acting as patient.
  3. While one provider is patient, one will assess, record score and perform a mock online medical control (OLMC) consultation while the rest observe the assessment and record the score on blank paper as they identify it.
  4. Providers compare assessment scoring and review with facilitator, who will complete skill sheet for provider/s.
  5. Rotate roles until all providers have performed at least one assessment and OLMC contact themselves correctly.

- Personal session:

Time: 5-10 minutes

Required: 1-2 providers with 1 facilitator, patient description cards, skill sheets, scrap paper.

1. Facilitator will choose four random patient description cards.
2. Facilitator acts as patient.
3. Provider will assess, record score and perform mock OLMC presentation. If two providers, alternate assessing, scoring and OLMC presentation.
4. Providers review scoring with facilitator, who will complete skill sheets for provider/s.
5. Continue selecting new cards and repeating above until provider/s have performed at least one assessment and OLMC contact correctly.

Agencies are required to send an attestation of completion by March 31, 2019. We look forward to your active participation in this process and timely completion for a successful rollout! Surveys will be sent out upon completion to solicit your feedback and improve this process for future projects. Please email Mordy Lax, Chair, REMSCO Training and Education Committee with questions via mdiglio@nycremsco.org.

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:

- The patient is in cardiac arrest or has an unmanageable airway;
- 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;

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 Thrombectomy Stroke Center Hospitals.

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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.
        i. *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.
        ii. *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.
        iii. *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.

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* ***Grip Strength*** - have the patient hold both of your hands and squeeze them at same time

   Normal – if they squeeze both hands equally, the score is **0**

   Weak grip - if one hand has a weaker grip than the other, the score is **1**

   No grip – 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

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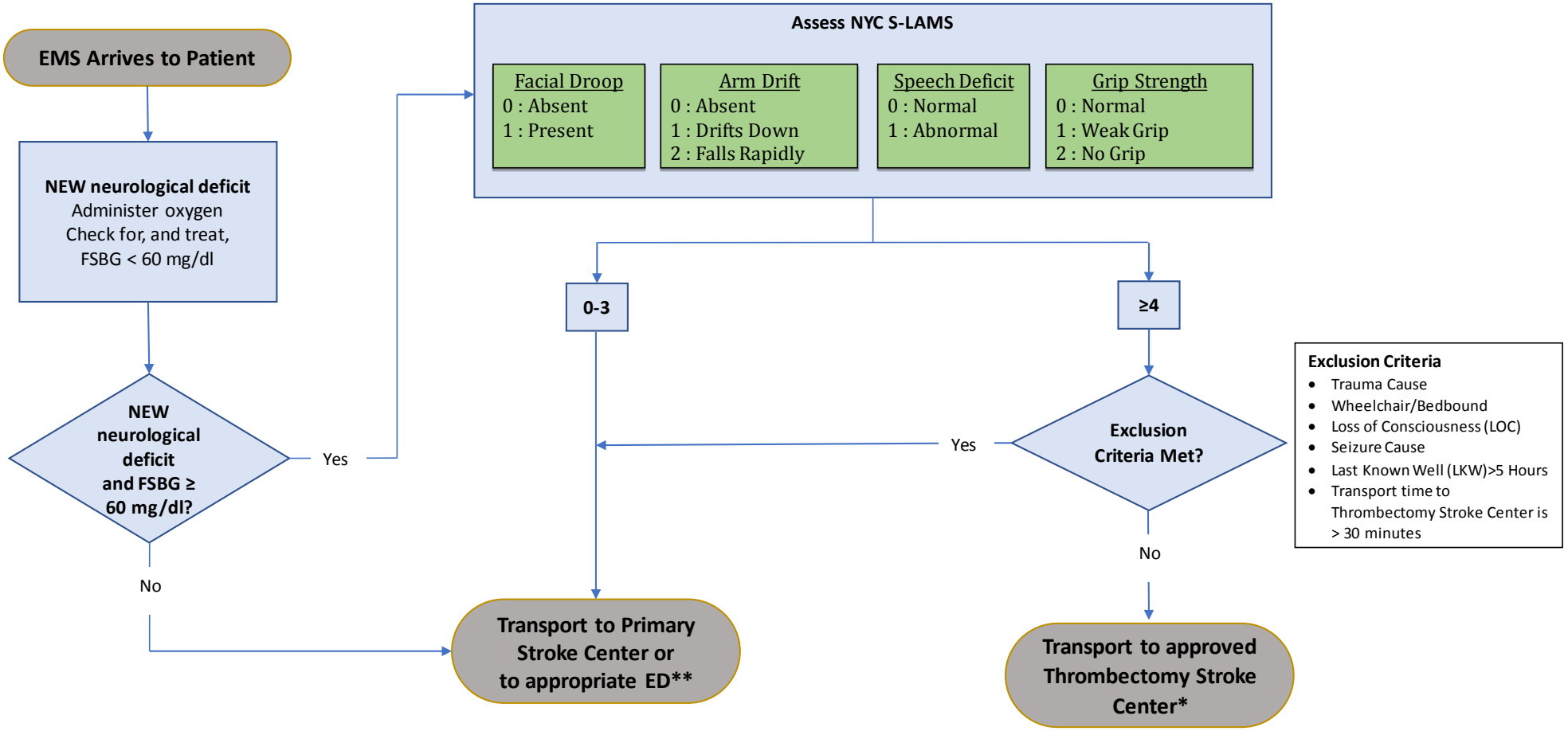
3. Stroke Triage & Transportation Algorithm



* Per OLMC direction if transport time ≤ 30 min
** e.g., trauma, treated hypoglycemia with resolved symptoms

APPENDIX R

THROMBECTOMY STROKE CENTER HOSPITALS LIST

THIS LIST WILL BE PROVIDED SEPARATELY