



NYC REMAC

Advisory No.	2004-16		
Title:	Identification of ACUTE Stroke Patients Transport to NYS DOH Designated Stroke Centers		
Issue Date:	December 6, 2004		
Effective Date:	Immediately		
Supersedes:	N/A	Page:	1 of 5

The Regional Emergency Medical Advisory Committee (REMAC) of New York City has been advised that the New York State Department of Health is now designating Stroke Centers for the care of patients identified as having suffered an “Acute Stroke”. This advisory contains information to properly identify and transport “Acute Stroke” patients to appropriate facilities.

With the permission of FDNY, this advisory contains information excerpted from:

- Office of Medical Affairs Directive 2004-18 (November 18, 2004) – Prehospital Evaluation of Stroke Center Candidates
- EMSC OGP 115-10 (November 18, 2004) – Prehospital Identification of Stroke Center Candidates
- EMSC OGP 115-10, APPENDIX A (November 18, 2004) – Using the Prehospital Stroke Scale

FDNY information has been modified for use by non-FDNY/911 System Participants

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 ensure their Service Medical Directors and EMS Prehospital Providers are informed of all changes/updates to the NYC REMAC Prehospital Treatment Protocols.

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Chair
Regional Emergency Medical Advisory Committee of New York City

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

Identification and Transport of ACUTE Stroke Patients to NYS DOH Designated Stroke Centers

1. PURPOSE

- a) To set forth policy and procedures for the identification and transportation of stroke patients to New York State Department of Health designated Stroke Centers.

2. SCOPE

- a) This procedure applies to all members of Ambulance and ALS First Response Services providing prehospital medical treatment within the five boroughs of the City of New York.

3. INTRODUCTION

- a) The rapid identification of the signs and symptoms of a stroke of recent onset may provide opportunities for improved patient care, including the utilization and benefits of thrombolytic therapy.
- b) Administration of thrombolytic therapy is required within 3 hours of stroke onset in order for treatment to be safe and potentially effective.
- c) The NYS Department of Health is designating Stroke Centers; hospitals accredited to assess and definitively treat patients identified as having had a stroke of recent onset.

4. THE PREHOSPITAL STROKE SCALE

- a) The Prehospital Stroke Scale (PSS) is a patient assessment tool to identify signs and symptoms of stroke (asymmetric facial weakness, upper extremity weakness, and/or any abnormalities of speech or language), as well as the time elapsed from onset of a patient's symptoms to the arrival of EMS on-scene.
- b) PSS Stroke Symptoms:
 - i) **Facial weakness** is evaluated by having patients try to smile or show their teeth. A normal response is noted if both sides move equally. An abnormal response is noted when one side of the face droops, or fails to move as well as the other.
 - ii) **Asymmetric arm weakness** is evaluated by having patients close their eyes and try to extend straight out both arms for 10 seconds. An abnormal response is noted when one arm moves or drifts down when compared to the other.
 - iii) **Speech abnormalities** are evaluated by having patients recite or repeat a sentence. A normal response is noted when the patient says the correct words, with no slurring of speech. An abnormal response is noted when the patient speech is slurred and/or the wrong words are repeated, or the patient is unable to speak.
- c) The PSS shall also be used to determine the time elapsed from initial onset of symptoms of stroke to arrival of EMS on-scene.
 - i) If a CVA is suspected, prehospital providers are required to ask the patient, and/or bystanders/family members the following questions:
 - To bystanders/ family members: "What time was the patient last seen (in his/her usual state of health) before he/she became weak, paralyzed or unable to speak clearly?"

- To patient: “When was the last time you remember being in your usual state of health – in other words, before you first noticed that you had become weak, paralyzed or unable to speak clearly?”

NOTE: *The patient must have been seen in their usual state of health within the last two hours to have an acute stroke (e.g., If the patient was last seen the night before, going to bed and awakens with stroke symptoms, this is outside the 2-hour window and therefore NOT a acute stroke).*

5. STROKE CENTER CRITERIA

- a) Prehospital providers shall perform a complete patient assessment including primary and secondary surveys and vital signs. When the patient exhibits signs and symptoms of a stroke (CVA), the Prehospital Stroke Scale (PSS) shall be utilized during the neurological assessment to evaluate for the presence of facial weakness, asymmetric arm weakness, and/or slurred speech/language.
- b) If a patient has **any** abnormal finding on the PSS the prehospital providers shall determine the category of “stroke” based on the onset of symptoms. Prehospital providers shall determine the time of the onset of symptoms by questioning the patient (if possible) and/or family members/bystanders.
 - i) If the time from onset of symptoms to EMS arrival on-scene is **2 hours or less (< 2)**, then the ‘presumptive diagnosis’ should be recorded as “**acute stroke**”.
 - ii) If the time from the onset of symptoms to EMS arrival on-scene is **greater than 2 hours (> 2)**, then the ‘presumptive diagnosis’ should be recorded as “**stroke**”.
- c) Only patients with a presumptive diagnosis of "**acute stroke**" are Stroke Center candidates.

6. PROCEDURE

- a) All prehospital providers shall become familiar with the Prehospital Stroke Scale (PSS), and incorporate it into their patient neurological evaluation.
- b) Any ‘abnormal’ finding on the PSS shall be used by prehospital providers to identify patients with suspected “stroke”.
- c) If the time from onset of symptoms to EMS arrival on-scene is 2 hours or less (<2), then the ‘presumptive diagnosis’ should be recorded as “acute stroke”.
- d) If the time from the onset of symptoms to EMS arrival on-scene is greater than 2 hours (>2), then the ‘presumptive diagnosis’ should be recorded as “stroke”.
- e) Upon identification of a Stroke Center candidate (acute stroke), prehospital providers shall:
 - i) Provide treatment in accordance with all applicable REMAC patient care protocols.
 - ii) Transport the patient from the scene to the closest available NYSDOH designated Stroke Center, unless the closest available Stroke Center is more than 20 minutes away or the patient is in extremis.

NOTE: **If a stroke patient's condition deteriorates to extremis, the patient shall be diverted to the nearest 911 Ambulance Destination.**

If the closest available NYSDOH designated Stroke Center is more than 20 minutes away, transport the patient to the nearest 911 Ambulance Destination.

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- iii) Notify the NYSDOH designated Stroke Center Emergency Department, directly or through your agency's dispatcher, of the imminent arrival of an acute stroke patient.

NOTE: The notification shall include the patient's age, sex, stroke signs and symptoms, vital signs and the estimated time since the onset of symptoms.

- iv) Notify your dispatcher if it becomes necessary to divert to the nearest 911 Ambulance Destination.
- f) All prehospital providers shall clearly and completely document their PSS findings, both positive and negative and symptom onset, on the Ambulance/Prehospital Call Report (ACR/PCR).
 - i) All prehospital providers shall continue to properly document all pertinent patient information on the ACR/PCR including history of present illness (HPI), past medical history (PMH), medications, allergies, and BLS/ALS treatment and response.



Units providing service in the NYC 911 system are to follow the FDNY Operations and Medical Affairs information and procedures:

- Office of Medical Affairs Directive 2004-18 (November 18, 2004) – Prehospital Evaluation of Stroke Center Candidates
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USING THE PREHOSPITAL STROKE SCALE

USING THE PRE-HOSPITAL STROKE SCALE
ANY ABNORMAL FINDING SUGGESTS A PRESUMPTIVE DIAGNOSIS OF STROKE.

1. Facial Droop The patient shows teeth or smiles.

 Normal Both sides of face move equally.	 Abnormal One side of the face does not move as well as the other.
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2. Arm Drift The patient closes their eyes and extends both arms straight out for 10 seconds.

 Normal Both arms move the same, or both arms do not move at all.	 Abnormal One arm either does not move, or drifts down compared to the other.
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3. Speech Ask the patient to say:
"You can't teach an old dog new tricks."

Normal The patient says the correct words with no slurring of words.	Abnormal The patient slurs words, says the wrong words, or is unable to speak.
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4. Time Elapsed (from onset of symptoms)
Determine the time from the onset of symptoms to EMS arrival by asking the following questions:

To bystanders or family members:
"What time was _____ (the patient) last seen (in his/her usual state of health) before he/she became weak, paralyzed or unable to speak clearly.

To patients: "When was the last time you remember being in your usual state of health— in other words before you first noticed that you had become weak, paralyzed or unable to speak clearly".

 If **TIME elapsed** is 2 hours or less patient is transported to nearest stroke center