

# FDNY\*EMS Seeks to Improve NYC Stroke Patient Care

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This past spring, FDNY initiated a new transport protocol for the treatment and transport of acute stroke patients in cooperation with the NYS Department of Health. The NYS-DOH has developed a patient health care initiative to determine if the early recognition of an acute stroke and the subsequent transport to a hospital designated as a stroke specialty center makes a difference in the patient's outcome.

NYSDOH surveyed all of the hospitals in Brooklyn and Queens and, as a result, designated 14 hospitals to participate in the project. The FDNY's Office of Medical Affairs developed the assessment, treatment and transport protocols for the pre-hospital sector. All ambulance services in the two boroughs are participating in the project and are using the FDNY Stroke Patient protocols. NYSDOH will be responsible for collecting and analyzing the data to determine the effectiveness of the program.

FDNY\*EMS units play a major role in the continuity of care in this project. The accurate assessment of a possible stroke patient using the Pre-hospital Stroke Scale and the determination of the time-lapse since the onset of symptoms are keys to making the transport decision, giving the patient the broadest opportunity for specialized interventions to improve patient outcome.



## BACKGROUND

Nationally, there are 700,000 new or recurrent strokes annually. Stroke or Cerebral Vascular Accident (CVA) is the second leading cause of disability in the United States, with some one suffering a stroke every 45 seconds. In New York State, males account for 44% of stroke victims and females 56% with 28% of these victims being under the age of 65. Locally, 20% of victims treated for strokes occur in Brooklyn and Queens. In New York State, treatment for stroke victims has been inconsistent, so something had to be done to increase medical and public awareness of this increasing problem.

## BENEFITS

Expected benefits of primary stroke centers include:

- Improved efficiency in patient care.
- Fewer post-stroke complications.
- Increased use of acute stroke therapies.
- Reduced morbidity and mortality rates.
- Improved long term outcomes (2nd leading cause of disability).
- Increased patient satisfaction.
- Reducing cost to health care system.

Once the stroke study data analysis is completed in May 2004, treatment and transport protocols will be implemented statewide. The New York State Stroke Study will serve as the national model for the pre-hospital treatment and transport of stroke victims.

## 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.

### 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.

### 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.

### 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

**This Pre-Hospital Stroke Scale (PSS) was issued to all EMTs and Medics in Brooklyn and Queens as part of the newly created Stroke Patient Protocols.**