

# TEAMING FOR ACTION: DEVELOPING A COMPREHENSIVE STROKE PROGRAM ACROSS A LARGE AND DIVERSE HEALTH SYSTEM

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## Background

- Stroke is the third leading cause of death in the United States
- There are approximately 4,100 stroke discharges each year across the North Shore-LIJ Health System
- The need to improve care provided to patients suffering from a stroke was deemed a priority by our senior leadership and board of trustees
- Literature supports improved patient outcomes when evidence-based stroke protocols and treatment guidelines are followed

## Objective

To establish a comprehensive stroke program that ensures a uniform standard of care for the patients, families and communities we serve

## Challenge

Our challenge was to come to agreement on and implement a set of standards for the delivery of safe and coordinated care across our entire health system comprised of multiple tertiary and community hospitals with varying resources

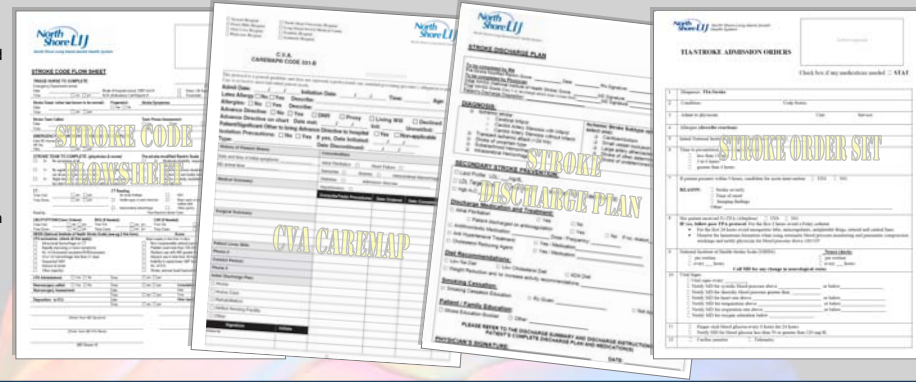
## Methods

- Convening of a multidisciplinary stroke task force with representation from each hospital
- Adoption of evidence-based guidelines systemwide
- Re-design of hospital systems of care to meet turnaround times for assessment and decision to treat (administration of IV t-PA)
- Implementation of a uniform methodology for performance measurement and improvement
- Participation in a nationally recognized data base
- Concurrent medical record review
- Monthly comparison reports to ensure timely patient data entry / consistency in GWTG
- Reports to senior leadership and board of trustees
- Executive and service line leader stroke performance metrics
- Commitment to transparency through public reporting of stroke performance measures on the health system's public website

## Redesigned Hospital Systems / Processes

- Stroke code teams established
- Stroke code activation plans
- Flags/alerts to laboratory and radiology to ensure rapid notification of test results
- Inclusion of early warning signs of impending stroke in rapid response team assessment

## Tools



## Results

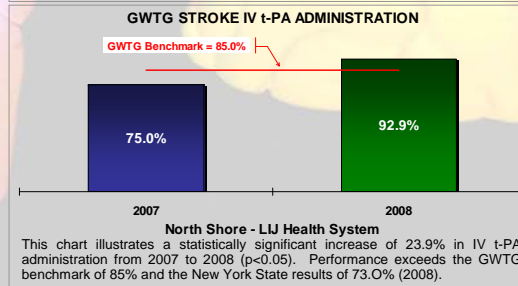
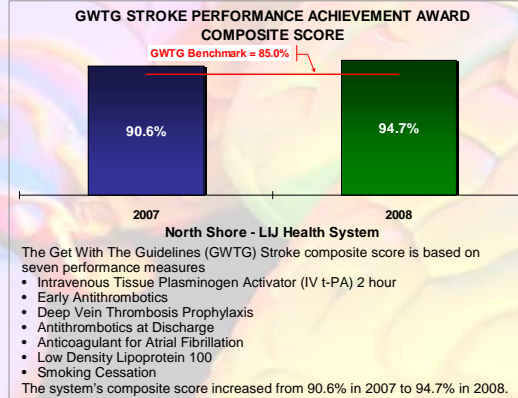
Time frame for measurement is 2005 (baseline-prior to program implementation) through 2008 (one year post full program implementation)

- 4.5% increase in composite score – 90.6% (2007) to 94.7% (2008)
- 23.9% increase (statistically significant  $p < .05$ ) in timely administration of intravenous t-PA – 75% (2007) to 93% (2008)
- 12.14% increase in timely patient data entry into GWTG – 85.6% (2007) to 96.0% (2008)
- 5% reduction in risk adjusted mortality index -1.11(2005) to 1.05 (2008)
- 3% reduction in average length of stay index –1.30 (2005) to 1.26 (2008)
- 7% reduction in variable cost per case index – 1.15 (2005) to 1.08 (2008)
- Hospitals have received performance achievement awards and recognition in national publications
- All 10 hospitals received and successfully maintained New York State Department of Health stroke center designation

## Conclusion

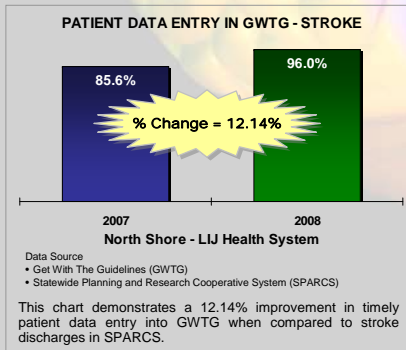
The multidisciplinary stroke task force was the driving force in keeping practitioners engaged, provided direction and the structure for communication as well as the forum for reaching consensus among the hospitals.

- Use of standardized tools reduced variation in care across the continuum
- Re-designed hospital care systems ensured timely assessment and treatment decisions
- Concurrent medical record review afforded opportunity to educate staff and correct practices at the bedside
- Placing accountability at the hospital level and communicating data from the bedside to the board of trustees improved patient outcomes and sustained performance
- Participation in a national database helped to ensure continuous quality improvement
- Public reporting of performance enhanced stakeholder trust



### GWTG Composite Score

Facility	2007	2008
Forest Hills Hospital	88.4%	95.8%
Franklin Hospital	81.1%	88.2%
Glen Cove Hospital	91.8%	95.8%
Huntington Hospital	90.4%	92.8%
Long Island Jewish Medical Center	95.8%	97.8%
North Shore University Hospital	95.95	96.5%
Plainview Hospital	83.4%	85.3%
Southside Hospital	89.7%	92.9%
Staten Island University Hospital	93.8%	95.8%
Syosset Hospital	74.5%	87.8%



## About North Shore-Long Island Jewish Health System

The nation's third largest, non-profit, secular healthcare system, the North Shore-LIJ Health System cares for people of all ages throughout Long Island, Queens and Staten Island in New York servicing an area encompassing more than five million people. The health system consists of 14 hospitals, 18 long-term care facilities, The Feinstein Institute for Medical Research, five trauma centers, five home health agencies, a hospice network and dozens of outpatient centers. [www.northshorelij.com](http://www.northshorelij.com)