

NYS Stroke Data - Quality Measure Report from Coverdell

5th Annual New York State Stroke Conference :
Looking Forward in Stroke Care

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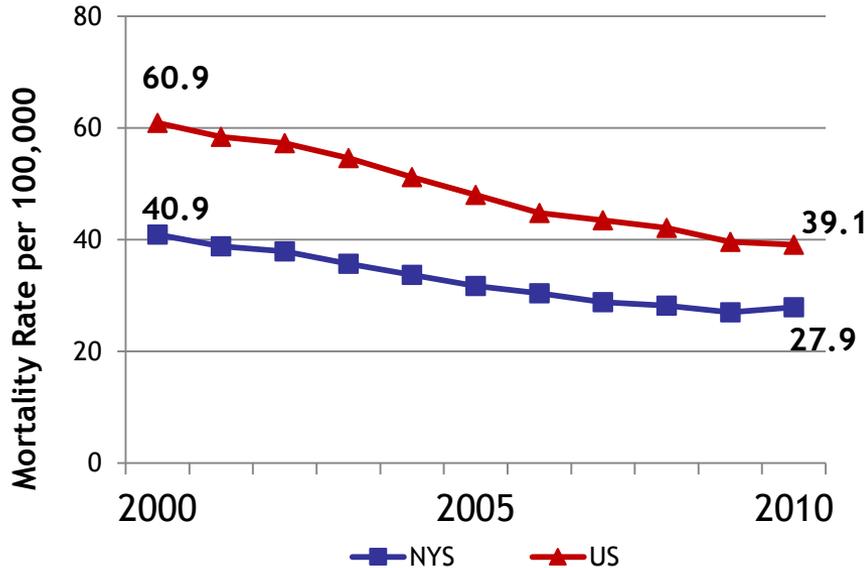
Division of Chronic Disease Prevention
New York State Department of Health

Presentation Overview

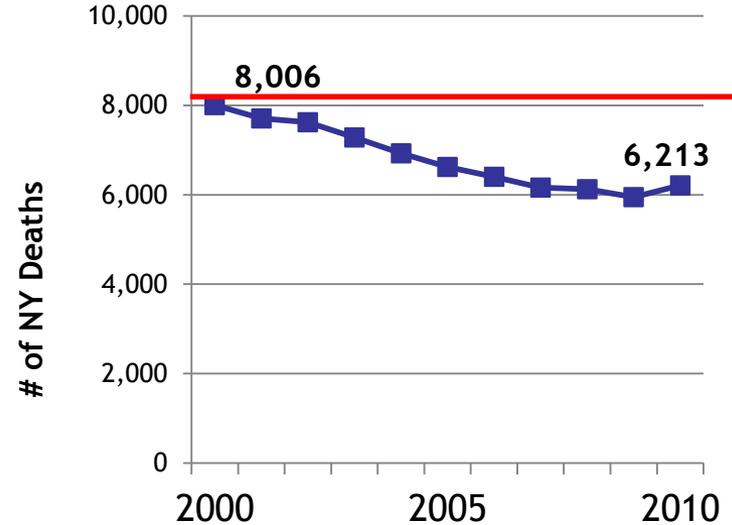
- Review data on trends in stroke deaths in the 10 years and population metrics associated with advances in stroke systems of care
- Review performance data collected through the NY Stroke Designation Program, including detailed information on reasons for transfer;
- Describe the process for selecting performance measures that will be the focus of improvement activities that are part of NYS Coverdell Program

Stroke Deaths and Age-Adjusted Mortality Rates in NYS and US, 2000-10

Age-Adjusted Stroke Mortality Rate
2000-2010



Number of Stroke Deaths in NY
2000-2010



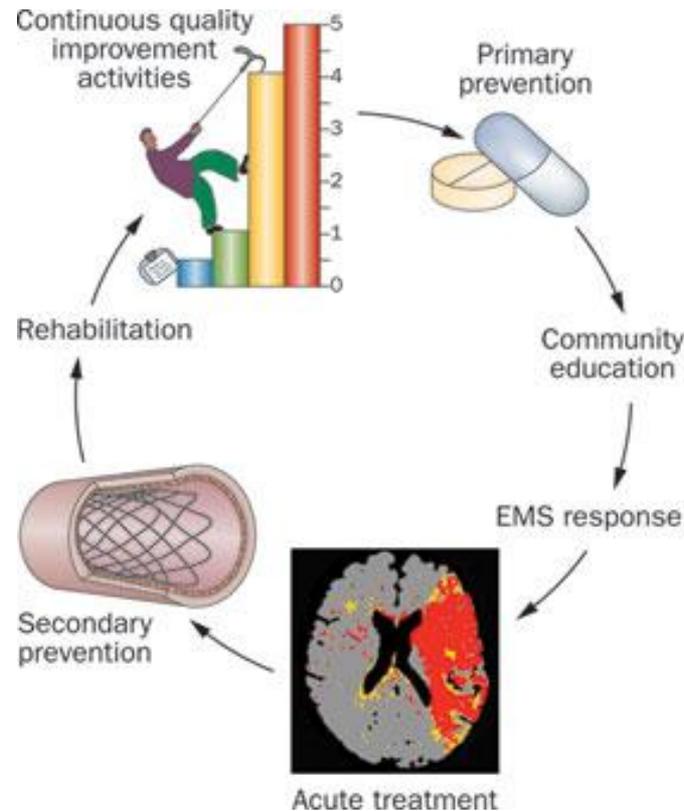
Data Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Compressed Mortality File 1999-2010 on CDC WONDER Online Database, released January 2013. Data are compiled from Compressed Mortality File 1999-2010 Series 20 No. 2P, 2013. Accessed at <http://wonder.cdc.gov/cmfi-icd10.html> on Apr 29, 2013 10:20:46 AM

Trends in Stroke Deaths in New York State

- Age-adjusted death rate for stroke declined by 32% between 2000 and 2010 in New York
- Between 2000 and 2010, **13,000** fewer New Yorkers died from stroke than expected if the rate of death from stroke remain stable.
- Stroke moved from 3rd to 4th leading cause of death in NY (2005) and in the US (2008).

Factors Contributing to Population Trends in Stroke Outcomes: Stroke Systems of Care

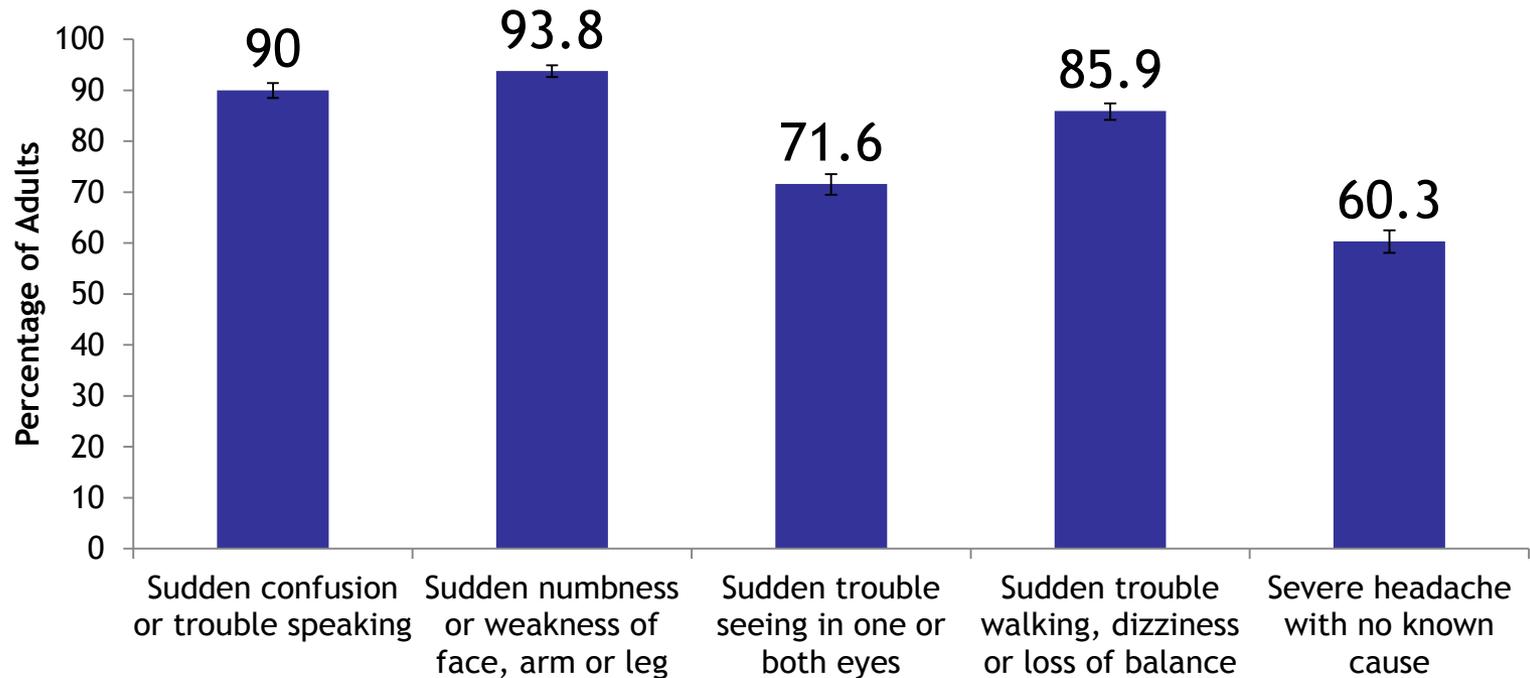
Schwamm, L. H. (2012) Major advances across the spectrum of stroke care *Nat. Rev. Neurol.* doi:10.1038/nrneurol.2011.225



Review of Population Metrics Related to Stroke Systems of Care in New York State

Pre-Event Community Education:

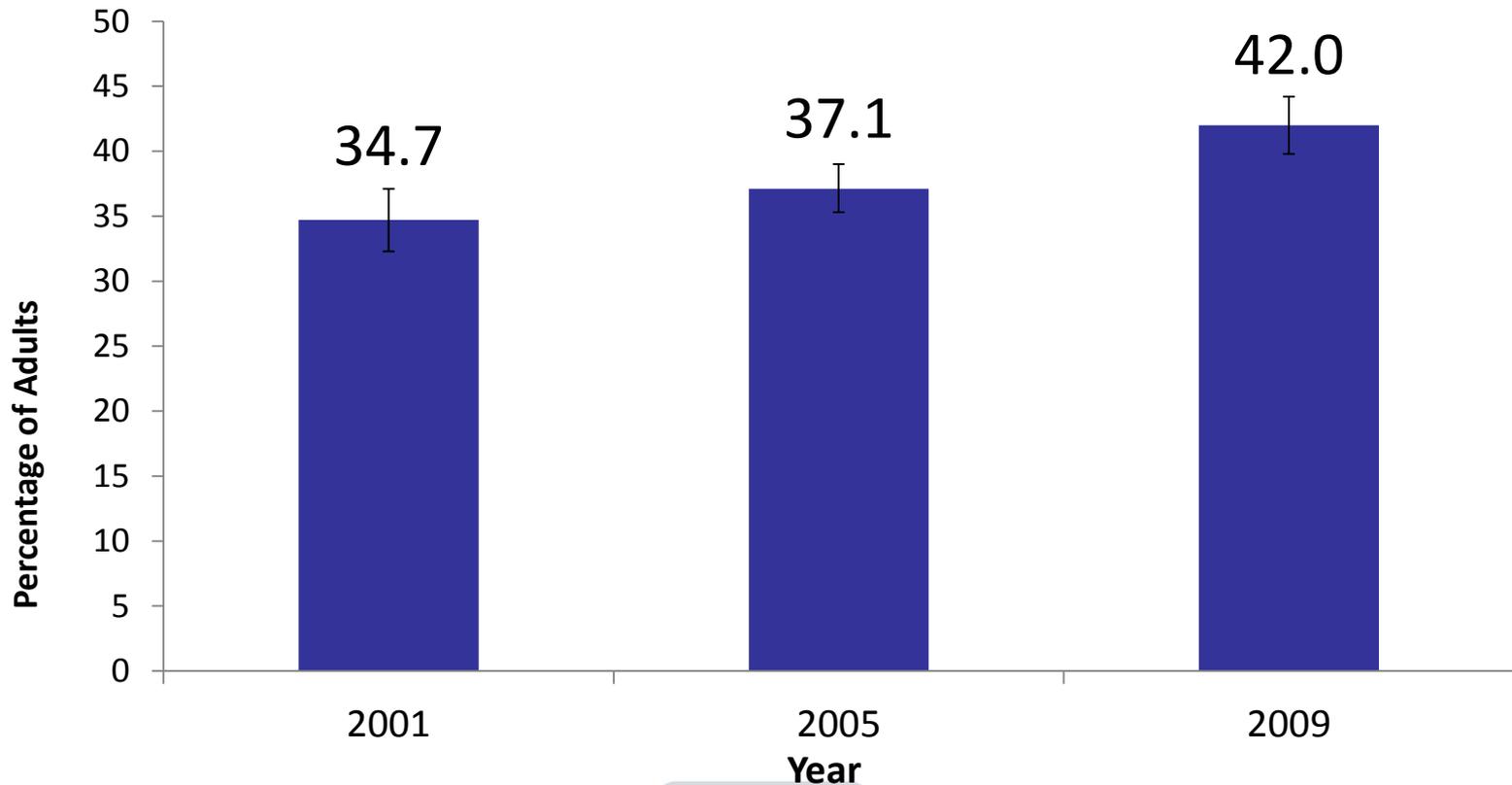
Percentage of Adults 18 and Older Aware of Specific Signs and Symptoms of Stroke, NYS BRFSS 2009



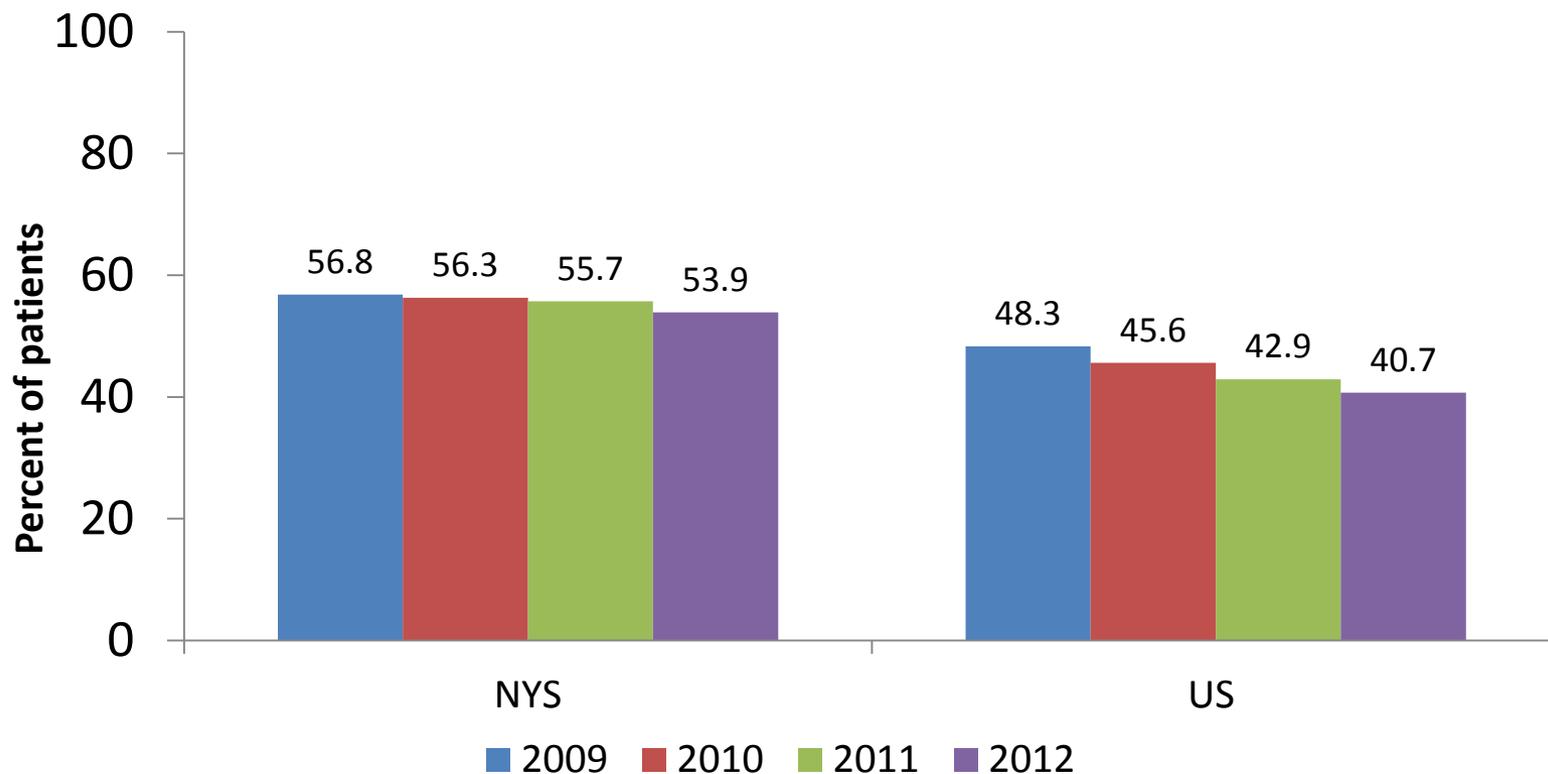
Stroke warning signs and symptoms

Pre-Event Community Awareness:

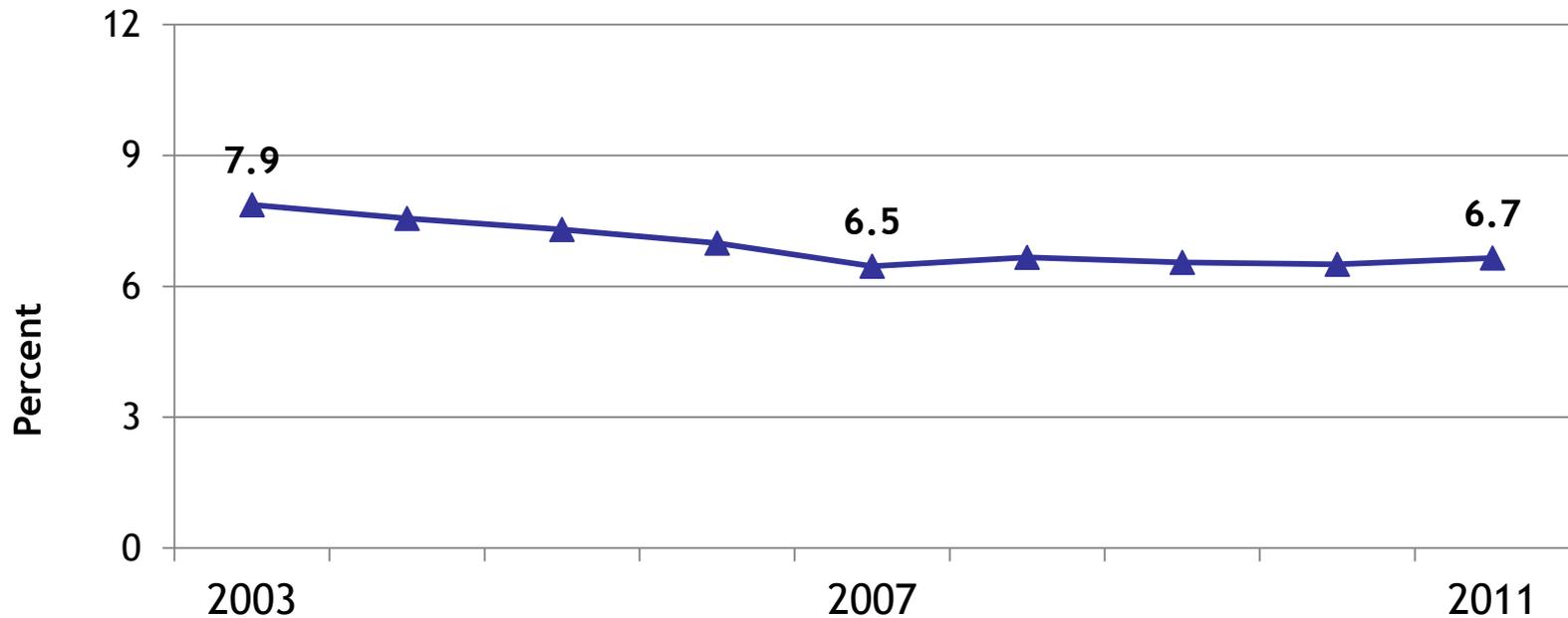
Percentage of Adults 18 Years and Older Aware of All 5 Signs and Symptoms of Stroke and 9-1-1 as First Action, NYS BRFSS 2001-2009



Pre-Event Community Awareness - EMS Response: Use of Emergency Transport Among Stroke Patients in NY and US, 2009-2012 (Get with the Guidelines, Stroke)

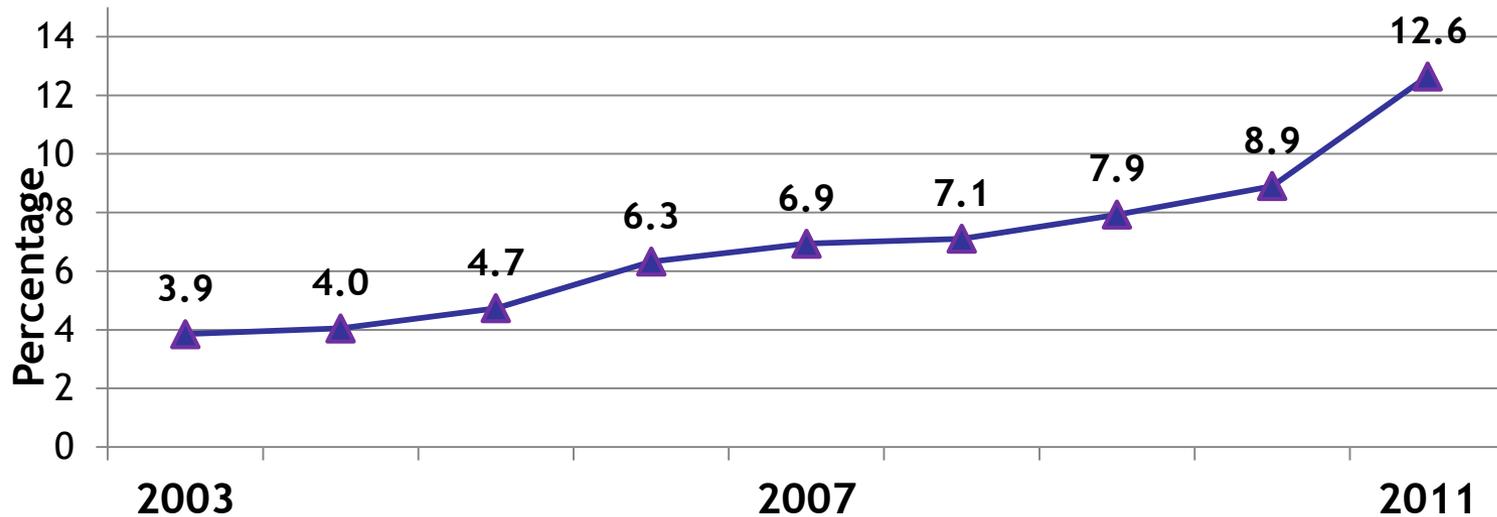


Acute Treatment and Care: Percentage of Stroke Discharges Resulting in In-Hospital Mortality, SPARCS NY 2003-2011



Data Source: Statewide Planning and Research Cooperative System (SPARCS) 2003-2011; Acute Stroke defined as ICD-9-CM of 430-436
In-Hospital mortality defined as disposition 20

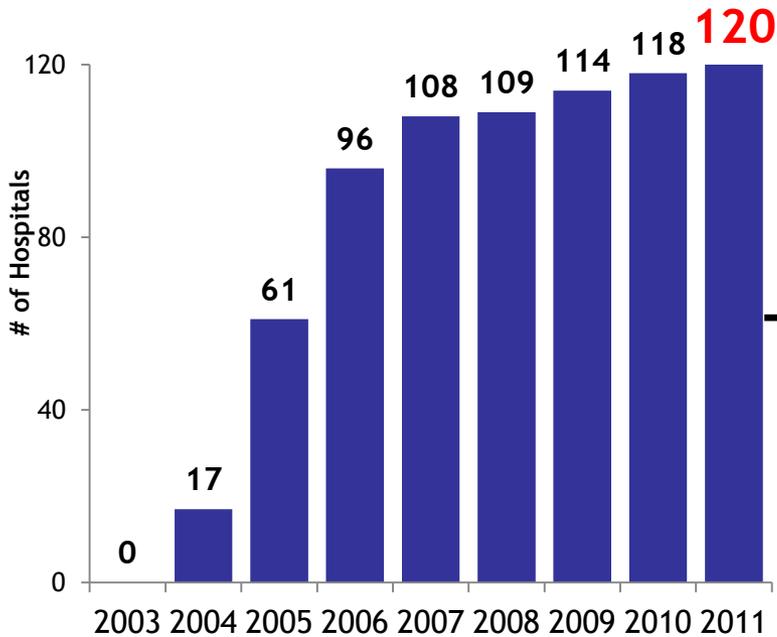
Acute Treatment and Care: Percentage of Hospital Discharges for Ischemic Stroke (ICD-9-CM 433 434) in which tPA was administered, SPARCS NY 2003-2011



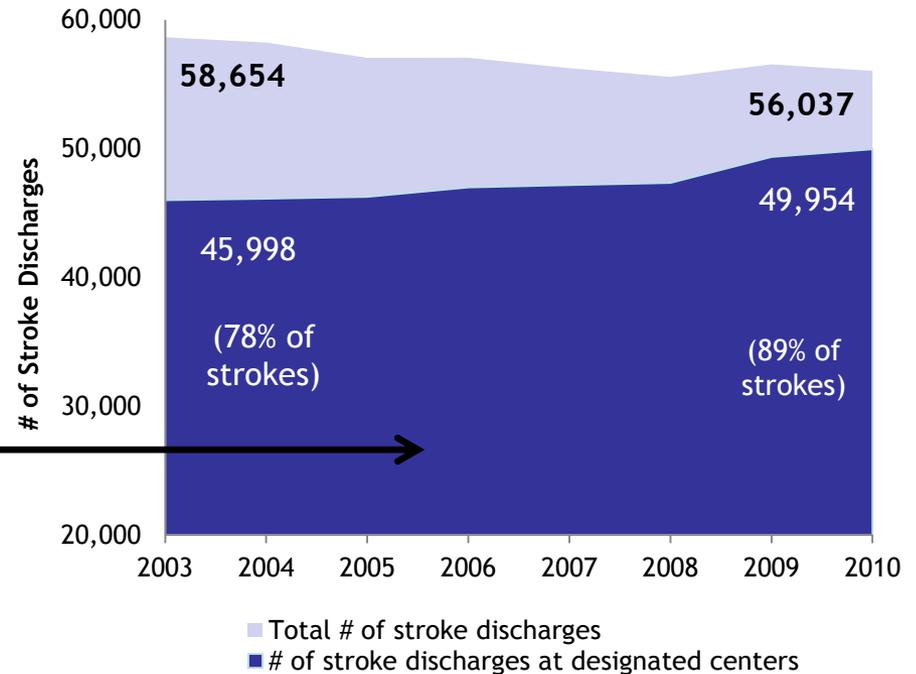
Data Source: Statewide Planning and Research Cooperative System (SPARCS) 2003-2011
Ischemic stroke defined as principal diagnosis of ICD-9-CM 433-434
tPA defined as principal procedure code of ICD-9-CM 99.1 or Federal DRG code of 061, 062, 063, 559 or NYS DRG of 880

New York Stroke Designation Program

Number of Designated Stroke Centers 2003-2011



Number of Discharges for Stroke from All NY Hospitals and Designated Stroke Centers 2003-2011



Data Source: Statewide Planning and Research Cooperative System (SPARCS) 2003-2011
 Stroke defined as principal diagnosis of ICD-9-CM 430-438

Summary from Trends in Population Data on Stroke Indicators

- Increase awareness of signs and symptoms of stroke (2001-2009) but no evidence of corresponding increase in use of EMS transport
- Increase administration of tPA for ischemic stroke in NYS, & reduction in in-hospital mortality from stroke
- Evidence of a greater proportion of stroke patients in NY receiving care from designated stroke centers

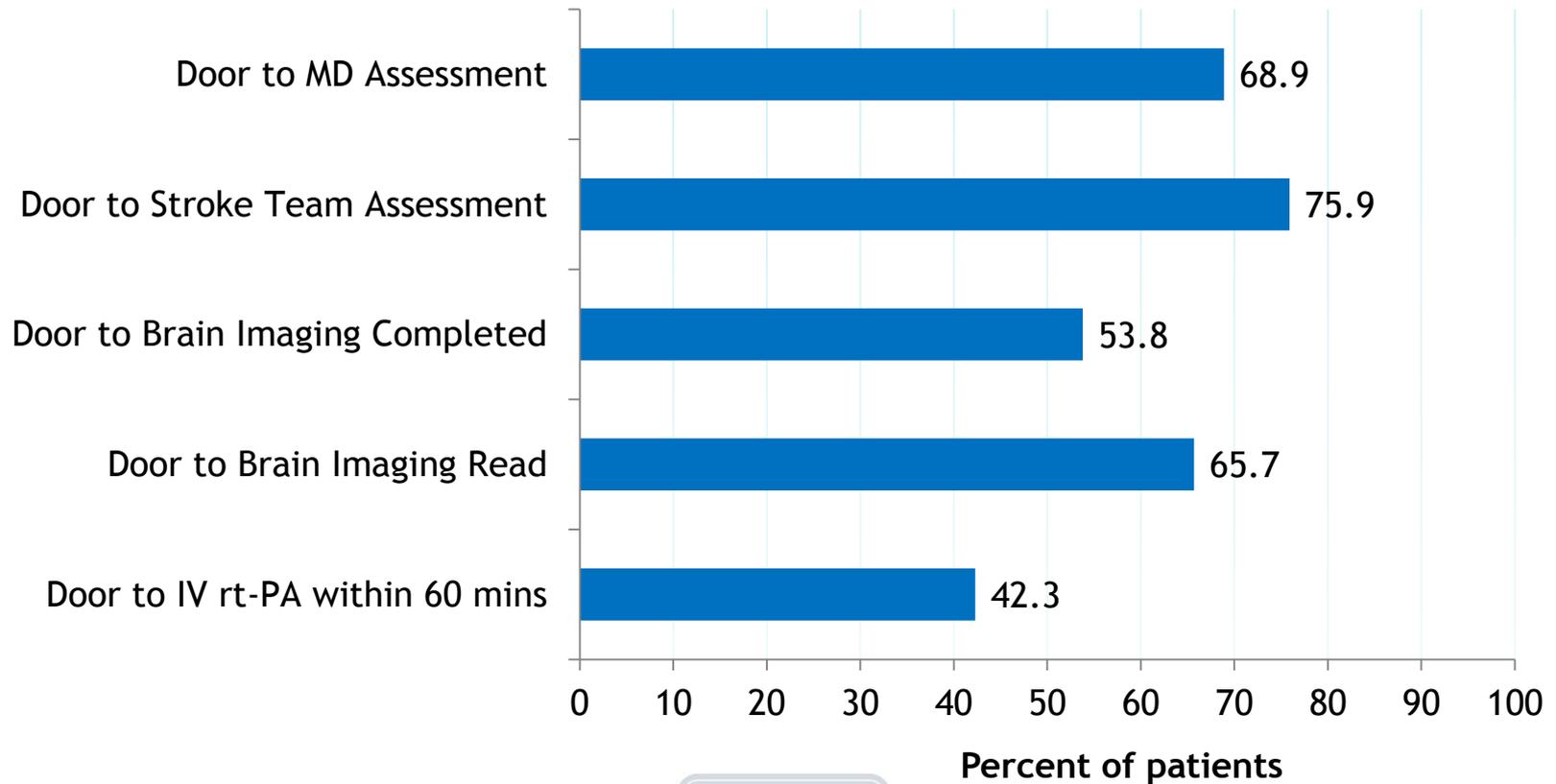
2013 NYS Stroke Designation Review Tool

Time Targets

Performance Measures

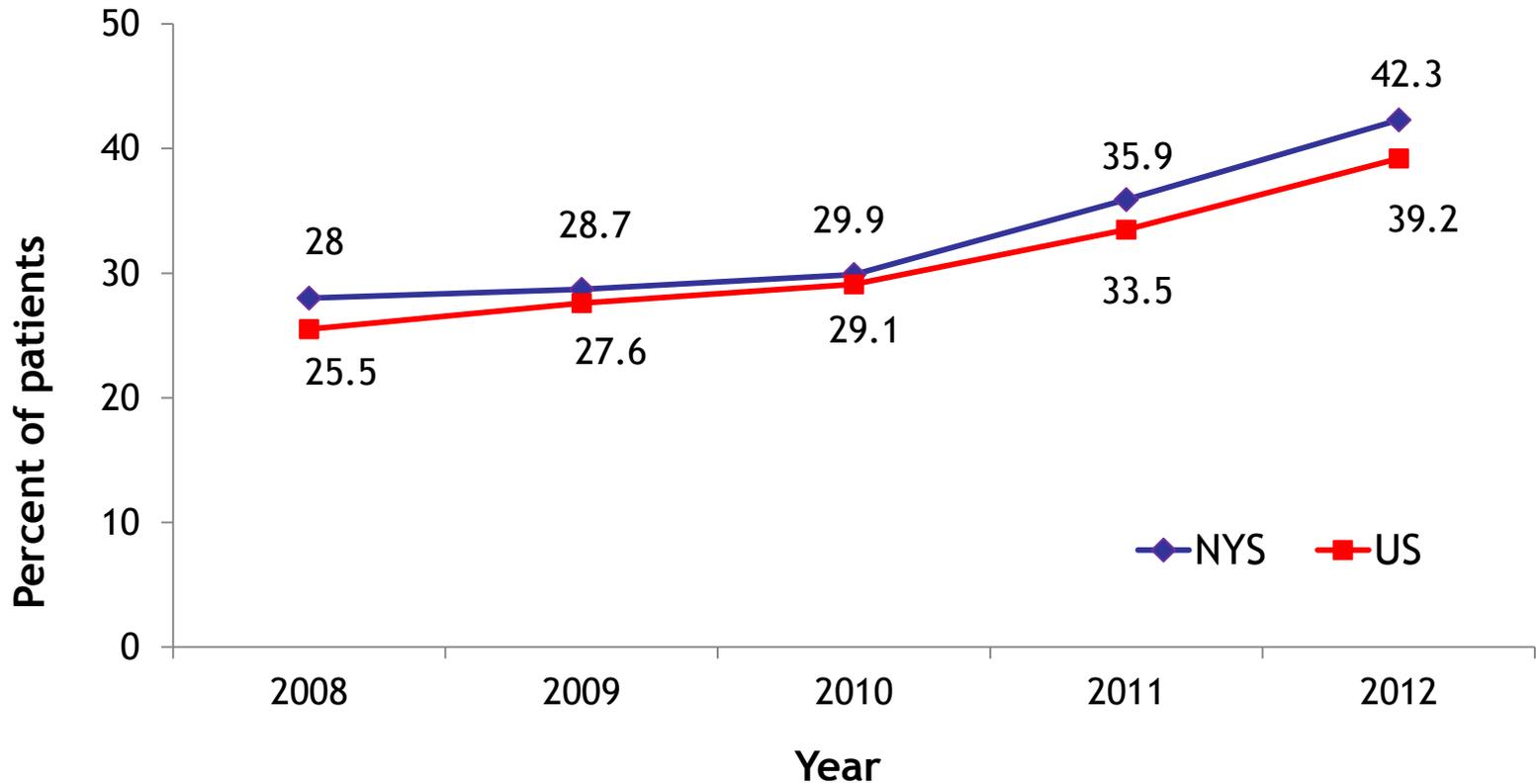
Performance on NYS Time Targets

All NYS Designated Hospitals, 2012

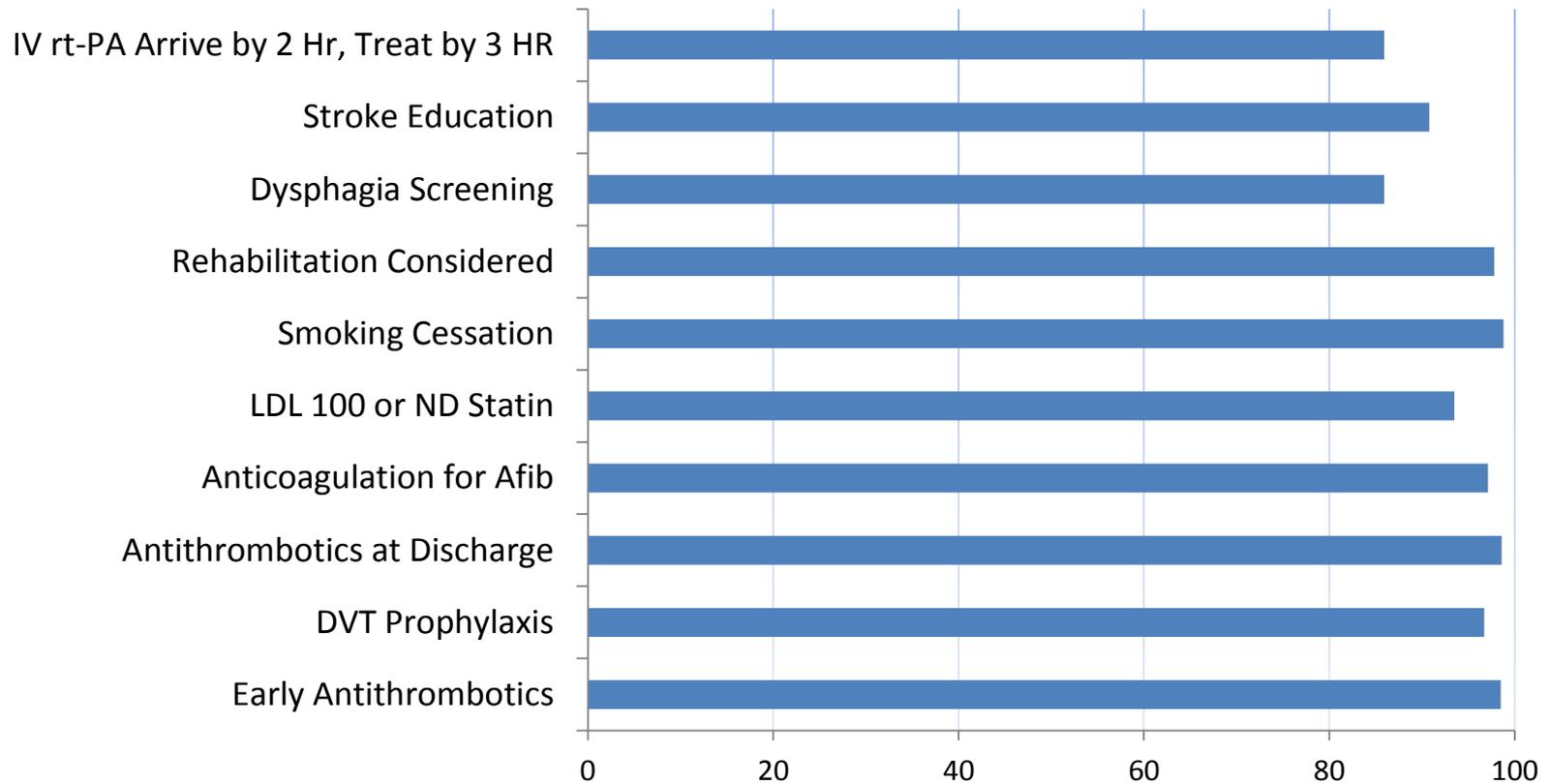


Door to IV rt-PA in 60 minutes by year

(Percent of ischemic stroke patients receiving IV t_PA who are treated within 60 min after triage (ED arrival))

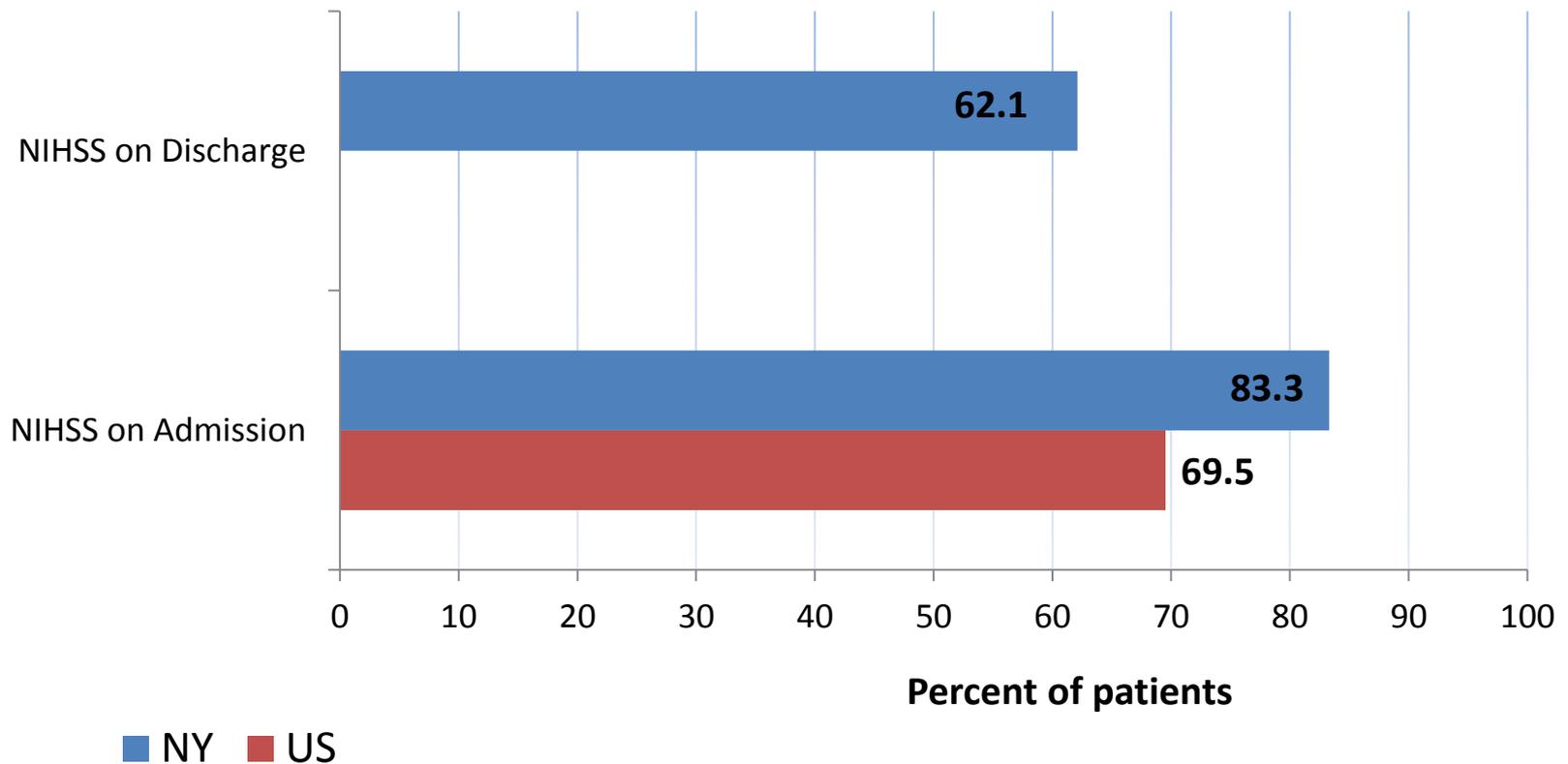


NYS Performance Measures Above 85% All NYS Stroke Designated Hospitals, 2012



NYS Performance Measures Below 85%

All NYS Stroke Designated & US Hospitals, 2012



Performance Measures and Time Targets

- Performance for NYS Designated Stroke Centers surpassed 85% on 10 of 12 performance measures
- NYS Stroke Centers exceeded performance of US hospitals on 2 performance measures for 2012 that were below 85%
- NYS Stroke Centers continue to exceed performance of US hospitals on door to IV t_PA in within 60 minutes of triage.

Opportunity of Improvement IV t_PA within 60 Minutes

Across NYS Stroke Centers, performance achieving the time target has improved from 28% to 42% between 2008-2012, **but...**

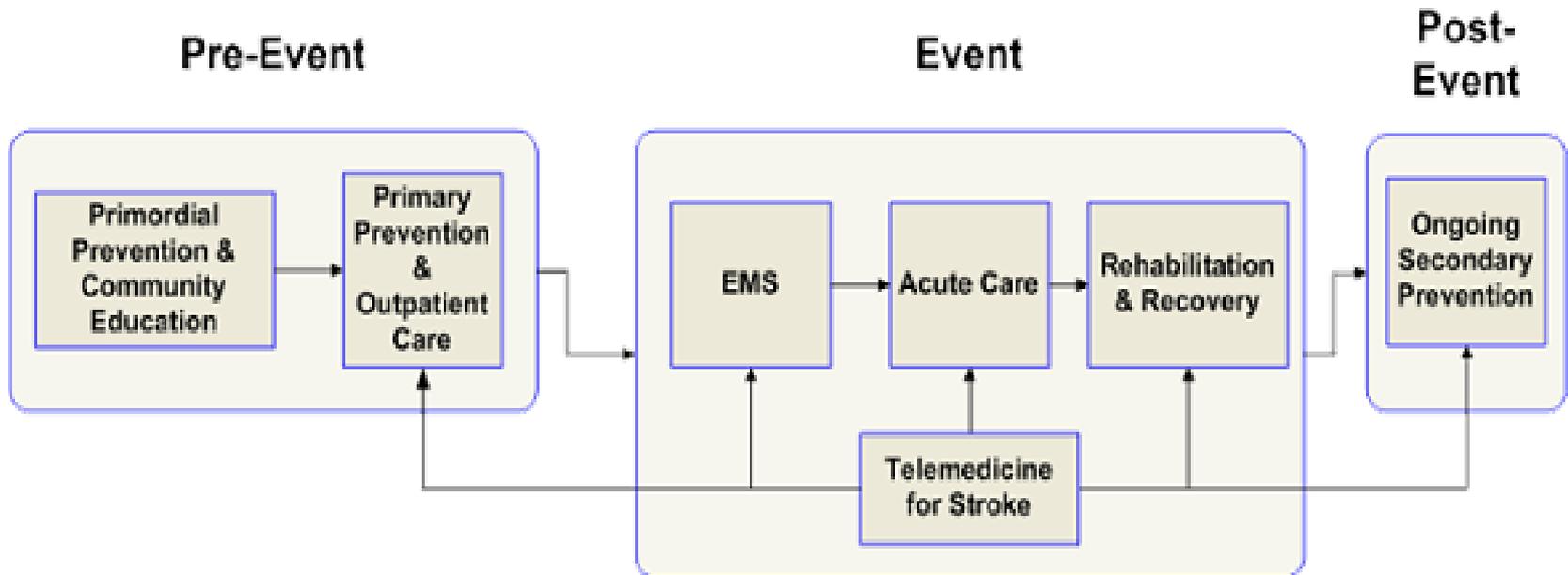
- Nearly 60% of patients receiving IV t_PA received treatment **after** the time target (within 60 minutes of admission)
- For 55 NYS Stroke Centers performance achieving the time target declined from 2011 to 2012; For 41 of the 55, the absolute decline in performance was more than 10% (e.g., 95% to 85%)

Opportunity of Improvement Stroke Education

Performance delivering stroke education among NYS Designated Stroke Centers was high during the 2012 performance year (90.8%) **but...**

- For 19 NYS Stroke Centers performance was **below 85%**.
- For 27 NYS Stroke Centers performance was **lower** in 2012 than in 2011; For 14 of the 27, the absolute decline in performance was more than 5%.

NYS Coverdell Initiative



NY received funding to promote improvement activities on in-hospital care for acute stroke.

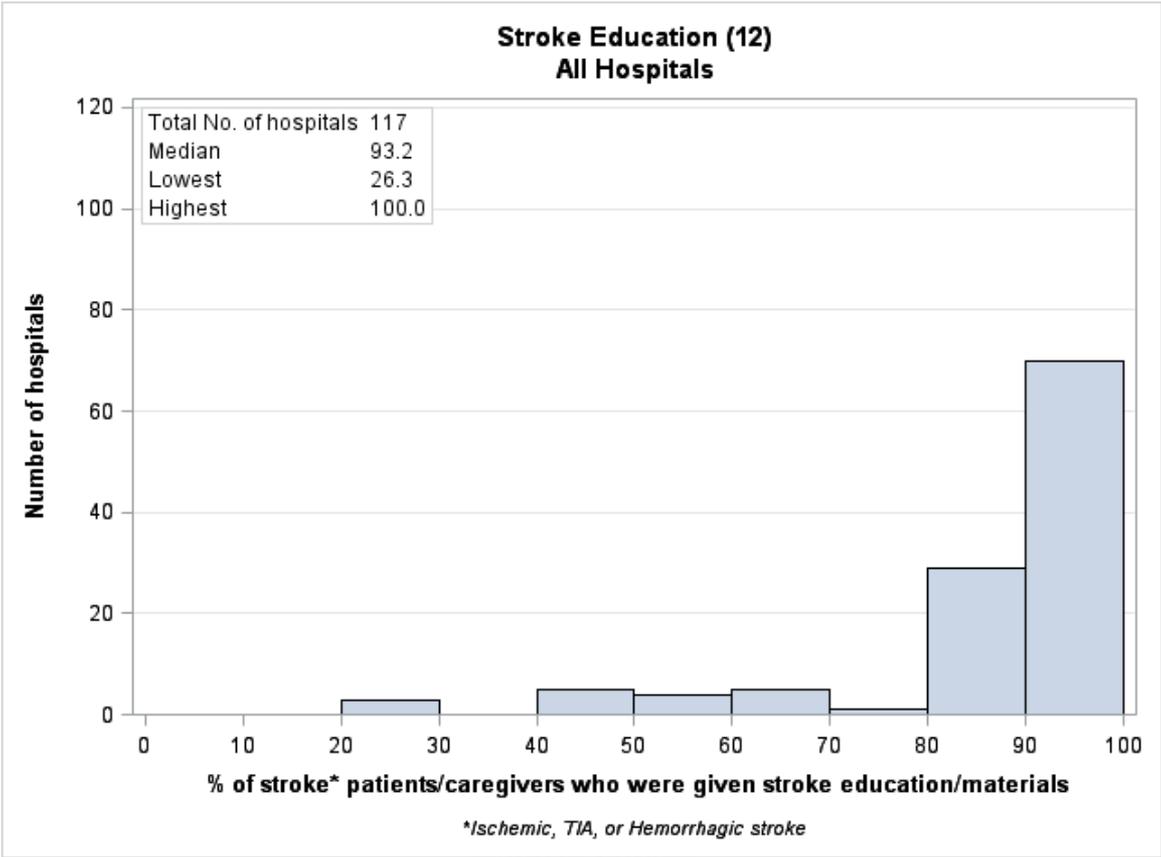
Focused Measures for Coverdell Initiative

- Determined by stroke physician workgroup during a meeting on March 12th.
- Selection was based on review of data on distribution of performance across stroke centers and guiding questions.
- Measures will be the focus of QI and data quality assurance activities during the next 12 months.

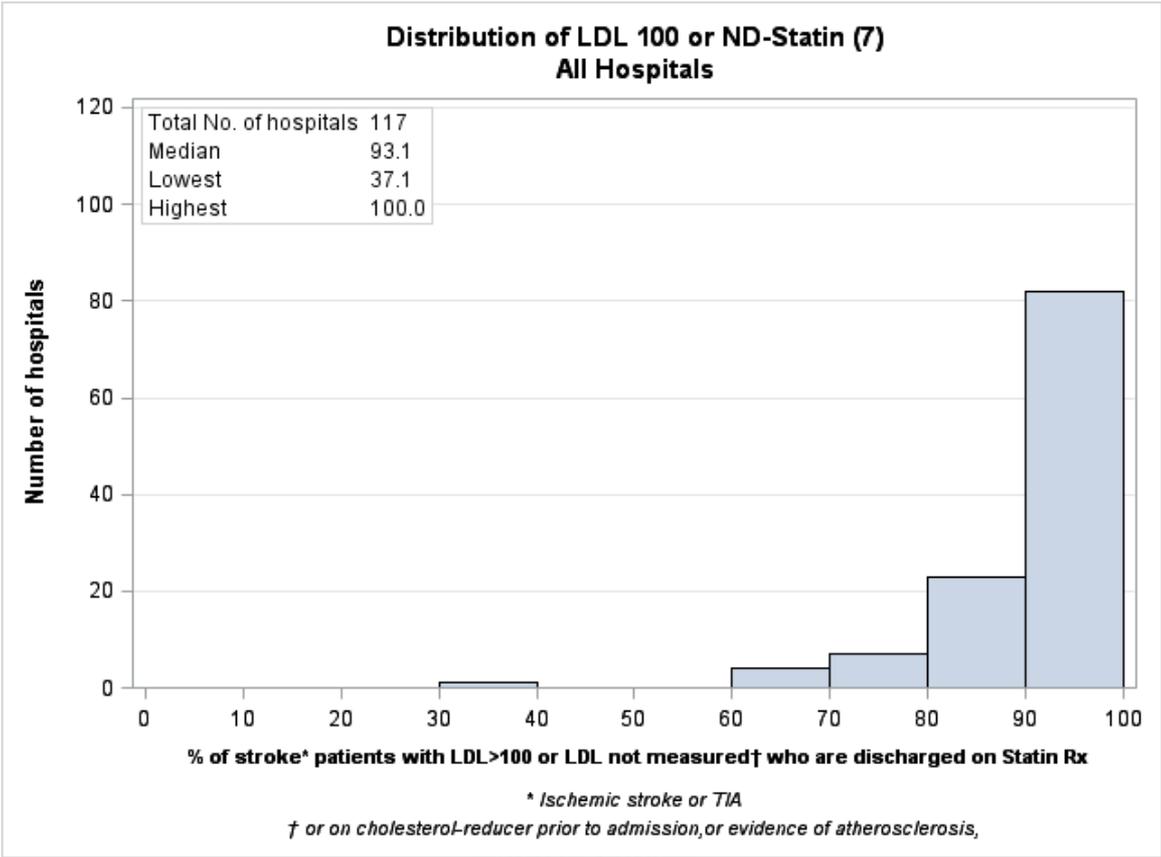
Guiding Questions (Sample)

- Which measures (performance and time target) represent the most significant opportunity for improvement?
- Which measures are associated with known or tested improvement strategies for improving stroke care?
- Which measures reflect aspects of care that should have the greatest impact on stroke outcomes (preventable complications, readmissions, disability, mortality)?

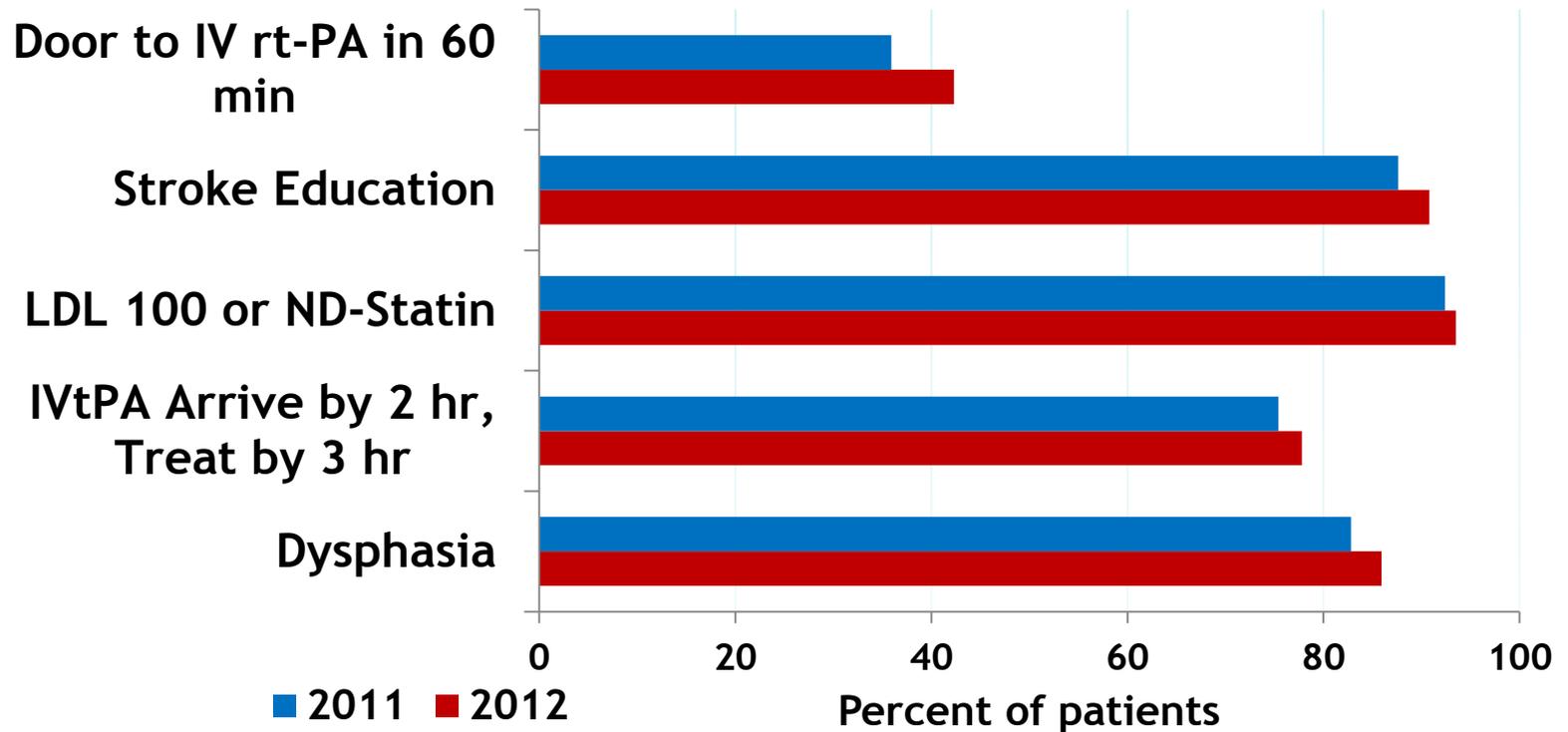
Sample histogram of stroke center performance (stroke education, 2011 performance year) used in selection of Coverdell focus measures.



Sample histogram of stroke center performance (Statin at Discharge, 2011 performance year) used in selection of Coverdell focus measures.



NYS Stroke Center Performance on Selected Coverdell Focus Measures, 2011 & 2012



Next Steps for NYS Coverdell Initiative

- Establishing objectives for the initiative and participating hospitals for each of the 5 performance measures
- Developing materials and learning opportunities to support quality improvement (QI consultant)
- Reporting and quality assurance activities: data re-abstractation, dissemination of data quality and performance reports