

Beth Israel Deaconess Hospital-Milton

Implementing Strategies to Mitigate Mortality and Permanent Disability for Patients Presenting with Acute Stroke

The Problem

In 2017, the American Stroke Association identified Stroke as the 5th leading cause of death in the United States as well as a major reason for significant adult onset disability.

Reducing 30-day mortality and mitigating disability from stroke is largely contingent and reliant upon prompt recognition of stroke as well as providing emergency interventions and comprehensive care to patients presenting with acute non-hemorrhagic stroke or Transient Ischemic Attack (TIA).

In 2016, Beth Israel Deaconess Hospital-Milton was unable to demonstrate consistent, timely and optimal performance relating to providing essential clinical interventions for patients presenting with acute stroke or TIAs.

The volume of patients presenting to the BID-Milton Emergency Department (ED) in 2016 was and continues to be relatively low (< 10 per quarter). Of that total population an even smaller subset were/are eligible for Tissue Plasminogen Activator (tPA) administration (i.e., approximately 2-3 patients per quarter). As a result of this low patient volume there was/is a limited opportunity for ED staff to become proficient in the rapid assessment of patients presenting with stroke or the timely administration of tPA. Patients receiving tPA or those requiring tertiary facility interventions are transferred from BID-Milton to Beth Israel Deaconess Medical Center. For non-eligible tPA patients who were admitted to the inpatient setting, performance relating to post-stroke care requirements was inconsistent.

Aim/Goal

- Increase the percentage of patients receiving tPA within 60 minutes of arrival from 20% in 2016 to at least 60% by the end of 2017
- Increase the percentage compliance with the 15-measure composite of patients admitted with acute stroke or TIA from 40% in 2016 to at least 75% by the end of 2017.

The Team

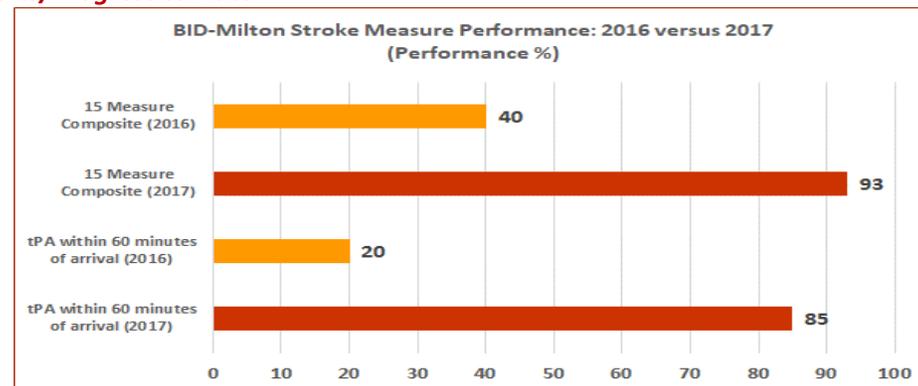
Stroke QI Committee

- John Mahoney, MD: Neurology (Committee Chair)
- Dawn Zaccaria, MBA, RN: Director, Nursing Ops. (Committee Facilitator)
- Lynn Cronin, MSN, CNL: Vice President, Nursing/CNO
- Ashley Yeats, MD, FACEP: Vice President, HCQ/CI/CMO
- Alex Campbell, MSN, RN, NE-BC, CPHQ: Director HCQ & PS
- Grace Phillips, BSN, RN: Quality Nurse Specialist
- Rachel Kleiman-Wexler, Pharm. D, Director, Pharmacy Services
- Daniel Siao, MD: Medical Director, Hospitalists
- Jon Anderson, MD: Chief, Emergency Services
- Ellen Lanza, BSN, RN: Nurse Manager, ICU/2N
- Phillipa Breslin, RN; Nurse Manager, Emergency Department
- Valeria Blathras, BSN, RN: Assistant Nurse Manager, Emergency Department
- Michael Iodice: Hematology Supervisor, Laboratory Services
- Andrea Sampson, PT: Rehabilitation Services
- Christina Nickels, RT: CT Supervisor
- Lynn Mahoney: Fallon Ambulance

Interventions

- Patient Care Assessment Committee established organizational goal for 2017: Improve performance in relation to key clinical stroke measures
- Conducted Primary Stroke Services Gap Analysis to identify and respond to opportunities for improvement relative to implementation of evidence-based practices, including but not limited to: Rapid assessment and completion of head CT studies and ED based expedited Lab. testing processes
- Improved commitment and member participation in Stroke QI Committee
- Implemented real time case review process by HCQ staff for patients admitted with Stroke/TIA to ensure care measures and documentation requirements were met
- Prompt review and feedback by HCQ to clinicians involved in patients receiving tPA and recognition of staff when administration timelines were achieved
- In depth review and sharing of all measure outliers and development of action plans
- Changes to EMR to improve documentation associated with patient education
- Automated referrals to Rehab. Services when patients admitted with TIA or Stroke
- Focused medical education for high volume providers with history of stroke measure outliers
- Development of tools/references to assist providers in ensuring key clinical measures were met
- Effectively responded to opportunities for improvement identified following onsite assessment by Department of Public Health/American Heart Association (AHA) surveyor.

Results/Progress to Date



The above data demonstrates a statistically significant improvement in the performance for selected stroke measures between 2016 and 2017 (see goals).

Lessons Learned

- Importance of including documentation in EMR as to reasons for delays in tPA administration
- Identifying and assigning specific performance activities to named clinicians, e.g., stroke assessment (NIH scale) to ED MD

Next Steps

- Need to sustain gains achieved in 2017. Seeking to receive bronze award (3 consecutive months of favorable performance) as per AHA Get with the Guidelines (GWTG) performance thresholds.