Beth Israel Deaconess Hospital-Milton

Preventing Hospital Acquired VTE in the ICU Setting (VTE-2)

The Problem

In 2006, The National Quality Forum (NQF) reported the critical importance of QI activity and compliance relative to driving improved patient outcomes and decreasing hospital mortality:

"*Venous thromboembolism (VTE) is the most common preventable cause of hospital death in the United States. Most hospitalized patients have one or more risk factors for VTE, and about two-thirds of VTE-related deaths are the result of hospital-acquired disease. Recent estimates show that more than 900,000 Americans suffer VTE each year, with about 400,000 of these being DVT (Deep Venous Thrombosis) and 500,000 manifesting as PE (Pulmonary Embolus). In about 300,000 persons, PE proves fatal, making it the third most common cause of hospital-related death in the United States. Despite the fact that several clinical interventions, including the use of mechanical and pharmacologic therapies, are known to be effective in preventing and treating VTE, only one-third of all patients at risk for VTE who are appropriate candidates for prophylactic treatment actually receive such treatment.*"

The NQF officially endorsed the VTE measures in 2008, with The Joint Commission (TJC) adopting the measure set in 2009. VTE measure sets are currently tied to hospital accreditation, performance and value-based purchasing / risk / hospital performance improvement program (HPIP) private payor contracts (>3% of revenue at risk), such as Blue Cross Blue Shield (BCBS).

VTE-2 Measure Description: The number of high risk patients who received mechanical and pharmacological VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after the initial admission (or transfer) to the Intensive Care Unit (ICU) or surgery end date for surgeries that start the day of or the day after ICU admission (or transfer).

An analysis in FY14 of baseline VTE-2 performance for January-September 2013 identified a suboptimal performance of 88% (baseline).

Aim/Goal

Improve performance relative to VTE-2 at Beth Israel Deaconess Hospital-Milton by developing interventions and implementing VTE prevention best practices to achieve and sustain a mean VTE-2 measure performance of ≥96% by FY 2014 and sustain in FY15.

The Team

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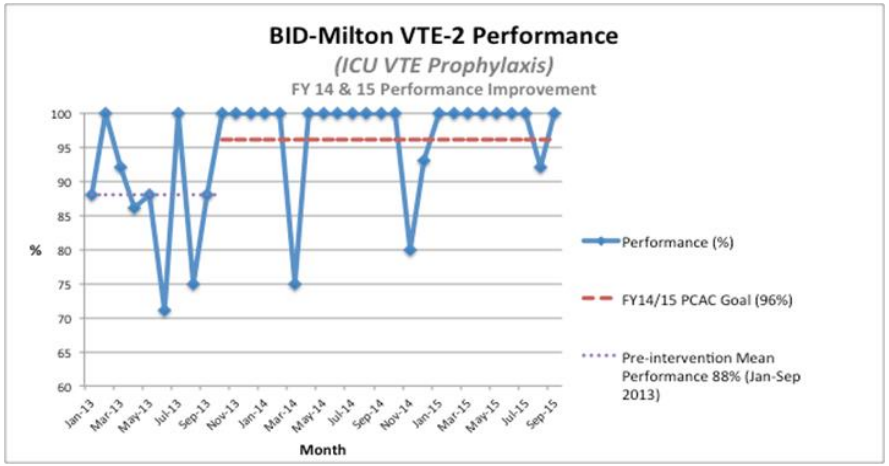
- Alex Campbell, Director, Healthcare Quality & Patient Safety
- Dr. Daniel Siao, Medical Director, Hospitalist Medicine
- Rachel Kleiman-Wexler, Director, Pharmacy Services
- Jessica Crowley, IT Systems Analyst
- Lynn Cronin, Vice President of Nursing/CNO
- Tracy Dickerson, Lead Surgical Physician Assistant
- Grace Phillips, Quality & Safety Specialist

The Interventions

- Extensive education of Medical Staff in FY14
- Re-education of Hospitalists after major program transition in August 2014
- Identification of Hospitalist Service Medical Director and Lead Surgical PA as VTE champions in Fall 2014
- Core Measure '*Cheat Sheet*' created for Medical Staff by Director of HCQ & PS in April 2015
- Medical VTE risk assessment with auto-calculation of risk score and reflex VTE prophylaxis orders created in CPOE and implemented as an order set linked to admission orders in August 2015

Progress to Date

- **FY14 target of 96% exceeded: 99%**
- **FY15 target of 96% exceeded: 96.1%**



Lessons Learned

- Abstraction guideline requires presence of a 'Transfer to ICU' order - performance vulnerable to absence of documentation of an order, even if appropriate VTE prophylaxis administered (FY15: 2 outliers)
- Absence of reassessment of risk upon transfer to ICU/failure to prescribe pharmacologic prophylaxis (FY15: 1 outlier)
- Lack of '*documentation in the negative*' in the setting of contraindications to pharmacologic prophylaxis, resulting in outliers – inferred contraindications insufficient, per abstraction rules (FY15: 1 outlier) – re-education of Hospitalists

Next Steps

- 'Transfer to ICU' Order Set created, reflexing repeat VTE risk assessment and VTE prophylaxis orders implemented November 30, 2015 with required contraindication field
- Monitor impact of implementation of ICU intensivist staffing model in October 2015
- Reset target to 98% in FY16 to align with revised FY17 BCBS HPIP performance threshold

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