

VENOUS THROMBOEMBOLIC PREVENTION

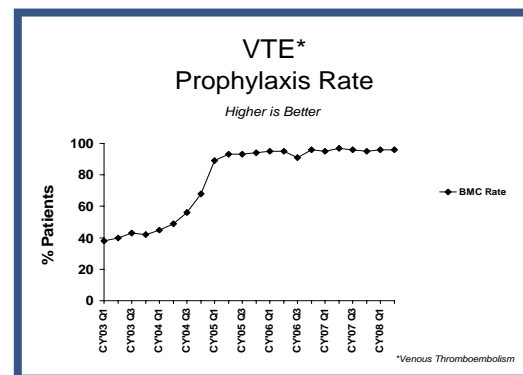
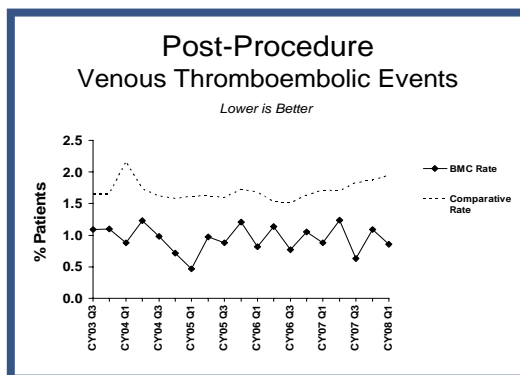
Where we've been...

Most hospitalized patients have one or more risk factors for the development of venous thromboembolic (VTE) disease, usually either deep vein thrombosis (DVT) or pulmonary embolus (PE). Risk factors are generally cumulative and are determined by preexisting comorbidities, age, activity, and the patient's present condition. A patient may fall into any of the following risk groups - low, moderate, high, or very high risk. In many patients, VTE is the most serious complication they will experience. Without prophylaxis, the incidence of hospital-acquired DVT is approximately 10-40% among medical or general surgical patients and 40-60% following major orthopedic surgery. One-quarter to one-third of thrombi involve the proximal deep veins and they are much more likely to produce symptoms and result in PE. Approximately 10% of hospital deaths are attributed to PE. Despite this commonly known information, under use of appropriate prophylaxis continues to occur; some studies indicate that prophylaxis occurs in only 44% of patients. Because of these issues, Baystate Medical Center chartered a team to work on prevention of hospital-acquired VTE to reduce the number of VTE-related events by using several interventions to ensure appropriate prophylaxis therapy is in place.

Rapid cycle PDSA (plan-do-study-act) techniques and multiple small tests of change were used to ensure timely risk assessment and intervention. This resulted in adding DVT prophylaxis orders to all admission order sets in our computerized physician order entry system (CIS), building a "SMART" rule to check DVT prophylaxis orders prior to entering initial orders in CIS, and daily screening of all patients by hospital case managers to determine risk and evaluate for appropriate prophylaxis. If prophylaxis is not appropriate, physicians are contacted to adjust therapy based on the patient's risk. Additionally, education was provided to physicians through Grand Rounds, mailings, letters, noon conferences, and teaching aids. A system to review DVT/PE events for "potential preventability" is in place. Any omissions in care provide learning and direct future improvement efforts. All patients undergoing surgery have mechanical prophylaxis applied as the minimal standard of prophylaxis and therapy is intensified based on post-operative risk per BMC and national guidelines.

Where we are now...

BAYSTATE MEDICAL CENTER VTE is an important health problem resulting in significant morbidity, mortality, and resource expenditure. Despite the need for additional data, there is sufficient evidence to recommend routine thromboprophylaxis for the majority of hospitalized patients. Prior to starting the VTE prophylaxis program in late 2003, our rate of post-procedure VTE was 1.21%. Since that time we have been able to reduce the rate without increasing the incidence of bleeding; our current rate is 0.86%. Unit specific rates of prophylaxis vary, but focus on this important issue has driven our overall rate of prophylaxis to 96% for all patients, well above the National Quality Forum and Centers for Medicare and Medicaid Services reported rates.



Where we are going...

Greater awareness of VTE and the need for prophylaxis has led to widespread use of effective interventions to help reduce the incidence of thromboembolic events in hospitalized patients at Baystate Medical Center. BMC is committed to the reliable application of VTE prophylaxis for every at-risk hospitalized patient.