

Commentary**Quality and Patient Safety****Venous Thromboembolism**

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Venous Thromboembolism (VTE) is a collective term to describe deep vein thrombosis (DVT) and pulmonary embolism (PE). These entities have a high prevalence in the hospitalized patient and are collectively the most common cause of preventable hospitalized death.¹⁻³ Approximately 10% of hospital deaths are attributed to PE.³ Further, VTE in hospitalized patients is increasing.⁴ Current hospitalized patients may be at greater risk than previous studied patients as more elderly patients are receiving advanced care (i.e., ICU, cancer, and surgical care).

Appropriate prevention measures have been underutilized nationally with a performance gap in knowledge to practice of appropriate VTE prophylaxis.⁵⁻⁸ However, a reduction in morbidity and mortality with VTE prophylaxis was demonstrated.³ Unfortunately, these data are not translating to evidence-based practice for patients. In a study of 152 MICU patients, only one-third of the patients received VTE prophylaxis.⁷ There was an average two-day delay before prophylaxis was given. The Worcester DVT Study demonstrated that only 32% of high risk hospitalized patients received prophylaxis.⁸

The Agency for Healthcare Research and Quality and the Society of Hospital Medicine are taking steps to narrow this performance gap.⁹⁻¹⁰ These steps require local action from each healthcare institution to establish a multidisciplinary team to champion VTE prophylaxis. Improving prevention of VTE should be an area of focus for healthcare leaders and providers.

The three key components to eliminate the performance gap in VTE prophylaxis are:

- (1) Each institution should have a process for identifying at risk populations for VTE and instituting appropriate prophylaxis. The most effective methods minimize reliance upon a single individual to achieve desired outcomes. A recent systematic review reported that passive dissemination of guidelines to clinicians was unlikely to improve prophylaxis.¹¹ Clinician reminders with appropriate recommendation were more effective.¹¹
- (2) Once a process has been outlined, outcome measures will establish its viability. The optimal desired outcome is 100% of hospitalized patients without new VTE. A more realistic goal is 100% of hospitalized patients assessed for VTE risk with the most appropriate prophylaxis given. Each institution must review outcomes data frequently to evaluate achievement toward this goal.
- (3) Refinement of the process will be necessary. Identification of road blocks preventing achievement of institutional preferred outcomes is important. A perpetual barrier is unexplained practice variation. Clinical variance only can be eliminated by standardization of practice. Evidence-based standardization will give institutions the opportunity to achieve desired outcomes. The best available evidence on practice standardization is the 7th ACCP consensus statement.³

A good process with good outcomes, based on evidence derived standardization is necessary to decrease VTE death in hospitalized patients. A physician champion with the appropriate support team can use these steps to produce an effective VTE prevention strategy. The current national campaign to eliminate this performance gap is called the Society of Hospital Medicine VTE Prevention Collaborative.¹⁰ This collaborative is a good resource and could bolster individual institutional campaigns.

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