

## Hospitalist and Pharmacist VTE Treatment Protocol Collaborative

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### Abstract

Venous thromboembolism (VTE) is a common inpatient condition with major morbidity and mortality. VTE management, like VTE prophylaxis, is often suboptimal, due to the complex nature of therapeutic anticoagulation, transitions in care, and lack of standardization of the process. While organizations and guidelines provide an outline of the “best practices” in VTE management, there has not been any literature to date on the feasibility of reliably delivering the myriad best practices, or outlining methodology to enhance effective implementation. Furthermore, the best practices call for significant medical center resources, while the impact of delivering the recommended best practices on important clinical outcomes has not been quantified.

We have identified several VTE management “best practices” from guidelines and regulatory agency literature.

We plan to:

1. Demonstrate markedly improved VTE management in our medical center via implementation of a VTE management best practices bundle, leveraging our past work and a proven performance improvement (PI) framework. Hospitalist/pharmacist collaboration, high reliability design features, and an expansion of pharmacist leadership, educational, and interventional roles will be used to enhance the probability of success. We identify every inpatient diagnosed with VTE via queries of our digital imaging and storage system. While we will track adherence to each applicable component of the VTE management bundle by concurrent chart review, *all* applicable best practices must be delivered in order to achieve “optimal VTE management.” We anticipate an increase in the proportion of patients receiving optimal VTE management from <20% to >80% by the 9<sup>th</sup> month of the 24 month study period.
2. Assess the impact of a VTE management bundle on pertinent outcomes. We will compare the outcomes associated with VTE management in a 567 patient historical control group with acute VTE to the outcomes in the >300 acute VTE patients we expect to manage after implementation of the VTE treatment bundle. The main outcome compared is a composite outcome of mortality, major bleeding episodes, unscheduled readmission, recurrent VTE, and warfarin induced over-anticoagulation occurring in the index admission or within 90 days of the VTE diagnosis. We will also examine the impact of the VTE management bundle on length of stay.
3. Gain the experience of implementing our VTE treatment bundle necessary to build and disseminate a web-based compendium of resources to assist other medical centers in accomplishing the same goals in an accelerated manner. This project can be seen as a prelude to the construction of a VTE Management Toolkit.