

**Venous Thromboembolism Prophylaxis and Treatment
for Surgical Patients –
Achieving the Standard of Care
Tools and Resources for Hospital Performance Measurement
Improvement Activities**

Twentieth in a series of targeted quality improvement articles

January 19, 2007

Illinois Hospital Association

**Venous Thromboembolism Prophylaxis and Treatment
for Surgical Patients –
Achieving the Standard of Care
Tools and Resources for Hospital Performance Measurement Improvement
Activities**

Achieving the Highest Standard of Care

Representing one of the four targets in the Surgical Care Improvement Projected (SCIP), these two Venous Thromboembolism (VTE) measures examine whether surgical patients were ordered and received the recommended VTE prophylaxis during their hospitalization.

As these are newly implemented measures, there are no state or national performance data available at this time. However, according to the National Quality Forum (NQF), current estimates suggest that less than 50 percent of patients diagnosed and hospitalized with deep vein thrombosis had received prophylaxis. The goal for all Illinois hospitals is **100% compliance** with the standards of care.

Starting with 4th quarter 2006 discharges, hospitals may begin to collect and voluntarily report measure data to the Hospital Compare web site. Fourth quarter VTE results will be available for public viewing later in 2007. Further, hospitals participating in the Annual Payment Update (APU) will be required to report these two VTE measures beginning with January 1, 2007 discharges to be eligible for the FYY 2008 full market basket update.

Venous Thromboembolism Prophylaxis and Treatment Measurement Description

Venous thrombosis is a condition where a blood clot (thrombosis) forms in a vein. Venous clots may restrict blood flow and lead to swelling and pain. These clots occur more commonly in the lower extremities and pelvis and when these occur in “deep” veins the condition is referred to as “DVT” (deep vein thrombosis).

Pulmonary embolism is a very serious and potentially fatal condition of the same clinical entity. In this condition, a portion of the clot (DVT) breaks away (embolus) and travels to the lungs (pulmonary) and when the clot lodges in a pulmonary blood vessel; this condition is referred to as PE (pulmonary embolism).

Many factors are attributed to venous thrombosis formation. According to CMS, VTE is one of the most common post-operative complications and prophylaxis (preventive interventions) is the most effective strategy to reduce associated morbidity and mortality. Prophylaxis recommendations are addressed in the 2004 American College of Chest Physicians (ACCP) guidelines and are available at the journal of Chest. Go to: http://www.chestjournal.org/content/vol126/3_suppl/, download the article titled Prevention of Venous Thromboembolism (vol. 126 no. 3, September 2004 Supplement).

Calculating the Measure's Performance. SCIP-VTE-1 Surgery patients with recommended VTE prophylaxis ordered is reported as a proportion, based on:

- Numerator includes patients with recommended VTE prophylaxis ordered during the admission.
- Denominator includes all selected surgery patients according to:
 - Principal Procedure code of selected surgeries (refer to Appendix A. Table 5.10 from the Technical Specifications Manual), **and**
 - Principal Procedure code of selected surgeries (refer to Appendix A. Tables 5.17 through 5.24 from the Technical Specifications Manual). The select surgeries include these types:
 - Intracranial Neuro
 - Elective spinal
 - General
 - Gynecologic
 - Urologic
 - Elective hip replacement
 - Elective total knee replacement
 - Hip fracture

Calculating the Measure's Performance. SCIP-VTE-2 Surgery patients who received appropriate VTE prophylaxis within 24 hours prior to surgery to 24 hours after surgery is reported as a proportion, based on:

- Numerator includes patients who received appropriate VTE prophylaxis within 24 hours prior to surgical incision time to 24 hours after surgery end time.
- Denominator includes all selected surgery patients (as described above).

A Fuller Understanding of the Measure

It is important to note, these measures are not necessarily a true estimate of VTE prophylaxes practices in your hospital's patient population. At this time, these measures are focused on one population of patients at risk for VTE when in fact VTE prophylaxis may be appropriate for other patients. Clinicians will want to consider other patient populations at risk and their potential improvement opportunities. See Appendix for American College of Chest Physicians (ACCP) Quality Improvement Committee recent recommendations for DVT prophylaxis for all hospitalized patients.

Finally, the SCIP-VTE measures reflect both the ordering of and the administration of appropriate VTE prophylaxis. Therefore, to enhance the interpretive value, these measures are best used in conjunction with each other.

The Impact of Medical Record Documentation on Measure Calculation

SCIP-VTE measures are sensitive to medical record documentation practices as proper documentation is required particularly with the contraindication *risk of bleeding*.

The *Technical Specifications* manuals are a resource for the measure description, rationale, the numerator and denominator, inclusions and exclusions, contraindications, and how data is processed including what results in *missing data* and *not in measure populations*. To view or download the manual, go to www.qnetexchange.org/, from the top menu bar select Hospitals, from left menu bar select Specification Manuals, select the manual appropriated to the data abstraction time period.

Venous Thromboembolism Web Based Resources

See Appendix I for venous thromboembolism web-based resources.

For additional information about SCIP - Venous Thromboembolism measures, Hospital Compare measures, or to comment on this series, please contact Tim Philipp, Director, Quality Improvement at tphilipp@ihastaff.org.

APPENDIX I. SCIP-VTE Web Based Resources

This document offers web resources about SCIP - Venous Thromboembolism useful in your improvement efforts. To access the materials below, click on or enter the web address and follow the additional steps.

VTE Recommendations.

- Review American College of Chest Physicians (ACCP) 2004 Guidelines for Prevention of Venous Thromboembolism: The Seventh ACCP Conference on Antithrombotic and Thrombolytic Therapy at the journal of Chest. Go to: http://www.chestjournal.org/content/vol126/3_suppl/, download the article titled Prevention of Venous Thromboembolism (vol. 126 no. 3, September 2004 Supplement). The guidelines are also located at <http://www.medqic.org>.
- Review the American College of Chest Physicians (ACCP) comments to National Consensus Standards for the Prevention and Care of Venous at: <http://www.qualityforum.org/>, from the top menu bar select Projects, from left menu bar select Ongoing Projects, scroll down to and select VTE, from left menu bar select ACCP Letter to NQF.

Educational.

- WebEx slide and audio presentation designed to engage and provide physicians with information to lead SCIP initiatives including VTE. See Improving Patient Safety Through the Prevention of Venous Thromboembolism presented by Bill Geerts, M.D., member SCIP VTE Expert Technical Panel and Chair of the ACCP Consensus committee on VTE. Go to: <http://www.medqic.org>, from top menu bar select Hospitals, from left menu bar select Surgical Care Improvement Project, from right menu box select Presentations, scroll down to and select SCIP Physician Championing Training WebEx dated February 7, 2006. The audio portions for the Geert's presentation are to found in program titles Physician Champion WebEx.
- A concise review of pertinent VTE statistics including related references is available from the American Heart Association at: <http://www.americanheart.org>, located search box in top left screen and enter "venous thromboembolism statistics" into search box.

Intervention Tools.

- DVT Order Set and DVT Prophylaxis Physicians Orders which includes assessments, data tracking, forms and templates may be viewed and down loaded at: <http://www.medqic.org>, from top menu bar select Hospitals, from left menu bar select Venous Thromboembolism, from right menu box select Tools, scroll down to titles of interest.

Surgical Care Improvement Project Overview.

- The Surgical Care Improvement Project (SCIP) is a national quality partnership focused on improving surgical care by significantly reducing surgical

complications. To review target areas, measures, and hospital participation materials, go to: <http://www.medqic.org>, from top menu bar select Hospitals, from left menu bar select SCIP Project Information.

Institute Healthcare Improvement (IHI) Tools and Materials.

- As part of the 5 Million Lives Campaign, the IHI provides educational and interventional tools and materials for Reducing Surgical Complications including venous thromboembolism prophylaxis. To review, go to: <http://www.ihl.org>, click on the 5 Million Lives logo, scroll down to Interventional Materials, select Reduce Surgical Complications. Registration is required to access IHI materials. Registration is free and open to all.

Frequently Asked Questions – (FAQs)

FAQs often reflect the insights and concerns of hospital staff involved in clinical care and data collection. Use *FAQs* as your first source to answer clinical and data related questions. *FAQs* are also an important educational tool for novice and expert.

- For Topic, select Hospital SCIP Measures or Interventions. Enter key words note, different key words (DVT, PE, VTE, prophylaxis, thrombosis, thrombus, embolus, bleeding, TED, SCD – “sequential compression devices,” GCS – “graduated compression stockings”) will increase your returns (with some duplication). Responses address data abstraction, clinical practices and prophylaxis, physician documentation, and contraindications.

To review *FAQs* or to ask a new question, go to: www.medqic.org, from top menu bar select Home, from left menu bar select *FAQ*.