Venous Thromboembolus (VTE) Prevention & Treatment
Establish risk assessment, prevention, and links to treatment for this complication of hospital care.

Domain

- **Patient Care Processes:** Clinical processes that ensure delivery of high-quality care to individual patients

Aims

- **Safe:** Delivery of care in a manner that minimizes any risk of harm to a patient

Process Attributes

<table>
<thead>
<tr>
<th>$</th>
<th>Cost to Implement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The monetary resources required to implement this process</td>
</tr>
<tr>
<td></td>
<td><strong>Minimal:</strong> Just the cost of the improvement effort itself</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>🕒</th>
<th>Time to Implement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The amount of time, from months to years, it will take on average to establish this process</td>
</tr>
<tr>
<td></td>
<td><strong>Fewer than 12 months</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>🙍‍♂️</th>
<th>Difficulty to Implement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The challenges of implementing this process</td>
</tr>
<tr>
<td></td>
<td><strong>Moderately Challenging:</strong> Either involves multiple units or disciplines OR requires a substantial shift in culture and/or operations, but not both of these</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>📐</th>
<th>Level of Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The degree to which the actions in this process are supported by research and experience; based on the Cochrane scale</td>
</tr>
<tr>
<td></td>
<td><strong>Strong Evidence:</strong> Level I or Level II — Studies published using randomized trials</td>
</tr>
</tbody>
</table>

Details

Elements

- **Assess all patients on admission for venous thromboembolism (VTE) risk**

- **Provide appropriate venous thromboembolism (VTE) prophylaxis, including pharmaceutical and mechanical approaches based on national guidelines:**
  - Surgical patients with procedures designated in SCIP measures
  - Intensive care ventilated patients as part of the Ventilator Bundle
  - All other patients assessed to be at risk (based on ACCP Guidelines)
Outcomes

- **Mortality (HSMR):** Decreased mortality (hospital standardized mortality ratio, or HSMR)
- **Harm:** Decreased harm to patient (e.g., Harms per 100 patient days, as measured by the IHI Global Trigger Tool)
- **Cost of Care:** Decreased cost per inpatient case
- **Readmissions within 30 Days:** Decreased readmissions within 30 days
- **Reliability:** Increased delivery of evidence-based care 100% of the time

Service Lines and Critical Functions

- Hospital Medicine, Adult
- Surgical

Key Measures

- Percent of patients screened on admission for VTE risk

Venous Thromboembolism Discharge Instructions

VTE patients with documentation that they or their caregivers were given written discharge instructions or other educational material addressing all of the following:
- Follow-up monitoring
- Compliance issues
- Dietary restrictions
- Potential for adverse drug reactions/interactions
- Activity requirements or restrictions

Venous Thromboembolism Prophylaxis

Percent of patients who received venous thromboembolism (VTE) prophylaxis or have documentation why no VTE prophylaxis was given within 24 hours of hospital admission or surgery end time (medical and surgical inpatients with inpatient stays of >48 hours and >18 years of age)

Reasons and Implications

Importance for Patients and Families

This very serious complication can often be prevented by checking patients for risk of blood clots and then taking steps to prevent them. Reducing VTE decreases the chances of readmissions to hospitals, serious complications, and deaths.

Requirement, Standards, Policies, and Guidelines

- [Agency for Healthcare Research and Quality (AHRQ)](http://app.ihi.org/imap/tool/#process=5b9bfd5a-1e17-433b-a9d4-602fafef73c8)
- [Centers for Medicare & Medicaid Services (CMS)](http://app.ihi.org/imap/tool/#process=5b9bfd5a-1e17-433b-a9d4-602fafef73c8)
- [National Priorities Partnership (NPP)](http://app.ihi.org/imap/tool/#process=5b9bfd5a-1e17-433b-a9d4-602fafef73c8)
  - Safety
- [National Quality Forum (NQF)](http://app.ihi.org/imap/tool/#process=5b9bfd5a-1e17-433b-a9d4-602fafef73c8)
  - Safe Practice for Better Healthcare—2009 Update
  - Safe Practice 28: Venous Thromboembolism Prevention
- [The Joint Commission (TJC)](http://app.ihi.org/imap/tool/#process=5b9bfd5a-1e17-433b-a9d4-602fafef73c8)
  - Venous Thromboembolism (VTE) Core Measure Set

Financial Implications

- Expense reduction can occur due to decreased cost from prevention of complications and associated increase in length of stay.
- Expense increases can occur due to increased use of prophylaxis.

Prerequisites

None for this process
Resources

Additional Resources

- **Society of Hospital Medicine**
  Preventing Hospital-Acquired Venous Thromboembolism
  A Guide for Effective Quality Improvement
  Version 3.0

- **Venous Disease Coalition**

- **American College of Chest Physicians (ACCP)**
  Antithrombotic and Thrombolytic Therapy, 8th Ed: ACCP Guidelines, Table of Contents

- **Agency for Healthcare Research and Quality (AHRQ)**
  Diagnosis and Treatment of Deep Venous Thrombosis and Pulmonary Embolism

- **Map of Medicine**
  Venous Thromboembolism Risk Assessment

- **The Commonwealth Fund**
  Why Not the Best?
  Comparative performance data on surgical care, including VTE prevention

- **National Blood Clot Alliance**
  Stop the Clot

- **Scottish Intercollegiate Guidelines Network (SIGN)**
  Prevention and management of venous thromboembolism: A national clinical guideline

- **NICE Pathways**
  NICE Pathways is an interactive tool for health and social care professionals providing fast access to NICE guidance and associated products.

- **Agency for Healthcare Research and Quality (AHRQ)**
  National Guideline Clearinghouse Synthessis on Preventing Venous Thromboembolism (VTE)

- **Agency for Healthcare Research and Quality (AHRQ)**
  National Guideline Clearinghouse

- **US Department of Health and Human Services**
  Partnership for Patients

- **Centers for Disease Control and Prevention (CDC)**
  Deep Vein Thrombosis/Pulmonary Embolism (DVT/PE)

Information Compiled By

IHI