

VTE Prevention and Management

The risk for developing a venous thromboembolism is universal among hospitalized patients and is one of the most common causes of preventable death for patients. Fortunately there are safe, cost-effective, evidence-based interventions hospitals can implement to reduce the risk of harm from developing a VTE. However, despite these evidence-based practices, studies continue to show a significant underutilization of preventative measures.¹ The American Public Health Association goes so far as to state “disconnect between evidence and execution as it relates to DVT prevention amounts to a public health crisis.”¹

During a webinar hosted by the Hospital Research and Educational Trust, [VTE Prophylaxis: Strategies to Decrease Patient Refusal](#), Steve Tremain, M.D., offered a three-step process to successful VTE prevention.

- **Perform evidence-based risk screening.**
- **Ensure that risk screening drives appropriate prophylaxis orders.**
- **Implement orders reliably at the bedside.**

Dr. Tremain notes that while one failure in this three-step process undermines VTE prevention, the third step of order implementation is crucial. Patients are at risk for clot formation 24/7. One missed dose of a chemoprophylaxis (medication prophylaxis) agent or several hours of missed sequential compression device application can lead to a VTE.³

According to Anthony D. Yang, M.D.,³ the ideal VTE prophylaxis includes the following.

- **Early ambulation – ensure it is ordered and implemented**
- **Mechanical prophylaxis (SCDs) – ensure it is ordered, applied and is working**
- **Chemoprophylaxis ordered – ensure the dose and frequency are correct and that it is being administered as ordered**

Data Corner: ^{1,2,3,4}

- 350,000 to 900,000 people develop VTE annually
- VTEs are the leading cause of preventable hospital death – an estimated 60,000-100,000 deaths annually
- The average total hospitalization cost for DVTs and PEs is -\$9,400 and \$11,000, respectively
- 70 percent of VTE cases were preventable through the use of pharmacologic agents and/or mechanical prophylaxis – less than half of hospitalized patients received these interventions
- Patients reject an injection for VTE prophylaxis 25 to 50 percent of the time
- Only 50 percent of the time is the SCD properly in place and properly functioning



Be part of the
HIN CROWD

Innovate. Exnovate.
Improve. Inspire.

HIInovating Practice Spotlight: Strategies to involve patients and families in VTE prevention

Patient refusal has been identified as the most commonly documented reason for non-administration of mechanical and medication for VTE prevention. In focus groups, nurses cited several barriers to reducing refusals including lack of training and knowledge on how to handle a patient refusal.^{2,3,4,5}

To help reduce patient refusals, consider these questions at your next quality improvement team meeting.

- Do you track patient refusal/non-compliance with VTE prophylaxis?
- How do your nurses manage the situation when a patient refuses VTE prophylaxis?
- Have you looked at the refusals as charted? Have you found patterns by nurse or unit?
- How are you helping your nurses decrease refusals?
- Do you have a plan to increase nursing and patient awareness and reduce refusals?

When a patient is refusing prophylaxis, nurses could consider the following.

- Have I discussed VTE and potential complications with my patient and his/her family?
- Have I discussed individualized VTE risk factors with my patient? Read this [study](#) on how patients want to receive their VTE education.
- Have I told the prescriber that the patient is refusing?
- Have I discussed alternative options with the prescriber (such as medications administered once daily)?
- Nurses hold a vital role in ensuring proper use of mechanical devices. The nurse should verify
 - correct size stockings are selected.
 - stockings are applied appropriately.
 - stockings are worn at all times.

VTE Prevention Resources:

- HRET has compiled the latest guidelines, data, resources and tools in the updated [VTE Change Package](#) and [TOP 10 Checklist](#).
- Watch this HRET webinar: [VTE Virtual Event | Reliability and Teamwork](#)
- Don't forget **Get Up** is a cross-cutting strategy to manage VTE! Find all UP Campaign resources [here](#).
- [AHRQ's Prevention Hospital-Associated Venous Thromboembolism: A Guide for Effective Quality Improvement](#)
- [Aspen Valley's VTE journey during the VTE webinar event.](#)
- [Partnership for Patients Pacing Event focused on VTE prevention.](#)
- [Venous Thromboembolisms Prophylaxis in Major Orthopedic Surgery: Systematic Review Update](#)



Innovate. Exnovate.
Improve. Inspire.

References:

¹Health Research & Educational Trust (June 2017). *Venous Thromboembolism (VTE) Change Package: 2017 Update*. Chicago, IL: Health Research & Educational Trust.

²Muramoto, Shannon M., "Increasing Sequential Compression Device Compliance to Decrease Venous Thromboembolisms and Improve Nursing Documentation" (2017). *Master's Projects and Capstones*. 568. <http://repository.usfca.edu/capstone/568>

³American Hospital Association/Health Research & Educational Trust, VTE Prophylaxis: Strategies to Decrease Patient Refusals; webinar Published: August 15, 2017; accessed <http://www.hret-hiin.org/Resources/vte/17/vte-virtual-event-vte-prophylaxis-strategies-to-decrease-patient-refusals-slides.pdf>

⁴Shermock, K. M., Lau, B. D., Haut, E. R., Hobson, D. B., Ganetsky, V. S., Kraus, P. S., Streiff, M. B. (2013). Patterns of Non-Administration of Ordered Doses of Venous Thromboembolism Prophylaxis: Implications for Novel Intervention Strategies. *PLoS ONE*, 8(6), e66311. <http://doi.org/10.1371/journal.pone.0066311>

⁵Article 2 Popoola, V. O., Lau, B. D., Shihab, H. M., Farrow, N. E., Shaffer, D. L., Hobson, D. B., ... Haut, E. R. (2016). Patient Preferences for Receiving Education on Venous Thromboembolism Prevention – A Survey of Stakeholder Organizations. *PLoS ONE*, 11(3), e0152084; accessed <http://doi.org/10.1371/journal.pone.0152084> <https://jamanetwork.com/journals/jamainternalmedicine/article-abstract/2629450>



Be part of the
HIIN CROWD

Innovate. Exnovate.
Improve. Inspire.