

Venous Thromboembolism (VTE) EHR Improvement Guide

Background: This guide is intended to **improve safety, efficiency, and standardization of VTE care** through the optimization of Electronic Health Record (EHR) systems. Well-designed EHR tools make the right action the easiest action by supporting accurate, timely decisions, reduce prescribing and monitoring errors, and streamline team workflows. This guide offers strategies to ensure EHR updates promote consistent, evidence-based practice and improve patient safety in antithrombotic stewardship.



EHR Build for VTE Care Pathway

Improving the EHR to support VTE care can include 3 steps or levels of intervention: The individual clinician, the institution, and the health system. On this continuum is a range of interventions, from personalized workarounds to a fully integrated antithrombotic platform.



STEP 1

INDIVIDUAL

Customize Your EHR Experience



HIGH PERSONAL IMPACT

WHAT YOU DO

- Create text shortcuts & favorites
- Customize dashboards & filters
- Set-up order & notification preferences
- Use personal task lists



Examples of Personal Customizations

- Quick order sets
- Text templates for VTE/AC plans
- Quick lists/lists for H&P/discharge
- Personal dashboards
- Follow-up reminders
- Saved patient cohorts
- Saved patient education materials

Outcome

- ✓ Faster
- ✓ Consistent
- ✓ High-quality individual workflow



STEP 2

INSTITUTION

Sitewide Guidance and Clinical Decision Support



LOCALIZED STEWARDSHIP

Build Indication Driven Order Sets

- Prioritized use of preferred agents
- Default to guideline-concordant dosing
- Include renal/hepatic dose adjustments
- Bundle labs when appropriate

Embed Clinical Decision Support for High-Risk Interactions

- Duplicate therapy alerts
- Flags for significant changes (ex. renal function, weight, platelets)
- Contraindications
- Perioperative guidance

Create Antithrombotic Dashboards to Identify:

- Patients on multiple AT agents
- Inappropriate AC dosing
- Missed doses or interruptions
- Transitions of care

Outcome: ✓ Visibility ✓ Quality Improvement ✓ Standardization ✓ System-Wide Pilots



STEP 3

SYSTEM-WIDE

Integrated Antithrombotic Platform



POPULATION HEALTH

WHAT'S DELIVERED

- Automated patient identification (AC- or diagnosis-triggered)
- Integrated risk calculators
- Clinical decision support
- Task management
- Billing integration
- Structured referral workflows



Expands to System-Wide Implementation

- Treatment pathways triggered by diagnosis
- Built-in risk assessments
- System-wide safety alerts (duplicates, dosing)
- Standardized perioperative templates
- Quality-driven VTE reporting & benchmarking

Outcome

- ↑ Appropriate Care
- ↓ VTE Events
- ↓ Bleeding Harm
- ✓ Population Health
- ✓ Stewardship

SMART INDIVIDUAL WORKFLOW + INSTITUTIONAL OVERSIGHT + SYSTEM-WIDE POWER = OPTIMAL VTE CARE

Right data → Right time → Right decision → Right outcome




Clinical decision support and EHR guidance should be implemented in conjunction with institutional policies, procedures, and evidence-based clinical guidelines, with all content reviewed and updated through a formal governance process on a defined recurring schedule to ensure ongoing accuracy and patient safety.

Begin building a VTE Care Pathway in your EHR today!

Below are example tools to address care needs in adults with VTE. Consider using these ideas as starting points on which you can continue to build into a clinical decision support module.

VTE-Suspected Order Set

For use in *evaluating* patients for potential VTE

VTE Order Set Logic	Deep Vein Thrombosis (DVT)	Pulmonary Embolism (PE)
	Link/build clinical calculator for Wells' Score	
	Include instruction text: "Consider advancing to treatment order set if high clinical suspicion and delay in diagnostic testing"	
Orders	Create panels and set test priorities and applicable settings	
Low Probability	Labs: D-dimer	
Moderate to High Probability (or positive D-dimer)	Labs: D-dimer, CBC, CMP, PT/INR, pregnancy test	
	Venous US of suspicious extremity(ies)	CT Angiography Consider: V/Q Scan, Venous US of suspicious extremity(ies)

Standardized Documentation for Acute VTE

Create a note template for acute VTE to ensure all components of care are considered and documented

VTE History

- Previous VTE?
- Features of acute event:
 - Symptoms at onset: severity, duration
 - Thrombosis location
 - VTE risk factors: List all

Anticoagulation Management

1. Anticoagulant and dose
2. Actions to ensure affordability
3. Anticipated anticoagulation duration

Antithrombotic Therapy Optimization

1. History of bleeding events?
2. [Antiplatelet use](#)? If so, deprescribe? If can't deprescribe, add PPI?
3. [Women's Health Considerations](#): Menstrual bleeding, contraception, HRT?

Outpatient Acute VTE-Diagnosed Order Set

For use in *starting* the VTE Care Pathway

Use clinical situation/indication-based ordering (e.g., DDI, renal function, pregnancy, APS, mechanical heart valves, liver disease, cancer, etc.)

Anticoagulants

- Direct Oral Anticoagulants: set for 30D + 2 refills
- VKA: INR goal 2-3 with overlapping LMWH-therapeutic dosing (5D + 1 refill)

Other Medication Considerations

Include Instructional Text: If patient on antiplatelet, review indication and consider deprescribing if appropriate. If patient must remain on antiplatelet or history of GI bleeding, consider PPI initial 30D + 2 refills

Referrals

- Anticoagulation Clinic
- Specialists (vascular, hematology)
- 3-6 months PCP follow-up appointment

For a detailed example of a treatment plan, refer to [AC Forum's Acute VTE Care Transition Order Set \(Adult\)](#)

Patient Education Resources

Embed standardized, high-quality educational resources

EHR Supplied Resources

Review for completeness and accuracy


Institution Specific Instructions and Guidance

Include specific instructions for questions and emergency care (clinic/ED locations, phone numbers, etc.)

Outside Resources

Work with your IT team to embed approved resources or links into order-sets and discharge instructions by diagnosis type and medication

Pro tip: Flag VTE-related patient education resources in your favorites



Educational Resources not embedded in your EHR?

Find examples in the [AC Forum Education & Resource Center](#)

VTE Follow-up Text Template

Use text templates to prompt consistent VTE care, documentation, and follow-up

- 1 **AC toxicity monitoring**
Bleeding events & lab interpretation (Hg and CrCl stability)
- 2 **Current dose and duration of therapy**
- 3 **AC Affordability/Access**
- 4 **Any hospitalization/surgery since last visit?**
- 5 **Any hospitalization/surgery planned?**
- 6 **Re-emphasis of bleeding risk**

Abbreviations: AC: Anticoagulant; APS: Antiphospholipid Syndrome; AT: Antithrombotic; CBC: Complete Blood Count; CMP: Comprehensive Metabolic Panel; DDI: Drug-Drug Interactions, DVT: Deep Vein Thrombosis; ED: Emergency Department; EHR: Electronic Health Record; H&P: History & Physical; PT/INR: Prothrombin Time/International Normalized Ratio; PCP: Primary Care Provider; PE: Pulmonary Embolism; PPI: Proton Pump Inhibitor; US: Ultrasound; VKA: Vitamin K Antagonist; VTE: Venous Thromboembolism

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