



Steps to Building the VTE Prophylaxis Registry and Real Time Alert

Implementing Best-Practice, Patient-Centered Venous Thromboembolism Prevention in Trauma Centers
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Building the VTE Prophylaxis Registry

The exact medication wording can be different in each electronic health record (EHR) system build (even sites using the same vendor). For example, at our institution we found that a change was made describing 'Enoxaparin 40mg **Injection**' to 'Enoxaparin 40mg **Syringe**,' which required revision of our query. Therefore, each trauma center will need to validate their own comprehensive list of VTE prophylaxis medications used for hospitalized patients to populate their VTE prophylaxis registry.

Below are the steps we have used to generate our VTE prophylaxis medication list. You will need to do the same at your trauma center. We suggest a group composed of a physician, nurse, pharmacist, and an EHR report writer work together on these steps.

The attached Excel spreadsheet titled "CLOTT3 VTE prophylaxis medication list" should be used to build your VTE prophylaxis registry.

Step 1: Medication Identification

- The EHR report writer at your site will review tab 1, labeled "Root Medication Names," in the attached Excel spreadsheet and pull a de-duplicated list for the previous 24 months of every way the "root" medication can be prescribed in your EHR. Look at tab 2, columns H through L ("JHH Example Medication List") for examples of doses, and potential routes and frequencies that may be used at your hospital.
- Note that any combination of root medication, dose, and frequency should be on this initial, comprehensive list.
- This comprehensive list will include medications used for VTE prophylaxis, VTE treatment, and other uses.
- The comprehensive list should be provided to the clinicians (physician, nurse, and pharmacist) on your team.
- The clinicians on your team will delete every instance where they agree that the medication is NOT used for VTE prophylaxis (e.g., enoxaparin 100mg BID).
- Your list should now look more like columns A through E of tab 2 ("JHU Example Medication List").
- Your final list of medications used for prophylaxis, with Generic Name, Brand Name, Dose, Route, and Frequency should be added to tab 3 of the Excel spreadsheet labeled "Your Site Medication List."
- This final list will include every way that a VTE prophylaxis medication has been ordered at your site from the previous 24 months. This forms the basis of the VTE prophylaxis registry and real-time alert.

Step 2: Review, Validate, and Finalize Medication List

- The EHR report writer will generate a list of all medication doses prescribed during the previous month that match the final list developed in Step 1. This list should include whether each dose was administered or not administered (e.g., missed, not given, refused), and the location (e.g., floor, unit) where each dose was scheduled to be administered.
- The clinicians on your team (physician, nurse, pharmacist) will review the compiled list to validate that doses were used for VTE prophylaxis.
- Once you have validated your medication list, you can begin Step 3.

Step 3: Generate 24-month VTE Prophylaxis Registry and Update Every 3 Months

- The EHR report writer will use the validated final medication list to generate a 24-month report of all VTE prophylaxis medications prescribed before the CLOTT3 project implementation. The 24 months will include all data for calendar years 2019 and 2020.
- Data should be validated every 3 months when reports are run to check the quality and consistency of the dataset.
- If substantial changes are noticed in the number of monthly doses, re-do steps 1 and 2 to ensure no changes to the medication documentation were made. If changes are identified, you will need to modify the list and update your related alert too.

Step 4: Send VTE Prophylaxis Registry to Johns Hopkins

- Send the report to Johns Hopkins University via secure file sharing AFTER Data Use Agreement (DUA) is fully executed between your institution and the Johns Hopkins University.
- Your hospital will upload data to a hospital-specific folder on the HIPAA-compliant Johns Hopkins Medicine server. The EHR report writer and trauma registrar for your site will receive access to a folder for their hospital where they can upload VTE prophylaxis registry data and trauma registry data every 3 months.

Building the Real Time Alert:

(see document titled Real Time Alert Description and Build Specifications)

- Determine which floor(s) your site will target for the intervention
- Determine which individual or group of individuals will receive the real-time alert
- Determine the preferred communication device (e.g., pager, phone) to receive the real-time alert
- The real-time alert will be triggered using the medication list developed and validated in Steps 1 and 2. The alert will ONLY trigger when one of these scheduled medication doses is documented as **NOT** administered (e.g., missed, refused, not given). The alert will only go to the designated floor for your site where the dose was scheduled to be administered.

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