

Dove eCQM Public Comment Information Sheet

Measure Title: Diagnostic Delay of Venous Thromboembolism (DOVE) in Primary Care electronic clinical quality measure (eCQM)

Measure Description: This measure assesses the rate of delayed diagnosis of venous thromboembolisms (VTE) in adults aged 18 years and older in the primary care setting. Delayed diagnosis is defined as diagnosis of VTE that occurs >24 hours following the index primary care visit (within 30 days) where symptoms for the VTE were first present. This measure is an electronic clinical quality measure (eCQM), meaning it leverages information in the electronic health record, and rate calculation does not result in additional document burden to clinicians.

VTE is a serious, preventable public health problem affecting approximately 300,000–600,000 individuals in the U.S. each year and requires timely and adequate treatment (Beckman, et al. 2010). VTE consists of pulmonary embolism and deep vein thrombosis and its 30-day mortality rate is up to 23% (Tagalakis, et al. 2013; Nijekuter, et al. 2007). Because signs and symptoms of VTE are non-specific, timely recognition of VTE is difficult, and missed VTE diagnosis is common (Karwinski, et al. 1989, Bricola, et al. 2013). In addition to concerns over patient safety, VTE events are costly to healthcare systems. Ruppert et al. (2011) estimated that VTE complications ranged from \$426-\$41,133 across literature and represent a financial burden to healthcare systems. Preventing VTE events avoids VTE-related adverse events from occurring, meaning that this eCQM has the potential to save thousands of dollars in avoidable healthcare costs.

Currently there is no way to measure a clinician group's VTE diagnostic performance. Metrics are needed to quantify suboptimal VTE diagnostic performance, improve early recognition of VTE symptoms, and ultimately reduce unfavorable VTE outcomes. Measuring and reporting delayed VTE diagnosis rates will inform healthcare providers and facilities about opportunities to improve care, strengthen incentives for quality improvement, and improve the quality of care received by patients. Beta testing in two geographically different U.S. healthcare systems resulted in a DOVE eCQM rate of 72.60% and 77.14% respectively, with primary care practice rates ranging from 0%-100%.

Measure Specifications:

Numerator: The subset of the denominator where the patient's VTE diagnosis occurs >24 hours following a primary care visit (within 30 days).

Denominator: All adult patients presenting in primary care with VTE-related symptoms (**Table 1**), who are subsequently diagnosed with a VTE following their primary care visit (within 30 days). A patient is defined as having a VTE diagnosis if they have **all** the following:

- ICD-10 codes related to VTE;
- CPT imaging codes for VTE linked to the same encounter as the ICD-10 code;
- RxNorm codes for therapeutic anticoagulants placed in the same encounter as the imaging scan.

If a patient has multiple eligible VTE events within a 6 month period, the first encounter will be used and the remaining VTE events will be excluded from measure calculation.

Level of Analysis: Clinician group/Practice

Target population: Adults age ≥ 18 years

Care settings: Primary care (outpatient services)

Data source: Electronic health record (EHR)

Exclusions: Patients with hospice or palliative care encounters within 90 days of the eligible VTE event.

Stratification: This measure is not stratified.

Risk Adjustment: This measure is not risk adjusted.

Intended Use: This measure is being submitted for consideration for the Centers for Medicare & Medicaid Services (CMS) Merit-based Incentive Payment System (MIPS) as an eCQM within the quality domain.

Table 1: VTE-related symptoms:

cough	hypotension	lightheadedness
syncope	tachycardia	hemoptysis
calf pain	leg pain	foot pain
Calf numbness	leg numbness	foot numbness
calf tingling	leg tingling	foot tingling
calf redness	leg redness	foot redness
calf swelling	leg swelling	foot swelling
calf tenderness	leg tenderness	foot tenderness
calf warmth	leg warmth	foot warmth
shortness of breath		

Measure Testing: This measure was developed and tested in two healthcare systems in the United States. Site 1 in Boston, MA, included a total of 214 clinical group practices with 3,591 encounters in the denominator from 2016-2022. Site 1 had a DOVE rate of 72.60% (ranging from 46.15%-100% across the largest 50 primary care sites in Site 1). Site 2 in Lexington, KY, was assessed at the organization-level as this site uses a non-interoperable EHR. Site 2 included 245 encounters with a DOVE rate of 77.14%. Due to barriers in eCQM usage in non-interoperable healthcare systems like Site 2, this measure has been specified for use in integrated healthcare systems. This is a limitation of all eCQMs, not limited to the DOVE eCQM. Testing in a third healthcare system with an interoperable EHR will be conducted in 2023.

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