

Center for Clinical Standards and Quality (CCSQ) Centers for Medicare & Medicaid Services (CMS)



Measure Information Form

Hospital Harm: Postoperative Venous Thromboembolism

Task 2, Deliverable #3-3

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Version 4



SUBMITTED TO

Centers for Medicare & Medicaid Services (CMS)
Center for Clinical Standards and Quality (CCSQ)

ATTENTION

Annese Abdullah-Mclaughlin
Centers for Medicare & Medicaid Services
7500 Security Boulevard
Baltimore, MD 21244-1850

SUBMITTED BY

IMPAQ International, LLC
10420 Little Patuxent Parkway
Suite 300
Columbia, MD 21044
(443)256-5500
www.impaqint.com

PROJECT

Patient Safety Measure Development and Maintenance
Contract Number: 75FCMC18D0027

TASK & DELIVERABLE

Chapter 3 Information Gathering
Deliverable 3-3 Measure Information Form (MIF)

AUTHORS

Richard White, University of California-Davis
Michelle Lefebvre, IMPAQ International, LLC
Mia Nievera, IMPAQ International, LLC
Hannah Klein, IMPAQ International, LLC

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Overview

PROJECT TITLE: Patient Safety Measure Development and Maintenance Project

DATE: Information included is current on September 21, 2021.

PROJECT OVERVIEW: The Centers for Medicare & Medicaid Services (CMS) has contracted with IMPAQ International to develop, maintain, reevaluate, and implement patient safety measures for CMS' hospital-level quality reporting programs. The contract name is Patient Safety Measure Development and Maintenance. The contract number is 75FCMC18D0027 (Task Order: 75FCMC19F0001).

1. Measure Name:

Hospital Harm – Postoperative Venous Thromboembolism

2. Descriptive Information:

2.1 MEASURE TYPE

Outcome

2.2 BRIEF DESCRIPTION OF MEASURE

This electronic clinical quality measure (eCQM) assesses the proportion of inpatient hospitalizations with at least one postoperative venous thromboembolism (VTE), defined as an inpatient postoperative pulmonary embolism (PE) or deep vein thrombosis (DVT), during the inpatient hospital encounter for postoperative patients with VTE not present on admission (NPOA), in patients ages 18 years and older at admission.

The detailed specifications for this measure are still in development and this measure has not gone through the testing process. The measure has also not yet been submitted for public comment.

2.3 IF PAIRED OR GROUPED

Not Applicable.

3. Measure Specifications:

3.1 MEASURE-SPECIFIC WEB PAGE

Not applicable.

3.2 HQMF SPECIFICATIONS (ECQM)

Attachment: PostoperativeVTEv604-Artifacts.zip

3.3 DATA DICTIONARY, CODE, TABLE, OR VALUE SETS

Attachment: Postoperative VTE Value Set Directory.xlsx

3.4 INSTRUMENT-BASED MEASURE

Not applicable.

3.5 UPDATES SINCE LAST SUBMISSION

Not applicable. This is a *de novo* measure.

3.6 NUMERATOR STATEMENT

Inpatient hospitalizations for patients with a postoperative venous thromboembolism (VTE).
Evidence of a postoperative VTE is determined by:

A diagnostic imaging study performed after the surgery and at least one of the following:

AND EITHER:

(1) A non-heparin anticoagulation therapy within 24 hours after the imaging study. OR

2) Heparin therapy within 24 hours after the imaging study, with at least 2 aPTT heparin therapy monitoring tests or at least 2 Anti Factor Xa Assays within 35 hours of the start of heparin therapy administration. OR

(3) Placement of an inferior vena cava (IVC) filter within 24 hours after the imaging study.

(4) An encounter diagnosis of VTE not present on admission.

The detailed specifications for this measure are still in development and this measure has not yet gone through the testing process. The measure has also not yet been submitted for public comment.

3.7 NUMERATOR DETAILS

This is an eCQM, and therefore uses electronic health record data to calculate the measure score. The time period for data collection is during an inpatient hospitalization, beginning at hospital arrival (whether through emergency department, observation stay, or directly admitted as inpatient).

All data elements necessary to calculate the numerator are defined within value sets available in the Value Set Authority Center (VSAC) and listed below.

The diagnostic imaging studies are defined by these value sets:

"Abdominal or Pelvic CT Scan with Contrast" (2.16.840.1.113762.1.4.1147.160)

"CT Angiography of Chest" (2.16.840.1.113762.1.4.1147.155)

"Pulmonary Ventilation/Perfusion (VQ) Scan" (2.16.840.1.113762.1.4.1147.170)

"Ultrasound of Upper or Lower Extremities" (2.16.840.1.113762.1.4.1147.165)

The diagnosis of VTE is defined by the value set "Venous Thromboembolism" (2.16.840.1.113883.3.117.1.7.1.279)

Present on Admission Indicator is defined by the value set

"Present on Admission = No or Documentation Insufficient to Determine" (2.16.840.1.113762.1.4.1147.198)

Antithrombotic Treatment is defined by these value sets:

"Non-Heparin Anticoagulants for VTE Treatment" (2.16.840.1.113762.1.4.1147.172)

"Heparin for VTE Treatment" (2.16.840.1.113762.1.4.1147.179)

"Inferior Vena Cava (IVC) Filter Placement" (2.16.840.1.113762.1.4.1147.151)

Heparin Monitoring is defined by these direct reference codes:

3274-8 Heparin unfractionated [Units/volume] in Platelet poor plasma by Chromogenic method
3173-2 aPTT in Blood by Coagulation assay

To access the value sets for the measure, please visit the Value Set Authority Center (VSAC), sponsored by the National Library of Medicine, at <https://vsac.nlm.nih.gov/>.

3.8 DENOMINATOR STATEMENT

Inpatient hospitalizations where the patient is 18 years of age or older at the start of the encounter, and at least one surgical procedure was performed during the encounter.

The detailed specifications for this measure are still in development and this measure has not yet gone through the testing process. The measure has also not yet been submitted for public comment.

3.9 DENOMINATOR DETAILS

This measure includes all patients aged 18 years and older at the time of admission, and all payers. Measurement period is one year.

This measure is at the hospital admission level; only one numerator event is counted per encounter.

Inpatient encounters are defined using the value set of Encounter Inpatient (2.16.840.1.113883.3.666.5.307).

Emergency department visits are defined using the value set of Emergency Department Visit (2.16.840.1.113883.3.117.1.7.1.292).

Observation stays are defined using the value set of Observation Services (2.16.840.1.113762.1.4.1111.143).

The surgery is defined by the value set "General or Neuraxial Anesthesia" (2.16.840.1.113883.3.666.5.1743)

To access the value sets for the measure, please visit the Value Set Authority Center, sponsored by the National Library of Medicine, at <https://vsac.nlm.nih.gov/>.

3.10 DENOMINATOR EXCLUSIONS

Exclude:

Inpatient hospitalizations for patients with venous thromboembolism (VTE) present on admission.

Inpatient hospitalizations for patients with obstetrical conditions.

3.11 DENOMINATOR EXCLUSION DETAILS

A VTE is considered present on admission if documented within 24 hours of arrival.

The diagnosis of VTE present on admission is defined by these value sets:

"Venous Thromboembolism" (2.16.840.1.113883.3.117.1.7.1.279)

"Present on Admission = Yes or Clinically Undetermined" (2.16.840.1.113762.1.4.1147.197)

Obstetrical conditions are defined by the value sets:

"Obstetrics" (2.16.840.1.113883.3.117.1.7.1.263)

"Obstetrics VTE" (2.16.840.1.113883.3.117.1.7.1.264)

3.12 STRATIFICATION DETAILS AND VARIABLES

Not applicable.

3.13 RISK ADJUSTMENT TYPE

This measure does not include risk adjustment or risk stratification.

3.14 TYPE OF SCORE

Rate/proportion

3.15 INTERPRETATION OF SCORE

A lower score is indicative of better quality.

3.16 CALCULATION ALGORITHM AND MEASURE LOGIC

The rate is calculated as follows:

To calculate the hospital-level measure result, the total numerator events is divided by the total number of qualifying encounters (denominator).

Qualifying encounters (denominator) include all patients 18 years of age or older at the start of the encounter who had at least one surgical procedure performed during the encounter.

Exclude encounters from the denominator include patients with:

- A venous thromboembolism (VTE) present on admission. A VTE is considered present on admission if documented within 24 hours of arrival.
- An obstetrical condition that overlaps the encounter.

To create the numerator, for each encounter identify an occurrence of postoperative VTE. Evidence of a postoperative VTE is determined by:

A diagnostic imaging study performed after the surgery and at least one of the following:

AND EITHER:

- (1) A non-heparin anticoagulation therapy within 24 hours after the imaging study. OR
- 2) Heparin therapy within 24 hours after the imaging study, with at least 2 aPTT heparin therapy monitoring tests or at least 2 Anti Factor Xa Assays within 35 hours of the start of heparin therapy administration. OR
- (3) Placement of an inferior vena cava (IVC) filter within 24 hours after the imaging study.
- (4) An encounter diagnosis of VTE not present on admission.

Only one harm (a qualifying postoperative VTE) is counted per encounter.

This eCQM is an episode-based measure. An episode is defined as each inpatient hospitalization encounter that ends during the measurement period.

This version of the eCQM uses QDM version 5.6. Please refer to the eCQI resource center (<https://ecqi.healthit.gov/qdm>) for more information on the QDM.

3.17 SAMPLING

Electronic Health Record

3.18 SURVEY/PATIENT-REPORTED DATA

Not applicable.

3.19 DATA SOURCE

Electronic clinical health record data

3.20 DATA SOURCE OR COLLECTION INSTRUMENT

Hospitals collect EHR data using certified electronic health record technology (CEHRT). The MAT output, which includes the human readable and XML artifacts of the clinical quality language (CQL) for the measure are contained in the eCQM specifications attached. No additional tools are used for data collection for eCQMs.

3.21 DATA SOURCE OR COLLECTION INSTRUMENT (REFERENCE)

No data collection instrument is used.

3.22 LEVEL OF ANALYSIS

Facility

3.23 CARE SETTING

Hospital: Short-Term Acute Care Facility. Excludes Long-Term Care Hospitals.

3.24 COMPOSITE PERFORMANCE MEASURE

Not Applicable.