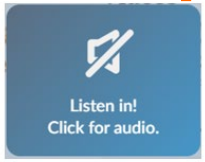
Pioneers in Quality

Expert to Expert Webinar Series

2023 Annual Updates
VTE-1, VTE-2

January 10, 2023

Webinar Audio – Information & Tips



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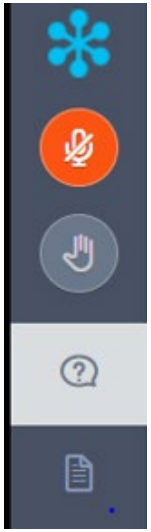

Welcome!

But first things first…

"Get Started with eCQMs"

Slides are available now!

To access the slides:

- click the icon that looks like a document
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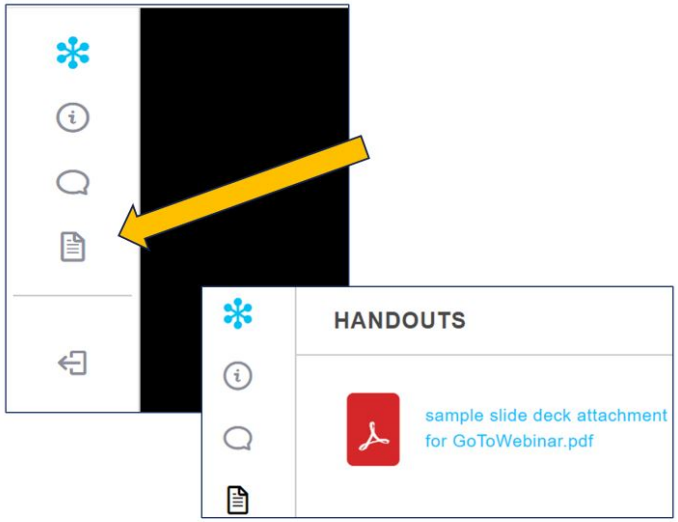
- you can print or download the slides.



Slides will also be available here within a couple weeks:
https://www.jointcommission.org/measurement/pioneers-in-quality/pioneers-in-quality-expert-to-expert-series/

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At the end of this webinar, participants should be able to:

- Navigate to the measure specifications, value sets, measure flow diagrams and technical release notes
- Apply concepts learned about the logic and intent for the VTE-1 and VTE-2 eCQMs
- Prepare to implement the VTE-1 and VTE-2 eCQMs for the 2023 eCQM reporting period
- Identify common issues and questions regarding the VTE-1 and VTE-2 eCQMs

Topics Not Covered in Today's Webinar

- Basic eCQM concepts
- Topics related to chart abstracted measures
- Process improvement efforts related to this measure
- eCQM validation

Disclosure Statement

These staff and speakers have disclosed that they do not have any conflicts of interest. For example, financial arrangements, affiliations with, or ownership of organizations that provide grants, consultancies, honoraria, travel, or other benefits that would impact the presentation of today's webinar content.

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Pioneers in Quality Expert to Expert Webinar Agenda: VTE eCQMs

- Demonstrate navigation to measure specifications, value sets, measure flow diagrams and technical release notes
- Review the measure flow/algorithm
- Review changes made to the VTE eCQMs
- FAQs
- Facilitated Audience Q&A Segment

eCQI Resource Center Website Demo

eCQI Resource Center Website https://ecqi.healthit.gov/

eCQM Resources	Short Description	Published
Implementation Checklist eCQM Annual Update	Implementation checklist	--
Guide for Reading eCQMs 8.0 (PDF)	Assists implementers and measured entities with information on how to read eCQM specifications	May 2022
Hospital Quality Reporting Table of eCQMs (PDF)	List of eCQMs available for use	May 2022
eCQM Specifications for Hospital Quality Reporting (ZIP)	eCQM technical specifications	May 2022
Measure Authoring Tool (MAT) Global Common Library (GCL) Technical Specifications and Technical Release Notes (ZIP)	MAT-CGL specifications and technical release notes	May 2022
eCQM Value Sets	Value sets used in eCQMs	May 2022
EH/CAH Pre-Rulemaking Value Sets CMS334 (ZIP)	Value sets used in CMS334v4	May 2022
eCQM Direct Reference Codes List	eCQM Direct Reference Codes used in eCQMs	May 2022
Binding Parameter Specification (BPS) (ZIP)	Value set metadata	May 2022
eCQM Logic and Implementation Guidance v6.0 (PDF)	Assists implementers and measured entities with how to use eCQMs and report issues	May 2022
Technical Release Notes (PDF)	Year over year changes to eCQM logic and terminology	May 2022
Technical Release Notes (ZIP)	Year over year changes to eCQM logic and terminology	May 2022
Standards and tool versions used for reporting period	Tools and standards versions measure developers used to create eCQMs and versions of standards and tools used for their reporting	May 2022
eCQM Flows (ZIP)	Assists implementers and measured entities with steps to take to calculate an eCQM	Aug 2022
2023 CMS QRDA I Implementation Guide for Hospital Quality Reporting (PDF)	Format for reporting eCQMs to CMS	May 2022
2023 CMS QRDA I Schematrons and Sample Files (ZIP)	Rules to validate eCQM reports with samples	May 2022
eCQM Annual Update Pre-Publication Document (PDF)	Standards and code system versions for the eCQM Annual Update	Mar 2022

VTE Measure Set

The VTE measure set consists of 2 measures:

- VTE-1 Venous Thromboembolism Prophylaxis
- VTE-2 Intensive Care Unit Venous Thromboembolism Prophylaxis

Rationale for the VTE Measure Set

- Venous thromboembolism (VTE) collectively refers to both pulmonary artery embolism (PE) and deep vein thrombosis (DVT).
- VTE begins as a blood clot in the proximal leg veins that can break free and travel into the pulmonary arteries blocking the pulmonary circulation of oxygen rich blood.
- Hospitalization is the most important risk factor for the development of VTE, particularly critical care admission (Achaibar, et al, 2015).

Rationale (continued 1)

- Sudden death is the initial symptom in approximately 25% of those with VTE, resulting in about 100,000 U.S. deaths each year and 10 billion dollars or more in associated healthcare costs (CDC, 2021).
- The Agency for Healthcare Research and Quality (AHRQ) considers VTE prevention a top priority in terms of improving hospital patient safety (Maynard, 2016).

Rationale (continued 2)

- VTE-1 and VTE-2 assess VTE prevention.
- These measures capture the proportion of patients who receive pharmacological or mechanical VTE prophylaxis or have documentation of why no VTE prophylaxis was administered.
- Patients not at risk for VTE or at low risk are included in the numerator.

Measure Changes from 2022 to 2023 - Clinical

Measure Components	2022 Reporting Year	2023 Reporting Year
Value Set	"Oral Factor Xa Inhibitor for VTE Prophylaxis or VTE Treatment" contains • Apixaban • Edoxaban • Rivaroxaban	Removed Rivaroxaban from the value set – • Apixaban • Edoxaban • ~~*Rivaroxaban*~~
Value Set	'Obstetrics'	Deleted 50 SNOMED CT codes from this value set based on review by technical experts, SMEs, and/or public feedback.

Measure Changes from 2022 to 2023 – Technical (1)

Measure Components	2022 Reporting Year	2023 Reporting Year
Value Set	• Graduated compression stockings (GCS) • Intermittent pneumatic compression devices (IPC) • Venous foot pumps (VFP)	The following 3 new value sets with SNOMED procedure codes were added - • Application of Graduated Compression Stockings (GCS) • Application of Intermittent Pneumatic Compression Devices (IPC) • Application of Venous Foot Pumps (VFP)

Measure Changes from 2022 to 2023 – Technical (2)

Measure Components	2022 Reporting Year	2023 Reporting Year
Initial Population Logic to calculate patient's age	Global.CalendarAgeInYearsAt function used to calculate patient's age	Native CQL function **AgeInYearsAt** used to calculate patient's age LOINC code 21112-8 (Birth date) is no longer required and has been removed.
Denominator Exclusions Logic and functions where Global.ToDate() is defined and used	Global."ToDate" (Value DateTime): DateTime(year from Value, month from Value, day from Value, 0, 0, 0, 0, timezoneoffset from Value)	Replaced with **TJC."TruncateTime"** (Value DateTime): DateTime(year from Value, month from Value, day from Value, 0, 0, 0, 0, timezoneoffset from Value)

Measure Changes from 2022 to 2023 – Technical (3)

Measure Components	2022 Reporting Year	2023 Reporting Year
Function	TJC."CalendarDayOfOrDayAfter"(StartValue DateTime): Interval[Global."ToDate" (StartValue), Global."ToDate" (StartValue + 2 days))	TJC."CalendarDayOfOrDayAfter"(StartValue DateTime): Interval["**TruncateTime**"(StartValue), "**TruncateTime**"(StartValue + 2 days))
Function	VTE.FromDayOfStartOfHospitalizationToDayAfterAdmission(Encounter "Encounter, Performed") Interval[Global."ToDate" (start of Global."HospitalizationWithObservation" (Encounter)), Global."ToDate" (start of Encounter.relevantPeriod + 2 days))	VTE.FromDayOfStartOfHospitalizationToDayAfterAdmission(Encounter "Encounter, Performed")Interval[**TJC."TruncateTime"** (start of Global."HospitalizationWithObservation" (Encounter)), **TJC."TruncateTime"** (start of Encounter.relevantPeriod + 2 days))

Measure Changes from 2022 to 2023 – Technical (4)

Measure Components	2022 Reporting Year	2023 Reporting Year
Denominator Exclusions and Numerator logic to compare a datetime to TJC.'CalendarDayOfOrDayAfter' and VTE.'FromDayOfStartOfHospitalizationToDayAfterFirstICU.	Not addressed	Added **"day of"** to capture the dates (without times) only from the timing components and compare at same timing precision as of Date.

Measure Changes from 2022 to 2023 – Technical (5)

Measure Components	2022 Reporting Year	2023 Reporting Year
Numerator Logic	• ["Device, Applied": "Intermittent pneumatic compression devices (IPC)" • ["Device, Applied": "Venous foot pumps (VFP)"] • ["Device, Applied": "Graduated compression stockings (GCS)"] **And** • ["Device, **Not Applied**": "Intermittent pneumatic compression devices (IPC) ….....	• **["Procedure, Performed"**: "Application of Intermittent Pneumatic Compression Devices (IPC)"] • **["Procedure, Performed":** "Application of Venous Foot Pumps (VFP)"] • **["Procedure, Performed":** "Application of Graduated Compression Stockings (GCS)"] **And** **["Procedure, Not Performed":** "Application of Intermittent Pneumatic Compression Devices (IPC)"] …….

VTE Initial Population

VTE-1	VTE-2
• Inpatient hospitalizations ending during measurement period	• Same
• Age ≥ 18 years old	• Same
• Without diagnosis of VTE or Obstetrics	• Same
• LOS ≤ 120 days	• Same

VTE Denominator

VTE-1 (Same as Initial Population)	VTE-2
• Inpatient hospitalizations ending during measurement period	• Same
• Age ≥ 18 years old	• Same
• Without dx of VTE or Obstetrics	• Same
• LOS ≤ 120 days	• Same
• NA	• **Patients directly admitted to or transferred to ICU during hospitalization**

VTE Denominator Exclusions

VTE-1	VTE-2
• LOS < 2 days	• LOS < 2 days
• **Transferred to ICU the day of or the day after hospital admission with ICU length of stay ≥ 1 day**	• NA
• **Principal diagnosis of mental disorders or stroke**	• NA
• Principal procedure of Surgical Care Improvement Project (SCIP) VTE selected surgeries	• Patients with a principal procedure of SCIP VTE selected surgeries **that end the day of or the day after ICU admission or transfer**
• Comfort measures documented anytime between the day of arrival and the day after **hospital admission**	• Comfort measures documented anytime between the day of arrival and the day after **ICU admission or transfer**
• Comfort measures documented by the day after surgery end date for surgeries that end **the day of or the day after hospital admission**	• Comfort measures documented by the day after surgery end date for surgeries that end **the day of or day after ~~hospital admission~~ ICU admission or transfer**

VTE Numerator

VTE-1	VTE-2
Patients who received VTE prophylaxis: • **between the day of arrival and the day after hospital admission** OR • the day of or the day after surgery end date (for surgeries that end the day of or the day after **hospital admission**)	Patients who received VTE prophylaxis: • **the day of or the day after ICU admission (or transfer)** OR • the day of or the day after surgery end date (for surgeries that end the day of or the day after **ICU admission or transfer)**
Patients who have documentation of a reason why no VTE prophylaxis was given: • between the day of arrival and the day after **hospital admission** OR • the day of or the day after surgery end date (for surgeries that end the day of or the day after **hospital admission)**	Patients who have documentation of a reason why no VTE prophylaxis was given: • between the day of arrival and the day after **ICU admission (for patients directly admitted as inpatients to the ICU)** OR • the day of or the day after surgery end date (for surgeries that end the day of or the day after **ICU admission or transfer)**

VTE Denominator Exceptions

VTE-1	VTE-2
• None	• **ICU LOS < 1 day**

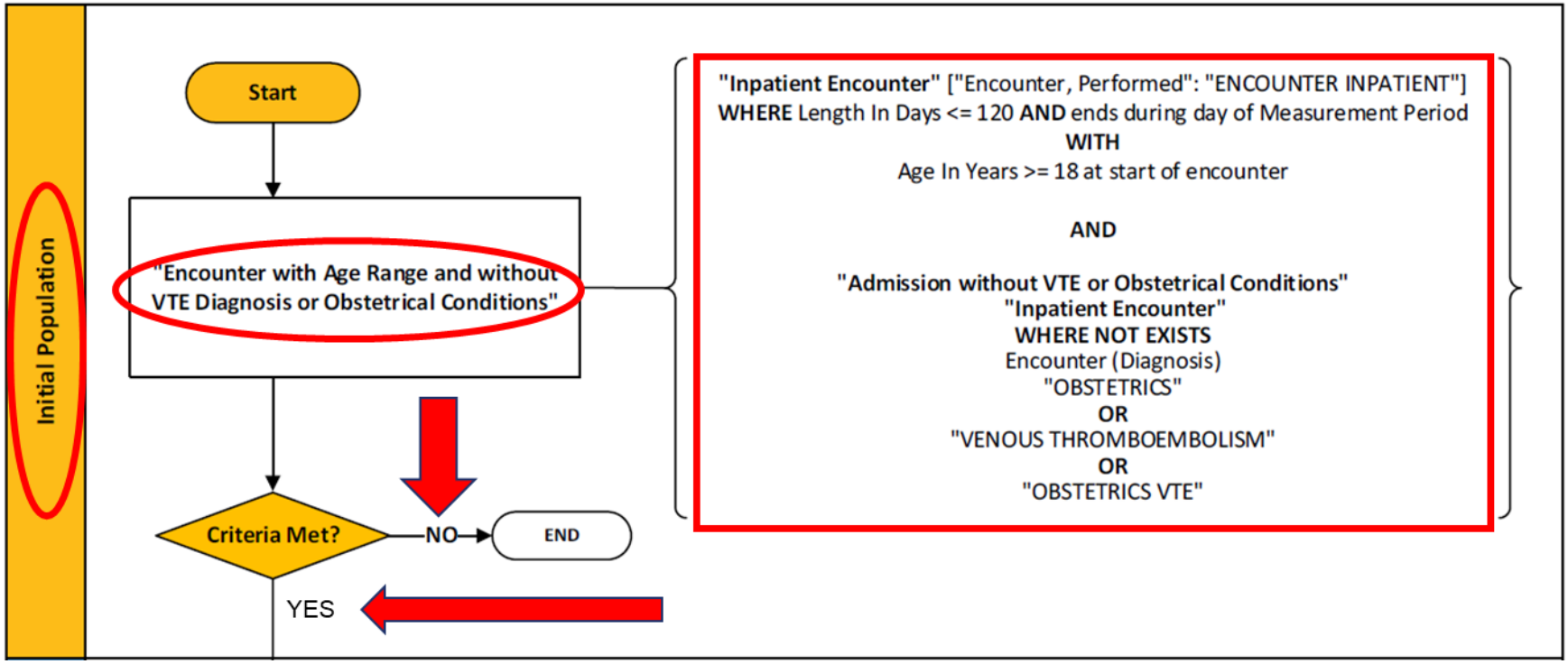
Measure Flow Diagrams

Measure Flow Diagram: VTE-1

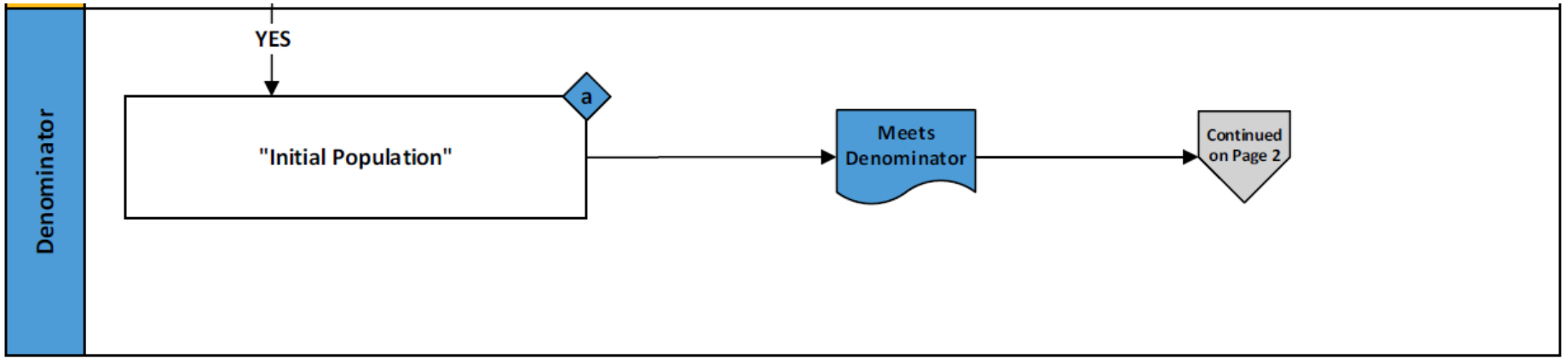
2023 eCQM Flow – **CMS108v11: Venous Thromboembolism Prophylaxis (VTE-1)***

**This flow diagram represents an overview of population criteria requirements. Please refer to the eCQM measure specification for a complete list of definitions, direct reference codes, data or timing elements included in this measure and required for submission.*

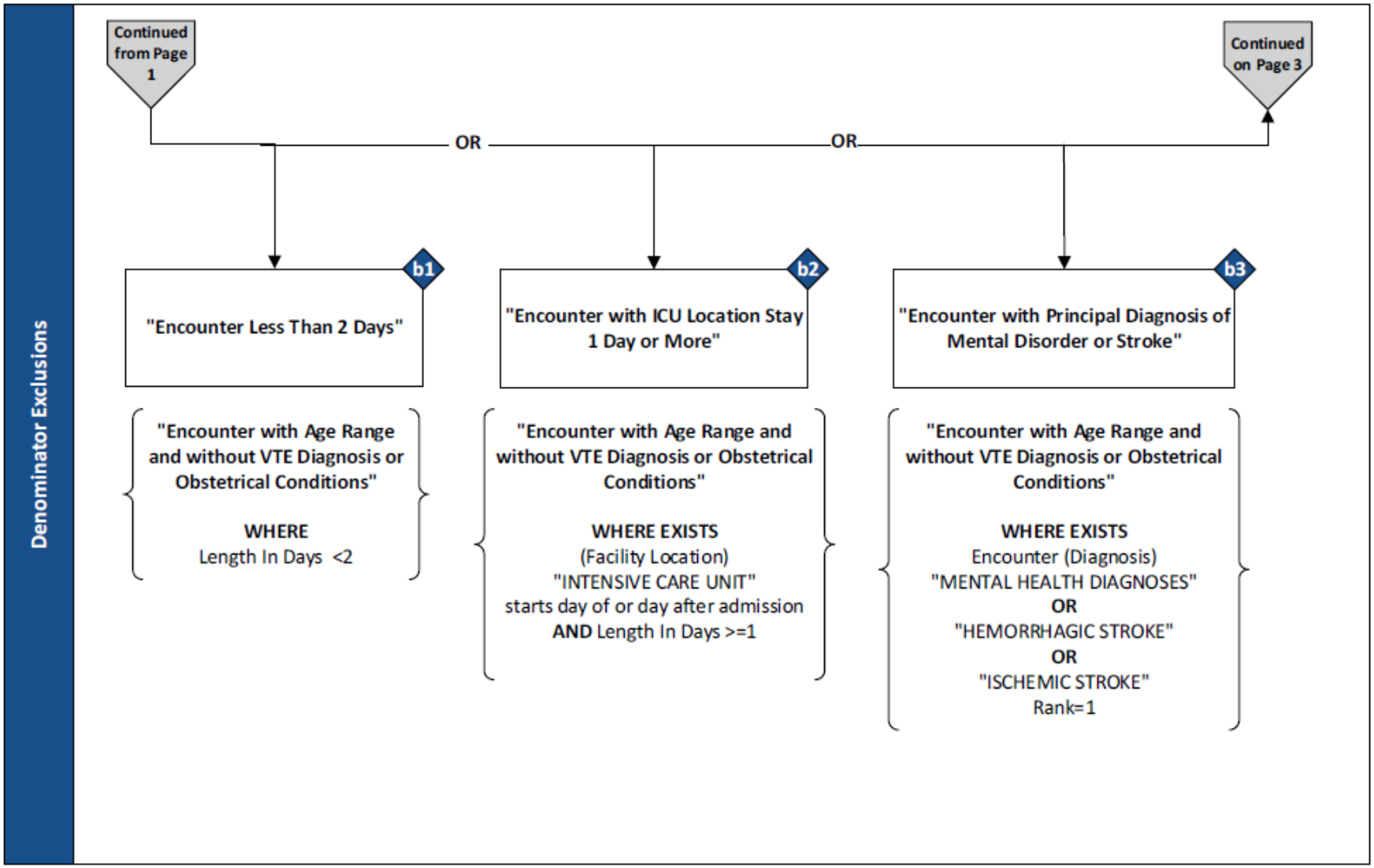
Measure Flow Diagram



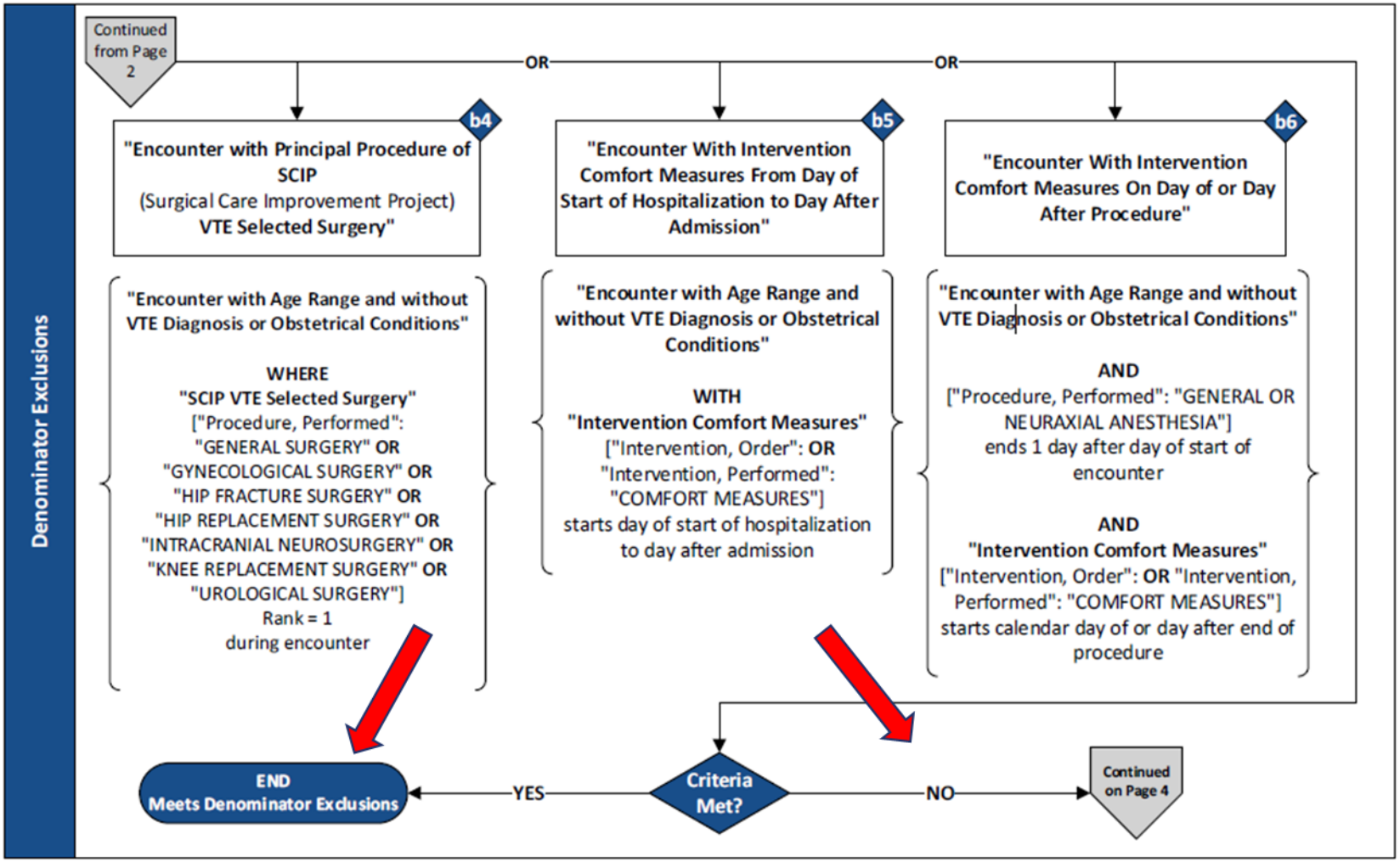
Measure Flow Diagram: VTE-1 (continued 1)



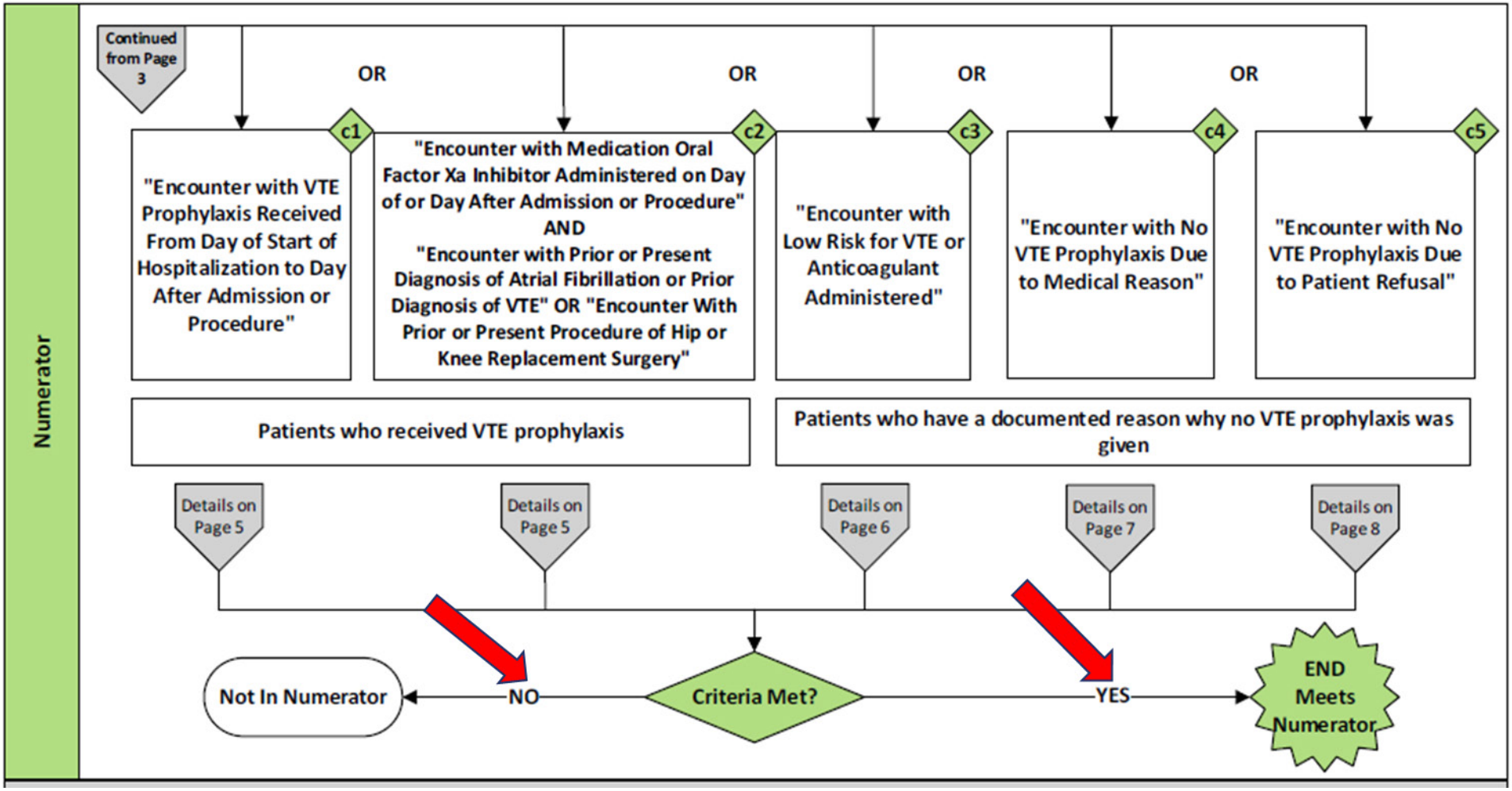
Measure Flow Diagram: VTE-1 (continued 2)



Measure Flow Diagram: VTE-1 (continued 3)



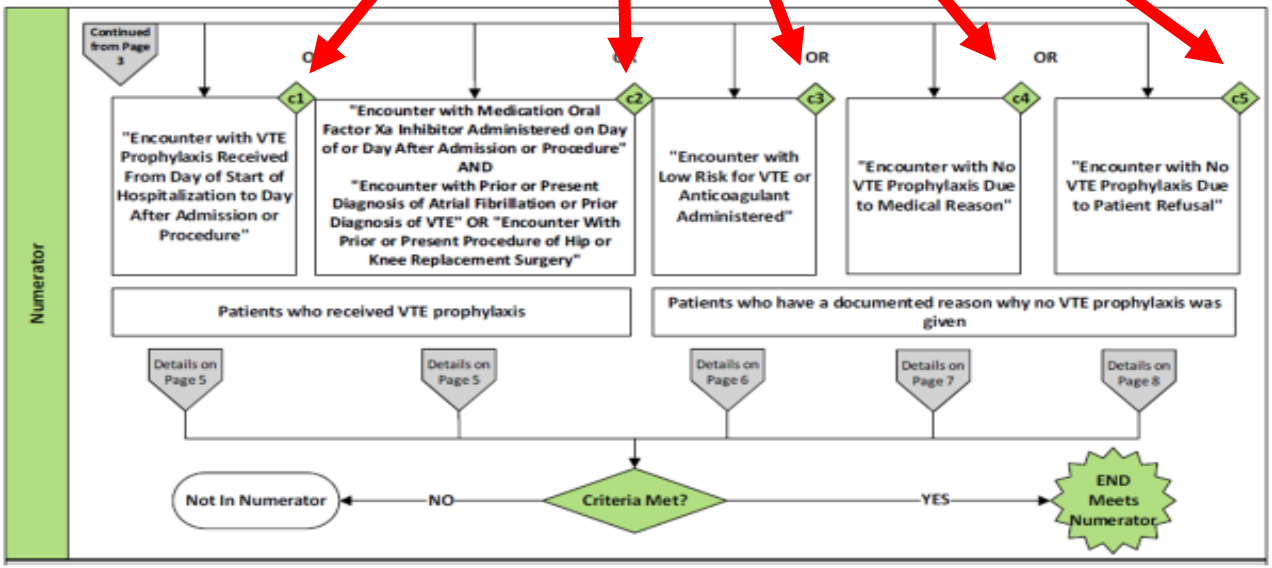
Measure Flow Diagram: VTE-1 (continued 4)



Measure Flow Diagram: VTE-1 (continued 5)

Sample Calculation

$$\text{Performance Rate} = \frac{\text{Numerator (c1 + c2 + c3 + c4 + c5 = 60)}}{\text{Denominator (a = 100) - Denominator Exclusions (b1 + b2 + b3 + b4 + b5 + b6 = 20)}} = 75\%$$



Measure Flow Diagram: VTE-1 (continued 6)

Measure Flow Narrative

The measure flow diagram on the preceding pages illustrates the steps to determine the population criteria for this measure.

Measure Description	This measure assesses the number of patients who received Venous Thromboembolism (VTE) prophylaxis or have documentation why no VTE prophylaxis was given between the day of arrival to the day after hospital admission or surgery end date for surgeries that start the day of or the day after hospital admission
Initial Population	Start by identifying the initial population criteria as inpatient hospitalizations with: • patients age 18 and older discharged from hospital inpatient acute care • without a diagnosis of venous thromboembolism (VTE) or obstetrics • a length of stay less than or equal to 120 days that ends during the measurement period
Denominator	The denominator criteria include the initial population
Denominator Exclusions	The denominator exclusions criteria identify a subset of the denominator population by excluding inpatient hospitalizations for patients with any of the following: • length of stay less than 2 days • direct admits to intensive care unit (ICU), or transferred to ICU the day of or the day after hospital admission with ICU length of stay greater than or equal to one day • a principal diagnosis of mental disorders or stroke • a principal procedure of Surgical Care Improvement Project (SCIP) VTE selected surgeries • comfort measures documented anytime between a day of arrival and the day after hospital admission • comfort measures documented by the day after surgery end date for surgeries that start the day of or the day after hospital admission

Measure Flow Diagram: VTE-1 (continued 7)

Measure Flow Narrative

The measure flow diagram on the preceding pages illustrates the steps to determine the population criteria for this measure.

Numerator	This numerator criteria identify a subset of the denominator population (that did not meet the denominator exclusions criteria) by including: **Inpatient hospitalizations for patients who received VTE prophylaxis:** • between the day of arrival and the day after hospital admission • the day of or the day after surgery end date (for surgeries that end the day of or the day after hospital admission) **OR** **Inpatient hospitalizations for patients who have documentation of a reason why not VTE prophylaxis was given:** • between the day of arrival or the day after hospital admission • the day of or the day after surgery end date (for surgeries that end the day of or the day after hospital admission)

Common Logic for VTE-1/VTE-2

Initial Population: VTE-1 and VTE-2

Initial Population: VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical Conditions"

VTE.Encounter with Age Range and without VTE Diagnosis or Obstetrical Conditions

(Global."Inpatient Encounter" InpatientEncounter
where **AgeInYearsAt(date from start of InpatientEncounter.relevantPeriod**) >= 18)
intersect "Admission Without VTE or Obstetrical Conditions"

Global.Inpatient Encounter

["Encounter, Performed": "Encounter Inpatient"] EncounterInpatient
where "LengthInDays"(EncounterInpatient.relevantPeriod)<= 120
and EncounterInpatient.relevantPeriod ends during day of "Measurement Period"

Initial Population: VTE-1 and VTE-2 (continued 1)

VTE.Admission without VTE or Obstetrical Conditions

```
Global."Inpatient Encounter" InpatientEncounter
where not ( exists
( InpatientEncounter.diagnoses EncounterDiagnoses
 where ( EncounterDiagnoses.code in "Obstetrics" or
         EncounterDiagnoses.code in "Venous
                  Thromboembolism" or
        EncounterDiagnoses.code in "Obstetrics
                  VTE")))
```

Initial Population: VTE-1 and VTE-2 (continued 2)

VTE.Encounter with Age Range and without VTE Diagnosis or Obstetrical Conditions

(Global."Inpatient Encounter" InpatientEncounter
where **AgeInYearsAt(date from start of InpatientEncounter.relevantPeriod**) >= 18)

intersect

"Admission without VTE or Obstetrical Conditions"

VTE-1 Venous Thromboembolism Prophylaxis Logic (CMS108 v11)

Denominator: VTE-1

Denominator: “Initial Population"

VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical Conditions"

Denominator Exclusions : VTE-1

"Encounter Less Than 2 Days"
union "Encounter with ICU Location Stay 1 Day or More"
union "Encounter with Principal Diagnosis of Mental Disorder or Stroke"
union "Encounter with Principal Procedure of SCIP VTE Selected Surgery"
union "Encounter with Intervention Comfort Measures From Day of Start of Hospitalization To Day After Admission"
union "Encounter with Intervention Comfort Measures on Day of or Day After Procedure"

Denominator Exclusions: VTE-1 (continued 1)

Encounter Less Than 2 Days:

VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical Conditions"
QualifyingEncounter
    where Global."LengthInDays“
    (QualifyingEncounter.relevantPeriod)< 2

Denominator Exclusions: VTE-1 (continued 2)

Encounter with ICU Location Stay 1 Day or More

```
VTE."Encounter with Age Range and without VTE Diagnosis or
Obstetrical Conditions" QualifyingEncounter
    where exists (QualifyingEncounter.facilityLocations Location
    where Location.code in "Intensive Care Unit"
        and Global."LengthInDays"(Location.locationPeriod)>= 1
        and Location.locationPeriod starts during Interval[start
            of QualifyingEncounter.relevantPeriod,
            ~~Global."ToDate"~~TJC."TruncateTime"(start of
                QualifyingEncounter.relevantPeriod + 2 days)))
```

Denominator Exclusions: VTE-1 (continued 3)

Encounter with Principal Diagnosis of Mental Disorder or Stroke

```
VTE."Encounter with Age Range and without VTE Diagnosis or
Obstetrical Conditions" QualifyingEncounter
    where exists ( QualifyingEncounter.diagnoses
                EncounterDiagnoses
     where EncounterDiagnoses.rank = 1
     and    (EncounterDiagnoses.code in "Mental Health
                    Diagnoses"
    or EncounterDiagnoses.code in "Hemorrhagic Stroke"
     or EncounterDiagnoses.code in "Ischemic Stroke"
```

Denominator Exclusions: VTE-1 (continued 4)

Encounter with Principal Procedure of SCIP VTE Selected Surgery

```
VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical
Conditions" QualifyingEncounter
    with ( "SCIP VTE Selected Surgery" Procedure
            where Procedure.rank = 1 ) SelectedSCIPProcedure
    such that Global."NormalizeInterval"
      (SelectedSCIPProcedure.relevantDatetime,
      SelectedSCIPProcedure.relevantPeriod )
            during QualifyingEncounter.relevantPeriod
```

SCIP VTE Selected Surgery

```
            ["Procedure, Performed": "General Surgery"]
              union ["Procedure, Performed": "Gynecological Surgery"]
              union ["Procedure, Performed": "Hip Fracture Surgery"]
              union ["Procedure, Performed": "Hip Replacement Surgery"]
              union ["Procedure, Performed": "Intracranial Neurosurgery"]
              union ["Procedure, Performed": "Knee Replacement Surgery"]
              union ["Procedure, Performed": "Urological Surgery"]
```

Denominator Exclusions: VTE-1 (continued 5)

Encounter with Intervention Comfort Measures From Day of Start of Hospitalization To Day After Admission

VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical Conditions" QualifyingEncounter
with "**Intervention Comfort Measures**" ComfortMeasures
such that Coalesce(start of
Global."NormalizeInterval"(ComfortMeasures.relevantDatetime, ComfortMeasures.relevantPeriod), ComfortMeasures.authorDatetime) during **day of** VTE."FromDayOfStartOfHospitalizationToDayAfterAdmission"(QualifyingEncounter)

Intervention Comfort Measures
["Intervention, Order": "Comfort Measures"]
union ["Intervention, Performed": "Comfort Measures"]

Denominator Exclusions: VTE-1 (continued 6)

Encounter with Intervention Comfort Measures From Day of Start of Hospitalization To Day After Admission

VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical Conditions" QualifyingEncounter
with "Intervention Comfort Measures" ComfortMeasures
such that Coalesce(start of
Global."NormalizeInterval"(ComfortMeasures.relevantDatetime, ComfortMeasures.relevantPeriod), ComfortMeasures.authorDatetime) during **day of VTE."FromDayOfStartOfHospitalizationToDayAfterAdmission"(** Qualifying Encounter)

VTE.FromDayOfStartOfHospitalizationToDayAfterAdmission
Interval[**TJC."TruncateTime"** (start of Global."HospitalizationWithObservation" (Encounter)), **TJC."TruncateTime"** (start of Encounter.relevantPeriod + 2 days))

Denominator Exclusions: VTE-1 (continued 7)

VTE.FromDayOfStartOfHospitalizationToDayAfterAdmission
Interval[**TJC."TruncateTime"** (start of Global."HospitalizationWithObservation" (Encounter)), **TJC."TruncateTime"** (start of Encounter.relevantPeriod + 2 days))

TJC.CalendarDayOfOrDayAfter(StartValue DateTime)
Interval["**TruncateTime**"(StartValue), "**TruncateTime**"(StartValue + 2 days))

TJC.TruncateTime (Value DateTime)
DateTime(year from Value, month from Value, day from Value, 0, 0, 0, 0, timezoneoffset from Value)

~~***Global.ToDate(Value DateTime)***~~
~~*DateTime(year from Value, month from Value, day from Value,*~~
~~*0, 0, 0, 0, timezoneoffset from Value)*~~

Denominator Exclusions: VTE-1 (continued 8)

Encounter with Intervention Comfort Measures on Day of or Day After Procedure

```
from VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical
Conditions" QualifyingEncounter,
    ["Procedure, Performed": "General or Neuraxial Anesthesia"]
      AnesthesiaProcedure,
    "Intervention Comfort Measures" ComfortMeasures
 where Global."NormalizeInterval" ( AnesthesiaProcedure.relevantDatetime,
      AnesthesiaProcedure.relevantPeriod )  ends 1
      day after day of start of QualifyingEncounter.relevantPeriod
 and Coalesce(start of
      Global."NormalizeInterval"(ComfortMeasures.relevantDatetime,
           ComfortMeasure.relevantPeriod, ComfortMeasures.authorDatetime)
           during day of TJC."CalendarDayOfOrDayAfter"(end of
            Global."NormalizeInterval" ( AnesthesiaProcedure.relevantDatetime,
            AnesthesiaProcedure.relevantPeriod ) )
return QualifyingEncounter
```

Numerator: VTE-1

#1 “Encounter with VTE Prophylaxis Received From Day of Start of Hospitalization To Day after Admission or Procedure”
#2 union ("Encounter with Medication Oral Factor Xa Inhibitor Administered on Day of or Day After Admission or Procedure"
intersect ("Encounter with Prior or Present Diagnosis of Atrial Fibrillation or **Prior Diagnosis of** VTE"
union "Encounter with Prior or Present Procedure of Hip or Knee Replacement Surgery“))
#3 union "Encounter with Low Risk for VTE or Anticoagulant Administered"
#4 union "Encounter with No VTE Prophylaxis Due to Medical Reason"
#5 union "Encounter with No VTE Prophylaxis Due to Patient Refusal"

Numerator: VTE-1 (continued 1)

Encounter with VTE Prophylaxis Received From Day of Start of Hospitalization To Day After Admission or Procedure

VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical Conditions" QualifyingEncounter
with ”**Pharmacological or Mechanical VTE Prophylaxis Received**"
    VTEProphylaxis
such that Global."NormalizeInterval"
    (VTEProphylaxis.relevantDatetime, VTEProhylaxis.relevantPeriod)
starts during **day of**
    VTE."FromDayOfStartOfHospitalizationToDayAfterAdmission“
    (QualifyingEncounter.relevantPeriod)

union
(….)

Numerator: VTE-1 (continued 2)

Encounter with VTE Prophylaxis Received From Day of Start of Hospitalization To Day After Admission or Procedure

```
…
  union (
  from VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical
  Conditions" QualifyingEncounter,
    ["Procedure, Performed": "General or Neuraxial Anesthesia"]
    AnesthesiaProcedure,
    "Pharmacological or Mechanical VTE Prophylaxis Received"
    VTEProphylaxis
    where Global."NormalizeInterval" (AnesthesiaProcedure.relevantDatetime,
    AnesthesiaProcedure.relevantPeriod) ends 1 day after day of start of
    QualifyingEncounter.relevantPeriod
   and Global."NormalizeInterval" (VTEProphylaxis.relevantDatetime,
    VTEProphylaxis.relevantPeriod) starts during day of
    TJC."CalendarDayOfOrDayAfter“(end of Global."NormalizeInterval"
    (AnesthesiaProcedure.relevantDatetime, AnesthesiaProcedure.relevantPeriod))
    return QualifyingEncounter)
```

Numerator: VTE-1 (continued 3)

Pharmacological or Mechanical VTE Prophylaxis Received
(["Medication, Administered": "Low Dose Unfractionated Heparin for VTE Prophylaxis"] VTEMedication
where VTEMedication.route in "Subcutaneous route")
union ["Medication, Administered": "Low Molecular Weight Heparin for VTE Prophylaxis"]
union ["Medication, Administered": "Injectable Factor Xa Inhibitor for VTE Prophylaxis"]
union ["Medication, Administered": "Warfarin"]
union ["Medication, Administered": "Rivaroxaban for VTE Prophylaxis"]
union **["Procedure, Performed": "Application of Intermittent Pneumatic Compression Devices (IPC)"]**
union **["Procedure, Performed": "Application of Venous Foot Pumps (VFP)"]**
union **["Procedure, Performed": "Application of Graduated Compression Stockings (GCS)"]**

Numerator: VTE-1 (continued 4)

Encounter with VTE Prophylaxis Received From Day of Start of Hospitalization To Day After Admission or Procedure

VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical Conditions" QualifyingEncounter
with "**Pharmacological or Mechanical VTE Prophylaxis Received**" VTEProphylaxis
such that Global."NormalizeInterval" (VTEProphylaxis.relevantDatetime,
VTEProphylaxis.relevantPeriod) starts during **day of**
VTE."FromDayOfStartOfHospitalizationToDayAfterAdmission"
(QualifyingEncounter.relevantPeriod)
union
(from VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical Conditions" QualifyingEncounter,
["Procedure, Performed": "General or Neuraxial Anesthesia"] AnesthesiaProcedure,
"**Pharmacological or Mechanical VTE Prophylaxis Received**" VTEProphylaxis
where Global."NormalizeInterval" (AnesthesiaProcedure.relevantDatetime,
AnesthesiaProcedure.relevantPeriod) ends 1 day after day of start of
QualifyingEncounter.relevantPeriod and Global."NormalizeInterval" (
VTEProphylaxis.relevantDatetime, VTEProphylaxis.relevantPeriod) starts during **day of**
TJC."CalendarDayOfOrDayAfter"(end of Global."NormalizeInterval" (
AnesthesiaProcedure.relevantDatetime, AnesthesiaProcedure.relevantPeriod))
return QualifyingEncounter)

Numerator: VTE-1 (continued 5)

Encounter with Medication Oral Factor Xa Inhibitor Administered on Day of or Day After Admission or Procedure

VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical Conditions" QualifyingEncounter
with ["Medication, Administered": "Oral Factor Xa Inhibitor for VTE Prophylaxis or VTE Treatment"] FactorXaMedication
such that Global."NormalizeInterval"
(FactorXaMedication.relevantDatetime, FactorXaMedication.relevantPeriod) starts during **day of** TJC."CalendarDayOfOrDayAfter“ (start of QualifyingEncounter.relevantPeriod)
union (…)

Numerator: VTE-1 (continued 6)

Encounter with Medication Oral Factor Xa Inhibitor Administered on Day of or Day After Admission or Procedure

…union (from VTE."Encounter With Age Range and Without VTE Diagnosis or Obstetrical Conditions" QualifyingEncounter,
["Procedure, Performed": "General or Neuraxial Anesthesia"] AnesthesiaProcedure,
["Medication, Administered": "Oral Factor Xa Inhibitor for VTE Prophylaxis or VTE Treatment"] FactorXaMedication
where Global."NormalizeInterval" (AnesthesiaProcedure.relevantDatetime, AnesthesiaProcedure.relevantPeriod) ends 1 day after day of start of QualifyingEncounter.relevantPeriod and Global."NormalizeInterval" (FactorXaMedication.relevantDatetime, FactorXaMedication.relevantPeriod) starts during **day of** TJC."CalendarDayOfOrDayAfter“ (end of Global."NormalizeInterval" (AnesthesiaProcedure.relevantDatetime, AnesthesiaProcedure.relevantPeriod)) return QualifyingEncounter)

Numerator: VTE-1 (continued 7)

Encounter with Prior or Present Diagnosis of Atrial Fibrillation or Prior Diagnosis of VTE

(VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical Conditions" QualifyingEncounter
with ["Diagnosis": "Atrial Fibrillation/Flutter"] AtrialFibrillation
such that AtrialFibrillation.prevalencePeriod starts on or before end of QualifyingEncounter.relevantPeriod)
union (VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical Conditions" QualifyingEncounter
where exists (QualifyingEncounter.diagnoses EncounterDiagnosis
where EncounterDiagnosis.code in "Atrial Fibrillation/Flutter"))
union (VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical Conditions" QualifyingEncounter
with ["Diagnosis": "Venous Thromboembolism"] VTEDiagnosis
such that VTEDiagnosis.prevalencePeriod starts before start of QualifyingEncounter.relevantPeriod)

Numerator: VTE-1 (continued 8)

Encounter with Prior or Present Procedure of Hip or Knee Replacement Surgery

```
VTE."Encounter with Age Range and without VTE Diagnosis or
Obstetrical Conditions" QualifyingEncounter
with ( ["Procedure, Performed": "Hip Replacement Surgery"]
    union ["Procedure, Performed": "Knee Replacement
    Surgery"] ) HipKneeProcedure
such that Global."NormalizeInterval"
    (HipKneeProcedure.relevantDatetime,
     HipKneeProcedure.relevantPeriod) starts on or before end of
    QualifyingEncounter.relevantPeriod
```

Numerator: VTE-1 (continued 9)

Encounter with Low Risk for VTE or Anticoagulant Administered

"Low Risk for VTE or Anticoagulant Administered From Day of Start of Hospitalization To Day After Admission"

union

"Low Risk for VTE or Anticoagulant Administered on Day of or Day After Procedure"

Numerator: VTE-1 (continued 10)

Low Risk for VTE or Anticoagulant Administered From Day of Start of Hospitalization To Day After Admission

VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical Conditions" QualifyingEncounter

with "Low Risk Indicator For VTE" LowRiskForVTE
such that LowRiskForVTE.LowRiskDatetime during **day of** VTE."FromDayOfStartOfHospitalizationToDayAfterAdmission" (QualifyingEncounter)

Numerator: VTE-1 (continued 11)

Low Risk Indicator For VTE

```
( ["Assessment, Performed": "Risk for venous thromboembolism"] VTERiskAssessment
    where VTERiskAssessment.result in "Low Risk"
    return {
      id: VTERiskAssessment.id,
      LowRiskDatetime: Global."EarliestOf" ( VTERiskAssessment.relevantDatetime,
VTERiskAssessment.relevantPeriod )})
  union ( ["Laboratory Test, Performed": "INR"] INRLabTest
      where INRLabTest.result > 3.0
      return {
        id: INRLabTest.id,
        LowRiskDatetime: INRLabTest.resultDatetime})
  union ( ( ( ["Medication, Administered": "Unfractionated Heparin"] UnfractionatedHeparin
        where UnfractionatedHeparin.route in "Intravenous route")
      union ["Medication, Administered": "Direct Thrombin Inhibitor"]
      union ["Medication, Administered": "Glycoprotein IIb/IIIa Inhibitors"] )
AnticoagulantMedication
      return {
        id: AnticoagulantMedication.id,
        LowRiskDatetime: start of Global."NormalizeInterval" (
AnticoagulantMedication.relevantDatetime,
         AnticoagulantMedication.relevantPeriod ) })
```

Numerator: VTE-1 (continued 12)

Low Risk for VTE or Anticoagulant Administered on Day of or Day After Procedure

```
from
  VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical
Conditions" QualifyingEncounter,
  ["Procedure, Performed": "General or Neuraxial Anesthesia"]
AnesthesiaProcedure,
  "Low Risk Indicator For VTE" LowRiskForVTE
where Global."NormalizeInterval" ( AnesthesiaProcedure.relevantDatetime,
AnesthesiaProcedure.relevantPeriod ) ends 1 day after day of start of
QualifyingEncounter.relevantPeriod
and LowRiskForVTE.LowRiskDatetime during day of
TJC."CalendarDayOfOrDayAfter"
    (end of Global."NormalizeInterval"
(AnesthesiaProcedure.relevantDatetime,AnesthesiaProcedure.relevantPeriod ) )
  return QualifyingEncounter
```

Numerator: VTE-1 (continued 13)

Encounter with No VTE Prophylaxis Due to Medical Reason
("No VTE Prophylaxis Medication Due to Medical Reason From Day of Start of Hospitalization To Day After Admission"
intersect
"No **Mechanical** VTE Prophylaxis ~~*Device*~~ Due to Medical Reason From Day of Start of Hospitalization To Day After Admission")
union
("No VTE Prophylaxis Medication Due to Medical Reason on Day of or Day After Procedure"
intersect
"No **Mechanical** VTE Prophylaxis ~~*Device*~~ Due to Medical Reason on Day of or Day After Procedure")

Numerator: VTE-1 (continued 14)

No VTE Prophylaxis Medication Due to Medical Reason From Day of Start of Hospitalization To Day After Admission

VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical Conditions" QualifyingEncounter,
with
"No VTE Prophylaxis Medication Administered or Ordered" NoVTEMedication
such that
NoVTEMedication.negationRationale in "**Medical Reason**"
and
NoVTEMedication.authorDatetime during **day of** VTE."FromDayOfStartOfHospitalizationToDayAfterAdmission“ (QualifyingEncounter)

Numerator: VTE-1 (continued 15)

No VTE Prophylaxis Medication Administered or Ordered

["Medication, Not Administered": "Low Dose Unfractionated Heparin for VTE Prophylaxis"]
union ["Medication, Not Administered": "Low Molecular Weight Heparin for VTE Prophylaxis"]
union ["Medication, Not Administered": "Injectable Factor Xa Inhibitor for VTE Prophylaxis"]
union ["Medication, Not Administered": "Warfarin"]
union ["Medication, Not Administered": " Rivaroxaban for VTE Prophylaxis "]
union ["Medication, Not Ordered": "Low Dose Unfractionated Heparin for VTE Prophylaxis"]
union ["Medication, Not Ordered": "Low Molecular Weight Heparin for VTE Prophylaxis"]
union ["Medication, Not Ordered": "Injectable Factor Xa Inhibitor for VTE Prophylaxis"]
union ["Medication, Not Ordered": "Warfarin"]
union ["Medication, Not Ordered": " Rivaroxaban for VTE Prophylaxis "]

Numerator: VTE-1 (continued 16)

No Mechanical VTE Prophylaxis Due to Medical Reason From Day of Start of Hospitalization To Day After Admission

VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical Conditions" QualifyingEncounter,
with
"**No Mechanical VTE Prophylaxis ~~*Device Applied*~~ Performed or Ordered**" NoVTEDevice
such that
NoVTEDevice.negationRationale in "Medical Reason“
And
NoVTEDevice.authorDatetime during **day of** VTE."FromDayOfStartOfHospitalizationToDayAfterAdmission“ (QualifyingEncounter)

Numerator: VTE-1 (continued 17)

No Mechanical VTE Prophylaxis ~~*Device Applied*~~ Performed or Ordered

["Procedure, Not Performed": "Application of Intermittent Pneumatic Compression Devices (IPC)"]
union ["Procedure, Not Performed": "Application of Venous Foot Pumps (VFP)"]
union ["Procedure, Not Performed": "Application of Graduated Compression Stockings (GCS)"]
union ["Device, Not Ordered": "Intermittent pneumatic compression devices (IPC)"]
union ["Device, Not Ordered": "Venous foot pumps (VFP)"]
union ["Device, Not Ordered": "Graduated compression stockings (GCS)"]

Numerator: VTE-1 (continued 18)

No VTE Prophylaxis Medication Due to Medical Reason on Day of or Day After Procedure

```
from VTE."Encounter with Age Range and without VTE Diagnosis or
Obstetrical Conditions" QualifyingEncounter,
["Procedure, Performed": "General or Neuraxial Anesthesia"]
AnesthesiaProcedure,
"No VTE Prophylaxis Medication Administered or Ordered" NoVTEMedication
where NoVTEMedication.negationRationale in "Medical Reason"
   and Global."NormalizeInterval" ( AnesthesiaProcedure.relevantDatetime,
AnesthesiaProcedure.relevantPeriod ) ends 1 day after day of start of
QualifyingEncounter.relevantPeriod and NoVTEMedication.authorDatetime
during day of TJC."CalendarDayOfOrDayAfter"(end of
Global."NormalizeInterval" ( AnesthesiaProcedure.relevantDatetime,
AnesthesiaProcedure.relevantPeriod ) )
return QualifyingEncounter
```

Numerator: VTE-1 (continued 19)

No Mechanical VTE Prophylaxis Due to Medical Reason on Day of or Day After Procedure

from "Encounter with Age Range and without VTE Diagnosis or Obstetrical Conditions" QualifyingEncounter,
["Procedure, Performed": "General or Neuraxial Anesthesia"] AnesthesiaProcedure,
"No Mechanical VTE Prophylaxis Performed or Ordered" NoVTEDevice
where NoVTEDevice.negationRationale in "Medical Reason“
and Global."NormalizeInterval" (AnesthesiaProcedure.relevantDatetime, AnesthesiaProcedure.relevantPeriod) ends 1 day after day of start of QualifyingEncounter.relevantPeriod
and NoVTEDevice.authorDatetime during **day of** TJC."CalendarDayOfOrDayAfter"(end of
    Global."NormalizeInterval" (AnesthesiaProcedure.relevantDatetime, AnesthesiaProcedure.relevantPeriod))
    return QualifyingEncounter

Numerator: VTE-1 (continued 20)

Encounter with No VTE Prophylaxis Due to Patient Refusal

"No VTE Prophylaxis Due to Patient Refusal From Day of Start of Hospitalization To Day After Admission“

union

"No VTE Prophylaxis Due to Patient Refusal on Day of or Day After Procedure"

Numerator: VTE-1 (continued 21)

No VTE Prophylaxis Due to Patient Refusal From Day of Start of Hospitalization To Day After Admission

VTE."Encounter with Age Range and Without VTE Diagnosis or Obstetrical Conditions" QualifyingEncounter
with
"No **Mechanical or Pharmacological** VTE Prophylaxis ~~*Medication or Device*~~ Due to Patient Refusal" PatientRefusal
such that
PatientRefusal.authorDatetime during **day of** VTE."FromDayOfStartOfHospitalizationToDayAfterAdmission"(QualifyingEncounter)

Numerator: VTE-1 (continued 22)

No Mechanical or Pharmacological VTE Prophylaxis ~~*Medication or Device*~~ Due to Patient Refusal

("No VTE Prophylaxis Medication Administered or Ordered"

union

"No **Mechanical** VTE Prophylaxis ~~*Device Applied*~~ **Performed** or Ordered") NoVTEProphylaxis

where

NoVTEProphylaxis.negationRationale in "Patient Refusal"

Numerator: VTE-1 (continued 23)

No VTE Prophylaxis Due to Patient Refusal On Day of or Day After Procedure

```
from
  VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical
Conditions" QualifyingEncounter,
  ["Procedure, Performed": "General or Neuraxial Anesthesia"]
AnesthesiaProcedure,
  "No Mechanical or Pharmacological VTE Prophylaxis Due to Patient
Refusal" PatientRefusal
  where Global."NormalizeInterval" ( AnesthesiaProcedure.relevantDatetime,
AnesthesiaProcedure.relevantPeriod ) ends 1 day after day of start of
QualifyingEncounter.relevantPeriod
    and PatientRefusal.authorDatetime during day of
TJC."CalendarDayOfOrDayAfter" (
    end of Global."NormalizeInterval" ( AnesthesiaProcedure.relevantDatetime,
AnesthesiaProcedure.relevantPeriod ) )
  return QualifyingEncounterWith
```

VTE-2 Intensive Care Unit Venous Thromboembolism Prophylaxis Logic (CMS190v11)

Denominator: VTE-2

"Encounter with ICU Location"

Encounter with ICU Location

VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical Conditions" QualifyingEncounter
where exists (QualifyingEncounter.facilityLocations Location
where Location.code in "Intensive Care Unit"
and Location.locationPeriod during QualifyingEncounter.relevantPeriod)

Denominator Exclusions: VTE-2

"Encounter with ICU Location And Encounter Less Than 2 Days"
union "Encounter with First ICU Stay with Principal Procedure of SCIP VTE Selected Surgery"
union "Encounter with Intervention Comfort Measures From Day of Start of Hospitalization To Day After First ICU Stay"
union "Encounter with Intervention Comfort Measures on Day of or Day After Procedure"

Denominator Exclusions: VTE-2 (continued 1)

Encounter with ICU Location And Encounter Less Than 2 Days

“Encounter with ICU Location" QualifyingEncounterICU
where Global."LengthInDays“
(QualifyingEncounterICU.relevantPeriod) < 2

Denominator Exclusions: VTE-2 (continued 2)

Encounter with First ICU Stay with Principal Procedure of SCIP VTE Selected Surgery

```
“Encounter with ICU Location" QualifyingEncounterICU
with ( "SCIP VTE Selected Surgery" Procedure
    where Procedure.rank = 1 ) SelectedSCIPProcedure
such that Global."NormalizeInterval"
    (SelectedSCIPProcedure.relevantDatetime,
    SelectedSCIPProcedure.relevantPeriod) ends during day of
    TJC."CalendarDayOfOrDayAfter“(VTE."StartOfFirstICU“
    (QualifyingEncounterICU))
```

Denominator Exclusions: VTE-2 (continued 3)

VTE.StartofFirstICU(Encounter "Encounter, Performed")

start of "FirstICULocationPeriod"(Encounter)

VTE.FirstICULocationPeriod(Encounter "Encounter, Performed")

Global."FirstInpatientIntensiveCareUnit"(Encounter).
locationPeriod

Global."FirstInpatientIntensiveCareUnit"(Encounter "Encounter, Performed")

```
First((Encounter.facilityLocations)HospitalLocation
   where HospitalLocation.code in "Intensive Care Unit"
   and HospitalLocation.locationPeriod during Encounter.relevantPeriod
   sort by start of locationPeriod))
```

Denominator Exclusions: VTE-2 (continued 4)

Encounter with Intervention Comfort Measures From Day Of Start of Hospitalization To Day After First ICU Stay

"Encounter with ICU Location" QualifyingEncounterICU with
    "Intervention Comfort Measures" ComfortMeasures
such that Coalesce(start of Global."NormalizeInterval"
    (ComfortMeasures.relevantDatetime, ComfortMeasures.relevantPeriod),
    ComfortMeasures.authorDatetime)
during **day of**
    VTE."FromDayOfStartOfHospitalizationToDayAfterFirstICU"
    (QualifyingEncounterICU)

VTE.FromDayOfStartOfHospitalizationToDayAfterFirstICU (Encounter "Encounter, Performed")
Interval[**TJC."TruncateTime"** (start of Global."HospitalizationWithObservation"(Encounter)), **TJC."TruncateTime"** (StartOfFirstICU(Encounter)+ 2 days))

Denominator Exclusions: VTE-2 (continued 5)

Encounter with Intervention Comfort Measures on Day of or Day After Procedure

```
from "Encounter with ICU Location" QualifyingEncounterICU,
    ["Procedure, Performed": "General or Neuraxial Anesthesia"]
    AnesthesiaProcedure,
    "Intervention Comfort Measures" ComfortMeasures
where Global."NormalizeInterval" ( AnesthesiaProcedure.relevantDatetime,
    AnesthesiaProcedure.relevantPeriod ) ends 1 day after day of
    VTE.”StartOfFirstICU”(QualifyingEncounterICU).locationPeriod and
Coalesce(start of  Global."NormalizeInterval"
    (ComfortMeasures.relevantDatetime,
    ComfortMeasures.relevantPeriod),  ComfortMeasures.authorDatetime)
    during day of TJC."CalendarDayOfOrDayAfter"( end of
    Global."NormalizeInterval" ( AnesthesiaProcedure.relevantDatetime,
    AnesthesiaProcedure.relevantPeriod ) )
return QualifyingEncounterICU
```

VTE-1/VTE-2 Numerator

VTE-1	VTE-2
Patients who received VTE prophylaxis: • **between the day of arrival and the day after hospital admission** OR • the day of or the day after surgery end date (for surgeries that end the day of or the day after **hospital admission**)	Patients who received VTE prophylaxis: • **the day of or the day after ICU admission (or transfer)** OR • the day of or the day after surgery end date (for surgeries that end the day of or the day after **ICU admission or transfer)**
Patients who have documentation of a reason why no VTE prophylaxis was given: • between the day of arrival and the day after **hospital admission** OR • the day of or the day after surgery end date (for surgeries that end the day of or the day after **hospital admission)**	Patients who have documentation of a reason why no VTE prophylaxis was given: • between the day of arrival and the day after **ICU admission (for patients directly admitted as inpatients to the ICU)** OR • the day of or the day after surgery end date (for surgeries that end the day of or the day after **ICU admission or transfer)**

Denominator Exceptions : VTE-2

Encounter with First ICU Location Stay less than 1 day:

Encounter with First ICU Location Stay less than 1 day

Encounter With ICU Location" QualifyingEncounterICU
where Global."LengthInDays"
(VTE."FirstICULocationPeriod"(QualifyingEncounterICU))< 1

Frequently Asked Questions

Frequently Asked Questions

Question: Does a prior history of DVT and/or Pulmonary Embolism exclude the patient from this population of VTE1 and VTE2?

Answer: There is no exclusion for patients with a history of DVT or PE. In fact, past history of DVT or PE increases the risk for developing VTE during the hospitalization and even more reason to make sure that VTE prophylaxis is administered timely.

Frequently Asked Questions

Question: Why is Apixaban NOT listed in the value set as a medication for VTE prophylaxis?

Answer: At this time, there is no approved indication to use Apixaban for VTE prophylaxis with the exception of hip or knee replacement surgery. If the FDA-approved indications for apixaban should change in the future to include all hospitalized medical and surgical patients, then the measure specifications will be updated.

Additional Resources

eCQI Resource Center – EH Measures:
https://ecqi.healthit.gov/eligible-hospital/critical-access-hospital-ecqms

Teach Me Clinical Quality Language (CQL) Video Series
https://ecqi.healthit.gov/cql?qt-tabs_cql=2

- Coalesce
- Normalize Interval
- Time Zone Considerations
- Latest, LatestOf, Earliest, EarliestOf, HasStart, HasEnd

Pioneers In Quality
https://www.jointcommission.org/measurement/pioneers-in-quality/

Expert to Expert
https://www.jointcommission.org/measurement/quality-measurement-webinars-and-videos/expert-to-expert-webinars/

ONC Issue Tracking System
https://oncprojectracking.healthit.gov/

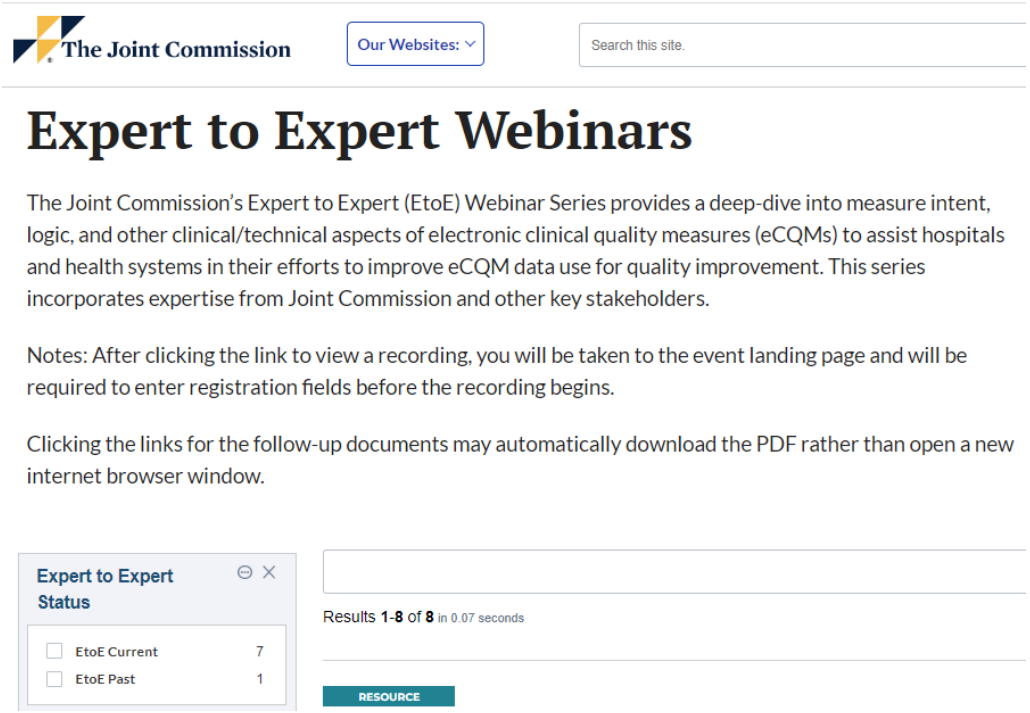
Live Q&A Segment

- Please submit questions via the question pane
- Click the Question mark icon in the audience toolbar
- A panel will open for you to type and submit your question
- Include slide reference number when possible
- All questions not answered verbally during the live event will be addressed in a written follow-up Q&A document
- The follow-up document will be posted to the Joint Commission website several weeks after the live event

Webinar recording

All Expert to Expert webinar recording links, slides, transcripts, and Q&A documents can be accessed within several weeks of the live event on the Joint Commission's webpage via this link:

https://www.jointcommission.org/measurement/quality-measurement-webinars-and-videos/expert-to-expert-webinars/



Expert to Expert Annual Update Webinars

- 2023 eCQM Annual Update Webinar series began in August with Joint Commission's PC-01 and PC-06 eCQMs and will continue until Jan 2023. The series incorporates expertise from The Joint Commission, Centers for Medicare & Medicaid Services, Mathematica, and other measure stewards to address the 2023 eCQM Annual Updates for: STK, VTE, PC, ED, Safe Opioid Use, and Hyper- and Hypo-Glycemia measures.

- Information will be available at this link as each webinar is offered: **https://www.jointcommission.org/measurement/pioneers-in-quality/pioneers-in-quality-expert-to-expert-series/**

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VTE-2 Numerator Detail

Numerator: VTE-2

#1 "Encounter with VTE Prophylaxis Received on Day of or Day After First ICU Stay or Procedure"
#2 union ("Encounter with Medication Oral Factor Xa Inhibitor Administered on Day of or Day After First ICU Stay or Procedure"
intersect ("Encounter with Prior or Present Diagnosis of Atrial Fibrillation or **Prior Diagnosis of** VTE"
union "Encounter with Prior or Present Procedure of Hip or Knee Replacement Surgery"))
#3 union "Encounter with Low Risk for VTE or Anticoagulant Administered“
#4 union "Encounter with No VTE Prophylaxis Due to Medical Reason“
#5 union "Encounter with No VTE Prophylaxis Due to Patient Refusal"

Numerator: VTE-2 (continued 1)

Encounter with VTE Prophylaxis Received on Day of or Day After First ICU Stay or Procedure

("Encounter With ICU Location" QualifyingEncounterICU
with
    "**Pharmacological or Mechanical VTE Prophylaxis Received**" VTEProphylaxis
such that Global."NormalizeInterval"
    (VTEProphylaxis.relevantDatetime,
    VTEProphylaxis.relevantPeriod)
starts during **day of** TJC."CalendarDayOfOrDayAfter“
    (VTE."StartOfFirstICU"(QualifyingEncounterICU)))

union (….)

Numerator: VTE-2 (continued 2)

Encounter with VTE Prophylaxis Received on Day of or Day After First ICU Stay or Procedure:

…union

```
( from "Encounter with ICU Location" QualifyingEncounterICU,
        ["Procedure, Performed": "General or Neuraxial Anesthesia"]
                AnesthesiaProcedure,
        "Pharmacological or Mechanical VTE Prophylaxis Received"
                VTEProphylaxis
where Global."NormalizeInterval" ( AnesthesiaProcedure.relevantDatetime,
          AnesthesiaProcedure.relevantPeriod )  ends 1 day after day of
          VTE."StartOfFirstICU"(QualifyingEncounterICU)  and
          Global."NormalizeInterval" ( VTEProphylaxis.relevantDatetime,
          VTEProphylaxis.relevantPeriod )  starts during day of
          TJC."CalendarDayOfOrDayAfter"( end of Global."NormalizeInterval"
          (AnesthesiaProcedure.relevantDatetime,AnesthesiaProcedure.relevantPeriod))
return QualifyingEncounterICU)
```

Numerator: VTE-2 (continued 3)

Pharmacological or Mechanical VTE Prophylaxis Received

(["Medication, Administered": "Low Dose Unfractionated Heparin for VTE Prophylaxis"] VTEMedication where VTEMedication.route in "Subcutaneous route")
union ["Medication, Administered": "Low Molecular Weight Heparin for VTE Prophylaxis"]
union ["Medication, Administered": "Injectable Factor Xa Inhibitor for VTE Prophylaxis"]
union ["Medication, Administered": "Warfarin"]
union ["Medication, Administered": "Rivaroxaban for VTE Prophylaxis"]
union **["Procedure, Performed": "Application of Intermittent Pneumatic Compression Devices (IPC)"]**
union **["Procedure, Performed": "Application of Venous Foot Pumps (VFP)"]**
union **["Procedure, Performed": "Application of Graduated Compression Stockings (GCS)"]**

Numerator: VTE-2 (continued 4)

Encounter with Medication Oral Factor Xa Inhibitor Administered on Day of or Day After First ICU Stay or Procedure

```
( "Encounter With ICU Location" QualifyingEncounterICU
with
["Medication, Administered": "Oral Factor Xa Inhibitor for VTE
Prophylaxis or VTE Treatment"] FactorXaMedication
such that
Global."NormalizeInterval" (FactorXaMedication.relevantDatetime,
    FactorXaMedication.relevantPeriod) starts day of
    TJC."CalendarDayOfOrDayAfter“
    (VTE."StartOfFirstICU"(QualifyingEncounterICU)))
union
(….)
```

Numerator: VTE-2 (continued 5)

Encounter with Medication Oral Factor Xa Inhibitor Administered on Day of or Day After First ICU Stay or Procedure

```
…union (
from "Encounter with ICU Location" QualifyingEncounterICU,
      ["Procedure, Performed": "General or Neuraxial Anesthesia"]
            AnesthesiaProcedure,
      ["Medication, Administered": "Oral Factor Xa Inhibitor for VTE Prophylaxis or VTE
            Treatment"] FactorXaMedication
where Global."NormalizeInterval" ( AnesthesiaProcedure.relevantDatetime,
      AnesthesiaProcedure.relevantPeriod ) ends 1 day after day of
      VTE."StartOfFirstICU"( QualifyingEncounterICU) and Global."NormalizeInterval" (
      FactorXaMedication.relevantDatetime, FactorXaMedication.relevantPeriod ) starts
      during day of TJC."CalendarDayOfOrDayAfter"(end of Global."NormalizeInterval"
      (AnesthesiaProcedure.relevantDatetime, AnesthesiaProcedure.relevantPeriod ) )
return QualifyingEncounterICU)
```

Numerator: VTE-2 (continued 6)

Encounter with Prior or Present Diagnosis of Atrial Fibrillation or Prior Diagnosis of VTE

```
( "Encounter with ICU Location" QualifyingEncounterICU with[
      ["Diagnosis": "Atrial Fibrillation/Flutter"] AtrialFibrillation
      such that AtrialFibrillation.prevalencePeriod starts on or before end
      of QualifyingEncounterICU.relevantPeriod)
union
( "Encounter with ICU Location" QualifyingEncounterICU
      where exists ( QualifyingEncounterICU.diagnoses
      EncounterDiagnosis where EncounterDiagnosis in "Atrial  Fibrillation
      /Flutter"))
union
( "Encounter with ICU Location" QualifyingEncounterICU
       with ["Diagnosis": "Venous Thromboembolism"] VTEDiagnosis
       such that VTEDiagnosis.prevalencePeriod starts before start
of QualifyingEncounterICU.relevantPeriod)
```

Numerator: VTE-2 (continued 7)

Encounter with Prior or Present Procedure of Hip or Knee Replacement Surgery

```
Encounter with ICU Location" QualifyingEncounterICU
with ( ["Procedure, Performed": "Hip Replacement
    Surgery"]
union
     ["Procedure, Performed": "Knee Replacement
    Surgery"] ) HipKneeProcedure
such that
    Global."NormalizeInterval"
    (HipKneeProcedure.relevantDatetime,
    HipKneeProcedure.relevantPeriod ) starts on or before
    end of QualifyingEncounterICU.relevantPeriod
```

Numerator: VTE-2 (continued 8)

Encounter with Low Risk for VTE or Anticoagulant Administered

“Low Risk for VTE or Anticoagulant Administered From Day of Start of Hospitalization To Day After First ICU Stay“

Union

"Low Risk for VTE or Anticoagulant Administered on Day of or Day After Procedure"

Numerator: VTE-2 (continued 9)

Low Risk for VTE or Anticoagulant Administered From Day of Start of Hospitalization To Day After First ICU Stay

Encounter with ICU Location" QualifyingEncounterICU
with **"Low Risk Indicator For VTE"** LowRiskForVTE
such that LowRiskForVTE.LowRiskDatetime during **day of**
VTE."FromDayOfStartOfHospitalizationToDayAfterFirstICU
"(QualifyingEncounterICU)

VTE.FromDayOfStartOfHospitalizationToDayAfterFirstICU (Encounter "Encounter, Performed"):
Interval[**TJC."TruncateTime"** (start of Global."HospitalizationWithObservation"(Encounter)), **TJC."TruncateTime"** (StartOfFirstICU(Encounter)+ 2 days))

Numerator: VTE-2 (continued 10)

Low Risk for VTE or Anticoagulant Administered on Day of or Day After Procedure

```
from "Encounter with ICU Location" QualifyingEncounterICU,
        ["Procedure, Performed": "General or Neuraxial Anesthesia"]
      AnesthesiaProcedure,
       "Low Risk Indicator For VTE" LowRiskForVTE
where Global."NormalizeInterval"(AnesthesiaProcedure.relevantDatetime,
      AnesthesiaProcedure.relevantPeriod) ends 1 day after day of
      VTE."StartOfFirstICU“ (QualifyingEncounterICU)
and LowRiskForVTE.LowRiskDatetime during day of
      TJC."CalendarDayOfOrDayAfter" (end of Global."NormalizeInterval"
      (AnesthesiaProcedure.relevantDatetime,
      AnesthesiaProcedure.relevantPeriod ))
return QualifyingEncounterICU
```

Numerator: VTE-2 (continued 11)

Encounter with No VTE Prophylaxis Due to Medical Reason

("No VTE Prophylaxis Medication Due to Medical Reason From Day of Start of Hospitalization To Day After First ICU Stay" **intersect** "**No Mechanical VTE Prophylaxis** Due to Medical Reason From Day Of Start of Hospitalization To Day After First ICU Stay")

union

("No VTE Prophylaxis Medication Due to Medical Reason on Day of or Day After Procedure" **intersect** " **No Mechanical VTE Prophylaxis** Due to Medical Reason on Day of or Day After Procedure")

Numerator: VTE-2 (continued 12)

No Mechanical VTE Prophylaxis Due to Medical Reason on Day of or Day After Procedure

```
from "Encounter with ICU Location" QualifyingEncounterICU,
      ["Procedure, Performed": "General or Neuraxial Anesthesia"]
      AnesthesiaProcedure,
       "No Mechanical VTE Prophylaxis Performed or Ordered"
      NoVTEDevice
where NoVTEDevice.negationRationale in "Medical Reason"
      and Global."NormalizeInterval" ( AnesthesiaProcedure.relevantDatetime,
      AnesthesiaProcedure.relevantPeriod ) ends 1 day after day of
      VTE."StartOfFirstICU" ( QualifyingEncounterICU )
and NoVTEDevice.authorDatetime during day of
      TJC."CalendarDayOfOrDayAfter" (end of Global."NormalizeInterval"
      (AnesthesiaProcedure.relevantDatetime,
      AnesthesiaProcedure.relevantPeriod ) )
  return QualifyingEncounterICU
```

Numerator: VTE-2 (continued 13)

Encounter with No VTE Prophylaxis Due to Patient Refusal

“No VTE Prophylaxis Due to Patient Refusal From Day of Start of Hospitalization To Day After First ICU Stay“

union

"No VTE Prophylaxis Due to Patient Refusal on **Day of or Day After Procedure**"

Transcript
Joint Commission Pioneers in Quality Expert to Expert Webinar Series 2023 Annual Updates VTE-1, VTE-2

Broadcast date: January 10, 2023

00:06
Welcome, everyone and thank you for joining us today for our Expert to Expert Series 2023 Annual Update webinar for VTE eCQMs.

00:22
Before we start, just a few comments about today's webinar platform. Audio is by Voice Over Internet Protocol only. Click the button that reads, "Listen in! Click for audio" Then use your computer speakers or headphones to listen. There are no dial in lines. Participants are connected in listen-only mode. Feedback or dropped audio are common for live streaming events. Refresh your screen or rejoin the event if this occurs. We will not be recognizing the Raise a Hand or Chat features. To ask a question, click on the Question Mark icon in the audience toolbar. A panel will open for you to type your question and submit.

01:04
We would like to welcome you to our webinar, but before we get started, we do want to explain that this webinar is fairly technical in nature and requires a baseline understanding of eCQMs. Participant feedback from previous webinars, indicated that the content may have been too technical for individuals new to eCQMs. If you are new to eCQMs, this content might be too technically advanced for your comprehension. We recommend that those new to eCQMS visit the eCQI Resource Center at the hyperlink listed on this slide. You will find a collection of resources to help you get started with eCQMs.

01:45
The slides are available now and can be found within the viewer toolbar. To access the slides, click the icon that looks like a document, select the file name, and the document will open in a new window. You can print or download and save the slides. Slides will also be available several weeks after the session at the link denoted on this slide.

02:08
CE Credit is offered for this webinar. This webinar is approved for one Continuing Education Credit for the entities listed on this slide, the Accreditation Council for Continuing Medical Education, American Nurses Credentialing Center, American College of Healthcare Executives, California Board of Registered Nursing and the International Association for Continuing Education and Training.

02:34
To claim CE Credit for this webinar, you must have individually registered for the webinar, participate for the entire live broadcast, and complete a post program evaluation and attestation. Tomorrow, you will receive an automated e-mail with the survey link. When you complete the online evaluation survey, after you click submit, you will be redirected to a URL from which you can print or download and save a PDF CE Certificate. An automated e-mail will also be sent from the

survey platform after you complete the survey that includes the link to access the PDF certificate. For more information on The Joint Commission's Continuing Education policies, visit the link at the bottom of this slide.

03:20
The learning objectives for this session are: Navigate to the measure specifications, Value Sets, measure flow diagrams, and technical release notes. Apply concepts learned about the logic and intent for the VTE eCQM, prepare to implement the VTE eCQMs for the 2023 eCQM reporting period and identify common issues and questions regarding the VTE eCQMs.

03:49
This webinar does not cover these topics: basic eCQM concepts, topics related to chart abstracted measures, process improvement efforts related to this measure and eCQM validation.

04:04
These staff and speakers have disclosed that they do not have any conflicts of interest, for example, financial arrangements, affiliations with or ownership of organizations that provide grants, consultancies, honoraria, travel or other benefits that would impact the presentation of today's webinar content.

Susan Funk, Marilyn Parenzan, Karen Kolbusz and Susan Yendro.

04:31
The agenda for today's discussion follows. Demonstrate navigation to measure specifications, Value Sets, measure flow diagrams, and technical release notes. Review the Measure Flow and algorithm. Review changes made to the VTE eCQMS, Frequently Asked Questions and then the live facilitated audience Q&A segment.

04:55
We will now share a demo that illustrates navigation to the eCQI Resource Center. To show the measure specifications, Value Sets, and Measure Flow diagrams and technical release notes.

05:18
Before we dive into our measures, we would like to refer you to the eCQI Resource Center website where you can find the measure specifications, Measure Flow diagrams, Value Sets and technical release notes for all measures in the CMS program. Click on the link, indicated in the upper right hand corner and you will be taken to the eCQI Resource Center landing page. Hover over the eCQMs item on the main menu and click on the eligible hospitals critical access hospitals eCQMs.

05:57
Select reporting period 2023, and you will see multiple resources listed. We will focus on the four items that were highlighted in red on the previous slide, starting with the eCQM specifications for hospital quality reporting. So double click on the entry. And open up the zip file. You will see additional zip files listed for each of the measures included in the CMS program. Double click on the measure you are interested in viewing. I will choose CMS108, which is VTE-1 for VTE Prophylaxis. Now you see all the files in the measure package. I will not go into detail on all of these files, but if you want to know more go to the get started with eCQM site on the eCQI Resource Center. We will take a quick look at the HTML document which is also referred to as the

human readable file by double clicking on the file name. The HTML file opens. This is where you will find all details related to the measure.

07:08
The top portion of the document highlighted in gray is referred to as the metadata or header information. This is where you will find the measure developer, measure, steward, a description of the measure, and all sorts of information related to the measure. If you scroll down you will find the specific definitions, for all of the population. So you see here the Initial Population, the Denominator, Denominator Exclusions, and Numerator. If you continue to scroll down you will get to the Population criteria logic which is listed here. And then continuing down you will see the definitions used in the logic. Continuing to scroll down, you will see the functions used by the logic and all of the terminology, which is also known as the Value Set.

08:05
Finally, you will see the QDM Data Elements that are used by the measure and the Supplemental Data Elements. If this is a Risk Adjusted Measure, the Risk Adjustment Variables would be listed there. So this is your source of truth for all the measure details. I went through this very quickly but wanted you to be aware of how to locate this document. And you have a basic understanding of its contents.

08:30
So if we go back to the eCQI Resource Center, we can download the Value Sets by clicking on the eCQM Value Sets tab. You will see Value Sets listed as far back as 2013. Please notice that you must be signed-in to the Value Set Authority Center to access the Value Sets. I'm already signed-in so I do not need to sign in, but you would be asked to sign in up here in the upper right-hand corner.

09:02
Let's open the most recent reporting year, 2023, by a single click on the May 2022 release. You will see all of the available downloads. I'm going to choose the first option. I'm going to choose this column here sorted by CMS ID and I'm going to choose the Excel format. You will see your zip file down in the lower left-hand corner. Go ahead and open up that zip file and double click on the file contained in that zip file. Okay, keeping with CMS108 VTE-1 click on the CMS108 tab. And you will see all of the information pertaining to all Value Sets for this measure, you'll see the ID that I just chose. If it's NQF endorsed, you will see that here you will see the Value Set name, the Value Set OID. What category of the QDM is used? The Definition Version, the Expansion Version dates and then you'll see the metadata related to the Value Set. So the Clinical Focus, the Data Elements Scope, the Inclusion Criteria and the Exclusion Criteria. Then you get into the actual codes contained in the Value Set. So the code is listed here with the description and whatever code system is being referenced for this particular code.

10:42,
Okay, so now let's take a look at the technical release notes. You can either open a PDF file containing TRNs for all measures, or a zip file containing TRNs in separate Excel files. I will choose the second option. And I will open that zip file. And I will select CMS108.

11:09
Here you'll find a nice concise list of all changes to the measures for the 2023 reporting year. Participant feedback from previous webinars as for concise list of changes to the measures, so we hope this meets your needs in addition to the information we will cover in this webinar.

11:29
Notice the first column, contains the technical release note. The second column contains the type of the TRNs. Does it refer to of the header or the logic or a Value Set? And the third column gets a little bit more specific and tells you this specific section of the measure that is affected by the change. The last column is just indicates the source of the change, whether it was an annual update, routine change or a change initiated by the measure lead.

12:08
Okay, so our last link is to look at the Measure Flow Diagrams. So we click on the link here. And we open up the zip file. The Measure Flows are in a PDF format for each measure. So choose the file you were interested in viewing. I'm going to choose 108 again and here you see the CMS eCQM flow for CMS108.

12:35
Please note that the eCQM flows are designed to assist in interpretation of the eCQM logic and calculation methodology for performance rates. The eCQM flows provide an overview of the of each of the Population criteria components and associated data elements that lead to the Inclusion or Exclusion into the measure. These flows are intended to be used as an additional resource when implementing eCQMs and should not be used in place of the eCQM specification. You see there is the CMS number and version number of the measure. The diagrams include a horizontal row for every Population applicable to the measure. So this measure has an Initial Population, Denominator, Denominator Exclusions. And the Numerator.

13:38
Going back up to the top. You will see an algorithm guiding you through each Population. Standard flow chart symbols are used. For example, a diamond is used to indicate a question or decision, and input and output symbols are used for denoting inputs and outputs. So after the flow diagram you will find a sample calculation, for the measure, scroll down there. Here we go. Here's the sample calculation how you take the Numerator and you divide it by the Denominator minus the Denominator Exclusions. And after the flow diagram for VTE-1, we have additional details related to the Numerator. Since the Numerator is so complex, for this measure. There's actually four additional pages for the Numerator.

14:20
And after those four pages you will see the Measure Flow Narrative. So for each Population you will see a narrative description of the Population. Stay tuned for more details on the Measure Flows later in the presentation. Now I will return the presentation over to Karen, who will introduce the VTE measures.

15:08
Thank you, Marilyn. The VTE measure set consists of two measures. VTE-1 Venous Thromboembolism Prophylaxis assesses the number of patients who received Venous Thromboembolism Prophylaxis or have documentation why no VTE Prophylaxis was given between

the day of arrival to the day after hospital admission or surgery end date for surgeries that start the day of or the day after, hospital admission. VTE-2 Intensive Care Unit Venous Thromboembolism Prophylaxis, assesses the number of patients who received VTE Prophylaxis, or have documentation why no VTE Prophylaxis was given the day of or the day after the Initial admission or transfer to the intensive care unit, or surgery end date for surgeries that start the day of or the day after ICU admission or transfer.

16:38
Before we get into technical details, we want to briefly review the clinical rationale for the VTE measures. VTE is an umbrella term that refers to blood clots that can develop in the pulmonary artery or a deep proximal leg vein. Most VTE are related to a recent hospitalization or surgery. Immobilization following these events increases the risk of developing a DVT or PE. ICU admission is a particularly significant risk factor, not only due to immobilization, but other comorbidities found in this patient population.

17:21
VTE is a leading cause of preventable hospital death in the United States and a top patient safety priority. Sudden death is often the first symptom of PE, even before the diagnosis is suspected. It is estimated that up to 70% of hospital acquired VTE are preventable through prophylactic interventions such as the use of anticoagulants or mechanical compression devices. Yet many hospitalized patients do not receive these measures.

17:53
Clinical practice guidelines from the American College of Chest Physicians, American Society of Hematology, and other professional groups recommend VTE Prophylaxis for most hospitalized patients. The intent of the VTE-1 and VTE-2 measures is VTE prevention through the promotion of anticoagulant medications or mechanical Prophylaxis, such as sequential compression devices or compression stockings administered soon after the patient's admission to the hospital. Patients who receive pharmacological or mechanical VTE Prophylaxis are included in the Numerator Population. Also included in the Numerator are patients with a reason why VTE Prophylaxis was not given and patients not at risk or low risk of developing VTE during the hospitalization.

18:49
I will now highlight some of the clinical changes to the measures this year. Please note that throughout this presentation, we use red font to highlight changes from last year. Rationale and references were updated to reflect the most recent literature.

19:05
In 2022 reporting year, Rivaroxaban was added to the VTE Prophylaxis medication list while it was still included in the Value Set of Oral Factor 10A inhibitor for VTE- Prophylaxis or VTE treatment. In 2023 reporting year, we removed Rivaroxaban from the Value Set of Oral Factor 10A inhibitor for VTE Prophylaxis or treatment to reduce redundancy as Rivaroxaban is included in the VTE Prophylaxis Value Set. We also deleted 50 SNOMED CT codes from the obstetrics Value Set. Based on review of technical experts, subject matter experts and, or public feedback. Marilyn will now review the technical changes. Marilyn.

19:57
Thank you, Karen. In 2023 reporting year, we added three new Value Sets with procedure codes to be used with the procedure performed and procedure not performed data types. The three Value Sets are Application of Graduated Compression Stockings, Application of Intermittent Numatic Compression Devices, and Application of Venous Foot Pumps. This is because the data element device applied is retired in QDM version 5.6. The QDM data type device applied led to misinterpretation of measure expressions and it is a duplicate concept to procedure performed which is sufficient to indicate placement of a device.

20:45
Meanwhile, the original Value Sets are still used with the device, not ordered logic. We will take a deeper dive into this change when we discuss the measure definitions.

20:57
We replaced the Global.CalendarAgeInYearsAt function with the native CQL function AgeInYearsAt, to take advantage of existing CQL features and increase human readability. As a result of this change, the LOINC code 2112-8 is no longer required and has been removed from the terminology section of the human readable specification.

21:25
For 2023 reporting year, Global."ToDate" function is retired. We added this function to the TJC library and renamed it as "TruncateTime". The definitions calling this function yield the same results as 2022.

21:44
Because of the replacement of Global."ToDate" function 2 functions have been updated. They are TJC.CalendarDayOfOrDayAfter and VTE.FromDayOfStartOfHospitalizationToDayAfterAdmission.

22:09
"Day of" was added when calling 2 functions that I just mentioned. By adding the day of in definitions, using these functions, the timing precision from DateTime to Date only aligns more closely with the measure intent.

22:31
As discussed earlier, the data element "Device, Applied" has been retired. Therefore the Numerator logic replaced the "Device, Applied, Not Applied" data types with "Procedure, Performed" / "Not Performed" We will discuss this further when reviewing the logic.

22:51
Now we will cover the measure Populations in detail, contrasting VTE-1 and VTE-2 as we go. There are no changes to the measure Populations this year. The Initial Population is the same for VTE-1 and VTE-2. That is, inpatient hospitalizations for patients age greater than or equal to 18 years of age, discharge from a hospital inpatient acute care, without a diagnosis of VTE or an Obstetric condition with a length of stay less than or equal to 120 days that ends during the measurement period.

23:35
For VTE-1, the Denominator is identical to the Initial Population. VTE-2's Denominator is the same as VTE-1 with one additional criteria. Patients who were directly admitted or transferred to ICU during the hospitalization. We will use yellow highlighting to call out the differences between VET-1 and VTE-2 throughout this webinar.

24:05
For VTE-1, the Denominator Exclusion is inpatient hospitalizations for patients with any of the following conditions: Length of stay less than two days. Transferred to the ICU the day of or the day after hospital admission with ICU length of stay greater than or equal to 1 day. With the principal diagnosis of mental disorders or stroke. With the principal procedure of Surgical Care Improvement Project, also referred to as SCIP, VTE selected surgeries. With comfort measures documented anytime between the day of arrival and the day after hospital admission. Or with comfort measures documented by the day after surgery end date for surgeries that end the day of or the day after hospital admission.

25:01
VTE-2 Denominator Exclusions are similar to VTE-1. Length of stay less than two days is an Exclusion. Transferred to the ICU the day of or the day after hospital admission with length of stay greater than or equal to 1 day and principal diagnosis of mental disorders or stroke are not Exclusions. SCIP VTE selective surgeries must end the day of or day after ICU admission or transfer. Comfort measures timing is anytime between the day of arrival and the day after ICU admission or transfer for VTE-2 or comfort measures documented by the day after surgery end date, for surgeries that end the day of or the day after ICU admission or transfer.

25:54
Please note there is a typographical error in this year's human readable and we will update the narrative in the next annual update process. It should be updated to read ICU admission or transfer instead of hospital admission to align with the measure intent and logic expression.

26:19
The Numerator for VTE-1 is inpatient hospitalizations for patients who receive VTE Prophylaxis between the day of arrival and the day after hospital admission or the day of or the day after surgery end date. For surgeries that end the day of or the day after hospital admission. Inpatient hospitalization for patients who have documentation of a reason why no VTE Prophylaxis was given. Between the day of arrival and the day after hospital admission or the day of or the day after surgery end date for surgeries that end the day of or the day after hospital admission.

27:02
VTE-2 Numerator is similar except the timing of the Prophylaxis and reason why no Prophylaxis was given uses the ICU admission as the benchmark as opposed to the hospital admission for VTE-1.

27:22
VTE-2 has one Denominator exception and that is ICU Length of Stay less than one day.

27:32
Okay, so now we're going to take a deeper look at the Measure Flow Diagrams. The demo just reviewed a Measure Flow Diagram structure in general, but we're going to take a deeper look.

27:45
In the interest of time, we will only review VTE-1 Flow Diagram in detail, but we do encourage you to study the Measure Flow diagrams on your own time to gain a better understanding of the measures. So at the top of the document you will see this is the Measure Flow Diagram for 2023. And the CMS number and version number of the measure is indicated here also. The description of the measure is provided also. Let's start with the Initial Population. Generally speaking, the Measure Flow Diagram shows the definitions on the left hand side of the page.

28:26
For example, Encounter with Age Range and Without VTE Diagnosis or Obstetrical Conditions highlighted here. On the right hand side of the diagram you see definitions that are called and the logic expressed at a very high level. The purpose of the Measure Flow Diagram is to show just that at a high level, which Populations the patient qualifies for.

28:55
The patient with the appropriate age range and without VTE diagnosis or obstetrical conditions will meet the Initial Population criteria and proceed to the Denominator. If the criteria is not met, processing would stop here. Since VTE-1 Denominator Population is the same as the Initial Population, Denominator is met if the Initial Population is met.

29:27
We continue to the Denominator Exclusions as you just saw when we reviewed the three measure Populations. Excuse me. As we reviewed the measure Populations, there are six Exclusion conditions. Three are listed on this page and three on the next page. If any one of the criteria is met, the patient will be excluded from the Denominator and processing steps. If none of the Denominator Exclusions are met, processing continues to the Numerator evaluation.

30:05
The five Numerator criteria we previously covered are listed here. If the patient meets any of these conditions, they will be in the Numerator. If not, cases would remain in the Denominator Population and count it as performance not met.

30:25
A sample calculation shows how the Performance Rate is calculated. The Numerator is divided by the Denominator less the Denominator Exclusions. The letter values in the formula shown here, that is A, B1 through B6, C1 through C5, are indicated on the previous slides and represent the various populations. So looking back at the Numerator portion of the algorithm. The number of encounters that have C1 through C5 met is added together to arrive at the Numerator Population.

31:10
The next two pages are the Measure Flow Narrative. Here you will see the Population criteria displayed in a narrative format. And here is the second page of the Measure Flow narrative.

31:27
So common logic shared by VTE-1 and .VTE-2 will now be reviewed. As mentioned earlier, both VTE-1 and two measures share the same Initial Population. The main Initial Population definition is Encounter with Age Range and Without VTE to PE Diagnosis or Obstetrical Conditions, which is stored in the VTE library as evidenced by the prefix VTE in front of the definition name. This definition calls 2 definitions. The Global."Inpatient Encounter". The prefix Global is an alias for the

MAT Global Common Functions Library and is called at the measure level. Admission without VTE or Obstetrical Conditions, and the Global.InpatientEncounter looks for inpatient encounters where the Length of Stay is less than or equal to 120 days and the encounter period ends during the measurement. Then those encounters are narrowed to only patients age 18 years or older. This year, we've replaced the Global.CalendarAgeInYearsAt function with the native CQL function, AgeInYearsAt to take advantage of existing CQL features and increase human readability. We no longer need to reference the LOINC code, which represented birth date.

33:04
The second definition, called by the main Initial Population definition, is Admission without VTE or Obstetrical Conditions. There is no change for this definition this year. This definition looks for an inpatient encounter that does not have an encounter diagnosis of Obstetrics, VTE, or Obstetrics VTE. So then the two main definitions are intersected to narrow the Initial Population to patients 18 years or older with length of stay 120 day or less, encounter ending during the measurement. And the patient is without a diagnosis of VTE or Obstetrical Conditions.

33:57
Now we will review logic unique to VTE-1. The Denominator reads Initial Population. Because the Denominator doesn't change from the Initial Population, we can simply call in the Initial Population as the definition.

34:14
We just covered the Initial Population, so we will not go into detail here again. No changes were made to the Denominator for the 2023 reporting year. Moving on to the Denominator Exclusions, the Union operator allows for anyone of these conditions to meet the Denominator Exclusions. No changes have been made to this definition for the 2023 reporting year.

34:42
Looking at the first Exclusion Encounter Less Than Two Days. We use the Encounter with Age Range and Without VTE Diagnosis or Obstetrical Conditions as the Qualifying Encounter that moves through our measure algorithm. The logic will exclude patients with length of stay less than two days. No changes for 2023.

35:07
Looking at the second Exclusion encounter with ICU Location Stay One Day or More. Note that the TJC."TruncateTime" function replaces the Global."ToDate" function in the 2023 version. This logic is looking for an qualifying encounter that has an ICU stay greater than or equal to 1 day. Where the ICU location starts the day of or the day after the encounter starts.

35:40
Now we look at the third Exclusion Encounter with the Principal Diagnosis of Mental Disorders or Stroke. No changes for 2023 here. We use the encounter diagnosis components rank and code to identify a principal diagnosis of Mental Health Diagnosis, Hemorrhagic Stroke, or Ischemic Stroke.

36:06
Moving to the 4th Exclusion, Encounter with Principal Procedure of SCIP VTE Selected Surgery. As mentioned before, SCIP refers to the surgical Care Improvement Project, which is a discontinued measure set. This logic excludes any principal procedure defined as a SCIP VTE Selected Surgery,

and that surgery occurs during the encounter. As a refresher, we use Global.NormalizeInterval function to access whichever timing element is available in the patient data submission file for the time comparison. The SCIP VTE Selected Surgery definition that is called simply collects patients with procedures in any of these Value Sets.

37:00
In the 5th Exclusion, Intervention Comfort Measures From Day of Start of Hospitalization To Day After Admission. The only change for the 2023 reporting year is adding day of. Where the logic will disregard the time and only evaluate the dates of the fields that are being compared. No other changes were made to this definition. The Coalesce Logic looks complicated but basically Coalesce and Global."NormalizeInterval" ensure that the available data is used in a consistent manner.

37:39
First, Global."NormalizeInterval" looks for a relevant, datetime, or period, and creates an interval from that. The start of this interval as well as the author, date and time is then used by the Coalesce function. Note that Coalesce chooses the first not null value that it finds. If Global."NormalizeInterval" returns a null, because both relevant date and time and period start were null, then Coalesce would select the author, date and time. Please see the resources slide at the end of this presentation for links to excellent video shorts on the Coalesce and Normalize Interval functions.

38:27
As we mentioned earlier, Global.ToDate is replaced with TJC."TruncateTime" without any impact to the measure outcome. The function VTE.FromDayOfStartOfHospitalizationToDayAfterAdmission is where this replacement occurs. So in the 5th Exclusion intervention, comfort measures from day of start of hospitalization to day after admission will check if comfort measures were ordered or performed during the day of any time from arrival date to the day after hospital admission.

39:11
Here are two functions used in VTE-1 where TJC truncate time function is called out. First VTE.FromDayOfStartOfHospitalizationToDayAfterAdmission that we just presented on the previous slide and another one is TJC.CalendarDayOfOrDayAfter which is included in the logic on the next slide. The TJC."TruncateTime" contains the same content as the Global."ToDate function, which was removed.

39:51
The last exclusion is, Intervention Comfort Measures on Day of or Day After Procedure. The logic is looking for Comfort Measures to be performed or documented by the day after surgery and day for surgeries that end the day of or the day after hospital admission. The only change we made for the 23 reporting year is adding day of to evaluate of comfort measures was ordered to perform the day of or the day after the procedure.

40:26
Moving on to the Numerator. The Union operator allows for anyone of these conditions to meet the VTE Numerator. The first part of the Numerator focuses on inpatient hospitalization for patients who received, VTE Prophylaxis shown as condition one and two. Conditions three, four, and five are the second part of the Numerator, where the logic is looking for reasons why a patient

did not receive VTE Prophylaxis. Both need to be within the required timing criteria. Let's take a look at each statement one at a time.

41:05
So the first condition of Encounter with VTE Prophylaxis Received From Day of Start of Hospitalization to Day After Admission or Procedure. In this definition, union operator is to include two qualifying time frames for VTE Prophylaxis patient may have received. The first time frame is Prophylaxis was received between the day of arrival and the day after hospital admission. Here is the logic associated with this time frame. The first change for the 2023 version is that we've renamed the definition name for the qualifying VTE Prophylaxis. As "Pharmacological or Mechanical VTE Prophylaxis Received" to align with the data type changes. This will be discussed later.

41:59
The second change is that day of is added to the time comparison. The second qualifying time frame is Prophylaxis was Received the Day of or the Day After Surgery End Date. The logic is displayed here. Some changes were made as previously discussed. Excuse me, same changes were made as previously described.

42:25
Let's look at Pharmacological or Mechanical VTE Prophylaxis Received. It includes all qualifying medications administered and mechanical devices applied for VTE Prophylaxis. The change for the 2023 version is that procedure performed data type replaced the previous data type device applied. Three new Value Sets containing application of IPC, VFP and GCS devices are used this year.

43:05
So putting the last three slides together, we go back to the first Numerator condition by using Union. And the definition is looking for pharmacological or mechanical VTE Prophylaxis given any time from the day of the start of the hospitalization to the day after the admission. Or starts during the day of or the day after the end of the procedure, and that the procedure ends one calendar day after the start of the encounter.

43:38
Within the second condition we have 3 definitions. First, the measure is looking for. Medication Oral Factor 10A Inhibitor Administered on Day of or Day After Admission or Procedure. In this definition, the Union operator is to include two qualifying time frames for Oral Factor 10A inhibitor administered. The first part of the Union is to look for Oral factor 10A medication was administered on the day of or the day after the start of the encounter.

44:13
The changes for 2023 is that we added day of to the timing comparisons. The second part of the Union is to look for Oral Factor 10A Inhibitor medication administered on the day of or day after procedure that ends day of or day after start of encounter. Again, day of was added to the timing comparison.

44:40
Next, we look for patients with a history of atrial fibrillation or flutter. Note we use the diagnosis data type to capture history of these diagnosis that may be present prior to admission. Or a

current diagnosis of atrial fib or flutter. Or a history of VTE. Only changes in 2023 reporting year is the definition name was updated where prior diagnosis of, was added to clarify that we were looking for a history of VTE. The measure intent and logic was always looking for history or prior diagnosis of VTE the name is updated to reflect the intent more clearly.

Last, we are evaluating if a hip or knee replacement surgery was performed on or before the end of the encounter. No changes was made for this definition for 2023.

45:39
Moving into the third Numerator condition, we transition the focus to patients who have a documented reason for no VTE Prophylaxis. This condition of Low Risk for VTE or Anticoagulant Administered unions two definitions using two timing conditions from the day of start of hospitalization to the day after admission. And day of or day after procedure. The only change to the first definition is adding day of. We will review the low risk indicator for VTE definition in greater detail where you will see where the attribute Low Risk DateTime is originating from.

46:30
In the definition low risk indicator for VTE, the logic is evaluating if the patient is a low risk for VTE. Based on an assessment, as a refresher, the low risk data, the LowRiskDateTime variable highlighted in yellow here is used as a timestamp placeholder to represent an assessment that the patient is a low risk for VTE. The low risk datetime represents VTE risk assessment date time here.

47:05
Next, the logic evaluates if the patient is low risk based on an INR lab result greater than three. Here at the low risk date time variable represents the INR lab result date and time.

47:20
And lastly, the logic evaluates if the patient is low risk if the patient is currently on an anticoagulant for VTE, here's the low risk datetime variable represents an anticoagulant medication administration date and time. The logic that allows the time stamp from any of the three options to fill in the low risk datetime variable to meet the condition. No change was made here for the current reporting year.

47:53
Same changes made for the definition of low risk for VTE or anticoagulant administered on the day of or day after procedure which is adding the day of. Moving to the 4th Numerator condition encounter with no VTE Prophylaxis due to medical reason. A clinician needs to document a medical reason for why pharmacological and medical, excuse me, mechanical VTE Prophylaxis was not done. So we use intersect to satisfy both conditions to pass the Numerator. For 2023, we just had a definition name change to align with the data type change. We union the two timing conditions from day of start of hospitalization to day after admission and day of or day after procedure where either will satisfy the Numerator.

48:54
Let's start with the Pharmacological VTE Prophylaxis. The logic is looking for a medical reason why any of the listed medications was not given or ordered. We use the negation rationale attribute which looks for a medical reason why VTE Prophylaxis was not done. We use the author, date and

time attribute, so the documentation must occur during the from day of start of hospitalization to the day after admission. Again, day of is the only change for this year.

49:34
Looking at the No VTE Prophylaxis, Medication Administered or Ordered definition, the logic looks to see if any of these VTE Prophylaxis medications were not administered or not ordered.

49:52
Now let's talk about the mechanical VTE Prophylaxis. The logic is looking for a medical reason why any of the mechanical devices were not applied or ordered from the day of start of hospitalization to the day after admission. Same reason as previous discussion for this year we replace the device not applied with Procedure Not Performed and with three new value sets and the definition is named as "No Mechanical VTE Prophylaxis Performed or Ordered".

50:28
This is the updated definition of 'No Mechanical VTE Prophylaxis Performed or Ordered". As you see Mechanical VTE Prophylaxis Now uses Procedure Not Performed with three new device application Value Sets. Please note that Device Not Ordered and Associated Value Sets have not changed, only Device Applied was retired.

50:57
Moving to the next set of definitions, we continue to use the same medication and device not done concept. However, this has to be documented on the day of or the day after procedure and that the procedure must end one day after hospital admission. Similar to previous set of medical reason logic, the changes made for this set are adding day of and definition name update. This definition of No VTE Prophylaxis Medication Due to Medical Reason on Day of or Day After Procedure is looking for a patient without VTE Prophylaxis Administrator ordered due to medical reason that was documented on the day of or the day after the procedure. That procedure ends one day after start of the encounter.

51:50
Moving to the definition of No Mechanical VTE Prophylaxis where it is looking for patient has no mechanical VTE Prophylaxis performed or ordered due to medical reason. Similar to previous medical reason logic. The changes made here are adding day of and definition name update.

52:14
Okay, the last Numerator condition is, No VTE Prophylaxis Due to Patient Refusal. So just like the medical reason, this looks for patient refusal as a reason for no VTE Prophylaxis. The same two timing conditions are repeated from day of start of hospitalization to day after admission and day of or day after procedure.

52:40
Let's look at the No VTE Prophylaxis Due to Patient Refusal From Day of Start of Hospitalization to Day After Admission. For 2023 reporting year, similar to medical reason conditions, we added day of to the time comparison as well as the as the definition name updates you see here.

53:03
Unlike medical reason, for no mechanical and pharmacological VTE Prophylaxis, the patient refusal logic only looks for either medication or mechanical Prophylaxis to have not been done due to patient refusal in order to meet the Numerator.

No VTE Prophylaxis Due to Patient Refusal on Day of or Day After Procedure. For this definition we added day of. And updated the definition name.

53:45
So we are finished with the VTE-1 measure. We're going to transition to VTE-2, but if you're not, we are well more than halfway finished. If you recall, VTE-1 and 2 share the same Initial Population, which carries into the Denominator to build the qualifying encounter. We already covered the Initial Population, so we'll just start right in with the Denominator.

54:14
For VTE-2, the dominator is refined to include only directed myths to the ICU or transfers to the ICU anytime during the hospital stay. No changes were made for this year. We use the attributes facility, locations and code to specify intensive care unit and the ICU stay must be during the qualifying encounter period.

54:42
Moving to the VTE-2 Denominator Exclusions by using union, a patient who meets any of these four conditions, will be excluded from the Denominator. In the first Exclusion to start the expression we use encounter with ICU location, which we saw used in the Denominator. If the inpatient hospital stays less than two days, it will be excluded. The second Exclusion is first ICU stay with principal procedure of SCIP VTE selected surgery. The SCIP procedure must end on the day of, or day after the start of the first ICU visit. The only change made this year is adding day of to the timing comparison.

55:39
As a refresher, let's review the VTE.StartOfFirstICU function that was called in the previous definition. Three functions together define the start date and time of the first ICU. Let's look at how StartOfFirstICU function is built upon. Global."FirstInpatientIntensiveCareUnit" function is looking for the first ICU admission or transfer to ICU during the encounter. Once the FirstInpatientIntensiveCareUnit was identified, we will get the first inpatient intensive care unit period. By VTE.FirstICULocation function.

56:29
Lastly, we can capture first ICU admission date and time by calling the start of the VTE dot first ICU function. No changes for this year. Moving on to the next Exclusion, you may recall that we've already reviewed intervention comfort measures in VTE-1. However, the timing conditions here for VTE-2 use a function to look for comfort measures to occur from the date of start of the hospitalization to the day after the first ICU admission or transfer. The function of "FromDayofStartofHospitalizationto DayAfterFirstICU" uses the interval operator to capture a time frame from start of Global.HospitalizationWithObservation" to the day after admission to the first ICU. The changes for the 23 reporting year were adding day of to the time comparison and the replacement of TJC.TuncateTime for the Global.ToDate function.

57:42
So again, in the last Exclusion, we've already reviewed the logic in VTE-1. The difference here is the timing condition, where we are looking for comfort measures to occur on the day of or the day after the procedure ends and that the procedure ends one calendar day after the start of the first ICU. And this year we added day of to the time comparison.

58:08
Moving on to the Numerator. Recall the comparison of VTE-1 to VTE-2 we looked at earlier in the presentation. We use the same clinical concepts. However, VTE-2 uses the first ICU stay for timing constraints and VTE uses the hospital admission. No new concepts or logic is introduced in the Numerator logic that has not already been covered, so we will not present those slides during the presentation. However, please note that the Numerator slides, are available at the end of the slide deck for your review on your own time.

58:50
So with the Denominator Exception, it's important to note the difference between an Exclusion and Exception. Simply put, it differentiates in the way it processes. A Denominator Exclusion is processed before the Numerator, so a patient is excluded and never in the Numerator, an exception is processed after the Numerator. So if a case fails the Numerator it meets the Denominator exception, it will be excluded from the measure. So in this instance, a patient with first ICU stay less than one day, will be excluded from the measure if the Numerator was not met. No changes to the exceptions for the 23 reporting year.

59:40
Okay, we're going to move into two Frequently Asked Questions. The first one being, "Does a prior history of DVT and/or Pulmonary Embolism exclude the patient from this Population of VTE-1 and VTE-2?"

And, and the answer is there is no exclusion for patients with a history of DVT or PE. In fact, a past history of DVT or PE increases the risk for developing VTE during the hospitalization and even more reason to make sure that VTE prophylaxis is administered timely.

01:00:21
Thanks, Karen. The next question, "Why is Apixaban NOT listed in the value set as a medication for VTE prophylaxis?"

At this time, there is no approved indication to use Apixaban for Venous Thromboembolism Prophylaxis with the exception of hip or knee replacement surgeries. We continuously monitor FDA approved indications to determine which medications are appropriate for inclusion in the Value Set. If the FDA approved and indications for Apixaban should be changed in the future to include VTE Prophylaxis indication for all hospitalized medical and surgical patients, then we will update the measure specifications. Meanwhile, if you have a new any new information about Apixaban, please forward it to us. Great.

01:01:19
Great, great. Thanks so much Marilyn and Karen for your parts in the presentation. We've included an additional resource slide here to direct our audience to the eCQI Resource Center, the Eligible Hospital Measures page, the Teach Me Clinical Quality Language Video Series including

shorts on several CQL language and concepts listed on the slide, The Pioneers in Quality landing page, Expert to Expert webinar series landing page and the ONC Issue Tracking System where the clinical and technical questions about these eCQM should be submitted.

01:01:55
Just a quick reminder on how to ask questions. We'll move into our Q&A, our live Q&A segment now. Please submit your questions via the question pane. Click the Question mark icon in the audience toolbar. A panel will open for you to type and submit your question. Include a slide reference number or measure number when possible. All questions that are not answered verbally today during this live event will be addressed via a written follow up Q&A document that will be posted on The Joint Commission website. And the follow up document will be posted several weeks after the live event.

01:02:29
So with that, I'll turn it over to Marilyn and Susan to facilitate the Question and Answer segment.

Great. Thank you. I will start. I'll jump in with a question. We had questions that were submitted in advance as well as questions submitted live today. So we will try to take as many of those as we can.

01:02:50
The first question. "Why can't the history of codes for VTE like Z86.711 or Z86.718 be incorporated into the logic when patient is on Oral Factor XA?"

The answer to that question is that all Z codes, that Z codes are situational status codes that denote a personal history of a condition. They're not diagnostic codes and therefore, not included in the VTE Value Set. The measures' Numerator logic looks for a history of other Venous Thromboembolism, diagnosis encoded in SNOMED and ICD10 codes that start prior to the encounter, using diagnosis prevalence period as an indicator of history of diagnosis.

01:03:50
Okay, next question. "Can you help us understand why a patient on Eliquis for previous Acute Embolism and Thrombosis of right tibial vein which is ICD10 code I82.44 would not pass the measure? This code is not in VTE table, so is there an expectation that additional Prophylaxis is needed beyond Eliquis?"

So the answer to that is Eliquis currently is not considered as a standalone pharmacological VTE Prophylaxis. Patients given Eliquis with prior or present diagnosis of Afib or prior diagnosis of VTE or a hip or knee replacement surgery will pass the measure. Patients on Eliquis without Atrial Fib but having other cardiac history or conditions need a medical reason for not giving VTE Prophylaxis. That was documented by a physician, APN, or pharmacist.

Great. Thank you.

01:04:53
The next question. "If the patient has Mechanical Prophylaxis, but no Pharmacological Prophylaxis, would it still pass the measure?"

The answer is yes. The patient with mechanical Prophylaxis applied within the measurement time frame will pass the measure. A reason for no Pharmacological Prophylaxis is not needed.

01:05:20
Thank you. Okay. “Are eCQMs, and Core Measures the same terms? We've been using Core Measures for VTE please clarify."

So no, eCQMs and Core Measures are not the same terms. They represent different concepts. eCQM stands for Electronic Clinical Quality Measures is used for all quality measures in the electronic version.

The Core Measures use this webinar referred to the Electronic Clinical Quality Measures that are 2022 reporting. You can find more information on the eCQI Resource Center.

Great. Thanks Marilyn.

01:06:06
So the next question is, "Does VTE Prophylaxis mean either Mechanical or Pharmacological and documentation on either meets compliance of the measure?"

So the answer is yes, if a patient received VTE Prophylaxis and a qualifying timeline.

They will meet them measure Numerator where the VTE Prophylaxis received means either Pharmacological or Mechanical VTE Prophylaxis given to the patient.

01:06:35
Thanks, okay. "Can you please inform where you find the list of medications that meet the measures the the individual ask is it in the Measure Flow?"

So if you navigate to the eCQI Resource Center at the link that was provided in the slide deck and you click the VTE-1 or VTE-2 measures. The Value Set link will guide you to the VSAC website and from there you will see all the medication value sets listed.

01:07:11
Okay, this next question asks, "Currently in our EPIC system, Eliquis and Xarelto are not recognized as VTE Prophylaxis like Warfarin or Lovenox. How can the above be addressed?"

So the answer is that Xarelto or Rivaroxaban is considered as a Pharmacological VTE Prophylaxis in the Value Set of Rivaroxaban for VTE Prophylaxis. If a patient is given Xarelto during an anticipated time frame and data is submitted for measure evaluation, this patient will pass the Numerator. However, Eliquis is not considered as a standalone Pharmacological VTE Prophylaxis. Patients given Eliquis with prior or present diagnosis of atrial fibrillation or prior diagnosis of VTE or hip or knee replacement surgery will pass the measure.

01:08:12
Okay next question. "Why are we still requiring novel oral anticoagulants also referred to as NOACs to have special documentation when they are effective in used for many other conditions?"

So with the exception of Rivaroxaban, other direct Oral anticoagulants also known as DOACs do not have a FDA approved indication for VTE Prophylaxis. In general medical or surgical patients, the approved indications for other DOACs medications are condition specific, for example, VTE Prophylaxis after hip or knee replacement surgery, stroke prevention for patients with atrial fib. Okay.

01:09:02
The next question is, "Is the day of and day after within 24 hours or is it a calendar day?"

So the function TJC calendar day of or day after is, based on a calendar day or 24 hours. Okay.

01:09:26
"If a patient scores are low or very low risk level, do they have to have VTE Prophylaxis? Mechanical or Pharmacological?" VTE Prophylaxis? Mechanical or Pharmacological?

So patients with no VTE risk or low VTE risk documented within the measurement time frame are included in the Numerator Population. Intermediate risk moderate, risk high risk in patients with conflicting are questionable VTE risk needs or scores should receive VTE Prophylaxis.

01:10:03
Okay. "Is the first day of arrival based on a calendar day that VTE should be ordered or documented?"

01:10:14
The first day of arrival is based on a calendar day, not by 24 hours for VTE measures.

Okay, "If a patient refuses Thromboembolic Deterrent or TED hose or Sequential Compression Devices (SCDs), are you required to administer a pharmacological agent or provide empty documentation of contraindication?"

Patient refusal of the answer to that question is patient refusal of any form. Or VTE Prophylaxis is acceptable. No further reason documentation is needed when patient refusal is documented.

01:11:02
Okay, so another question about, um, documentation. "Does physician documentation for reason for no Mechanical or Pharmacological VTE Prophylaxis have to be documented in an order? Where can a patient refusal be documented?"

The answer is, reasons for no. VTE Prophylaxis can be documented in any order. Patient refusal or Pharmacological Prophylaxis may be documented in the MAR or Mechanical in a Nursing Flow Sheet. However, other sources of patient refusal are also acceptable. Okay, next question.

01:11:43
"Why does Heparin IV not count or exclude the patient from VTE Prophylaxis?"

Heparin administered in intravenous dosages may exceed Prophylaxis and count as a reason for not administering VTE Prophylaxis. Patients receiving IV Heparin are included in the Numerator

Population. However, small doses administered as an IV Heparin flush or push should be disregarded.

01:12:14
Okay. Next question, "If physician documentation in their progress notes that chemical Prophylaxis is contraindicated, should there be an order for that in the chart or is that alone sufficient to exclude from the measure?"

01:12:30
So physician documentation of a contraindication to chemical or Pharmacological Prophylaxis is acceptable to meet the reason for no Pharmacological Prophylaxis in order for no Pharmacological Prophylaxis is not required. However, documentation of a reason for no Mechanical Prophylaxis is needed to include the case in the Numerator.

Okay.

01:12:57
Oh, I'm sorry. I think that's about all we're going to have time for today. We're almost at 12:15. So I'm going to turn it back over to Susan to close this out for today. Thank you.

01:13:10
Great, thanks so much Susan and Marilyn for facilitating the Q&A segment and thanks to our content experts that have been answering the questions in the background.

01:13:19
We'll post up the responses to any of these questions we didn't address live today via written document that will be posted online when it's available.

01:13:27
All Expert to Expert webinar recording links, slides, transcripts and Q&A documents can be accessed from for previous and On Demand webinars on The Joint Commission's web page at the link shown on this slide.

01:13:42
And we're going to do a quick promo for the the rest of the webinar series. We started in August with the PC-01 and 06 eCQMS and have continued with Stroke, PC and ED. This series continues until February 23. The series incorporates expertise from Joint Commission, CMS, and Mathematica and other Measure Stewards and addresses the 2023 eCQM annual updates. Registration is now open for the January 24th Glycemia webinar, so if you haven't already, you can register now. Just use the link on this slide to find the registration link.

01:14:17
Before the session concludes, a few words about the CE survey. We use your feedback to inform future content and assess the quality of our educational programs. Tomorrow, an automated e-mail sent to the participants e-mail address used to register will include that survey link.

01:14:33
At the end of the survey, when you click submit, you are redirected to a page from which you can print or download a PDF CE certificate. An automated e-mail will also be sent to you that includes that link and you'll be able to print and download your. The CE certificate from that link.

01:14:51
Thank you, Marilyn and Karen for your presentations and Susan and Marilyn for facilitating the Q&A segment. And thanks to all of our content experts in the background that we're answering the submitted questions. Most of all, thanks to all of you who attended today's broadcast.

01:15:05
Have a great day.

Q and A Document – Expert to Expert Webinar: 2023 Annual Update Webinar for Emergency Department (ED-2) eCQM

Broadcast - December 13, 2022

Question	Answer
Please explain slide #32 emergency department (ED) visit period ends 1 hour or less before or on start of encounter. Thank you.	The initial population evaluates for an ED visit that ended within an hour of the start of the inpatient encounter. The logic calculates the inpatient admission time (inpatient encounter start time) minus the ED discharge time (ED visit end time) to determine if it is 60 mins or less. For example: let's say, Inpatient admission time was 1500 and ED visit discharge time was at 1430, this is 30-minute difference (less than 1 hour before start of encounter). Another example: Inpatient admission time was 0200 and ED visit discharge time was 0200 this is 0-minute difference (on start of encounter).
For patients that are admitted from the ED initially as an observation patient and are changed to inpatient after admission on the floor and are discharged as inpatient, are these included in the ED population?	ED–2/CMS 111 Without the specific details of the encounters, we are unable to provide a definitive answer to your question. If the patient was in ED, then Observation, then inpatient and this is reflected in the chart post discharge, no, he is not included. But it the retrospective review of the chart, it indicates the patient moved from ED to inpatient and the decision to admit was made in the ED and before the patient left the ED then yes, he would be included.
Is ED-2 required or optional reporting for the 2023 CMS performance period?	ED-2/Admit Decision Time to ED Departure Time for Admitted Patients is optional for 2023 reporting.
Is this for admission to any inpatient unit or only one within the same organization? For example, if we make the decision to admit a patient to a different location for higher levels of care, does that patient fall into the initial population?	Patients are included when admitted to any inpatient unit at the same facility where they received services during the preceding ED visit. In the example, the patient will not be included in the ED-2 initial population since they were not admitted to inpatient at the same facility where they received services during the preceding ED visit.
Please review the one-hour time. Does it mean if decision to admit is within 1 hour, the ED visit is excluded and not counted in the measure?	Patients are considered for the initial population of the measure if the ED visit ended within an hour of the inpatient admission. See Question 1 for examples.

Question	Answer
"Physically leaves" means what? It has to say "patient transported" or "patient moved" or can "admit from ED" or "transfer in" be used?	"Physically leaves" is referring to the location of the patient. When the decision to admit to inpatient is made the patient should physically be in the ED. Yes, this may be equivalent to the time the "patient transported" or "patient moved" but NOT "admit from ED" or "transfer in".
Can you clarify the meaning of an operational and disposition order?	Operational- the process for admitting a patient for hospitalization, ED-2/CMS 111, assesses for an order to admit the patient, Disposition- a conceptual classification of the patient plan (next steps) for continuing health care (i.e., admit to inpatient by requesting a bed or acquiring acceptance from the hospitalist).
Can you please speak to how observation patients are handled? Will they be excluded in some facilities but not others due to different EHR interpretation of ED visit, Observation visit and Inpatient visit?	Observation status is an outpatient status and is therefore not included in the initial population of this measure.
Will the ED-2 retirement occur for both Joint Commission and CMS?	CMS announced the retirement from CMS programs beginning in 2024. The Joint Commission has taken this under consideration and we don't have information to share regarding the removal at this time. We typically post annual ORYX measurement requirements on our website for the next calendar year around October: https://www.jointcommission.org/measurement/reporting/accreditation-oryx/
Isn't ED-2 an optional eCQM (1 of several options from which to CHOOSE for CMS IQR eCQM submission) in 2023 and to be retired in 2024?	Yes, ED-2 is one of several eCQMs that can be selected to meet this requirement. In the final IPPS rule, CMS removed CMS111/ED-2 from the program for CY2024. This means that 2023 will be the last year to report on this measure.
The CMS specifications state, "Documentation of the decision to admit the patient from the ED that is CLOSEST to the inpatient admission." Does this mean that if there are 2 places indicating decision to admit the one used should be the one closest to the physical leaving of the ED for eCQM?	"Documentation of the decision to admit the patient from the ED that is closest to the inpatient admission" means that if there are multiple decisions to admit to inpatient, use the one closest to the inpatient admission start time.
When does the inpatient encounter begin? at the time the patient is physically admitted or at the decision to admit time?	The inpatient encounter begins with the inpatient encounter start time or start of EncounterInpatient.relevantPeriod.

Question	Answer
Is there any consideration given for ED patients who have been admitted but there are no beds available, therefore ED time is extended?	The ED-2 measure does not exclude or make exceptions for patients boarded in the ED or awaiting bed placement since this is an ED throughput measure for which the essence of the measure is to reduce ED boarding.
If patient goes from ED to placed in Observation, then admitted Inpatient, would this patient still be in the measure?	It is difficult to answer this definitively as hospital process vary. The record is assessed post-inpatient discharge. When reviewing the discharged patient record, does it indicate that the patient had an ED visit with a decision to admit to inpatient that was performed during the ED visit and before the patient departed the ED? If so, was the time between the ED discharge and the inpatient admission within an hour? If yes, the patient is included in the initial population even if part of that hour was spent in observation. If the decision to admit to inpatient was done while in the observation unit, the patient will not be included in the initial population.
Can you please speak to the inclusion of Hospital in Home cases. Please explain what is includes and why.	Beginning in November 2020, Medicare-certified hospitals were permitted to treat patients with inpatient-level care at home and this program is referred to as "Acute Hospital Care at Home". The Acute Hospital Care at Home Individual Waiver Only (not a blanket waiver) participation requires nursing services to be provided on premises 24 hours a day, 7 days a week and the immediate availability of a registered nurse for care of any patient. For more information, visit the quality net site: https://qualitynet.cms.gov/acute-hospital-care-at-home.
What is the difference between Ed-2 (eCQMs) and OP18 (CMS chart abstracted measure?	ED-2 is an electronic clinical quality measure (eCQM) and is part of CMS's Hospital Inpatient Quality Reporting Program. It assesses the Median Admit Decision Time to ED Departure Time for Admitted Patients. The OP-18 measure is not an eCQM, it is chart-abstracted and part of CMS's Hospital Outpatient Quality Reporting Program. The OP-18 measure assesses the Median Time from ED Arrival to ED Departure for Discharged ED patients.
I thought I heard eCQM ED-2 being retired	In the final IPPS rule, CMS removed CMS111/ED-2 from the program for CY2024. This means that 2023 will be the last year to report on this measure.
I thought ED-2 measure was one of the other eCQM's from the list and not required. I believe the only required measure is the Opioid measure	Yes, ED-2 is one of several eCQMs that can be selected to meet the Hospital Inpatient Quality Reporting (IQR) Program requirement.
Do you give consideration for ED patients who are held longer than usual because of 5150 (danger to self/others)?	This measure is stratified by patients with and without a principal diagnosis consistent with psychiatric or mental health disorders. Stratification 1 = patients who do NOT have a principal psychiatric or mental health disorder diagnosis and Stratification 2 = patients who DO have a principal psychiatric or mental health disorder diagnosis. Patients with or without a psychiatric or mental health disorder are considered for inclusion in the initial population then stratified.

Question	Answer
Can you please speak to observation patient inclusion/exclusion and also definition of ED encounter versus inpatient encounter?	The measure intends to capture the duration from the decision to admit to inpatient time to the time the patient physically left the ED for patients admitted to inpatient. Observation status is an outpatient status and is therefore not included in the measure. Also, please see Question and Response to # 3. ED encounters are defined by the "Emergency Department Visit" value set and are outpatient type of encounters. The "Encounter Inpatient" value set includes concepts that represent inpatient hospitalization encounters.
What is ED Throughput?	ED throughput refers to the time it takes for the patient to move through ED. In other words, the length of stay (arrival to departure) in the ED.
How are the eCQMs evaluated and how often?	eCQMs undergo an annual update for which clinical guidelines, best practices, standards and terminology are evaluated to determine if and what revisions need to be made to measures.
I heard that ED-2 is no longer being reported for 2023? Please clarify.	In the final IPPS rule, CMS removed CMS111/ED-2 from the program for CY2024. This means that 2023 will be the last year to report on this measure.
Patient is inpatient status and still in the ED, how is the median time from decision admit to ED departure calculated?	Per the ED-2/CMS 111 v 11 specifications, ED Departure Time - Decision to Admit Time, after discharge from inpatient hospitalization, the record is assessed to determine if ED discharge time is within an hour of inpatient admission time, if so then determine if the Decision to admit time was during the ED encounter and before the patient physically left the ED, if so then the Decision to Admit time is subtracted from the ED Departure time to obtain the duration in minutes.
Please address how observation patients are handled.	Observation status is an outpatient status and is therefore not included in the initial population of the measure.
Please clarify depart time. Is it time patient leaves the department or time patient arrives on admitting unit?	Departure is the time the patient physically leaves the ED.
We have noticed our eCQM time is substantially lower than our chart abstracted time.	Chart abstracted and electronic measures are not the same so differences in calculation are expected. Chart-abstracted measures can abstract from multiple sources such as paper, electronic, structured or unstructured data whereas eCQMs can only use structured data that is electronically documented.
What source is used in EPIC for time of arrival and discharge?	We cannot comment on EHR systems, so we suggest you check with your vendor representative.
Why does the transaction time get recorded instead of the documented time with a third-party registration system	We cannot comment on EHR or third-party systems, so we suggest you check with your vendor representative.