

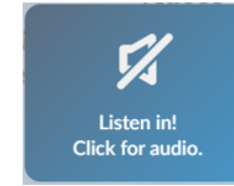
Expert to Expert Webinar

2025 Reporting Year Annual Updates for
VTE-1 (CMS108v13)
VTE-2 (CMS190v13)

December 19, 2024

Webinar Audio – Information & Tips

Audio is VOIP only – Computer speakers or headphones required to listen.



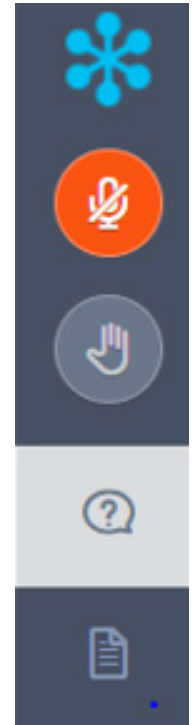
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Slides are designed to follow Americans with Disabilities Act rules.



New to eCQMs?

Today's content is highly technical and requires a baseline understanding of eCQM logic and concepts

Visit this section of the eCQI Resource Center:

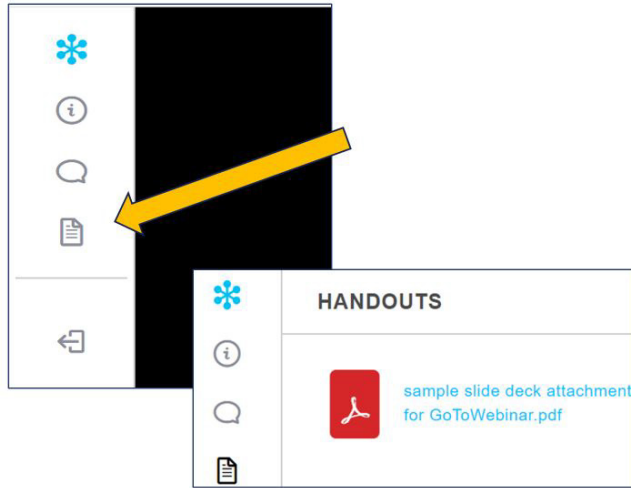
"Get Started with eCQMs"
https://ecqi.healthit.gov/ecqms?qt-tabs_ecqm=tools-resources



Access the slides

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Slides will also be available here within several weeks:

<https://www.jointcommission.org/measurement/quality-measurement-webinars-and-videos/expert-to-expert-webinars/#sort=%40resourcedate%20descending>

Webinar approved for 1 Continuing Education (CE) Credit for these entities



- Accreditation Council for Continuing Medical Education (ACCME)
- American Nurses Credentialing Center (ANCC)
- American College of Healthcare Executives (ACHE)*
- California Board of Registered Nursing

* ACHE Qualifying Education Hour

CE Requirements



- 1) **Individually register** for this webinar
- 2) Participate for the **entire webinar**
- 3) Complete a **post-program evaluation/attestation***

Program evaluation/attestation survey link will be sent to your email used to register.

For more information on The Joint Commission's continuing education policies, visit this link
<https://www.jointcommission.org/performance-improvement/joint-commission/continuing-education-credit-information/>

CE Survey and Certificate

Survey can be accessed in two ways:

- 1) QR code on final slide
- 2) Link within follow-up email



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Learning Objectives

Locate measure specifications, value sets, measure flow diagrams and technical release notes on the eCQI Resource Center.

Facilitate your organization's implementation of the VTE-1 and VTE-2 eCQM annual updates for the 2025 calendar year.

Utilize answers regarding common issues/questions regarding the VTE-1 and VTE-2 eCQMs to inform 2025 eCQM use/implementation.



Topics Not Covered in this Program

Basic eCQM concepts

Topics related to chart abstracted measures

Process improvement efforts related to this measure

eCQM validation



Disclosure Statement

All 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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Webinar Agenda

- Highlight how to access eCQM resources on the eCQI Resource Center
- Review the measure flow/algorithm
- Review the VTE-1 and VTE-2 eCQMs annual updates for Reporting Year 2025
- Review FAQs
- Facilitated Audience Q&A Segment



eCQM Resources on the eCQI Resource Center

eCQI Resource Center <https://ecqi.healthit.gov>

eCQI RESOURCE CENTER

eCQMs Electronic Clinical Quality Measures

dQMs Digital Quality Measures

Resources Standards, Tools, & Resources

About eCQI, CDS, FAQs Engage

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Electronic Clinical Quality Improvement (eCQI) Resource Center

Transforming eCQI through collaboration, education, and standards

Eligible Clinician eCQMs

Eligible Hospital / Critical Access Hospital eCQMs

Featured News & Events

Jun 04, 2024

Now Available: EH FHIR eCQM Draft Measure Packages for 2025 Reporting/Perfo...

Jun 27, 2024 @ 4:00pm EDT

Cooking with Clinical Quality Language (CQL) Webinar

Download and/or View Specifications

- “Human Readable” html
- Value Sets [↗](#)
 - **Value Set Authority Center (VSAC)**
- Data Elements
- eCQM Flow (PDF)
 - **(process flow diagrams)**
- Technical Release Notes (TRNs) (Excel)
- Jira Issue Tracker tickets [↗](#)

For more details, view the video short on the Expert to Expert landing page.

VTE Measure Set:

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 for the VTE Measure Set (2)

- Sudden death is the initial symptom in approximately 25% of those with PE.
 - VTE is a common reason for unplanned hospital readmission.
 - As many as 70% of cases of healthcare-associated VTE are preventable through measures such as use of anticoagulant medications or compression stockings but fewer than half of hospitalized patients receive these interventions (CDC, 2024).
 - The Agency for Healthcare Research and Quality (AHRQ) considers VTE prevention a top priority in terms of improving hospital patient safety (Maynard, 2016).
-

Rationale for the VTE Measure Set (3)

- 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.
 - 2022 national average rates were at 82.65% for VTE-1, and 93.88% for VTE-2.
-

★ Measure Changes from 2024 to 2025 - Technical

Measure Components	Reporting Year 2024	Reporting Year 2025
Value set	Payer	Payer <u>Type</u>
Header Initial Population	Inpatient hospitalization for patient...with a length of stay less than or equal to 120 days that ends during the measurement period.	Inpatient hospitalization for patient... with a length of stay less than or equal to 120 days that ends during the measurement period.
Definition Initial Population	Global.Inpatient Encounter ["Encounter, Performed": "Encounter Inpatient"] EncounterInpatient where "LengthInDays"(EncounterInpatient.relevantPeriod)<= 120 and EncounterInpatient.relevantPeriod ends during day of "Measurement Period"	Global.Inpatient Encounter ["Encounter, Performed": "Encounter Inpatient"] EncounterInpatient where "LengthInDays"(EncounterInpatient.relevantPeriod)<= 120 and EncounterInpatient.relevantPeriod ends during day of "Measurement Period"

Measure Changes from 2024 to 2025 - Technical (2)

Measure Components	Reporting Year 2024	Reporting Year 2025
Library	<ul style="list-style-type: none"> MATGlobalCommonFunctions TJCOverall VTE 	<ul style="list-style-type: none"> MATGlobalCommonFunctions<u>QDM</u> TJCOverall<u>QDM</u> VTE<u>QDM</u>
TJCOverall Library	TJC.TruncateTime(Value DateTime) DateTime(year from Value, month from Value, day from Value, 0, 0, 0, 0, timezoneoffset from Value)	Removed from TJCOverall Library
TJCOverall Library	TJC.CalendarDayOfOrDayAfter(StartValue DateTime) Interval["TruncateTime"(StartValue), "TruncateTime"(StartValue + 2 days))	TJC.CalendarDayOfOrDayAfter(StartValue DateTime) Interval[" TruncateTime " <u>date from</u> (StartValue), " TruncateTime " <u>date from</u> (StartValue) + 2 days) <u>1 day</u>]

Measure Changes (VTE-1) from 2024 to 2025 – Technical (3)

Measure Components	Reporting Year 2024	Reporting Year 2025
Denominator Exclusion	Encounter with ICU Location Stay 1 Day or More VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical Conditions" QualifyingEncounter where exists (...and Location.locationPeriod starts during Interval[start of QualifyingEncounter.relevantPeriod, TJC."TruncateTime" (start of QualifyingEncounter.relevantPeriod + 2 days)))	Encounter with ICU Location Stay 1 Day or More VTE."Encounter with Age Range and without VTE Diagnosis or Obstetrical Conditions" QualifyingEncounter where exists (...and Location.locationPeriod starts during Interval[start of QualifyingEncounter.relevantPeriod, TJC."TruncateTime" (start of QualifyingEncounter.relevantPeriod + 2 days))) on or after start of QualifyingEncounter.relevantPeriod and date from (start of Location.locationPeriod) during TJC."CalendarDayOfOrDayAfter" (start of QualifyingEncounter.relevantPeriod))
VTE Library	VTE.FromDayOfStartOfHospitalizationToDay AfterAdmission(Encounter "Encounter, Performed") Interval[TJC."TruncateTime" (start of Global."HospitalizationWithObservation" (Encounter)), TJC."TruncateTime" (start of Encounter.relevantPeriod + 2 days))	VTE.FromDayOfStartOfHospitalizationToDayAfterAdmission(Encounter "Encounter, Performed") Interval[TJC."TruncateTime" date from (start of Global."HospitalizationWithObservation" (Encounter)), TJC."TruncateTime" date from (start of Encounter.relevantPeriod) + -2 days)) 1 day]

Measure Change (VTE-2) from 2024 to 2025 - Technical (4)

Measure Components	Reporting Year 2024	Reporting Year 2025
VTE Library	<p>VTE.FromDayOfStartOfHospitalizationToDayAfterFirstICU(Encounter "Encounter, Performed")</p> <p>Interval[TJC."TruncateTime" (start of Global."HospitalizationWithObservation" (Encounter)), TJC."TruncateTime"(startOfFirstICU(Encounter) + 2 days))</p>	<p>VTE.FromDayOfStartOfHospitalizationToDayAfterFirstICU(Encounter "Encounter, Performed")</p> <p>Interval[TJC."TruncateTime" <u>date from</u> (start of Global."HospitalizationWithObservation" (Encounter)), TJC."TruncateTime" <u>date from</u> (startOfFirstICU(Encounter) + -2 days) <u>1 day</u>]</p>

VTE Initial Population

VTE-1	VTE-2
Inpatient hospitalizations ending during measurement period	Same
Age \geq 18 years old	Same
Without diagnosis of VTE or Obstetrical conditions	Same

VTE Denominator

VTE-1 (Same as Initial Population)	VTE-2
Inpatient hospitalizations ending during measurement period	Same
Age \geq 18 years old	Same
Without dx of VTE or Obstetrical conditions	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 > or = 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 admission or transfer

VTE Numerator

VTE-1	VTE-2
<p>Patients who received VTE prophylaxis:</p> <ul style="list-style-type: none"> between the day of arrival and the day after hospital admission <p>OR</p> <ul style="list-style-type: none"> the day of or the day after surgery end date (for surgeries that end the day of or the day after hospital admission) 	<p>Patients who received VTE prophylaxis:</p> <ul style="list-style-type: none"> the day of or the day after ICU admission (or transfer) <p>OR</p> <ul style="list-style-type: none"> 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)
<p>Patients who have documentation of a reason why no VTE prophylaxis was given:</p> <ul style="list-style-type: none"> between the day of arrival and the day after hospital admission <p>OR</p> <ul style="list-style-type: none"> the day of or the day after surgery end date (for surgeries that end the day of or the day after hospital admission) 	<p>Patients who have documentation of a reason why no VTE prophylaxis was given:</p> <ul style="list-style-type: none"> between the day of arrival and the day after ICU admission (for patients directly admitted as inpatients to the ICU) <p>OR</p> <ul style="list-style-type: none"> 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)

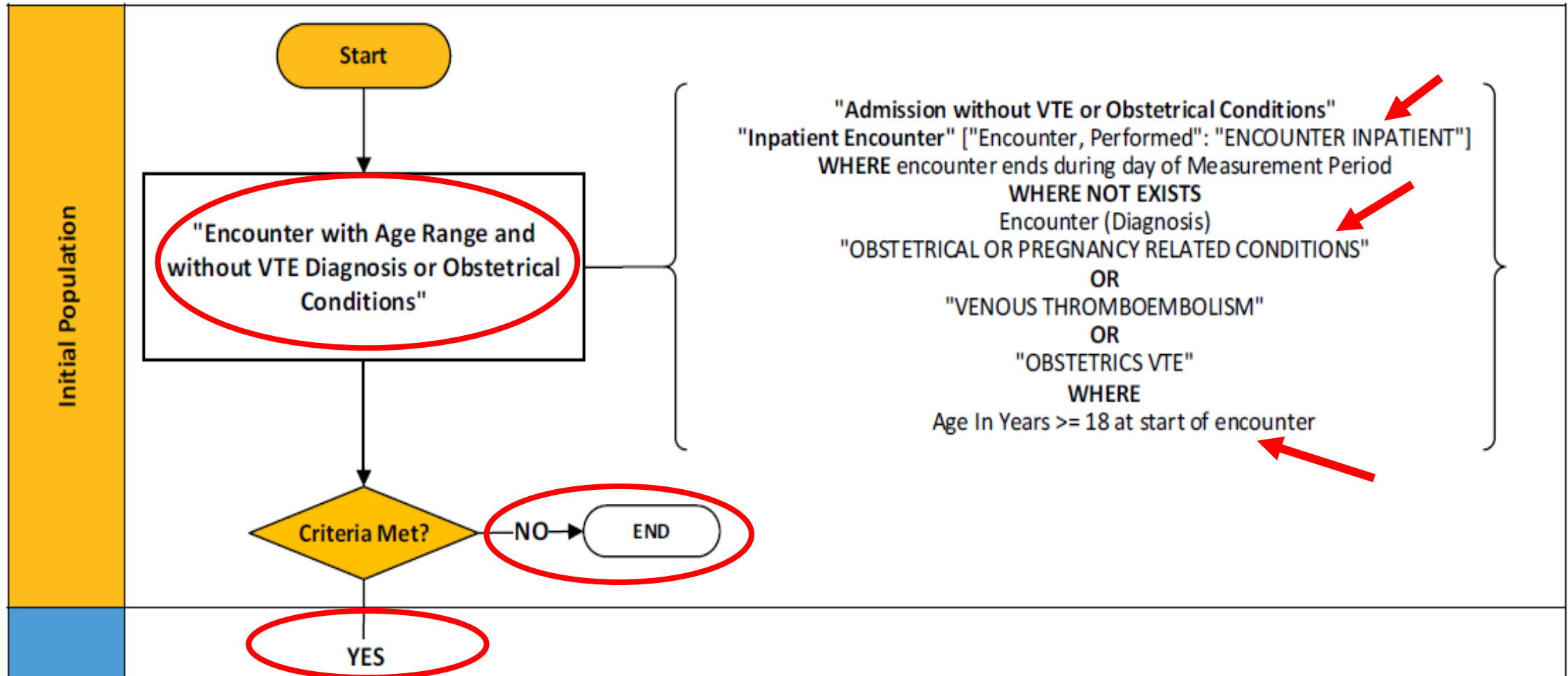
VTE Denominator Exceptions

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

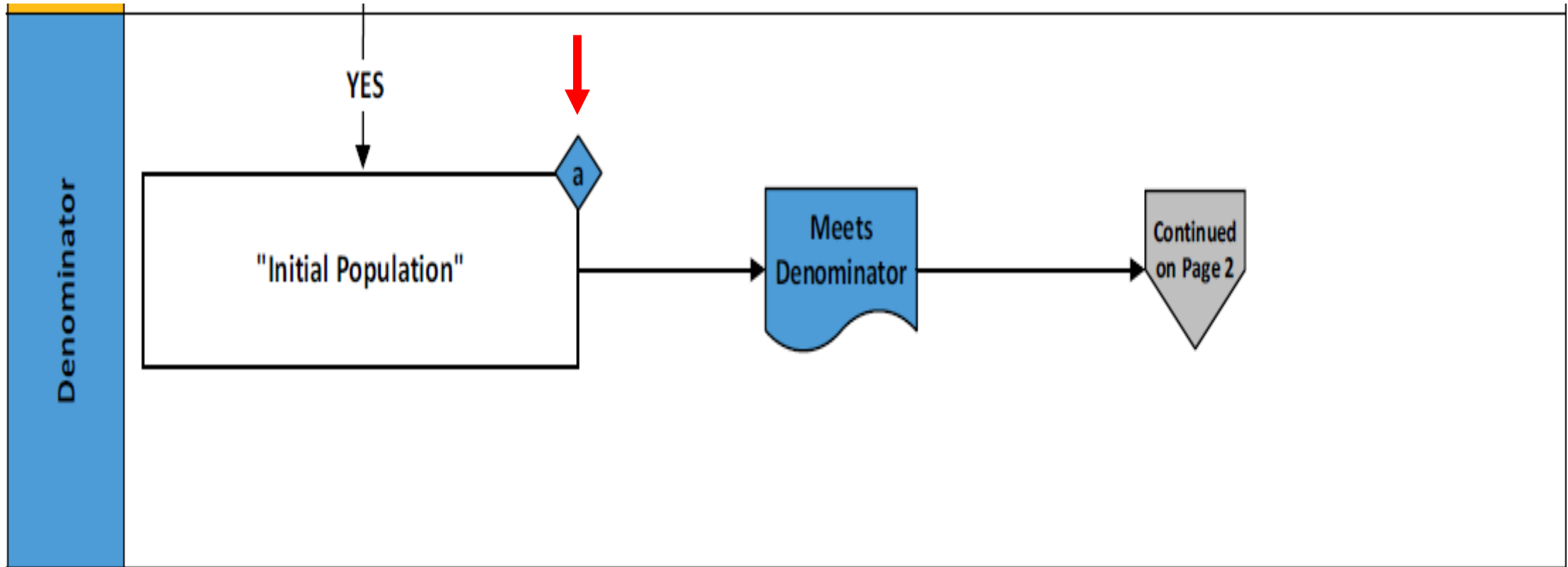
VTE-1

Venous Thromboembolism Prophylaxis

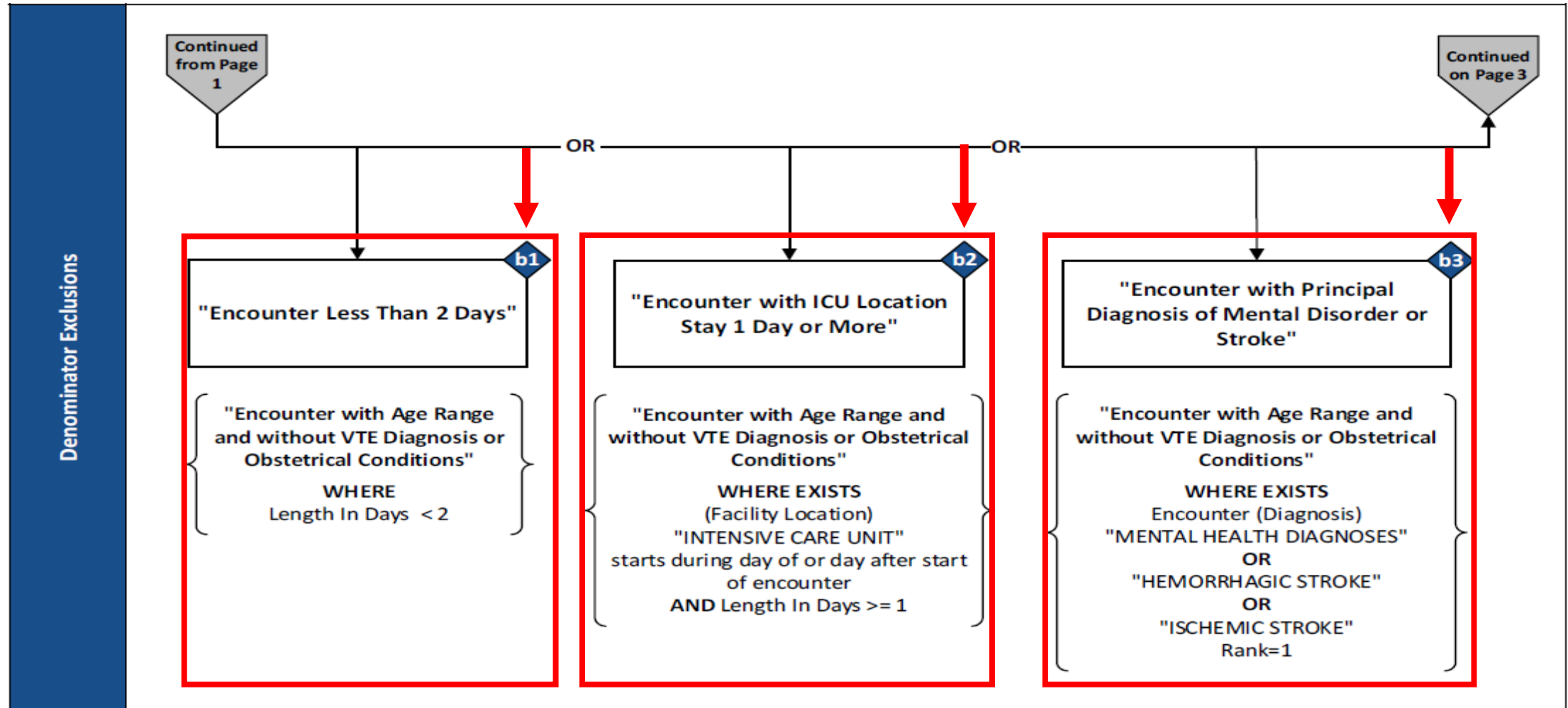
VTE-1 Measure Flow Diagram (Initial Population)



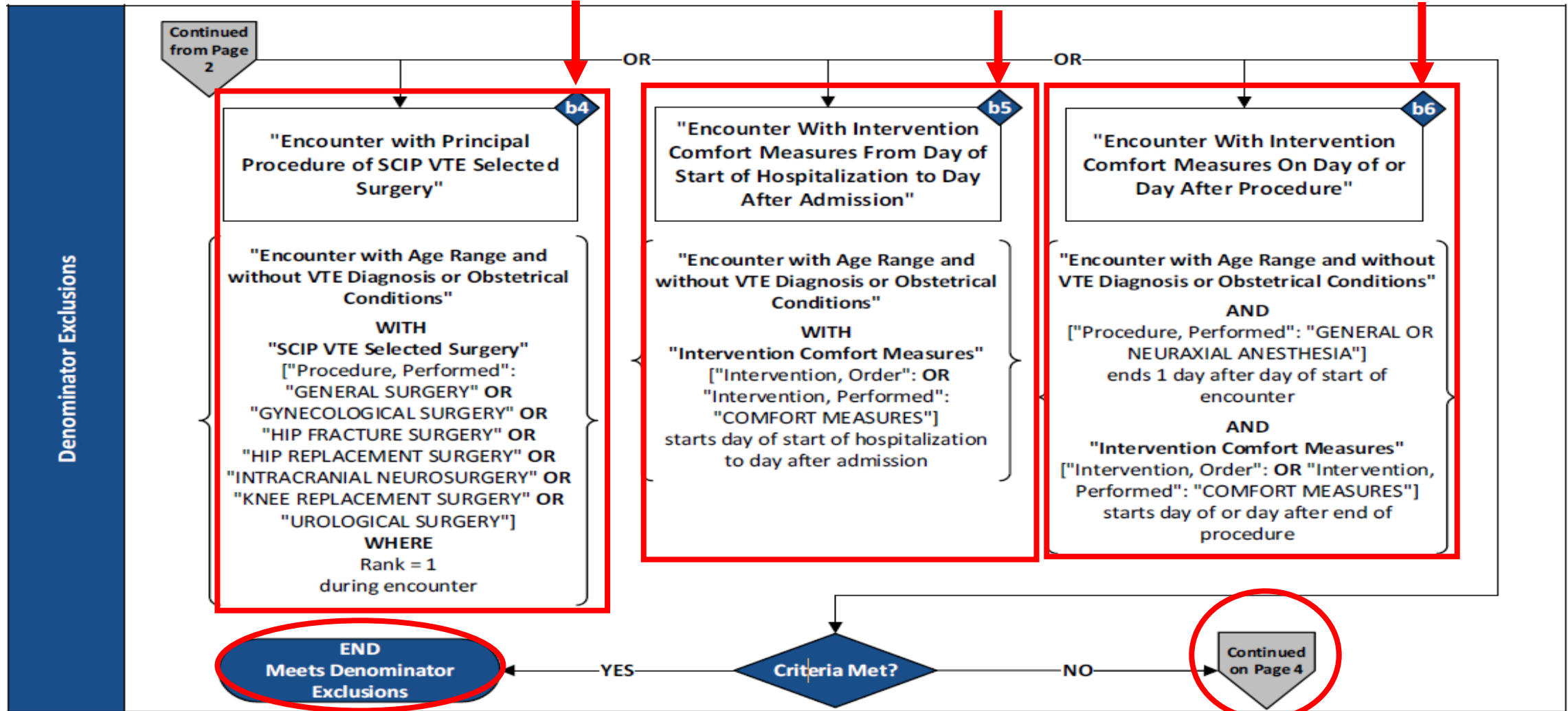
VTE-1 Measure Flow Diagram (Denominator)



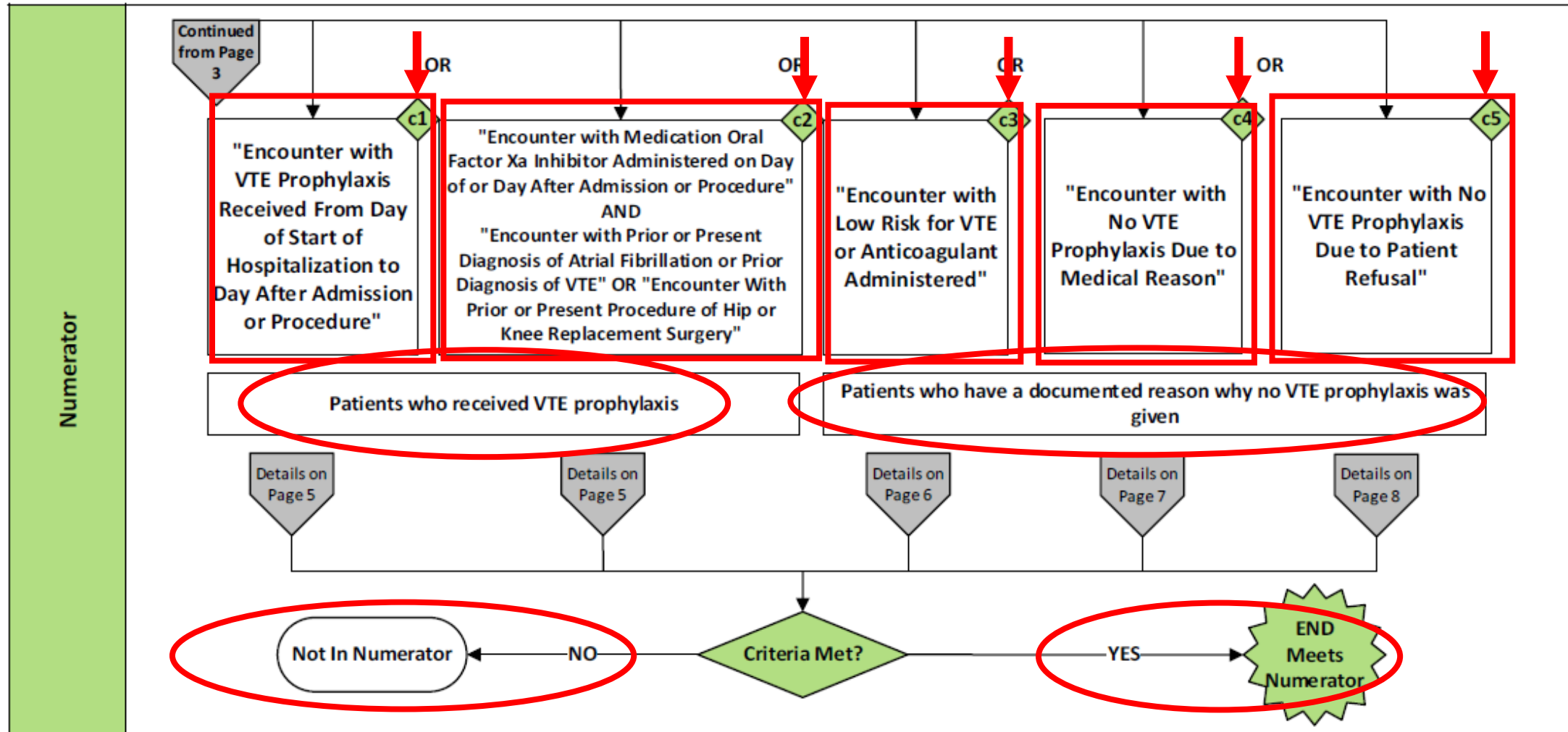
VTE-1 Measure Flow Diagram (Denominator Exclusions)



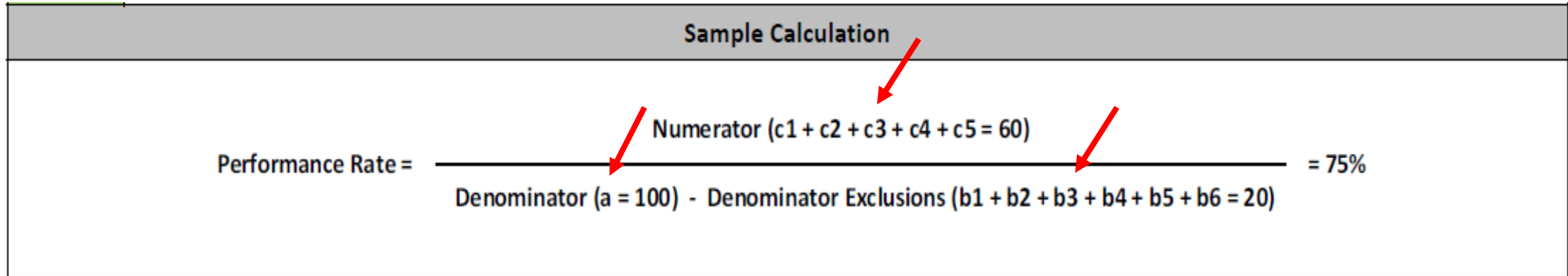
VTE-1 Measure Flow Diagram (Denominator Exclusions) (2)



VTE-1 Measure Flow Diagram (Numerator)



VTE-1 Measure Flow Diagram (Measure Calculation)



Initial Population: VTE-1

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

-“Admission without VTE or Obstetrical Conditions” EncounterWithoutConditions
 where AgeInYearsAt(date from start of
 EncounterWithoutConditions.relevantPeriod) >= 18

★ **VTE.Admission without VTE or Obstetrical Conditions**

Global."Inpatient Encounter"InpatientEncounter

where not

(exists (InpatientEncounter.diagnoses EncounterDiagnoses
 where (EncounterDiagnoses.code in "Obstetrical or Pregnancy Related Conditions" or
 EncounterDiagnoses.code in "Venous Thromboembolism" or EncounterDiagnoses.code in "Obstetrics
 VTE")))

VTE-1 Frequently Asked Question



Question:

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

Answer:

Patients with a history of DVT or PE are not excluded from the measures. 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.

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 (2)

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 (3)

★ 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,~~

~~TJC."TruncateTime"(start of QualifyingEncounter.relevantPeriod + 2 days))~~

on or after start of QualifyingEncounter.relevantPeriod

and date from (start of Location.locationPeriod) during

TJC."CalendarDayOfOrDayAfter"(start of QualifyingEncounter.relevantPeriod)

Denominator Exclusions: VTE-1 (4)

Encounter with Principal Diagnosis of Mental Disorder or Stroke

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

where exists (Qualifying Encounter.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 (5)

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 (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"

Qualifying Encounter

with "Intervention Comfort Measures" Comfort Measures

such that Coalesce(start of Global."NormalizeInterval"(ComfortMeasures.relevantDatetime, ComfortMeasures.relevantPeriod), ComfortMeasures.authorDatetime) during day of

VTE."FromDayOfStartOfHospitalizationToDayAfterAdmission"(Qualifying Encounter)

Intervention Comfort Measures

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

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

Denominator Exclusions: VTE-1 (7)

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 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 (2)

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 (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"]

union ["Procedure, Performed": "Application of Venous Foot Pumps"]

union ["Procedure, Performed": "Application of Graduated Compression Stockings"]

VTE-1 Frequently Asked Question (2)



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.

Numerator: VTE-1 (4)

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

(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 (5)

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 (6)

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

VTE-1 Frequently Asked Question (3)



Question:

Patients with hip/knee replacement surgeries are included in the VTE-1 and VTE-2 numerator but are excluded from the VTE-1 and VTE-2 denominator. Is this possible?

Answer:

A patient with a **principal** procedure of hip/knee replacement surgery will be excluded from the measure denominator. If the hip/knee surgery is **not** a principal procedure, the patient will be included in the denominator and will continue to the numerator for further evaluation.

Numerator: VTE-1 (7)

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 (8)

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

Numerator: VTE-1 (9)

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 (10)

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

VTE-1 Frequently Asked Question (4)



Question:

Is a specific VTE risk assessment tool required to document low risk?

Answer:

No requirement to use a specific tool.

- Several externally validated Risk Assessment Models (RAMs) available
- Internally developed tool is acceptable.
- Scoring methodologies vary depending on the tool selected.

Documentation of low risk or not at risk for developing VTE is required to be in the numerator.

Numerator: VTE-1 (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 Admission"

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

)



Numerator: VTE-1 (12)

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 For Not Providing Treatment"
and NoVTEMedication.**authorDatetime** during day of
VTE."**FromDayOfStartOfHospitalizationToDayAfterAdmission**" (QualifyingEncounter)

Numerator: VTE-1 (13)

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 (14)

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"
Qualifying Encounter,
with "No Mechanical VTE Prophylaxis Performed or Ordered" NoMechanicalProphylaxis
such that NoMechanicalProphylaxis.negationRationale in "Medical Reason For Not Providing Treatment"
And NoMechanicalProphylaxis.authorDatetime during day of
VTE."FromDayOfStartOfHospitalizationToDayAfterAdmission"(Qualifying Encounter)

Numerator: VTE-1 (15)

No Mechanical VTE Prophylaxis Performed or Ordered

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

Numerator: VTE-1 (16)

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 For Not Providing Treatment"
 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 (17)

No Mechanical VTE Prophylaxis 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 Mechanical VTE Prophylaxis Performed or Ordered" NoMechanicalProphylaxis
 where NoMechanicalProphylaxis.negationRationale in "Medical Reason For Not Providing Treatment"
 and Global."NormalizeInterval" (AnesthesiaProcedure.relevantDatetime,
 AnesthesiaProcedure.relevantPeriod) ends 1 day after day of start of
 QualifyingEncounter.relevantPeriod
 and NoMechanicalProphylaxis.authorDatetime during day of TJC."CalendarDayOfOrDayAfter"(end of
 Global."NormalizeInterval" (AnesthesiaProcedure.relevantDatetime,
 AnesthesiaProcedure.relevantPeriod))
 return QualifyingEncounter

Numerator: VTE-1 (18)

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 (19)

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 Due to Patient Refusal"
PatientRefusal
such that PatientRefusal.authorDatetime during day of
VTE."FromDayOfStartOfHospitalizationToDayAfterAdmission"(QualifyingEncounter)

Numerator: VTE-1 (20)

No Mechanical or Pharmacological VTE Prophylaxis Due to Patient Refusal

("No VTE Prophylaxis Medication Administered or Ordered"
union

"No Mechanical VTE Prophylaxis Performed or Ordered"
) NoVTEProphylaxis

where NoVTEProphylaxis.negationRationale in "Patient Refusal"

Numerator: VTE-1 (21)

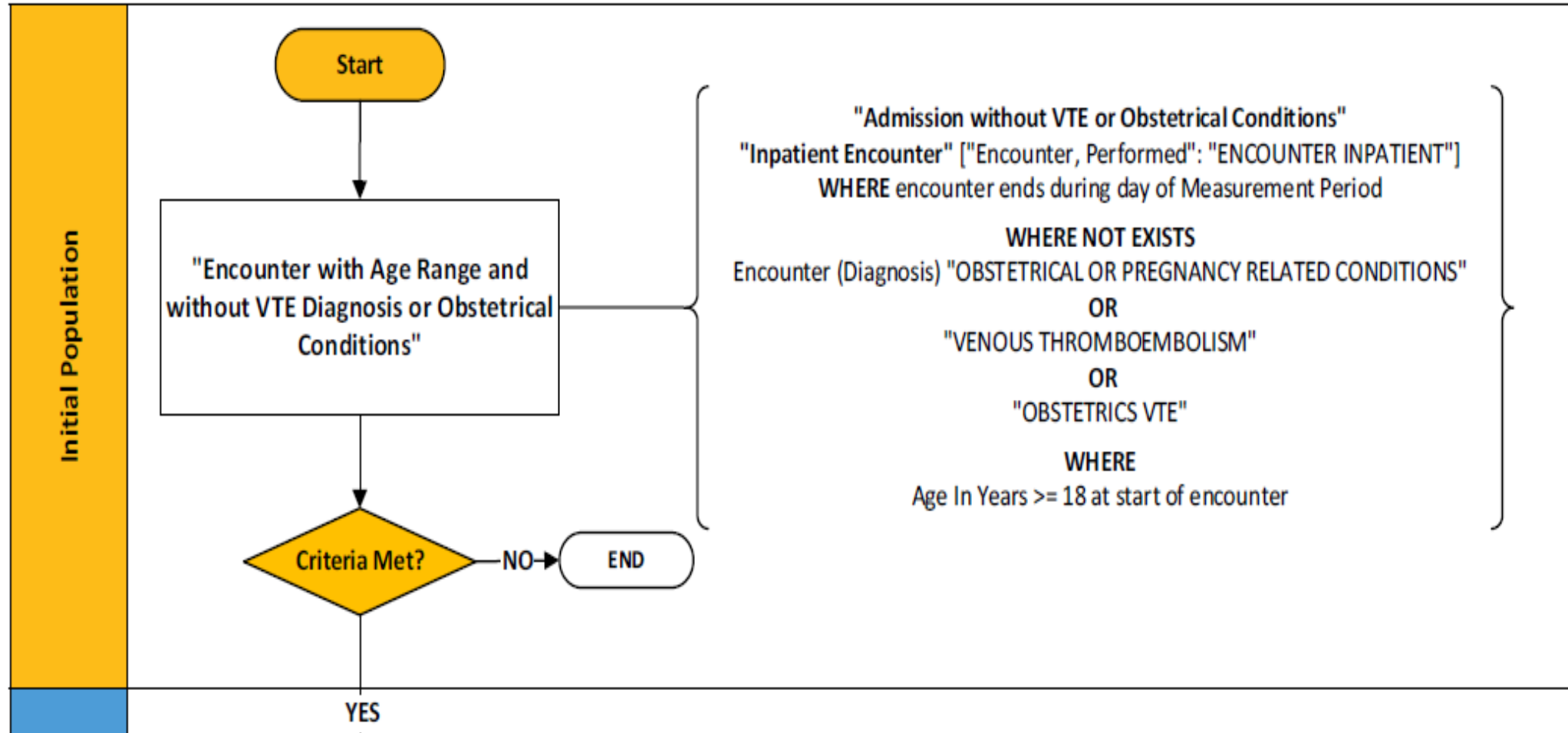
No VTE Prophylaxis Due to Patient Refusal On Day of or Day After Procedure

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

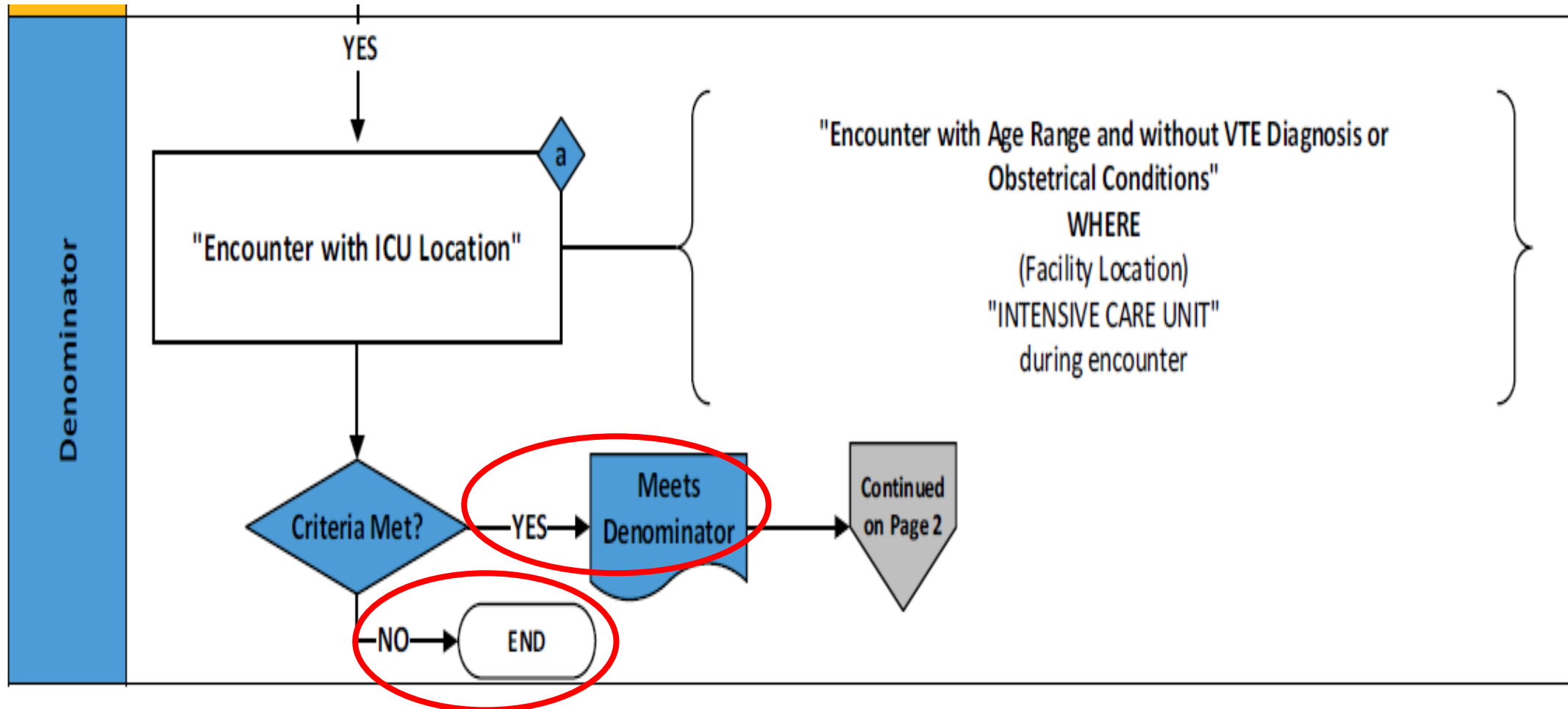
VTE-2

Intensive Care Unit Venous Thromboembolism Prophylaxis

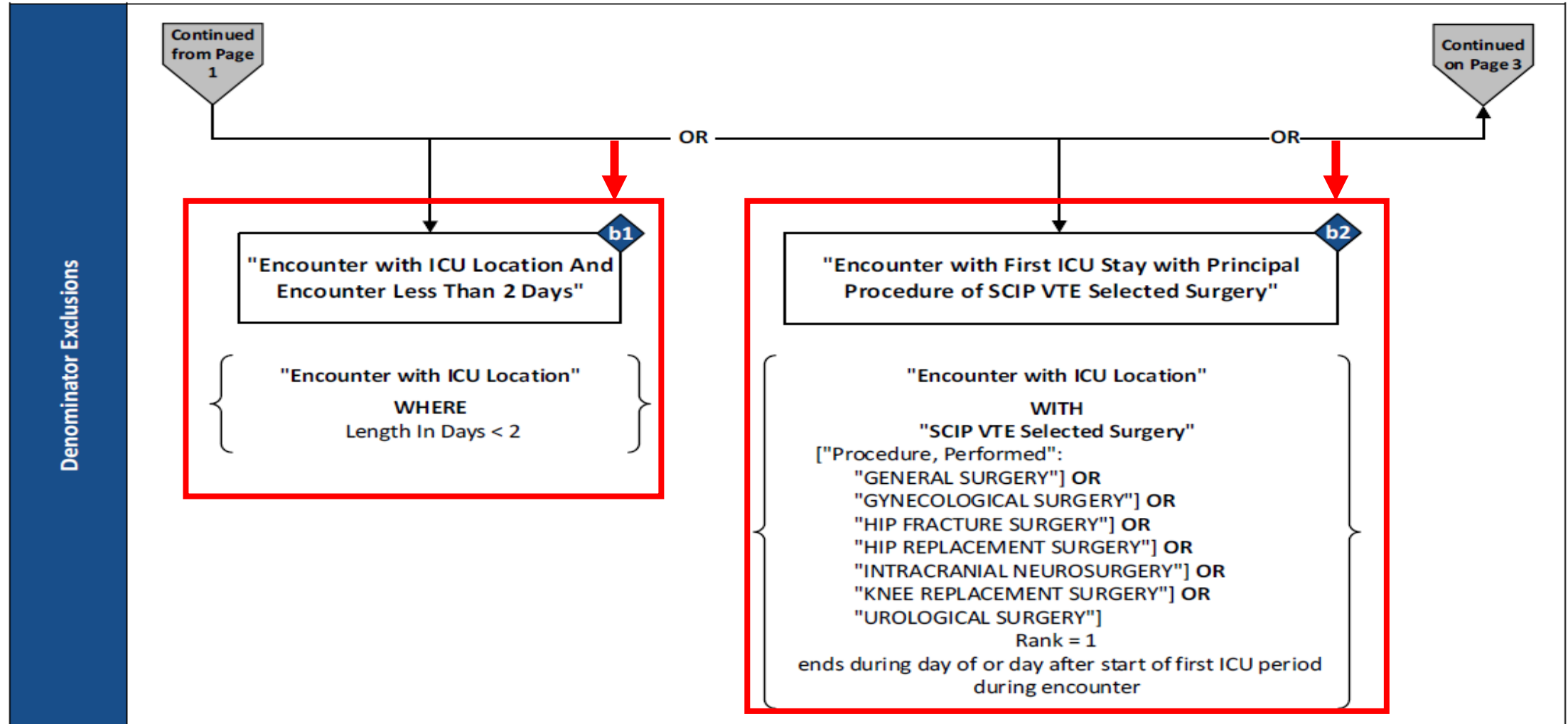
VTE-2 Measure Flow Diagram (Initial Population)



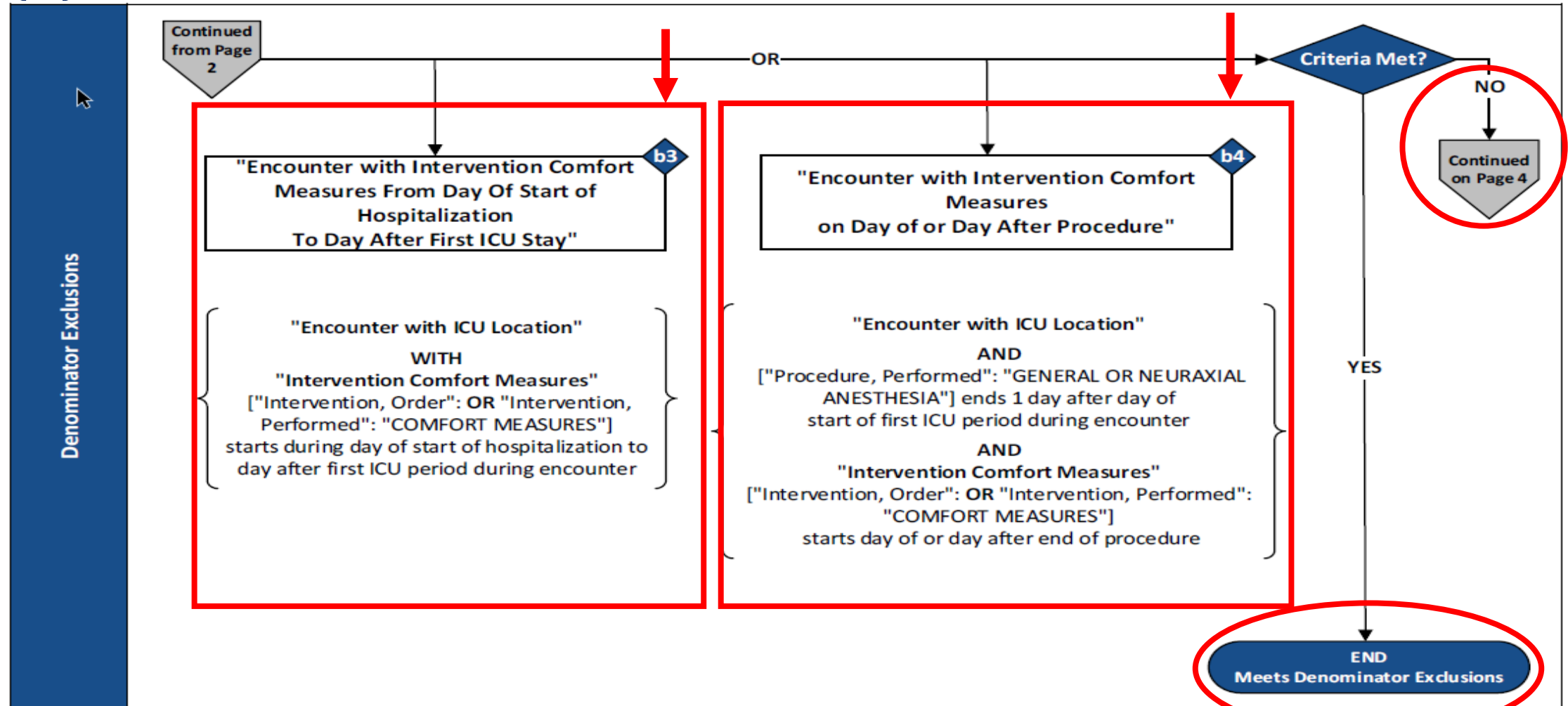
VTE -2 Measure Flow Diagram (Denominator)



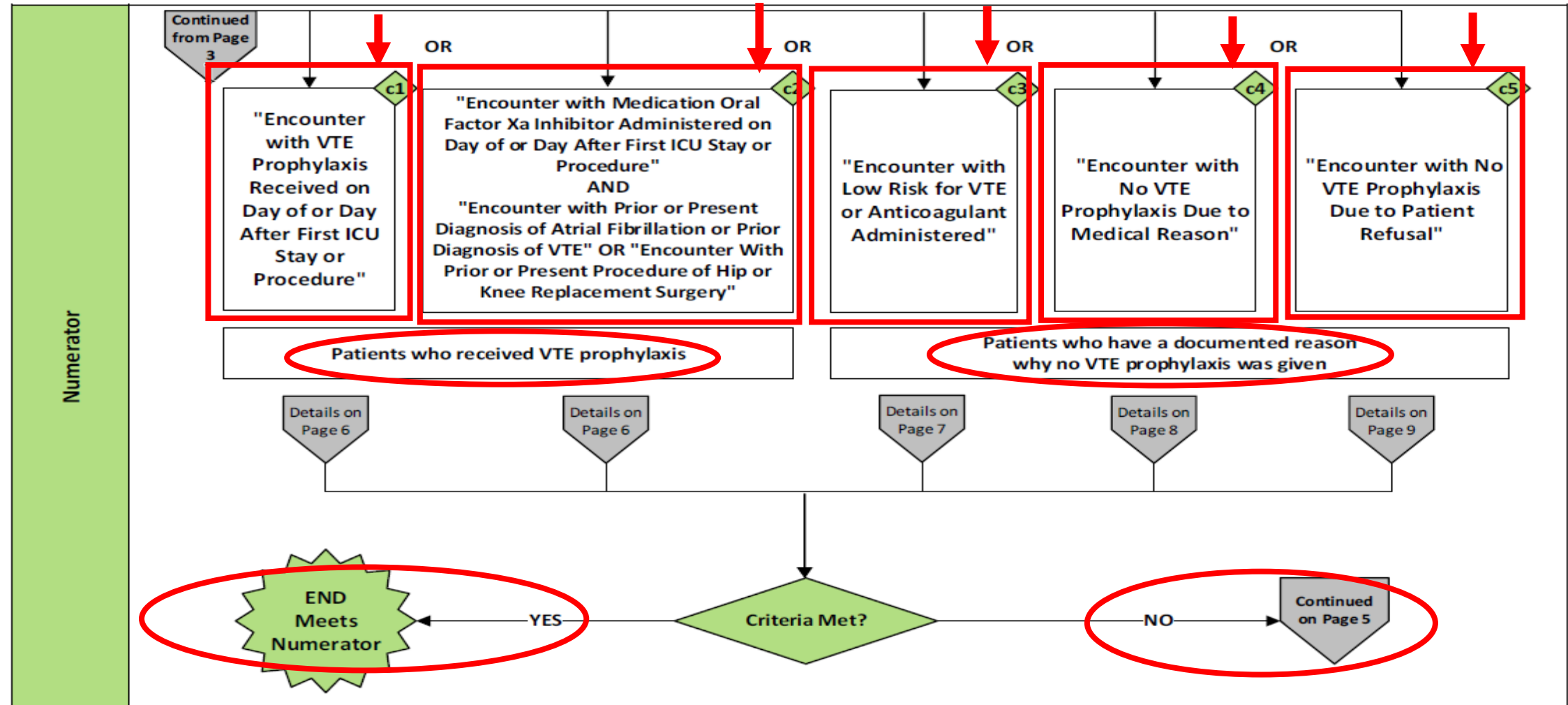
VTE -2 Measure Flow Diagram (Denominator Exclusions)



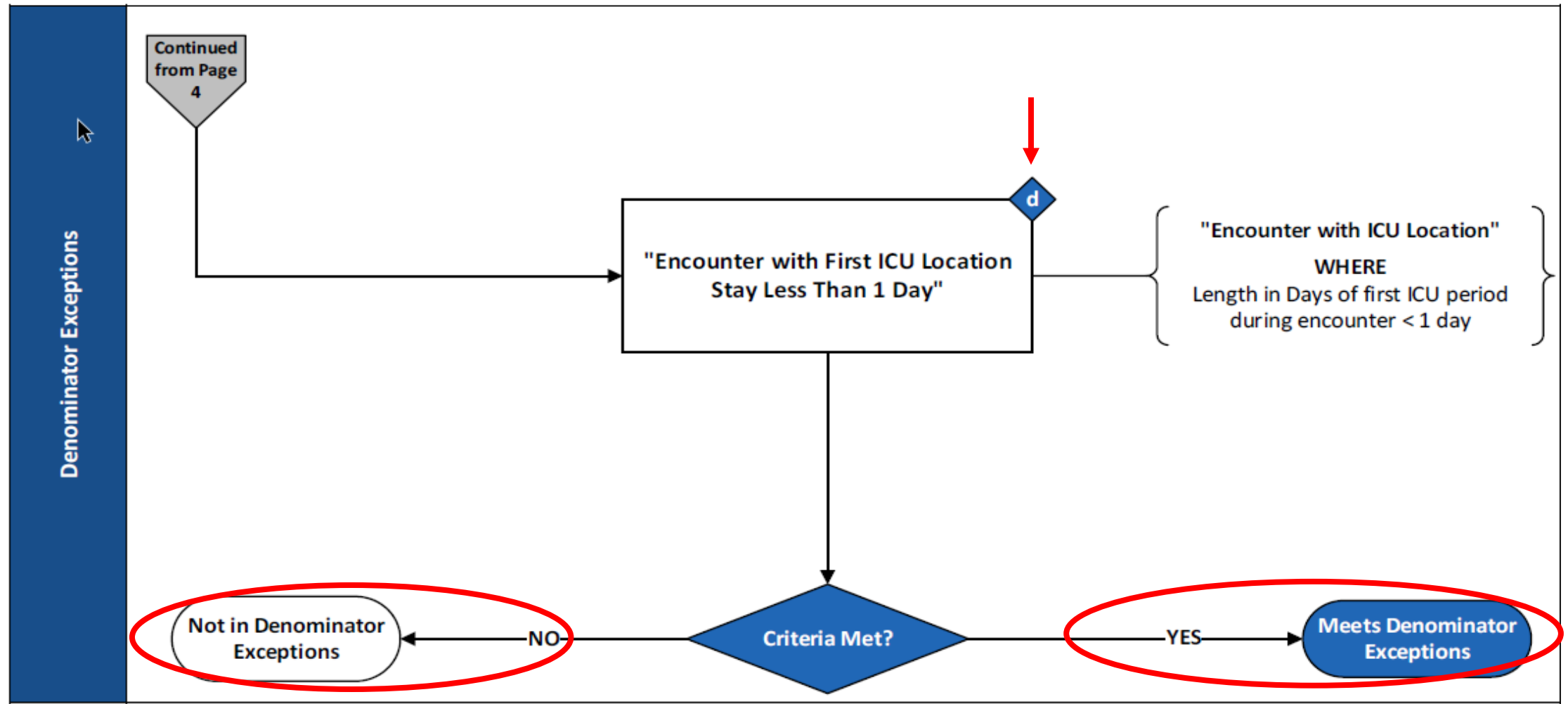
VTE -2 Measure Flow Diagram (Denominator Exclusions)



VTE -2 Measure Flow Diagram (Numerator)



VTE -2 Measure Flow Diagram (Denominator Exceptions)



VTE -2 Measure Flow Diagram (Measure Calculation)

Sample Calculation

Performance Rate =

Numerator (c1 + c2 + c3 + c4 + c5 = 50)

Denominator (a = 100) - Denominator Exclusions (b1 + b2 + b3 + b4 = 20) – Denominator Exceptions (d = 20)

= 83%



Initial Population: 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

“Admission without VTE or Obstetrical Conditions” EncounterWithoutConditions
 where AgeInYearsAt(date from start of
 EncounterWithoutConditions.relevantPeriod) >= 18

VTE.Admission without VTE or Obstetrical Conditions

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

Denominator: VTE-2

“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 (2)

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 (3)

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

“Encounter with ICU Location” Qualifying Encounter ICU
with (“SCIP VTE Selected Surgery” Procedure
where Procedure.rank = 1) Selected SCIP Procedure
such that Global.“NormalizeInterval” (Selected SCIP Procedure.relevant Datetime,
Selected SCIP Procedure.relevant Period) ends during day of
TJC.“CalendarDayOfOrDayAfter”(VTE.“StartOfFirst ICU”(Qualifying Encounter ICU))

Denominator Exclusions: VTE-2 (4)

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 (5)

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))~~
 Interval[date from (start of Global.“HospitalizationWithObservation”(Encounter)),
 date from (startOfFirstICU(Encounter)) +1 day]

Denominator Exclusions: VTE-2 (6)

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
<p>Patients who received VTE prophylaxis:</p> <ul style="list-style-type: none"> between the day of arrival and the day after hospital admission <p>OR</p> <ul style="list-style-type: none"> the day of or the day after surgery end date (for surgeries that end the day of or the day after hospital admission) 	<p>Patients who received VTE prophylaxis:</p> <ul style="list-style-type: none"> the day of or the day after ICU admission (or transfer) <p>OR</p> <ul style="list-style-type: none"> 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)
<p>Patients who have documentation of a reason why no VTE prophylaxis was given:</p> <ul style="list-style-type: none"> between the day of arrival and the day after hospital admission <p>OR</p> <ul style="list-style-type: none"> the day of or the day after surgery end date (for surgeries that end the day of or the day after hospital admission) 	<p>Patients who have documentation of a reason why no VTE prophylaxis was given:</p> <ul style="list-style-type: none"> between the day of arrival and the day after ICU admission (for patients directly admitted as inpatients to the ICU) <p>OR</p> <ul style="list-style-type: none"> 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 ICU Location" QualifyingEncounterICU
 where Global."LengthInDays"
 (VTE."FirstICULocationPeriod"(QualifyingEncounterICU))< 1

Resources

eCQI Resource Center

CMS EH Measures

<https://ecqi.healthit.gov/eligible-hospital/critical-access-hospital-eCQMs>

Get Started with eCQMs

https://ecqi.healthit.gov/ecqms?qt-tabs_ecqm=educationn

Teach Me Clinical Quality Language (CQL) Video Series

https://ecqi.healthit.gov/cql?qt-tabs_cql=2

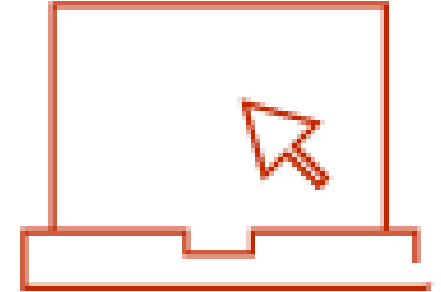
Hospitalization with Observation -

https://www.youtube.com/watch?v=3yqwOU2XcZM&ab_channel=CMSHHSgov

What is a Value Set - <https://register.gotowebinar.com/recording/4766956164118938369>

Coalesce - <https://www.youtube.com/watch?v=DhnVgs6PYxs>

Normalize Interval - https://www.youtube.com/watch?v=PKKta_fKKh8



Additional Resources

Value Set Authority Center (VSAC) Support

<https://www.nlm.nih.gov/vsac/support/index.html>

Pioneers In Quality

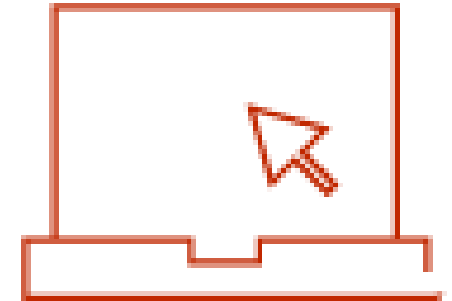
<https://www.jointcommission.org/measurement/pioneers-in-quality/>

Expert to Expert

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

ONC Issue Tracking System

<https://oncprojecttracking.healthit.gov/>



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<https://www.jointcommission.org/measurement/quality-measurement-webinars-and-videos/expert-to-expert-webinars/#sort=%40resourcedate%20descending>



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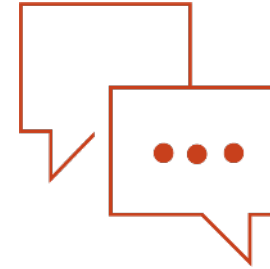
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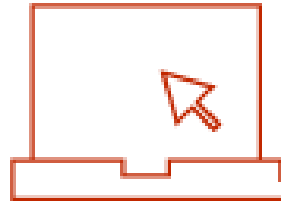
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Additional Resource: VTE-2 Numerator Detail

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 (2)

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
( 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 (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"]
union ["Procedure, Performed": "Application of Venous Foot Pumps"]
union ["Procedure, Performed": "Application of Graduated Compression Stockings"]
```

Numerator: VTE-2 (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

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 (5)

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

("Encounter with ICU Location" QualifyingEncounterICU
 With ["Diagnosis": "Atrial Fibrillation Flutter 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 (6)

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

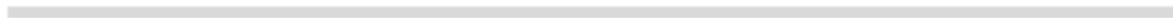
Numerator: VTE-2 (7)

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 (8)

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"~~ date from (start of
Global."HospitalizationWithObservation" (Encounter)), ~~TJC."TruncateTime"~~ date from
(startOfFirstICU(Encounter) ~~+ 2 days~~) + 1 day]

Numerator: VTE-2 (9)

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 (10)

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 (11)

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" NoMechanicalProphylaxis
where NoMechanicalProphylaxis..negationRationale in "Medical Reason For Not Providing Treatment"
and Global."NormalizeInterval" ( AnesthesiaProcedure.relevantDatetime,
    AnesthesiaProcedure.relevantPeriod ) ends 1 day after day of VTE."StartOfFirstICU" (
    QualifyingEncounterICU )
and NoMechanicalProphylaxis.authorDatetime during day of TJC."CalendarDayOfOrDayAfter"
(end of Global."NormalizeInterval" (AnesthesiaProcedure.relevantDatetime,
    AnesthesiaProcedure.relevantPeriod ) )
return QualifyingEncounterICU

```

Numerator: VTE-2 (12)

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"

Acronyms

ASH	American Society of Hematology
CDC	Centers for Disease Control and Prevention
CY	Calendar Year
DVT	Deep-vein Thrombosis
eCQM	Electronic Clinical Quality Measure
ED	Emergency Department
EHR	Electronic Health Record
FY	Fiscal Year
HIQR	Hospital Inpatient Quality Reporting
ICD10	International Classification of Diseases, Tenth Revision
ICU	Intensive Care Unit
IP	Initial Population
LMWH	Low Molecular Weight Heparin

Acronyms (Continued)

NQF	National Quality Forum
ORYX	The Joint Commission's ORYX initiative integrates performance measurement data into the accreditation process.
PE	Pulmonary Embolism
SCIP	Surgical Care Improvement Project
SNOMED CT	Systematized Nomenclature of Medicine - Clinical Terms
UFH	Unfractionated heparin
VSAC	Value Set Authority Center
VTE	Venous Thromboembolism