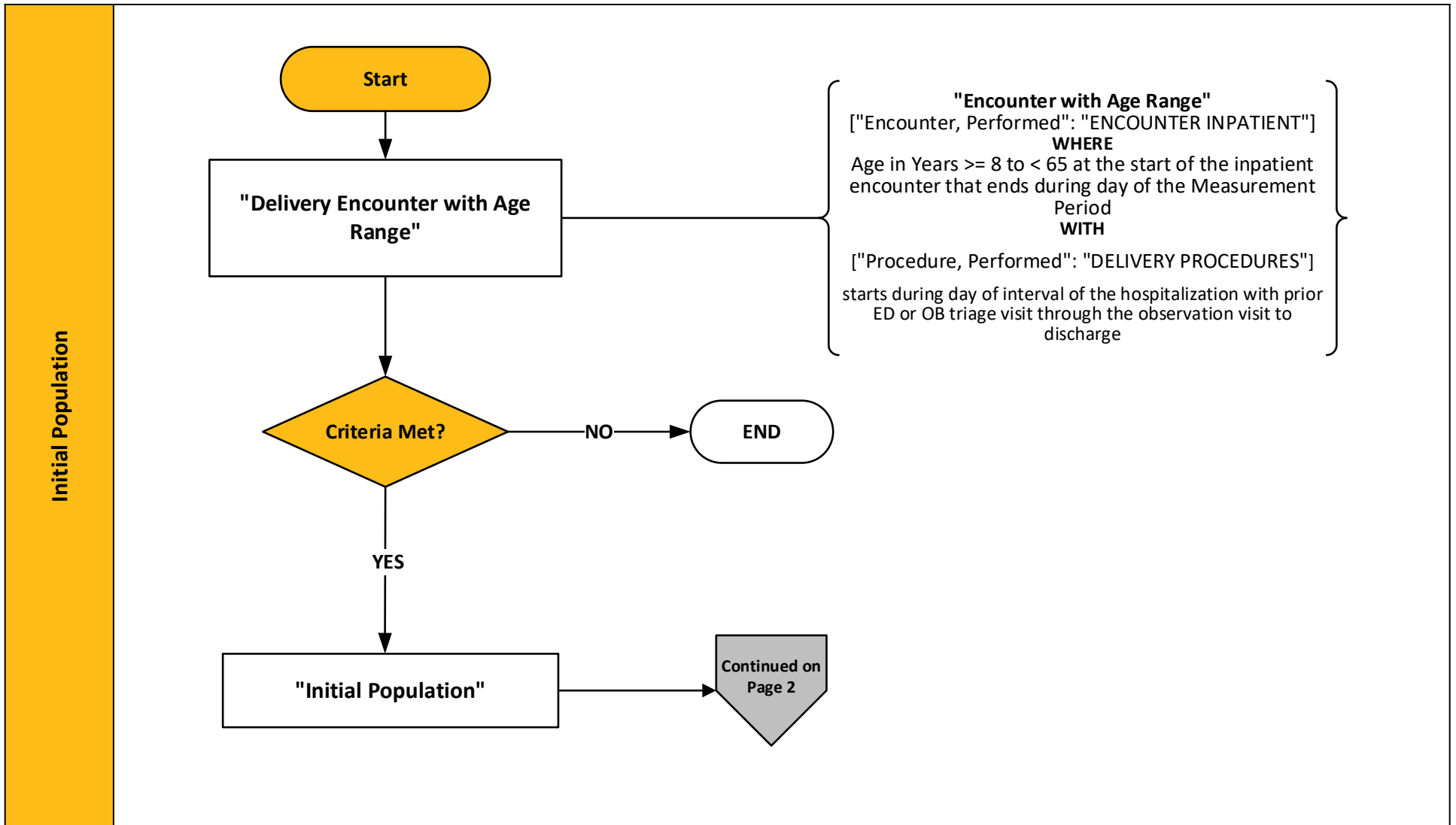# 2024 eCQM Flow – **CMS1028v2: Severe Obstetric Complications (PC-07)***

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

Initial Population

Start

"Delivery Encounter with Age Range"

"Encounter with Age Range"
["Encounter, Performed": "ENCOUNTER INPATIENT"]
WHERE
Age in Years >= 8 to < 65 at the start of the inpatient encounter that ends during day of the Measurement Period
WITH
["Procedure, Performed": "DELIVERY PROCEDURES"]
starts during day of interval of the hospitalization with prior ED or OB triage visit through the observation visit to discharge

Criteria Met? — NO → **END**

YES

"Initial Population" → Continued on Page 2

2024 eCQM Flow – **CMS1028v2: Severe Obstetric Complications (PC-07)***

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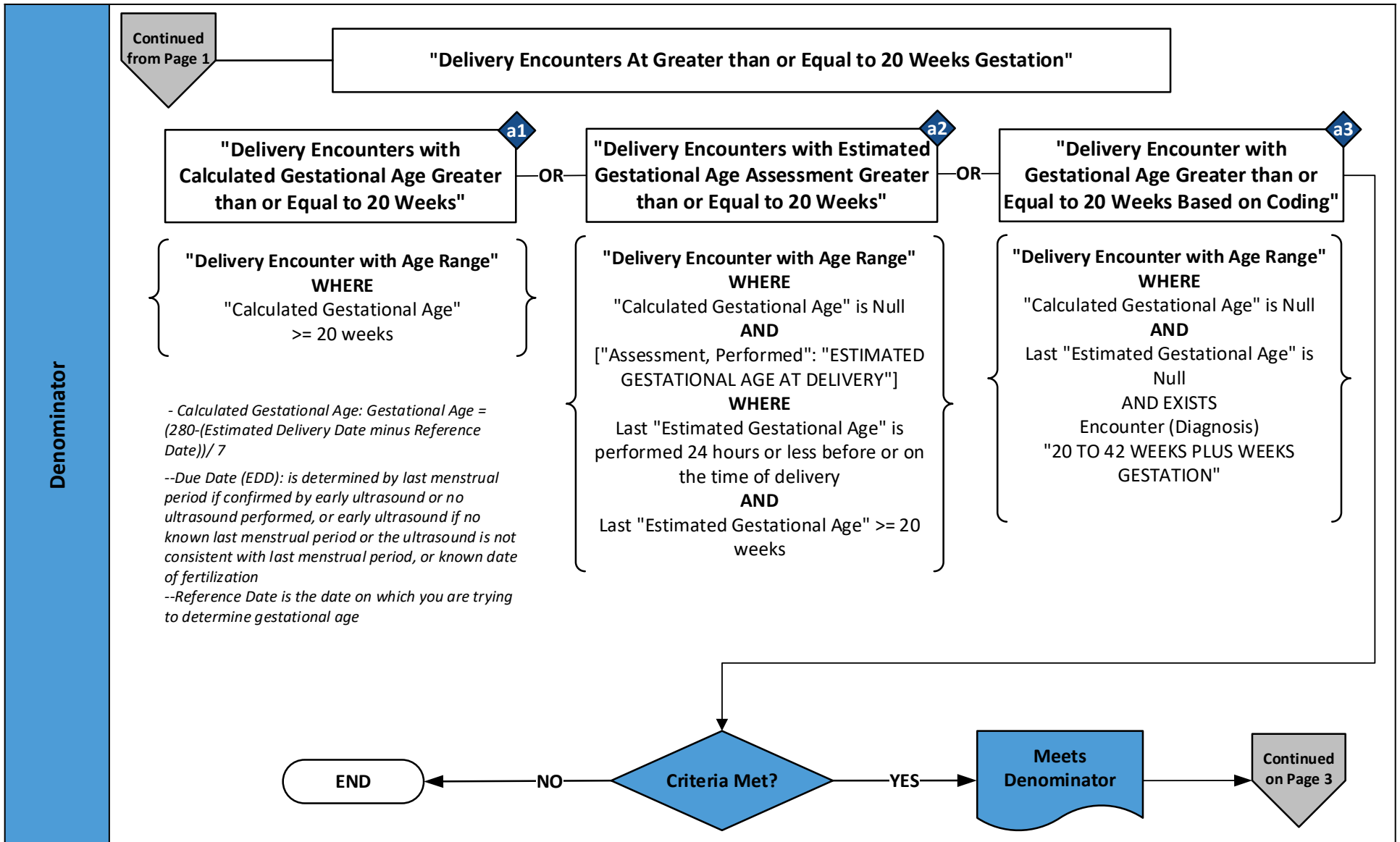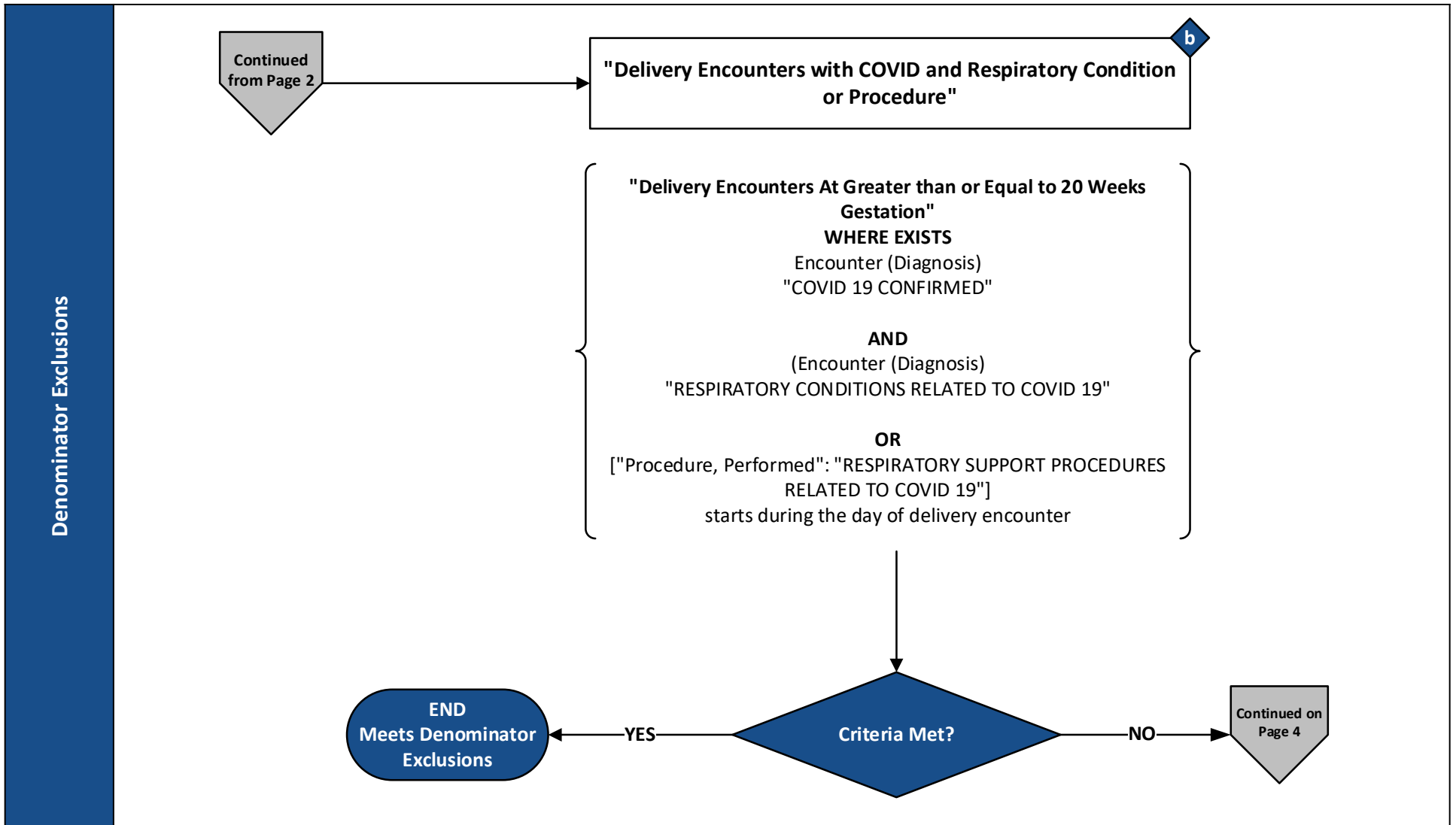
Measure Flow Diagram (Continued)

Denominator

Continued from Page 1

"Delivery Encounters At Greater than or Equal to 20 Weeks Gestation"

a1
"Delivery Encounters with Calculated Gestational Age Greater than or Equal to 20 Weeks"

—OR—

a2
"Delivery Encounters with Estimated Gestational Age Assessment Greater than or Equal to 20 Weeks"

—OR—

a3
"Delivery Encounter with Gestational Age Greater than or Equal to 20 Weeks Based on Coding"

"Delivery Encounter with Age Range"
WHERE
"Calculated Gestational Age"
>= 20 weeks

- Calculated Gestational Age: Gestational Age = (280-(Estimated Delivery Date minus Reference Date))/ 7

--Due Date (EDD): is determined by last menstrual period if confirmed by early ultrasound or no ultrasound performed, or early ultrasound if no known last menstrual period or the ultrasound is not consistent with last menstrual period, or known date of fertilization
--Reference Date is the date on which you are trying to determine gestational age

"Delivery Encounter with Age Range"
WHERE
"Calculated Gestational Age" is Null
AND
["Assessment, Performed": "ESTIMATED GESTATIONAL AGE AT DELIVERY"]
WHERE
Last "Estimated Gestational Age" is performed 24 hours or less before or on the time of delivery
AND
Last "Estimated Gestational Age" >= 20 weeks

"Delivery Encounter with Age Range"
WHERE
"Calculated Gestational Age" is Null
AND
Last "Estimated Gestational Age" is Null
AND EXISTS
Encounter (Diagnosis)
"20 TO 42 WEEKS PLUS WEEKS GESTATION"

END ←—NO— **Criteria Met?** —YES→ **Meets Denominator** → Continued on Page 3

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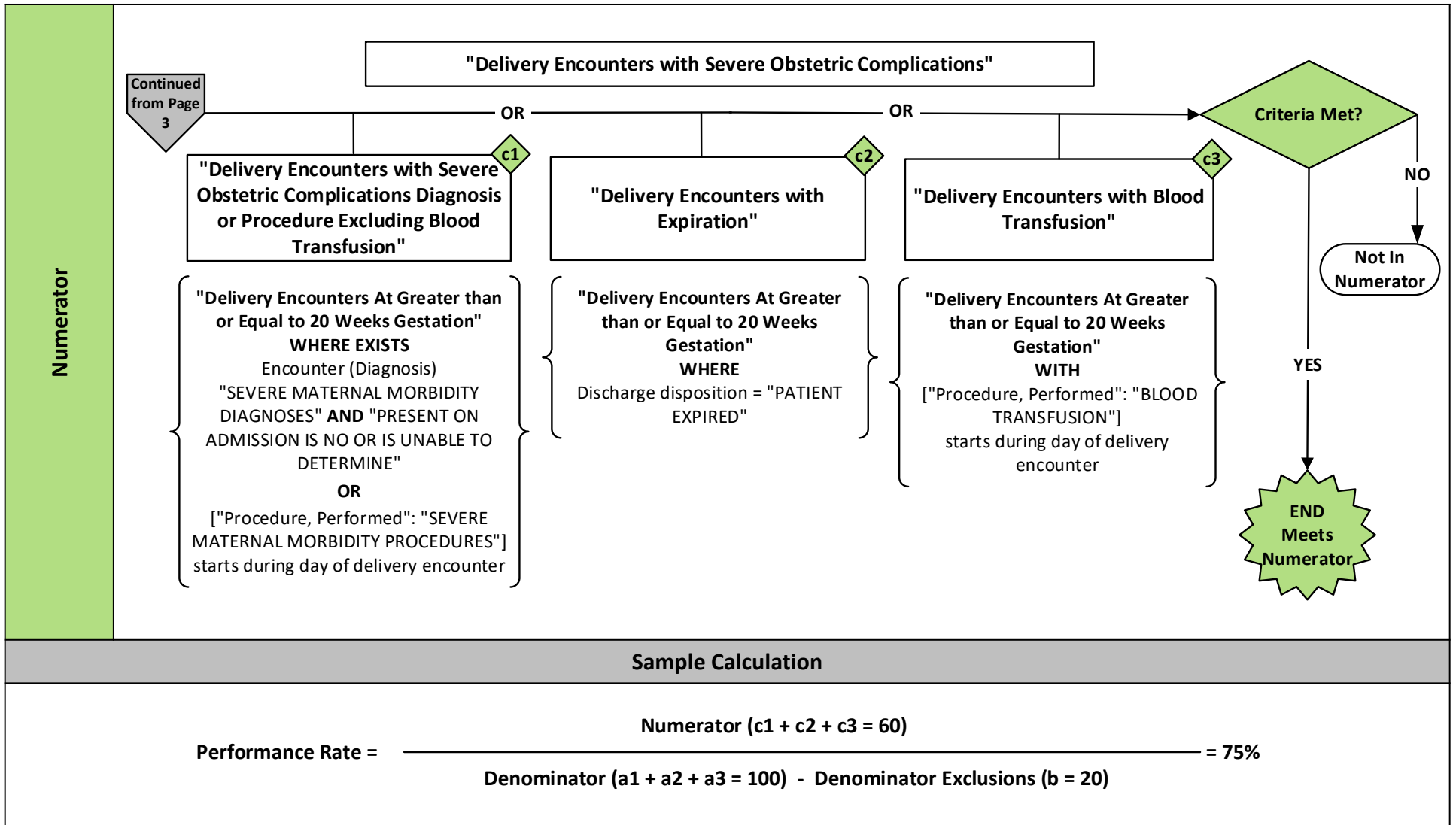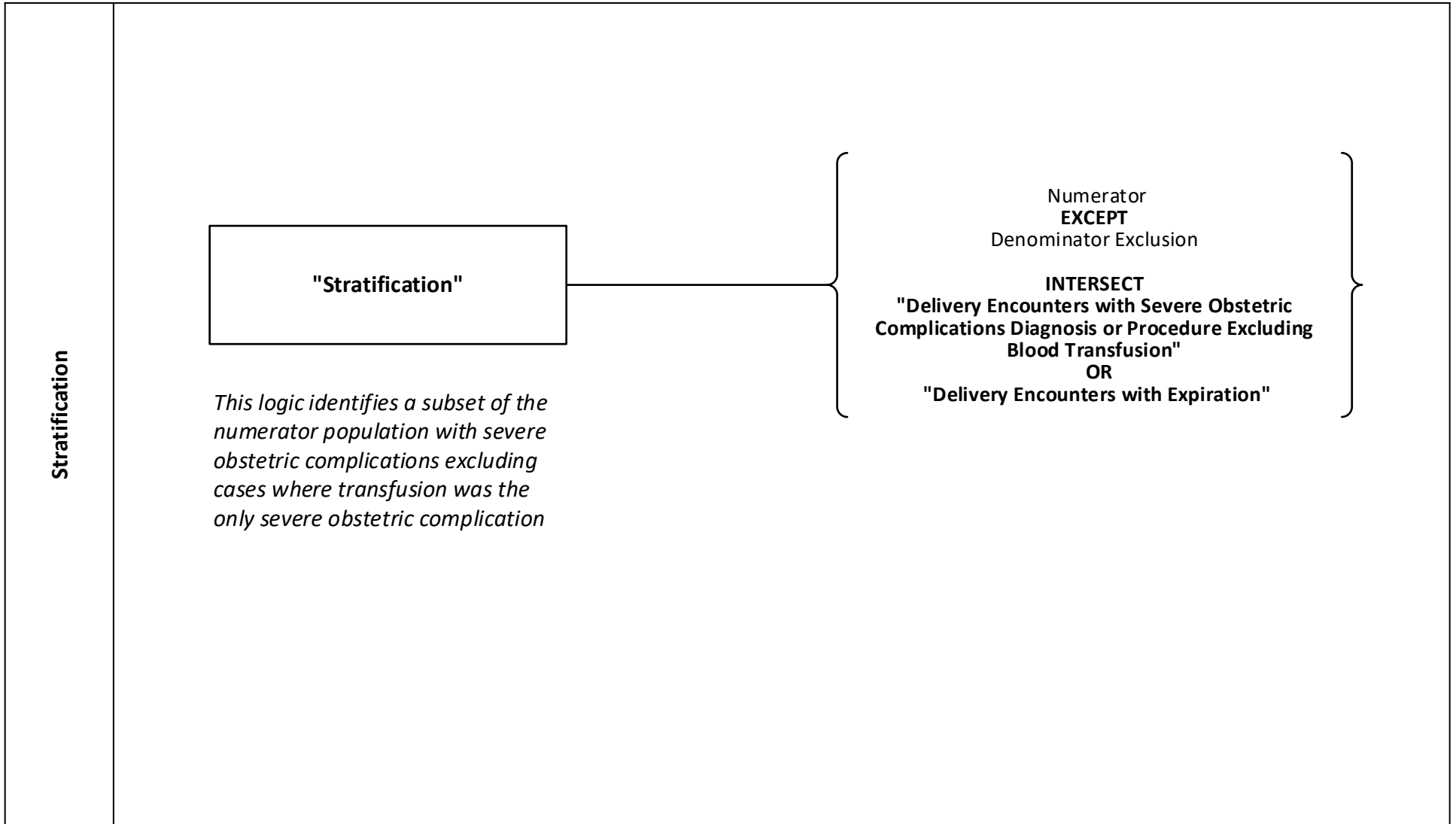
Measure Flow Diagram (Continued)

Denominator Exclusions

Continued from Page 2 → **"Delivery Encounters with COVID and Respiratory Condition or Procedure"** (b)

"Delivery Encounters At Greater than or Equal to 20 Weeks Gestation"
WHERE EXISTS
Encounter (Diagnosis)
"COVID 19 CONFIRMED"

AND
(Encounter (Diagnosis)
"RESPIRATORY CONDITIONS RELATED TO COVID 19"

OR
["Procedure, Performed": "RESPIRATORY SUPPORT PROCEDURES RELATED TO COVID 19"]
starts during the day of delivery encounter

Criteria Met?

← YES — **END Meets Denominator Exclusions**

— NO → Continued on Page 4

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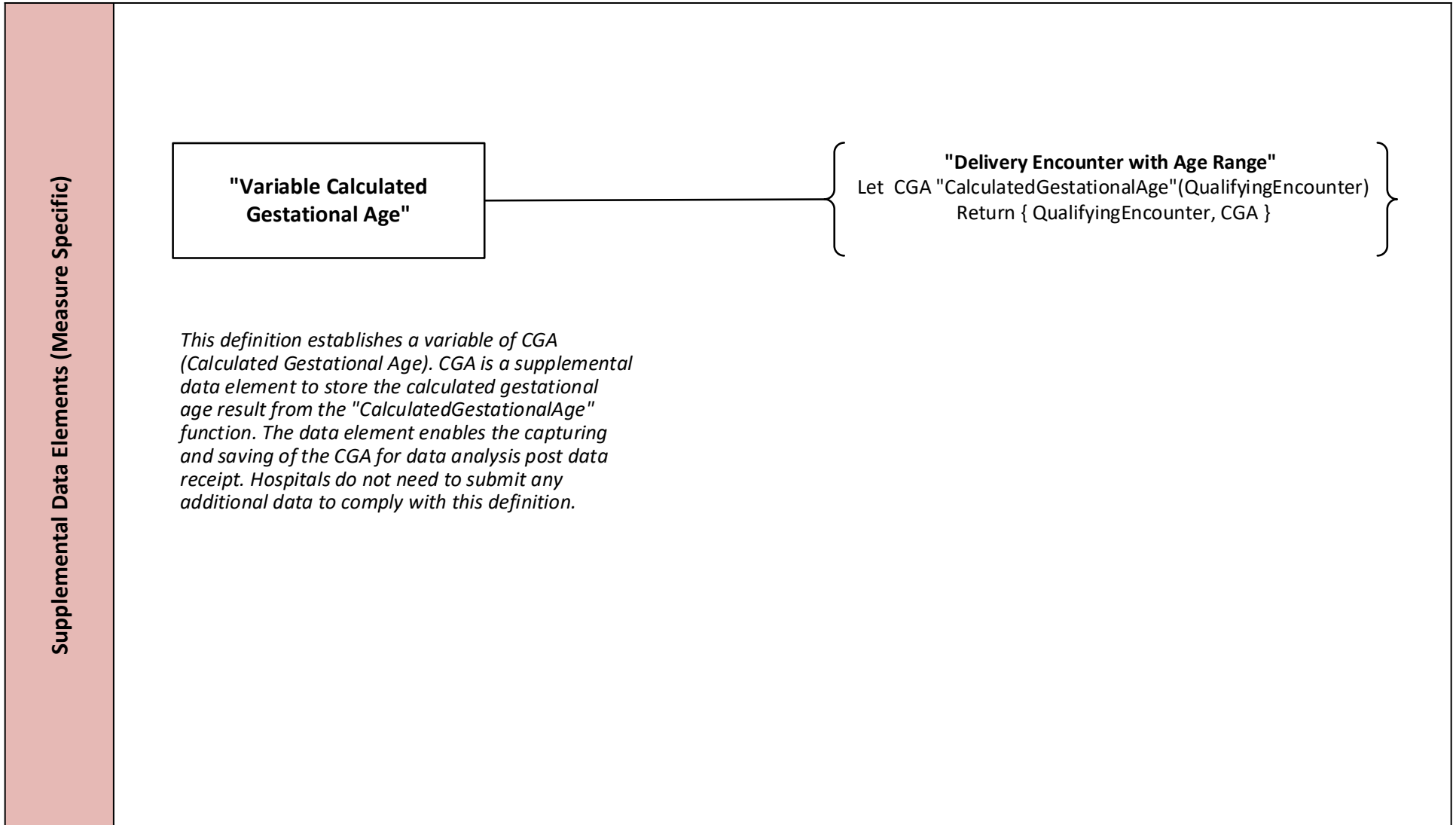
Measure Flow Diagram (Continued)

Numerator

Continued from Page 3

"Delivery Encounters with Severe Obstetric Complications"

OR — c1 — OR — c2 — OR — c3

"Delivery Encounters with Severe Obstetric Complications Diagnosis or Procedure Excluding Blood Transfusion"

"Delivery Encounters At Greater or Equal to 20 Weeks Gestation"
WHERE EXISTS
Encounter (Diagnosis)
"SEVERE MATERNAL MORBIDITY DIAGNOSES" **AND** "PRESENT ON ADMISSION IS NO OR IS UNABLE TO DETERMINE"
OR
["Procedure, Performed": "SEVERE MATERNAL MORBIDITY PROCEDURES"] starts during day of delivery encounter

"Delivery Encounters with Expiration"

"Delivery Encounters At Greater than or Equal to 20 Weeks Gestation"
WHERE
Discharge disposition = "PATIENT EXPIRED"

"Delivery Encounters with Blood Transfusion"

"Delivery Encounters At Greater than or Equal to 20 Weeks Gestation"
WITH
["Procedure, Performed": "BLOOD TRANSFUSION"]
starts during day of delivery encounter

Criteria Met?

NO → Not In Numerator

YES → **END Meets Numerator**

Sample Calculation

Performance Rate =
$$\frac{\text{Numerator } (c_1 + c_2 + c_3 = 60)}{\text{Denominator } (a_1 + a_2 + a_3 = 100) \ - \ \text{Denominator Exclusions } (b = 20)} = 75\%$$

2024 eCQM Flow – **CMS1028v2: Severe Obstetric Complications (PC-07)***

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Measure Flow Diagram (Continued)

Stratification

"Stratification"

This logic identifies a subset of the numerator population with severe obstetric complications excluding cases where transfusion was the only severe obstetric complication

Numerator
EXCEPT
Denominator Exclusion

INTERSECT
"Delivery Encounters with Severe Obstetric Complications Diagnosis or Procedure Excluding Blood Transfusion"
OR
"Delivery Encounters with Expiration"

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Measure Flow Diagram (Continued)

Supplemental Data Elements (Measure Specific)

"**Variable Calculated Gestational Age"**

"**Delivery Encounter with Age Range"**
Let CGA "CalculatedGestationalAge"(QualifyingEncounter)
Return { QualifyingEncounter, CGA }

This definition establishes a variable of CGA (Calculated Gestational Age). CGA is a supplemental data element to store the calculated gestational age result from the "CalculatedGestationalAge" function. The data element enables the capturing and saving of the CGA for data analysis post data receipt. Hospitals do not need to submit any additional data to comply with this definition.

2024 eCQM Flow – **CMS1028v2: Severe Obstetric Complications (PC-07)***

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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 is reported as the overall rate of patients with severe obstetric complications which occur during the inpatient delivery hospitalization.
Initial Population	Inpatient hospitalizations for patients age >= 8 years and < 65 admitted to the hospital for inpatient acute care who undergo a delivery procedure with a discharge date that ends during the measurement period
Denominator	Inpatient hospitalizations for patients delivering stillborn or live birth with >= 20 weeks, 0 days gestation completed
Denominator Exclusions	Inpatient hospitalizations for patients with confirmed diagnosis of COVID with COVID-related respiratory condition or patients with confirmed diagnosis of COVID with COVID-related respiratory procedure
Numerator	Inpatient hospitalizations for patients with severe obstetric complications (not present on admission that occur during the current delivery encounter) including the following: • Severe maternal morbidity diagnoses • Severe maternal morbidity procedures • Discharge disposition of expired

2024 eCQM Flow – **CMS1028v2: Severe Obstetric Complications (PC-07)***

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Measure Flow Narrative (Continued)

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

Stratification I	Delivery hospitalizations with severe obstetric complications excluding hospitalizations where transfusion was the only severe obstetric complication.
Risk Adjustment	Pre-existing conditions and variables must be present on admission: • *Anemia* • *Asthma* • *Autoimmune Disease* • *Bariatric Surgery* • *Bleeding disorder* • *Cardiac Disease* • *Gastrointestinal Disease* • *Gestational Diabetes* • *HIV* • *Housing Instability* • *Hypertension* • *Maternal Age (derived from birthdate)* • *Mental Health Disorder* • *Multiple Pregnancy* • *Neuromuscular Disease* • *Other Pre-eclampsia* • *Placenta Previa* • *Placental Abruption* • *Placental Accreta Spectrum* • *Pre-existing Diabetes* • *Preterm Birth* • *Previous Cesarean* • *Pulmonary Hypertension* • *Renal Disease* • *Severe Pre-eclampsia* • *Substance Abuse* • *Thyrotoxicosis* • *Long-term Anticoagulant Use* • *Obstetric VTE* *Additional variables used for risk adjustment include Lab and Physical Exam Results. Report the first resulted value 24 hours prior to start of encounter and before time of delivery in UCUM units specified:* • *Heart rate: {beats}/min* • *Systolic blood pressure: mm[Hg]* • *White blood cell count: 10*3/uL* • *Hematocrit: %* The Severe Obstetric Complications Risk Adjustment Methodology Report is available on the eCQI Resource Center (https://ecqi.healthit.gov).

2024 eCQM Flow – **CMS1028v2: Severe Obstetric Complications (PC-07)***

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Measure Flow Narrative (Continued)

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

Supplemental Data Elements (Measure Specific)	For every patient evaluated by this measure also identify calculated gestational age.