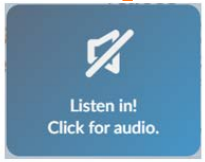
Pioneers in Quality
Expert to Expert Webinar Series

2023 Annual Updates for 2024 Reporting Year
ePC-02 Cesarean Birth
ePC-07 Severe Obstetric Complications

September 26, 2023

Webinar Audio – Information & Tips



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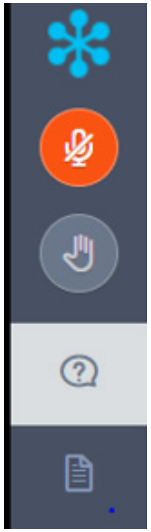

Welcome!

But first things first…

"Get Started with eCQMs"

Slides are available now!

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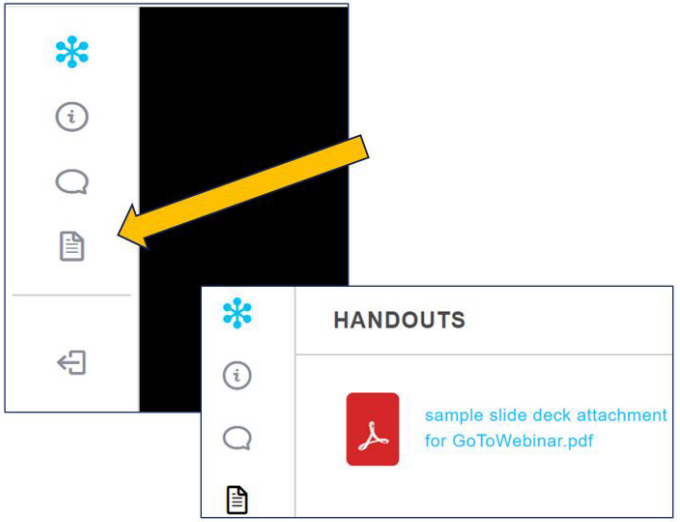

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Learning Objectives:

- Navigate to the measure specifications, value sets, measure flow diagrams and technical release notes
- Apply concepts learned about the logic and intent for the PC-02 and PC-07 eCQMs
- Prepare to implement the PC-02 and PC-07 eCQMs for the 2024 eCQM reporting period
- Identify common issues and questions regarding the PC-02 and PC-07 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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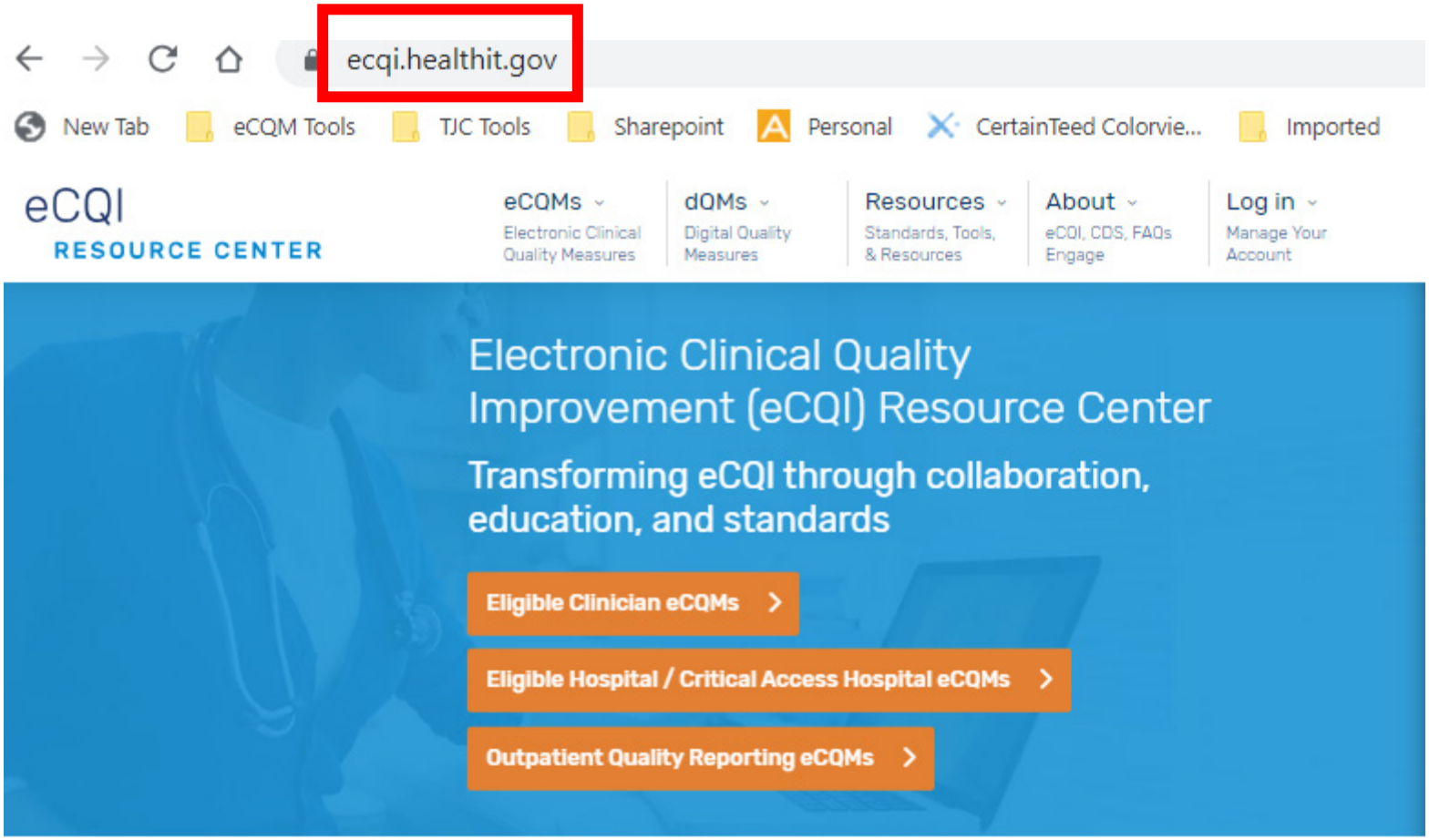
Pioneers in Quality Expert to Expert Webinar Agenda: PC eCQMs

- Demonstrate eCQI Resource Center navigation to measure specifications, value sets, measure flow diagrams and technical release notes
- Review the measure flow/algorithm
- Review changes made to PC-02, PC-07 eCQMs
- Review FAQs
- Facilitated Audience Q&A Segment

eCQI Resource Center Website Demo



ePC-02 Cesarean Birth
ePC-07 Severe Obstetric Complications

ePC-02 & ePC-07: Adopted Into CMS Program

- CMS approved ePC-02 and ePC-07 for use in the Hospital Inpatient Quality Reporting Program.
- Organizations can self-select to report the measures to CMS for calendar year (CY) 2023 reporting period/fiscal year (FY) 2025 payment determination
- Mandatory reporting beginning with CY 2024 reporting period/FY 2026 payment determination.

ePC-02 & ePC-07: TJC ORYX Program Requirements

- ePC-02 and ePC-07 were optional measures for the 2022 and 2023 ORYX requirements.
- TJC is considering making ePC-02 and ePC-07 required for reporting year 2024.
- Check the ORYX requirements page in the fall for final decision.

ePC-02 & ePC-07: Consensus Based Entity (CBE) Endorsement

- ePC-02 was endorsed in 2022
- ePC-07 was submitted for trial use endorsement for the Spring 2023 Cycle

ePC-02 Cesarean Birth

ePC-02 Rationale

- Measure focuses on cesarean birth in first-time moms with a single full-term baby in the head down position or Nulliparous Term Singleton Vertex (NTSV)
- The NTSV population accounts for a large majority of the variable portion of the Cesarean Birth rate and is the area most affected by subjectivity

ePC-02 Rationale (continued)

- Increased risk of severe maternal morbidity (SMM) for cesarean delivery compared to vaginal delivery
- Physician factors may be the driver for the difference in NTSV rates
- Some hospitals have made significant improvements, but there are an appreciable number of hospitals with rates over 30%

ePC-02 Measure Changes from 2023 to 2024 - Clinical

Measure Components	2023 Reporting Year	2024 Reporting Year
Endorsed By	None	National Quality Forum
Guidance	The measure allowed for 2 approaches to determine gestational age (GA): 1. Using the ACOG ReVITALize guidelines. 2. A discrete field in the EHR	The measure allows for 3 approaches to determine GA: 1. Using the ACOG ReVITALize guidelines. 2. A discrete field in the EHR 3. ICD10 or SNOMED codes indicative of weeks gestation.
Denominator Exclusions	Patients with abnormal presentation, or placenta previa	Placenta accreta and vasa previa have been added

ePC-02 Measure Specifications

Description: Nulliparous women with a term, singleton baby in a vertex position delivered by cesarean birth

Initial Population	Denominator	Denominator Exclusion	Numerator
Inpatient hospitalization	Inpatient hospitalization	Inpatient hospitalization	Inpatient hospitalization
Age: >= 8 and < 65 years	Nulliparous patients	Abnormal presentation, placenta previa, placenta accreta or vasa previa during the encounter	Delivery by cesarean section
Delivery procedure with a discharge date that ends during measurement period	Delivery of a live term singleton newborn >= 37 weeks gestation		

ePC-02 Measure Changes from 2023 to 2024 - Technical

Measure Components	2023 Reporting Year	2024 Reporting Year
Denominator	To describe how the eCQM and chart based measure digress, language was present describing that the chart based measure evaluates the data element "Previous Live Births" and abstractors were instructed to answer "no" if a patient had a previous stillbirth or fetal demise.	This language was removed this year as the eCQM and chart based measures are now aligned. The "Previous Live Birth" data element in the chart based measure was changed to "Previous Births" and documentation of previous birth >=20 weeks (regardless of the outcome) should be abstracted as "yes".

ePC-02 Measure Changes from 2023 to 2024 - Technical (continued)

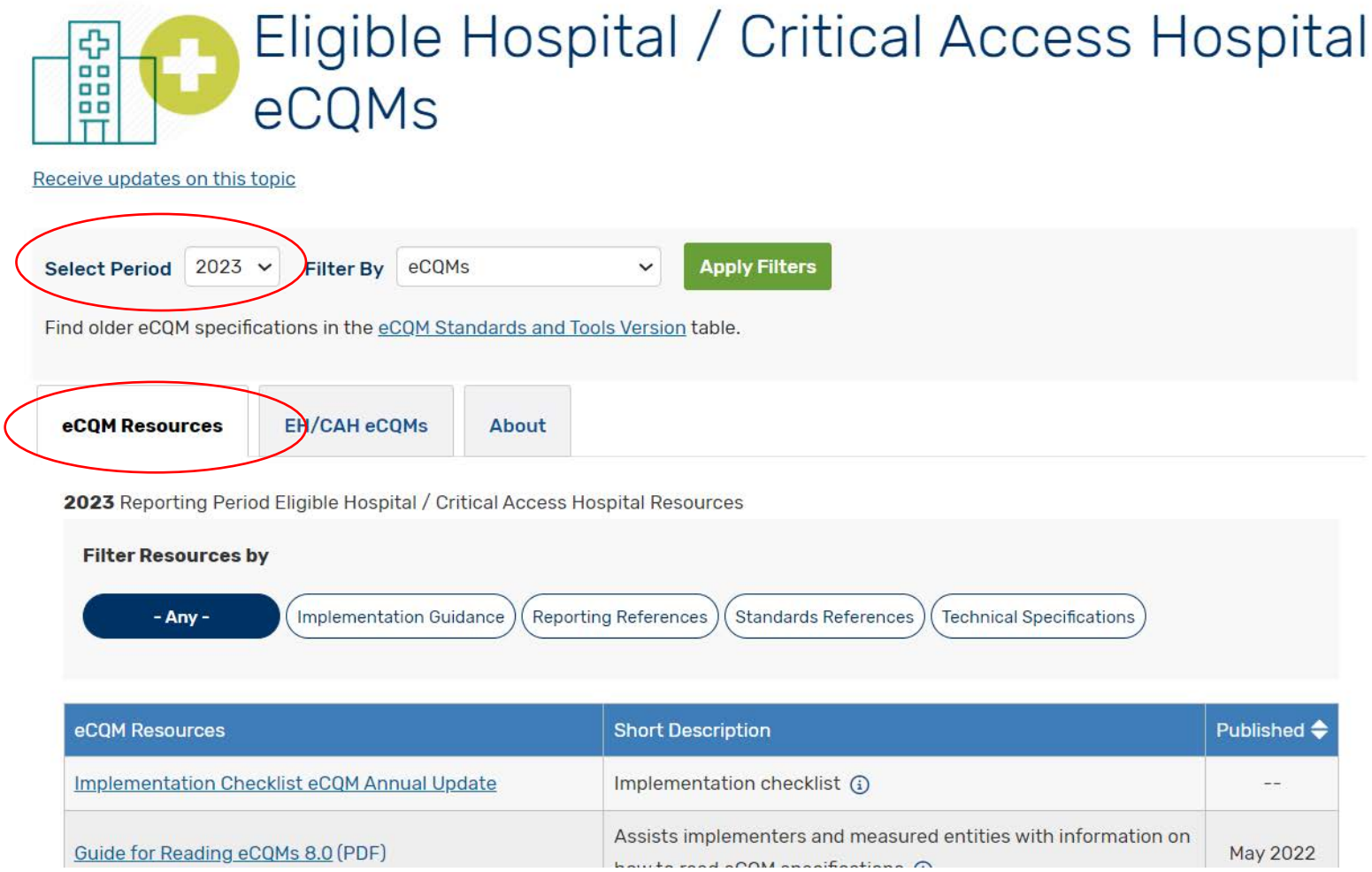
Measure Components	2023 Reporting Year	2024 Reporting Year
Functions/ Definitions	'EarliestOf' and 'relevantPeriod' were absent from Gravida, Parity, Preterm/Term Birth functions 'where' and 'sort by' logic	Added 'EarliestOf' and 'relevantPeriod' to the Gravida, Parity, Preterm/Term Birth functions' 'where' and 'sort by' logic .
Functions	Last Estimated Delivery Date logic did not include 'as DateTime' on the .result logic	Added 'as DateTime' logic
Functions	'TJC.TruncateTime' and 'FormattedLastEstimatedDeliveryDate' functions were present to eliminate the time if submitted.	Deleted both functions as no longer needed due to addition of 'as DateTime' logic.

ePC-02 Measure Changes from 2023 to 2024 - Technical (continued)

Measure Components	2023 Reporting Year	2024 Reporting Year
Value Set	NA	Added value set “37 to 42 Plus Weeks Gestation” (2.16.840.1.113762.1.4.1045.105) based on change in measure specification.
Value Set	“Placenta Previa”	Renamed to “Placenta Previa or Accreta or Vasa Previa”
Value Set	NA	Multiple value sets with code additions/deletions due to terminology updates or based on review by technical experts, SMEs, and/or public feedback. See value sets for more details.

Navigation to the Measure Flow Diagrams

Navigation to the Measure Flow Diagrams
(continued)

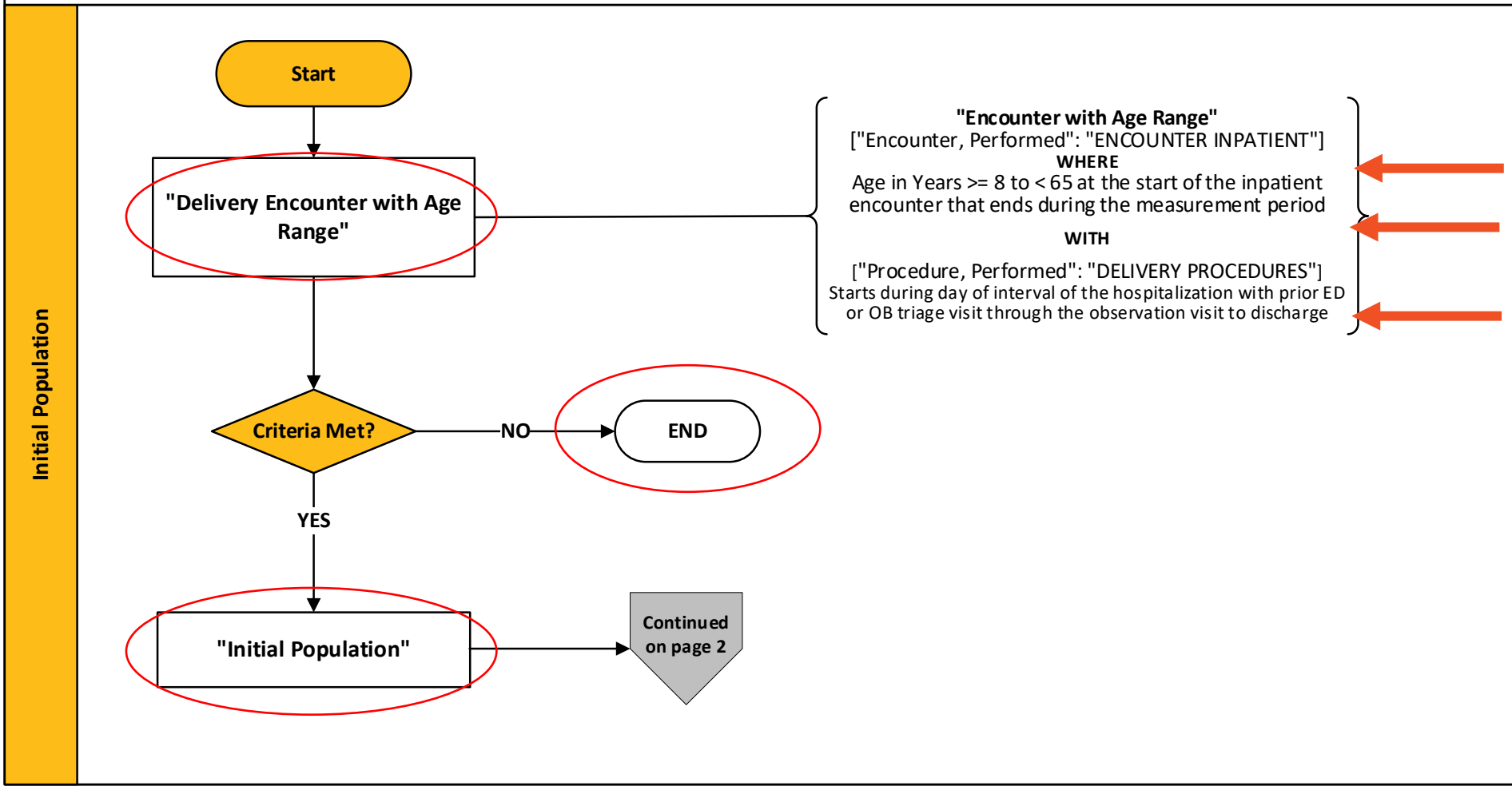


Navigation to the Measure Flow Diagrams
(continued)

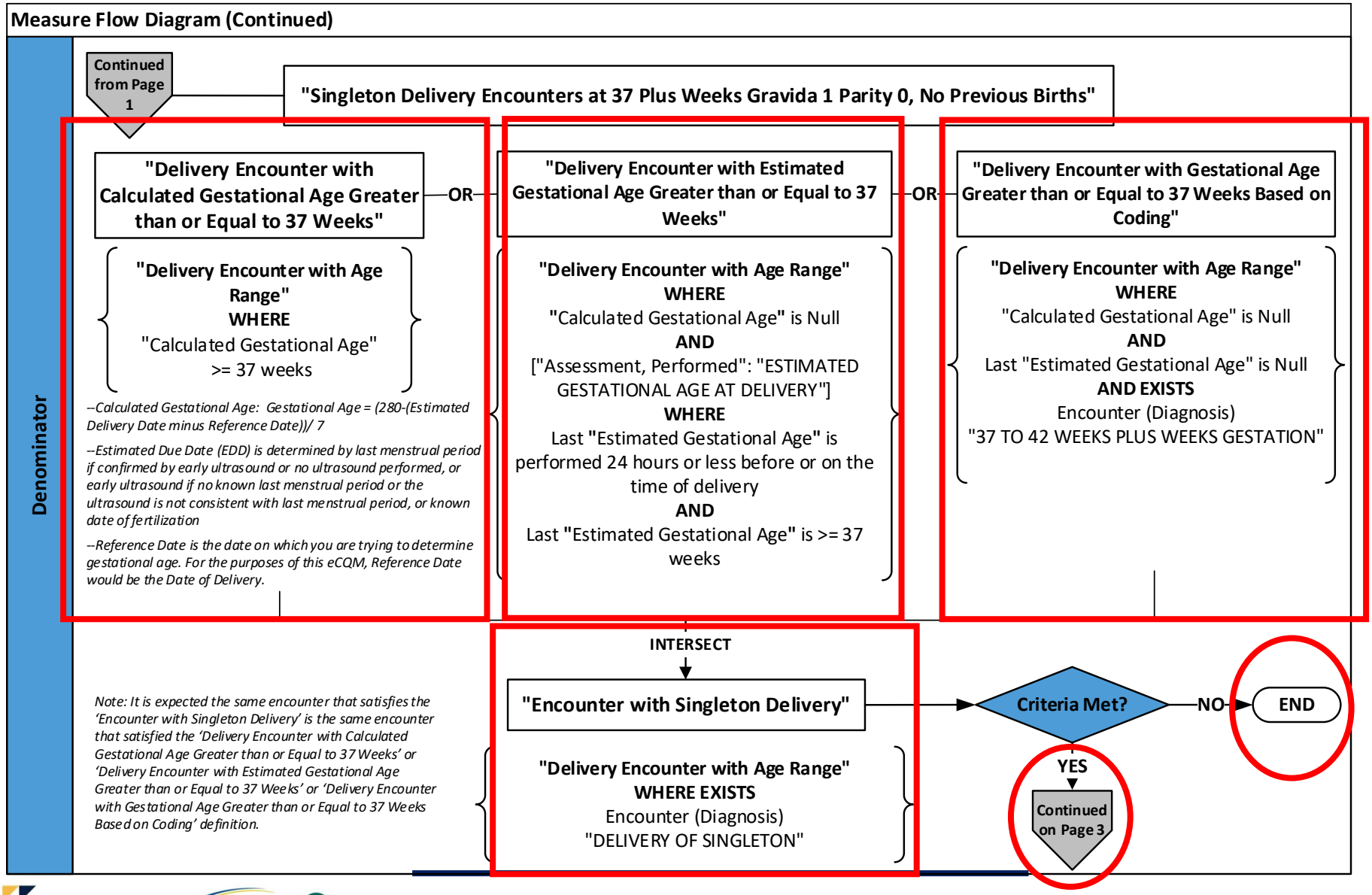
eCQM Resources	Short Description	Published
Implementation Checklist eCQM Annual Update	Implementation checklist	--
Guide for Reading eCQMs 8.0 (PDF)	Assists implementers and measured entities with information on how to read eCQM specifications	May 2022
Hospital Quality Reporting Table of eCQMs (PDF)	List of eCQMs available for use	Sep 2022
eCQM Specifications for Hospital Quality Reporting (ZIP)	eCQM technical specifications	Nov 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 and Hybrid Measure Value Sets	Value sets used with eCQMs and Hybrid Measures	May 2022
EH/CAH Value Sets CMS334 (ZIP)	Value sets used in CMS334v4	Apr 2023
eCQM Direct Reference Codes Lis	eCQM Direct Reference Codes used in eCQMs	May 2022
Binding Parameter Specificatio (ZIP)	Value set metadata	May 2022
eCQM Logic and Implementa idance v6.0 (PDF)	Assists implementers and measured entities with how to use eCQMs and report issues	May 2022
Technical Release Notes	Year over year changes to eCQM logic and terminology	May 2022
Technical Release Not	Year over year changes to eCQM logic and terminology	May 2022
Standards and s 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	Oct 2022
2023 CMS QRDA I Implementation Guide for Hospital Quality Reporting (PDF)	Format for reporting eCQMs to CMS	Mar 2023
2023 CMS QRDA I Schematrons and Sample Files (ZIP)	Rules to validate eCQM reports with samples	Mar 2023
eCQM Annual Update Pre-Publication Document (PDF)	Standards and code system versions for the eCQM Annual Update	Mar 2022

ePC-02 Measure Flow Diagram

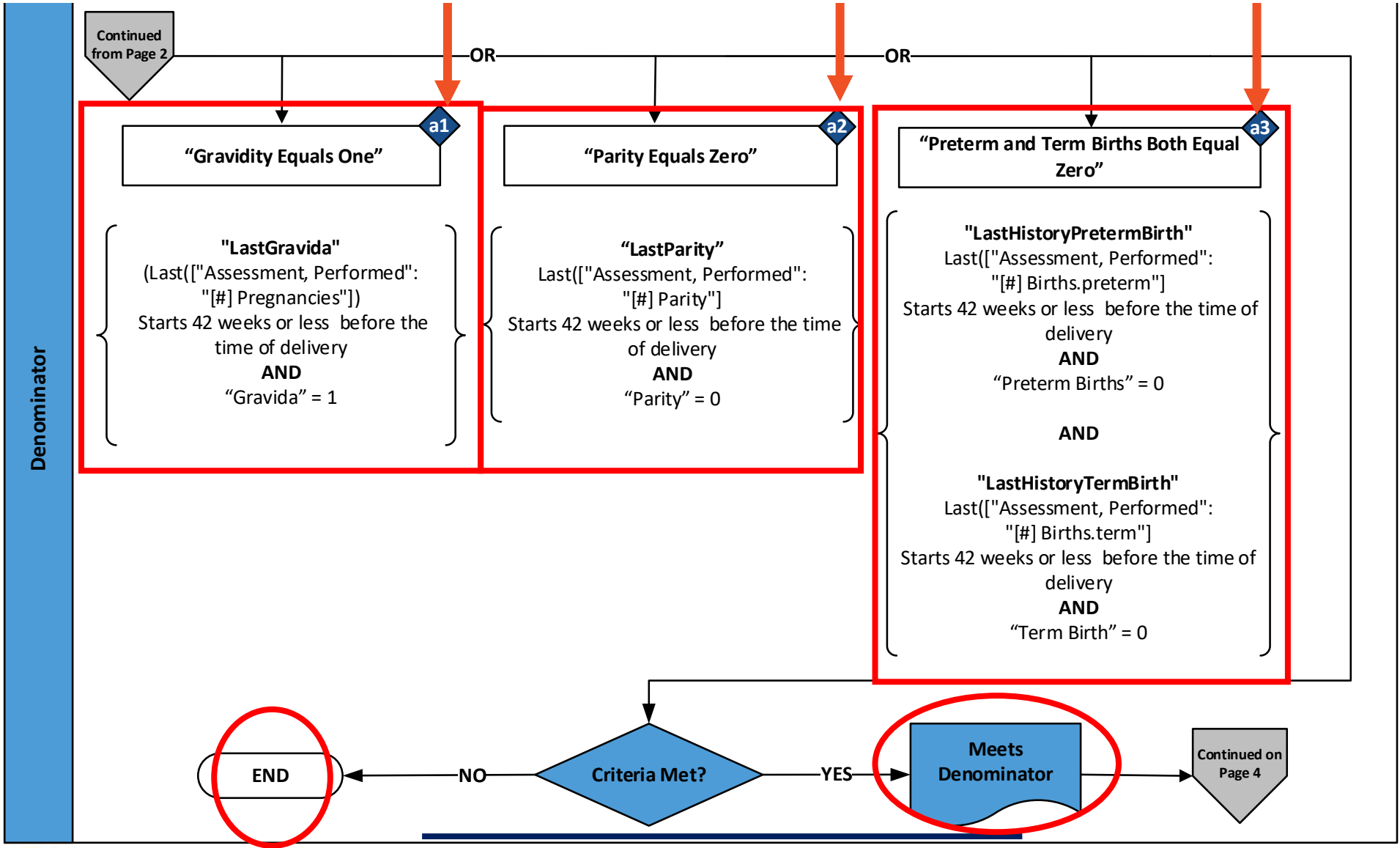
Measure Flow Diagram



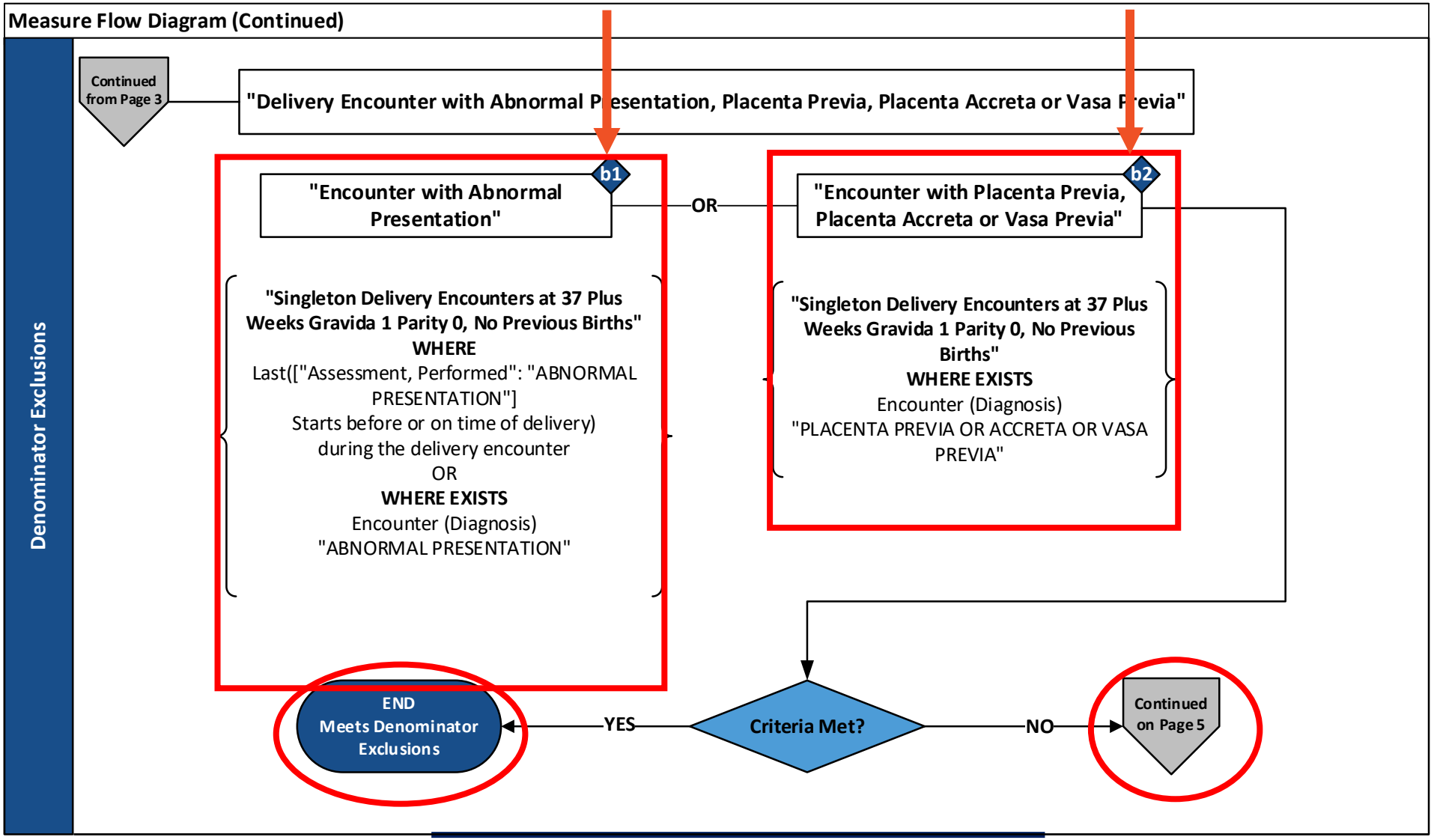
ePC-02 Measure Flow Diagram (continued)



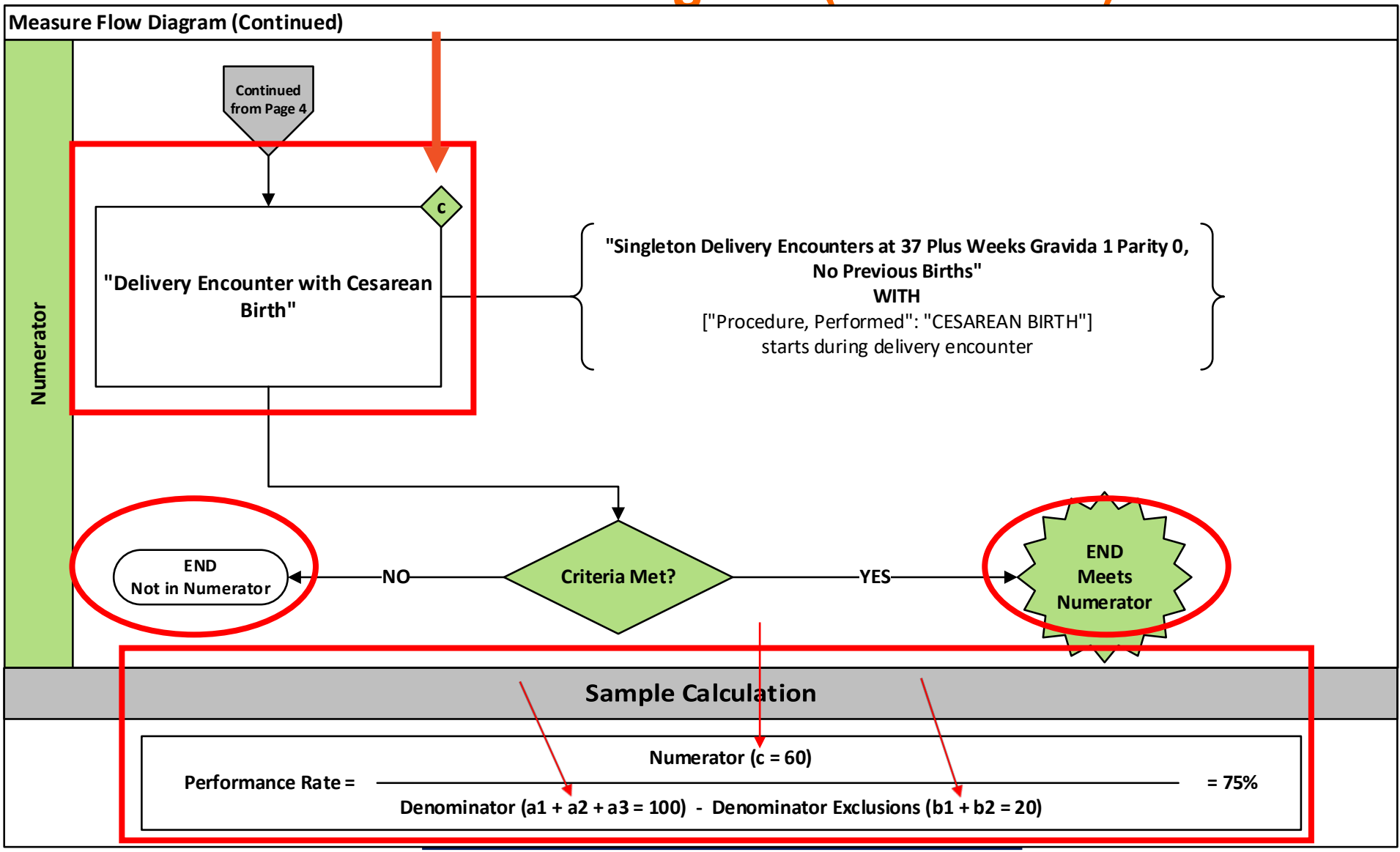
ePC-02 Measure Flow Diagram (continued)



ePC-02 Measure Flow Diagram (continued)



ePC-02 Measure Flow Diagram (continued)



ePC-02 Initial Population

PCMaternal.”Delivery Encounter with Age Range”

PCMaternal.Delivery Encounter with Age Range
"Encounter with Age Range" EncounterWithAge
with ["Procedure, Performed": "Delivery Procedures"] DeliveryProcedure
such that Global."NormalizeInterval" (DeliveryProcedure.relevantDatetime,
DeliveryProcedure.relevantPeriod)
starts during day of
"HospitalizationWithEDOBTriageObservation"(EncounterWithAge)

PCMaternal.Encounter with Age Range
["Encounter, Performed": "Encounter Inpatient"] EncounterInpatient
where AgeInYearsAt(date from start of EncounterInpatient.relevantPeriod)>= 8
and AgeInYearsAt(date from start of EncounterInpatient.relevantPeriod)< 65
and EncounterInpatient.relevantPeriod ends during day of "Measurement Period"

ePC-02 Denominator

Singleton Delivery Encounters at 37 Plus Weeks Gravida 1 Parity 0, No Previous Births

```
( "Delivery Encounter with Gestational Age Greater than or Equal to 37 Weeks"
  intersect "Encounter with Singleton Delivery" ) SingletonEncounterGE37Weeks
  where ( ( "LastGravida"(SingletonEncounterGE37Weeks)= 1 )
      or ( "LastParity"(SingletonEncounterGE37Weeks)= 0 )
      or ( ( "LastHistoryPretermBirth"(SingletonEncounterGE37Weeks)= 0 )
          and ( "LastHistoryTermBirth"(SingletonEncounterGE37Weeks)= 0 )))
```

ePC-02 Denominator (continued 2)

Delivery Encounter with Calculated Gestational Age Greater than or Equal to 37 Weeks

PCMaternal."Delivery Encounter with Age Range“ DeliveryEncounter where PCMaternal."CalculatedGestationalAge" (DeliveryEncounter) >= 37

PCMaternal.CalculatedGestationalAge

(280 - (difference in days between"LastTimeOfDelivery"(Encounter) and “~~Formatted~~LastEstimatedDeliveryDate"(Encounter))) div 7

ePC-02 Denominator (continued 1)

Delivery Encounter with Gestational Age Greater than or Equal to 37 Weeks

"Delivery Encounter with Calculated Gestational Age Greater than or Equal to 37 Weeks"

union

"Delivery Encounter with Estimated Gestational Age Greater than or Equal to 37 Weeks“

union

"Delivery Encounter with Gestational Age Greater than or Equal to 37 Weeks Based on Coding"

ePC-02 Denominator (continued 3)

PCMaternal.LastTimeOfDelivery(Encounter "Encounter, Performed")

```
Last
    (["Assessment, Performed": "Date and time of obstetric delivery"]
        TimeOfDelivery
    where Global."EarliestOf"(TimeOfDelivery.relevantDatetime,
        TimeOfDelivery.relevantPeriod)during
        "HospitalizationWithEDOBTriageObservation"(Encounter)
    and TimeOfDelivery.result as DateTime during
        "HospitalizationWithEDOBTriageObservation"(Encounter)
    sort by Global."EarliestOf"(relevantDatetime, relevantPeriod)).
        result as DateTime
```

ePC-02 Frequently Asked Question

Question:

The LastTimeOfDelivery function uses the EarliestOf function. Why is this when we are trying to identify the LAST time of delivery assessed?

Answer:

The **“last” and **“EarliestOf” operators may seem contradictory in this logic. The “Earliest Of” operator evaluates the time of delivery relevant date/time and relevant period for every assessment of time of delivery.

If both the relevant date/time and relevant period are present, we choose the relevant date/time. If only the relevantPeriod is specified, the starting point of the period is used. Otherwise, the end point of the period is used. Then all of the results of "earliest of" dates are sorted and the “Last” one is chosen.

ePC-02 Denominator (continued 4)

PCMaternal.LastEstimatedDeliveryDate

```
Last(["Assessment, Performed": "Delivery date Estimated"]
EstimatedDateOfDelivery
    where
Global."EarliestOf"(EstimatedDateOfDelivery.relevantDatetime,
EstimatedDateOfDelivery.relevantPeriod)42 weeks or less before or on
"LastTimeOfDelivery"(Encounter)
      and EstimatedDateOfDelivery.result is not null
    sort by Global."EarliestOf"(relevantDatetime, relevantPeriod)
).result as DateTime
```

ePC-02 Denominator (continued 5)

~~PCMaternal.FormattedLastEstimatedDeliveryDate~~

~~if "LastEstimatedDeliveryDate"(Encounter)is not null~~
~~then TJC."TruncateTime"~~
~~("LastEstimatedDeliveryDate"(Encounter))~~
~~else null~~

~~TJC.TruncateTime~~

~~DateTime(year from Value, month from Value, day from Value, 0, 0, 0, 0, timezoneoffset from Value)~~

ePC-02 Denominator (continued 6)

Delivery Encounter with Calculated Gestational Age Greater than or Equal to 37 Weeks

PCMaternal."Delivery Encounter with Age Range“ DeliveryEncounter
where PCMaternal."CalculatedGestationalAge" (DeliveryEncounter)
>= 37

PCMaternal.CalculatedGestationalAge(Encounter "Encounter, Performed")

(280 - (difference in days between"LastTimeOfDelivery"(Encounter) and “~~Formatted~~LastEstimatedDeliveryDate"(Encounter))) div 7

ePC-02 Denominator (continued 7)

Delivery Encounter with Estimated Gestational Age Greater than or Equal to 37 Weeks

```
PCMaternal."Delivery Encounter with Age Range" DeliveryEncounter
      where PCMaternal."CalculatedGestationalAge" ( DeliveryEncounter )
                  is null
and ( PCMaternal."LastEstimatedGestationalAge" ( DeliveryEncounter )
                  >= 37 weeks
```

ePC-02 Denominator (continued 8)

PCMaternal.LastEstimatedGestationalAge

```
Last
    (["Assessment, Performed": "Estimated Gestational Age at Delivery"]
    EstimatedGestationalAge
  where
        Global."EarliestOf"(EstimatedGestationalAge.relevantDatetime,
        EstimatedGestationalAge.relevantPeriod)24 hours or less before
        or on "LastTimeOfDelivery"(Encounter)
    and EstimatedGestationalAge.result is not null
    sort by
        Global."EarliestOf"(relevantDatetime, relevantPeriod)).result
        as Quantity
```

ePC-02 Frequently Asked Question

Question:

The Last Estimated Gestational Age function requires that the estimated gestational age relevant date/time be performed 24 hours or less before or on the time of delivery. Depending on the circumstances, we sometimes document gestational age after the delivery date/time.

Answer:

We have 2 responses to this question. First, the logic distinguishes between when an assessment is documented in the EHR (author dateTime) and when an assessment is performed (relevant dateTime). So if you assess a patient's gestational age at 0200, patient delivers at 0230, and you don't document until 0300, the assessment relevant dateTime should be mapped to 0200 which is prior to the delivery time. Second, some EHR's calculate gestational age automatically whereby the gestational age may continue to advance after delivery. Therefore, the logic specifically looks for a time prior to or on delivery.

ePC-02 Denominator (continued 9)

Delivery Encounter with Estimated Gestational Age Greater than or Equal to 37 Weeks

```
PCMaternal."Delivery Encounter with Age Range" DeliveryEncounter
      where PCMaternal."CalculatedGestationalAge" ( DeliveryEncounter )
                  is null
and ( PCMaternal."LastEstimatedGestationalAge" ( DeliveryEncounter )
                  >= 37 weeks
```

ePC-02 Denominator (continued 10)

Delivery Encounter with Gestational Age Greater than or Equal to 37 Weeks Based on Coding

```
PCMaternal.”Delivery Encounter with Age Range” DeliveryEncounter
let CGA: PCMaternal."CalculatedGestationalAge" ( DeliveryEncounter)
    EGA: PCMaternal."LastEstimatedGestationalAge" ( DeliveryEncounter)
where CGA is null
   and EGA is null
   and exists ( DeliveryEncounter.diagnoses EncounterDiagnoses
where EncounterDiagnoses.code in "37 to 42 Plus Weeks Gestation")
```

ePC-02 Denominator (continued 11)

Delivery Encounter with Gestational Age Greater than or Equal to 37 Weeks

"Delivery Encounter with Calculated Gestational Age Greater than or Equal to 37 Weeks"

union

"Delivery Encounter with Estimated Gestational Age Greater than or Equal to 37 Weeks“

union

"Delivery Encounter with Gestational Age Greater than or Equal to 37 Weeks Based on Coding"

ePC-02 Denominator (continued 12)

Singleton Delivery Encounters at 37 Plus Weeks Gravida 1 Parity 0, No Previous Births

("Delivery Encounter with Gestational Age Greater than or Equal to 37 Weeks"
intersect "Encounter with Singleton Delivery“ SingletonEncounterGE37Weeks
.....

Encounter with Singleton Delivery

PCMaternal."Delivery Encounter with Age Range" DeliveryEncounter
where exists (DeliveryEncounter.diagnoses EncounterDiagnoses
where EncounterDiagnoses.code in "Delivery of Singleton“)

ePC-02 Denominator (continued 13)

Singleton Delivery Encounters at 37 Plus Weeks Gravida 1 Parity 0, No Previous Births

```
( "Delivery Encounter with Gestational Age Greater than or Equal to 37
    Weeks"
  intersect "Encounter with Singleton Delivery" )
    SingletonEncounterGE37Weeks
  where ( ( "LastGravida"(SingletonEncounterGE37Weeks)= 1 )
    or ( "LastParity"(SingletonEncounterGE37Weeks)= 0 )
    or ( ( "LastHistoryPretermBirth"(SingletonEncounterGE37Weeks)= 0 )
    and ( "LastHistoryTermBirth"(SingletonEncounterGE37Weeks)= 0 )))
```

ePC-02 Frequently Asked Question

Question:

Is there any specific reason why the 4 Assessment, Performed of Gravida, Parity, Preterm and Term Births only consider relevantDateTime attribute where other measures use relevant DateTime and relevant Period. Should we expect any updates to the current version of the PC-02 measure for CY 2023 reporting?

Answer:

Clinically, these assessments occur at a point in time and not over an interval of time and therefore, relevantPeriod was not added. However, to be consistent and to add flexibility for implementers, we added "relevantPeriod" and "EarliestOf" to LastGravida, LastHistoryPretermBirth, LastHistoryTermBirth, LastParity definitions. This will cause the "NormalizeInterval" to be invoked which is called by the "EarliestOf" function.

ePC-02 Denominator (continued 14)

LastGravida(Encounter "Encounter, Performed")

```
Last(["Assessment, Performed": "[#] Pregnancies"] Gravida
    where Global.”EarliestOf” (Gravida.relevantDatetime,
Gravida.relevantPeriod) 42 weeks or less before
      PCMaternal."LastTimeOfDelivery"(Encounter)
    and Gravida.result is not null
    sort by Global.”EarliestOf” (relevantDatetime, relevantPeriod).result
as Integer
```

ePC-02 Denominator (continued 15)

Singleton Delivery Encounters at 37 Plus Weeks Gravida 1 Parity 0, No Previous Births

```
( "Delivery Encounter with Gestational Age Greater than or Equal to 37
      Weeks"
  intersect "Encounter with Singleton Delivery" )
      SingletonEncounterGE37Weeks
  where ( ( "LastGravida"(SingletonEncounterGE37Weeks)= 1 )
      or ( "LastParity"(SingletonEncounterGE37Weeks)= 0 )
      or ( ( "LastHistoryPretermBirth"(SingletonEncounterGE37Weeks)= 0 )
      and ( "LastHistoryTermBirth"(SingletonEncounterGE37Weeks)= 0 )))
```

ePC-02 Denominator Exclusions

"Delivery Encounter with Abnormal Presentation or Placenta Previa, Placenta Accreta or Vasa Previa"

"Encounter with Abnormal Presentation"

union

"Encounter with Placenta Previa, Placenta Accreta or Vasa Previa"

ePC-02 Denominator Exclusions (continued)

Encounter with Abnormal Presentation

"Singleton Delivery Encounters at 37 Plus Weeks Gravida 1 Parity 0, No Previous Births" QualifyingEncounter

```
let LastAbnormalPresentation:
Last(["Assessment, Performed": "Abnormal Presentation"] AbnormalPresentation
    where Global."EarliestOf"(AbnormalPresentation.relevantDatetime,
    AbnormalPresentation.relevantPeriod)before or on
    PCMaternal."LastTimeOfDelivery"(QualifyingEncounter)
  sort by Global."EarliestOf"(relevantDatetime, relevantPeriod))
  where exists ( QualifyingEncounter.diagnoses EncounterDiagnosis
    where EncounterDiagnosis.code in "Abnormal Presentation“)
    or Global."EarliestOf" ( LastAbnormalPresentation.relevantDatetime,
    LastAbnormalPresentation.relevantPeriod ) during
    QualifyingEncounter.relevantPeriod
```

ePC-02 Denominator Exclusions (continued)

Encounter with Placenta Previa, Placenta Accreta or Vasa Previa

"Singleton Delivery Encounters at 37 Plus Weeks Gravida 1 Parity 0, No Previous Births" QualifyingEncounter
where exists **QualifyingEncounter**.diagnoses EncounterDiagnosis
where EncounterDiagnosis.code in
"Placenta Previa or Accreta or Vasa Previa"

ePC-02 Numerator

"Delivery Encounter with Cesarean Birth"

```
"Singleton Delivery Encounters at 37 Plus Weeks Gravida 1 Parity 0, No
Previous Births" QualifyingEncounter
  with ["Procedure, Performed": "Cesarean Birth"] CSection
      such that Global."NormalizeInterval" ( CSection.relevantDatetime,
      CSection.relevantPeriod ) during
      PCMaternal."HospitalizationWithEDOBTriageObservation"
      (QualifyingEncounter )
```

ePC-07
Severe Obstetric Complications

ePC-07 Background

- TJC developed ePC-07 in collaboration with:
  - Yale New Haven Health Services Corporation-Center for Outcomes Research and Evaluation (CORE)
  - and expert advisor, Dr. Elliott Main, California Maternal Quality Care Collaborative (CMQCC), Medical Director and Executive Committee Chair.
- Risk adjusted outcome measure

ePC-07 Rationale

- USA experiences higher rates of maternal morbidity and mortality than other developed countries
- 65.8% of pregnancy related deaths preventable
- Variability in severe maternal morbidity (SMM) rates across the USA
- Racial and ethnic disparities in maternal health outcomes
- Health effects to mother, higher costs, longer lengths of stay

ePC-07 Severe Maternal Morbidity & Mortality

- Severe Maternal Morbidity (SMM) is defined as “unexpected outcomes of labor and delivery that result in significant short or long-term consequences to a woman’s health” (ACOG & SMFM)
- The Centers for Disease Control and Prevention (CDC) defines SMM by 22 indicators defined by ICD10 diagnoses and procedure codes.
  - ePC-07 uses a modified version of CDC’s SMM with Present on Admission (POA) codes to identify SMM that is not POA
- The goal of ePC07 is to assess prevalence of SMM ***AND*** mortality
- Specifications are modeled after CDC’s SMM indicators with the addition of maternal mortality.
- At times, we may refer to the CDC indicators of morbidity as SMM, but the outcome of the measure, which includes morbidity and mortality, is referred to as Severe Obstetric Complications (SOC)

SOC = SMM + Mortality

ePC-07 Risk Adjustment: Overview

- Risk adjustment is performed to account for patient characteristics and/or comorbidities associated with the measure outcome that are reasonably beyond the control of the hospital
  - Aim is to isolate assessment of quality
  - Accounts for case mix differences between hospitals, and "levels the playing field" for better comparisons between hospitals on the care patients receive at the hospital
  - Risk variables must be factors that were present on admission when the patient arrives at the hospital
- Risk adjustment is achieved through the development of risk model(s), typically multivariable regression model(s) that include all risk factors as covariates

ePC-07 Risk Adjustment

- Candidate risk variables predictive of severe obstetric complications were identified through:
    - Literature review
    - Hospital Core Clinical Data Elements
    - Input from clinicians, patients, and other experts
- Only conditions or comorbidities present on admission were included in risk adjustment

ePC-07 Risk Adjustment

- Two risk models were developed, one for each measure outcome:
  - any SOC and
  - SOC excluding blood transfusion-only encounters

- Due to very low prevalence, a few risk variables in the risk model for SOC excluding transfusion-only encounters were paired:
  - HIV was combined with autoimmune disease,
  - Obstetric VTE was combined with long-term anticoagulant medication use

ePC-07 Risk Adjustment: Social Determinants of Health

- Social risk factors were considered dependent on the availability of information in the EHR
- Economic/housing instability was included in the model due to:
  - Support in research literature for its inclusion
  - Availability in the EHR
- The Severe Obstetric Complications Risk Adjustment Methodology Report is available on the eCQI Resource Center (https://ecqi.healthit.gov).

ePC-07 Stratification

- Race/ethnicity were not considered for risk adjustment; instead, planned for stratification of the measure score

- Illumination of outcome disparities by race/ethnicity, rather than adjustment of outcomes by race/ethnicity. Would be most informative and impactful in incentivizing improvements in the quality and equity of maternal care

ePC-07 Key Points

- Value sets are used to group each category of SMM Diagnosis Codes
- Review all numerator cases to determine quality improvement opportunities and coding documentation
- Risk adjustment does not exclude cases
- Rate to be reported per 10,000 delivery hospitalizations

ePC-07 Measure Specifications

Description: Patients with severe obstetric complications which occur during the inpatient delivery hospitalization.

Initial Population	Denominator	Denominator Exclusions
Inpatient hospitalization	Inpatient hospitalization	Inpatient hospitalization
Age: >= 8 and < 65 years	Delivery of stillborn or live birth	Patients with confirmed COVID diagnosis with: • COVID-related respiratory condition or • COVID-related respiratory procedure
Delivery procedure with a discharge date that ends during measurement period	>= 20 weeks, 0 days gestation completed	

ePC-07 Measure Specifications - Numerator

Numerator

1. Severe Maternal Morbidity (SMM) Diagnoses*:

Cardiac
- Acute heart failure**
- Acute myocardial infarction
- Aortic aneurysm
- Cardiac arrest/ventricular fibrillation
- Heart failure/arrest during procedure or surgery

Hemorrhage
- Disseminated intravascular coagulation
- Shock

Renal
- Acute renal failure

Respiratory
- Adult respiratory distress syndrome
- Pulmonary edema**

Sepsis

Other OB
- Air and thrombotic embolism
- Amniotic fluid embolism
- Eclampsia
- Severe anesthesia complications

Other Medical
- Puerperal cerebrovascular disorder
- Sickle cell disease with crisis

2. Severe Maternal Morbidity (SMM) Procedures:
- Blood transfusion
- Conversion of cardiac rhythm
- Hysterectomy
- Temporary tracheostomy
- Ventilation

- *Only SMM conditions which are **NOT** present on admission are included in the numerator
- **CDC groups acute heart failure and pulmonary edema as one SMM indicator and hence a total of 21 indicators as opposed to the 22 listed here.

3. Discharge Disposition of Expired

ePC-07 Risk Adjustment Using the Following Pre-existing Conditions

• Anemia • Asthma • Autoimmune Disease • Bariatric Surgery • Bleeding Disorder • ~~BMI >= 40~~ • Cardiac Disease • Gastrointestinal Disease • Gestational Diabetes • HIV • Housing Instability • Hypertension • Maternal Age • Mental Health Disorder • Morbid Obesity • 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	First resulted value 24 hours prior to start of encounter and before time of delivery: • Heart Rate • Systolic Blood Pressure • White Blood Cell Count • Hematocrit

ePC-07 Measure Calculations

All complications	Excluding Transfusion Only
Hospital-level measure scores are calculated as a risk-adjusted proportion of the number of delivery hospitalizations for women who experience a SOC, as defined by the numerator, by the total number of delivery hospitalizations in the denominator during the measurement period. The hospital-level measure score will be reported as a rate per 10,000 delivery hospitalizations.	Stratum1: Delivery hospitalizations with SOC excluding hospitalizations where transfusion was the only SOC Divided by (Number of encounters in Denominator - Number of encounters in Denominator Exclusions) * 10,000

ePC-07 Measure Changes from 2023 to 2024 - Clinical

Measure Components	2023 Reporting Year	2024 Reporting Year
Guidance	The measure allowed for 2 approaches to determine gestational age (GA): 1. Using the ACOG ReVITALize guidelines. 2. A discrete field in the EHR	The measure allows for 3 approaches to determine GA: 1. Using the ACOG ReVITALize guidelines. 2. A discrete field in the EHR 3. ICD10 or SNOMED codes indicative of weeks gestation.

ePC-02 Measure Changes from 2023 to 2024 - Technical (continued)

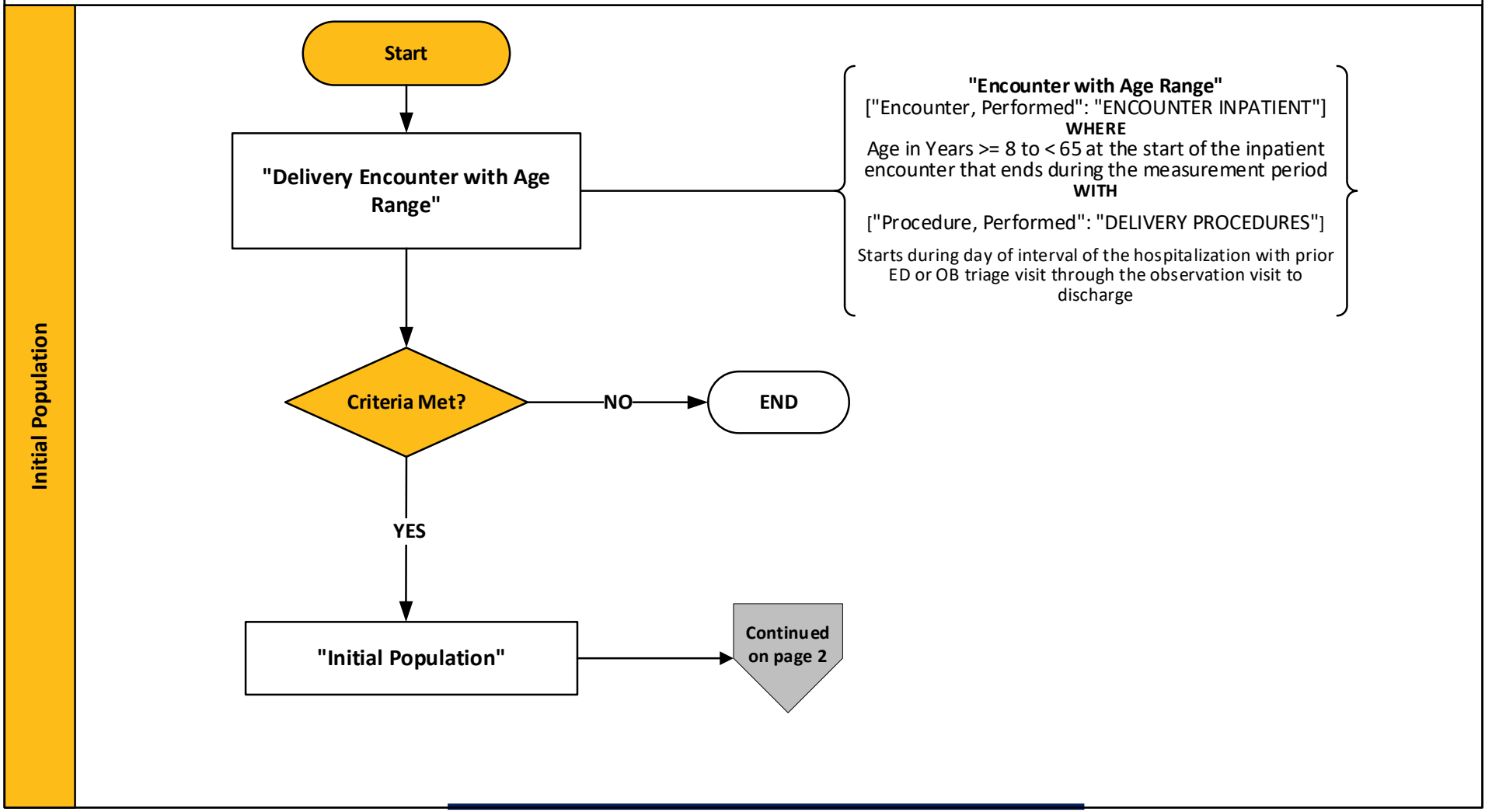
Measure Components	2023 Reporting Year	2024 Reporting Year
Risk Variable Logic	Renamed “Risk Variable BMI” >=40 to →	“Risk Variable Morbid Obesity”
Functions	Last Estimated Delivery Date logic did not include “as DateTime” on the result logic	Added as ‘DateTime’ logic
Functions	‘TJC.TruncateTime’ and FormattedLastEstimatedDeliveryDate’ functions were present to eliminate the time if submitted.	Deleted both functions as no longer needed due to addition of as ‘DateTime’ logic.

ePC-02 Measure Changes from 2023 to 2024 - Technical (continued)

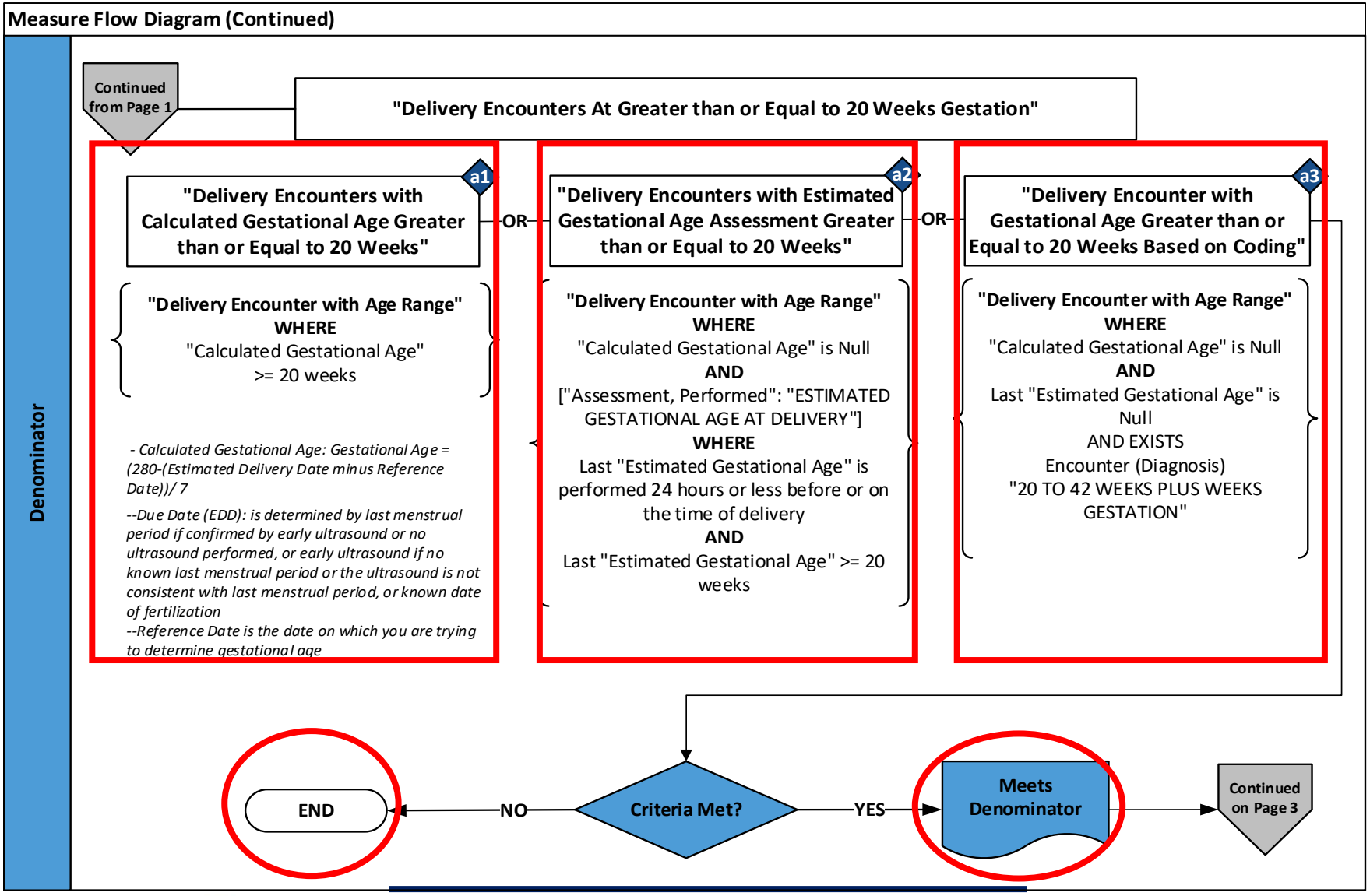
Measure Components	2023 Reporting Year	2024 Reporting Year
Value Set	NA	Added value set “20 to 42 Plus Weeks Gestation” (2.16.840.1.113762.1.4.1110.67) based on change in measure specification.
Value Set	NA	Multiple value sets with code additions/deletions due to terminology updates or based on review by technical experts, SMEs, and/or public feedback. See value sets for more details.
Value Set	Asthma	Renamed to “Acute or Persistent Asthma”
Value Set	HIV	Renamed to “HIV in Pregnancy Childbirth and Puerperium”
Value Set	Other Preeclampsia	Renamed to “Mild or Moderate Preeclampsia”
Value Set	Obstetrical VTE	Renamed to “Venous Thromboembolism in Pregnancy”
Value Set	BMI >= 40	Renamed to “Morbid or Severe Obesity”

ePC-07 Measure Flow Diagram

Measure Flow Diagram

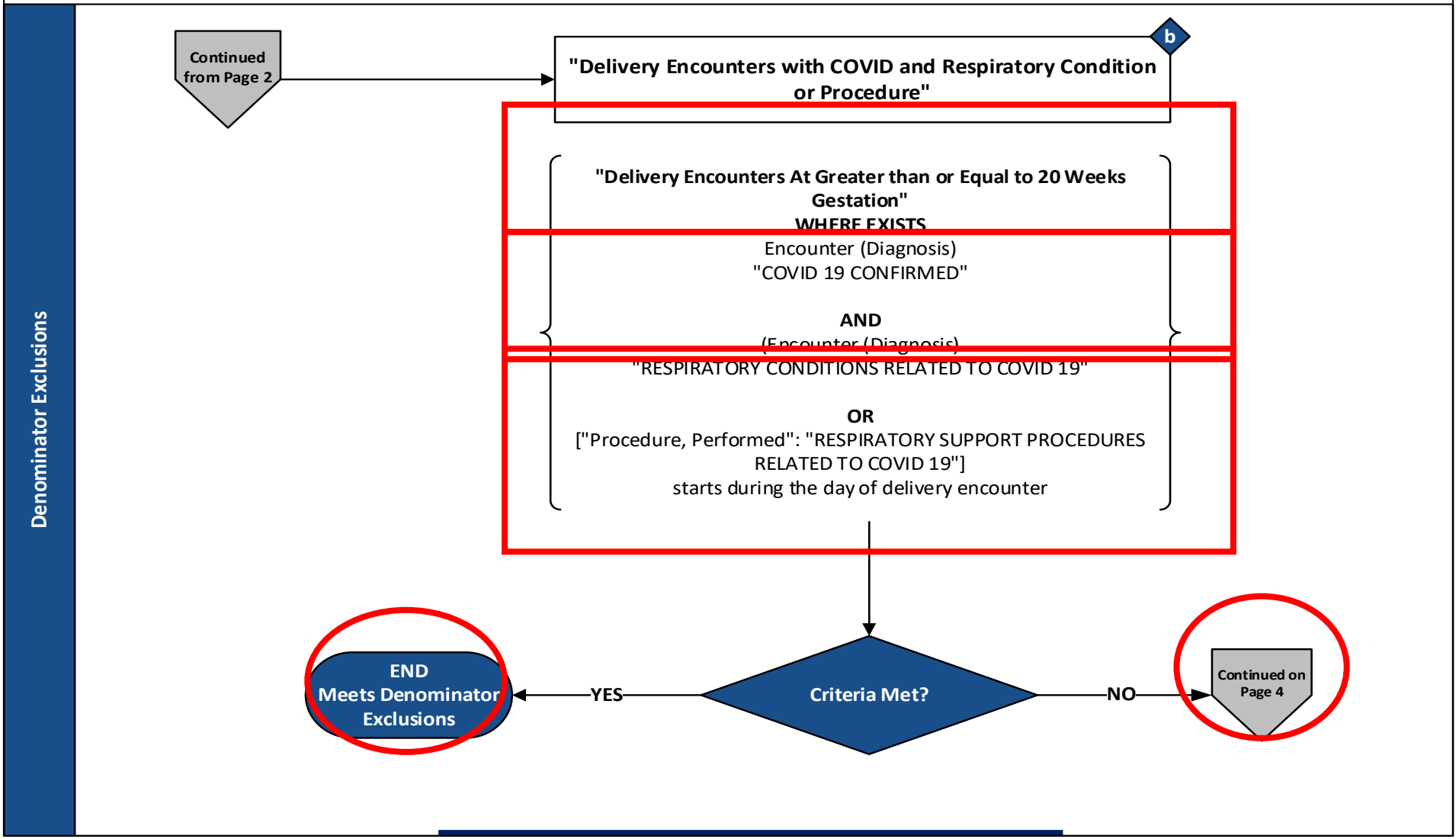


ePC-07 Measure Flow Diagram (continued)



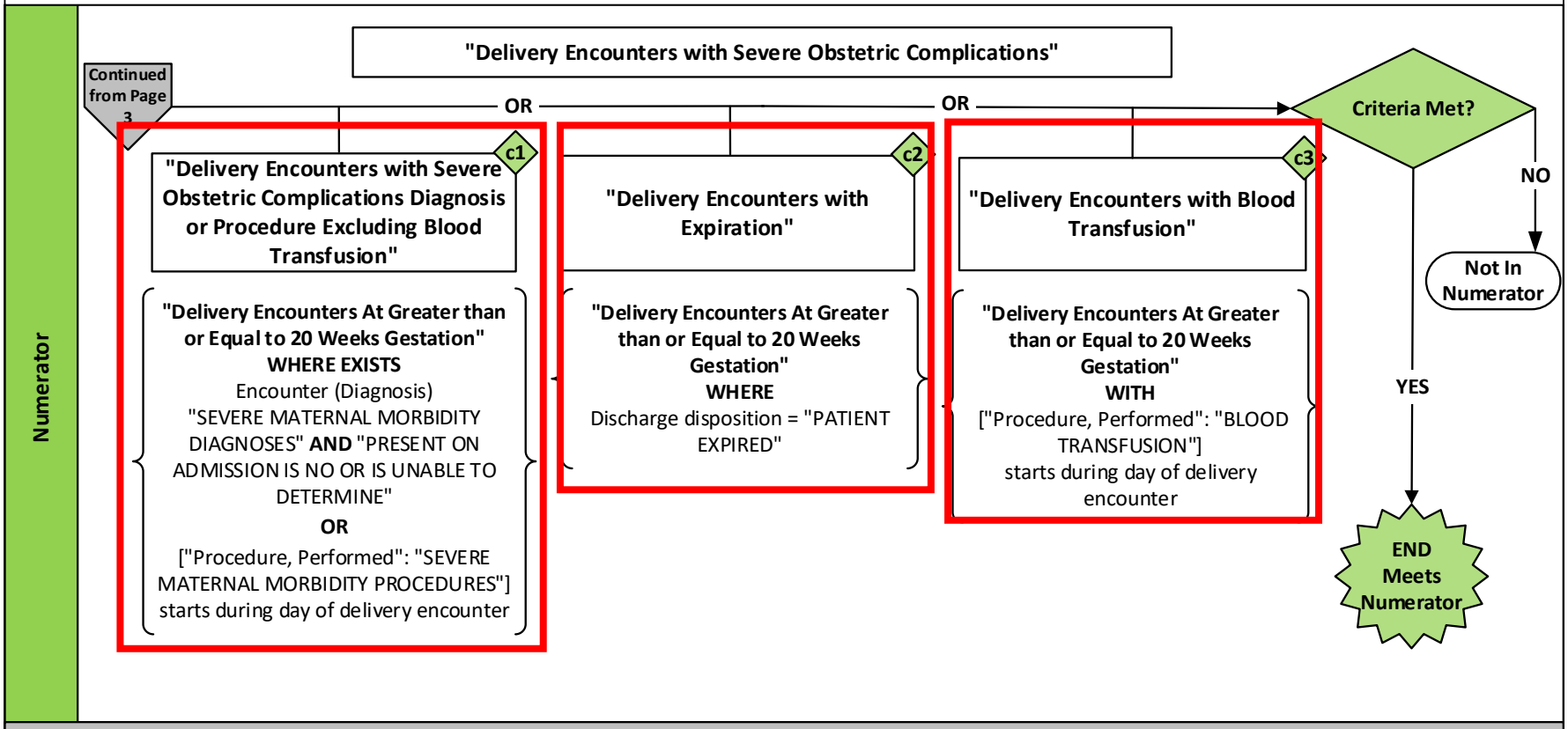
ePC-07 Measure Flow Diagram (continued)

Measure Flow Diagram (Continued)



ePC-07 Measure Flow Diagram (continued)

Measure Flow Diagram (Continued)



Sample Calculation

$$\text{Performance Rate} = \frac{\text{Numerator (c1 + c2 + c3 = 60)}}{\text{Denominator (a1 + a2 + a3 = 100) - Denominator Exclusions (b = 20)}} = 75\%$$

ePC-07 Initial Population

PCMaternal.”Delivery Encounter with Age Range”

PCMaternal.Delivery Encounter with Age Range

"Encounter with Age Range" EncounterWithAge
with ["Procedure, Performed": "Delivery Procedures"] DeliveryProcedure
such that Global."NormalizeInterval" (DeliveryProcedure.relevantDatetime,
DeliveryProcedure.relevantPeriod)
starts during day of
"HospitalizationWithEDOBTriageObservation"(EncounterWithAge)

PCMaternal.Encounter with Age Range

["Encounter, Performed": "Encounter Inpatient"] EncounterInpatient
where AgeInYearsAt(date from start of EncounterInpatient.relevantPeriod)>= 8
and AgeInYearsAt(date from start of EncounterInpatient.relevantPeriod)< 65
and EncounterInpatient.relevantPeriod ends during day of "Measurement Period"

ePC-07 Denominator

“Delivery Encounters At Greater than or Equal to 20 Weeks Gestation”

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

union

"Delivery Encounter with Estimated Gestational Age Greater than or Equal to 20 Weeks“

union

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

“

ePC-07 Denominator Exclusions

"Delivery Encounters with COVID and Respiratory Condition or Procedure"

```
"Delivery Encounters At Greater than or Equal to 20 Weeks Gestation"
TwentyWeeksPlusEncounter
  where exists ( TwentyWeeksPlusEncounter.diagnoses EncounterDiagnoses
  where EncounterDiagnoses.code in "COVID 19 Confirmed“)
  and ( exists ( TwentyWeeksPlusEncounter.diagnoses EncounterDiagnoses
        where EncounterDiagnoses.code in “Respiratory Conditions Related to
COVID 19"
        or exists ( ["Procedure, Performed": “Respiratory Support Procedures
            Related to COVID 19"] EncounterProcedures
        where Global."NormalizeInterval" ( EncounterProcedures.relevantDatetime,
            EncounterProcedures.relevantPeriod ) starts during day of
            PCMaternal."HospitalizationWithEDOBTriageObservation“
            ( TwentyWeeksPlusEncounter ))))
```

ePC-07 Numerator

"Delivery Encounters with Severe Obstetric Complications"

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

union

"Delivery Encounters with Expiration“

union

"Delivery Encounters with Blood Transfusion"

ePC-07 Numerator (continued)

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

"Delivery Encounters At Greater than or Equal to 20 Weeks Gestation"
TwentyWeeksPlusEncounter
where exists (TwentyWeeksPlusEncounter.diagnoses EncounterDiagnoses
where EncounterDiagnoses.code in "Severe Maternal Morbidity Diagnoses"
and EncounterDiagnoses.presentOnAdmissionIndicator in "Present on Admission is No or Unable To Determine")
or exists (["Procedure, Performed": "Severe Maternal Morbidity Procedures"] EncounterProcedures where Global."NormalizeInterval" (EncounterProcedures.relevantDatetime, EncounterProcedures.relevantPeriod) starts during day of
"PCMaternal."HospitalizationWithEDOBTriageObservation"
(" (TwentyWeeksPlusEncounter))

ePC-07 Numerator (continued)

“Delivery Encounters with Expiration“

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

where TwentyWeeksPlusEncounter.dischargeDisposition in "Patient Expired"

ePC-07 Numerator (continued)

“Delivery Encounters with Blood Transfusion”

"Delivery Encounters At Greater than or Equal to 20 Weeks Gestation“
TwentyWeeksPlusEncounter
with
["Procedure, Performed": "Blood Transfusion"] BloodTransfusion
such that
Global."NormalizeInterval“ (BloodTransfusion.relevantDatetime,
BloodTransfusion.relevantPeriod) starts during day of
PCMaternal."HospitalizationWithEDOBTriageObservation“
(TwentyWeeksPlusEncounter)

ePC-07 Numerator

Numerator: "Delivery Encounters with Severe Obstetric Complications"

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

union

"Delivery Encounters with Expiration“

union

"Delivery Encounters with Blood Transfusion"

ePC-07 Stratification

Stratum 1: "Stratification Encounter" intersect "Delivery Encounters with Severe Obstetric Complications ~~(~~Excluding Blood Transfusions~~)~~"

Stratification Encounter
"Numerator" except "Denominator Exclusion“

Delivery Encounters with Severe Obstetric Complications ~~(~~Excluding Blood Transfusions~~)~~

"Delivery Encounters with Severe Obstetric Complications Diagnosis or Procedure ~~(~~Excluding Blood Transfusion~~)~~"
union “Delivery Encounters with Expiration”

ePC-07 Stratification

Stratification Encounter

"Numerator" except "Denominator Exclusion“

ePC-07 Stratification

Delivery Encounters with Severe Obstetric Complications ~~(~~Excluding Blood Transfusions~~)~~

"Delivery Encounters with Severe Obstetric Complications Diagnosis or Procedure ~~(~~Excluding Blood Transfusion~~)~~“

union

“Delivery Encounters with Expiration”

ePC-07 Frequently Asked Question

Question: I understand PC07 is a risk adjusted measure. Is a patient with pre-existing conditions listed on the risk variable list, excluded from the measure?

Answer: Risk adjustment does not exclude a case from the measure numerator or denominator. The only denominator exclusions are 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.

ePC-07 Risk Adjustment Logic

Risk Variable Anemia

Risk Variable Anemia

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

where exists

(TwentyWeeksPlusEncounter.diagnoses EncounterDiagnoses where EncounterDiagnoses.code in "Anemia" and

EncounterDiagnoses.presentOnAdmissionIndicator in "Present On Admission is Yes or Exempt")

ePC-07 Risk Adjustment Logic

Risk Variable Preterm Birth

```
Risk Variable Preterm Birth
( PCMaternal."Delivery Encounter with Age Range" DeliveryEncounter
    let CGA: PCMaternal."CalculatedGestationalAge" ( DeliveryEncounter ),
    EGA: PCMaternal."LastEstimatedGestationalAge" ( DeliveryEncounter )
    where CGA in Interval[20, 36]
      or ( CGA is null
          and ( EGA >= 20 weeks
              and EGA <= 36 weeks)))
union
( PCMaternal."Delivery Encounter with Age Range" DeliveryEncounter
      let CGA: PCMaternal."CalculatedGestationalAge" ( DeliveryEncounter ),
      EGA: PCMaternal."LastEstimatedGestationalAge" ( DeliveryEncounter )
      where CGA is null
        and EGA is null
        and exists ( DeliveryEncounter.diagnoses EncounterDiagnoses
            where EncounterDiagnoses.code in "Preterm Birth"
              and EncounterDiagnoses.presentOnAdmissionIndicator in "Present On Admission = Yes
or Exempt“)))
```

ePC-07 Risk Adjustment Logic

FirstLabTestWithEncounterId

FirstLabTestWithEncounterId

"Delivery Encounters At Greater than or Equal to 20 Weeks Gestation" Encounter
 let FirstLab: First(LabList Lab
 where Lab.resultDatetime during Interval[start of "PCMaternal."HospitalizationWithEDOBTriageObservation"(Encounter)- 1440 minutes, PCMaternal."LastTimeOfDelivery"(Encounter))
sort by resultDatetime)
return {EncounterId: Encounter.id,FirstResult: FirstLab.result as Quantity, Timing: FirstLab.resultDatetime}

ePC-07 Risk Adjustment Logic

FirstPhysicalExamWithEncounterId

FirstPhysicalExamWithEncounterId

"Delivery Encounters At Greater than or Equal to 20 Weeks Gestation"
Encounter
let FirstExam: First(ExamList Exam
where Global."EarliestOf"(Exam.relevantDatetime,
Exam.relevantPeriod)during Interval[start of
"PCMaternal."HospitalizationWithEDOBTriageObservation"(Encounter)- 1440
minutes, PCMaternal."LastTimeOfDelivery"(Encounter))
sort by Global."EarliestOf"(relevantDatetime, relevantPeriod))
return {EncounterId: Encounter.id,FirstResult: FirstExam.result as
Quantity,Timing: Global."EarliestOf" (FirstExam.relevantDatetime,
FirstExam.relevantPeriod)}

ePC-07 Risk Adjustment Logic

Risk Variable Lab and Physical Exam Results

Risk Variable Lab and Physical Exam Results

// First physical exams: Report heart rate as {beats}/min, systolic blood pressure as mm[Hg]
FirstHeartRate: **"FirstPhysicalExamWithEncounterId"**(["Physical Exam, Performed": "Heart rate"]),
FirstSystolicBloodPressure: **"FirstPhysicalExamWithEncounterId"**(["Physical Exam, Performed": "Systolic blood pressure"]),

// First lab tests: Report hematocrit as %, white blood cell count as 10*3/uL
FirstHematocritLab: **"FirstLabTestWithEncounterId"**(["Laboratory Test, Performed": "Hematocrit lab test"]),
FirstWhiteBloodCellCount: **"FirstLabTestWithEncounterId"**(["Laboratory Test, Performed": "White blood cells count lab test"])}

ePC-07 Frequently Asked Question

Question:

There are a lot of risk variables associated with ePC07. Do we need to map each one of these individually in our QRDA submission.

Answer: The risk variable definitions are included in the specifications and risk variable data should be sent with eCQM data in the QRDA1 file. Specific risk variable templates are not needed in the QRDA1 files and therefore there is no additional submission process for risk variables as compared with other data elements.

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/

CDC website for detailed list of ICD-10-CM codes that do not require use of a POA indicator
https://www.cdc.gov/nchs/icd/comprehensive-listing-of-icd-10-cm-files.htm

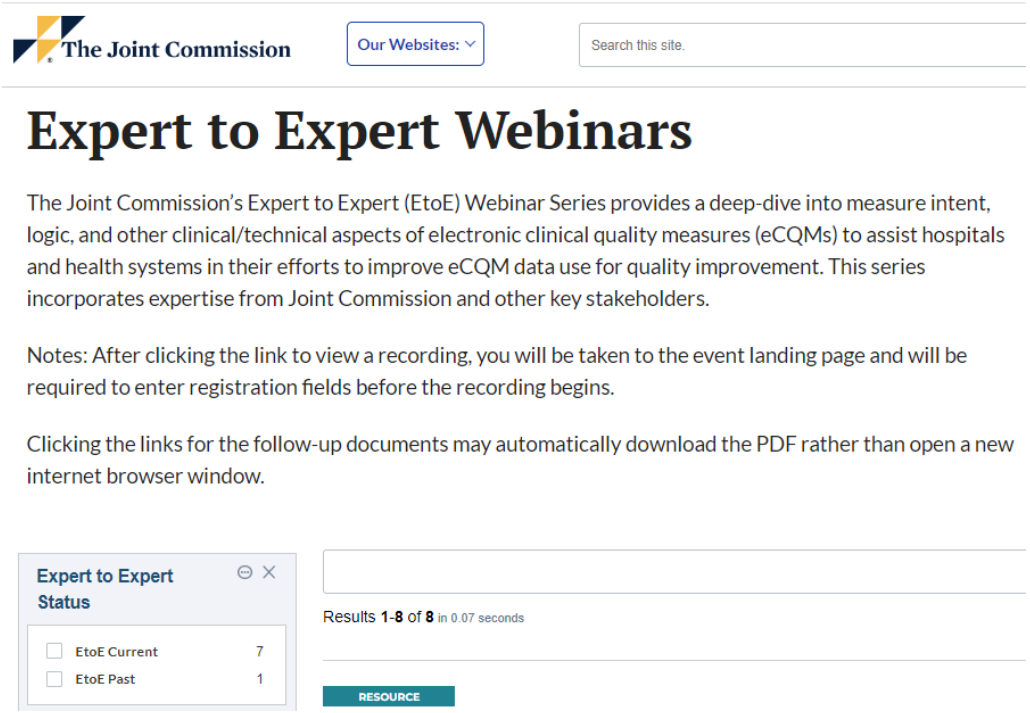
Live Q&A Segment

- 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/



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Acronyms

ACOG	American College of Obstetricians and Gynecologists
CBE	Consensus Based Entity
CDC	Center for Disease Control
CGA	Calculated Gestational Age
CMQCC	California Maternal Quality Care Collaborative
CORE	Center for Outcomes Research and Evaluation
CY	Calendar Year
eCQM	Electronic Clinical Quality Measure
ED	Emergency Department
EGA	Estimated Gestational Age
EHR	Electronic Health Record
FY	Fiscal Year
GA	Gestational Age
GE	Greater Than or Equal To
HIQR	Hospital Inpatient Quality Reporting

Acronyms (continued)

ICD10	International Classification of Diseases, Tenth Revision
IP	Initial Population
NQF	National Quality Forum
NTSV	Nulliparous Term Singleton Vertex
ORYX	The Joint Commission's ORYX initiative integrates performance measurement data into the accreditation process.
PC	Perinatal Care
reVITALize	Obstetric data definitions endorsed by ACOG and others
SDOH	Social Determinants of Health
SME	Subject Matter Expert
SMFM	Society for Maternal Fetal Medicine
SMM	Severe Maternal Morbidity
SNOMED CT	Systematized Nomenclature of Medicine - Clinical Terms
SOC	Severe Obstetric Complication
VSAC	Value Set Authority Center

Pioneers in Quality Expert to Expert Series 2024 Annual Updates Webinar for Perinatal Care (ePC-02 and ePC-07) eCQMs

Broadcast date: September 26, 2023

00:00:06

Welcome everyone and thank you for joining us today for our Expert to Expert Series Webinar 2024 Annual Updates for Perinatal Care ePC-02 Cesarean Birth and ePC-07 Severe Obstetric Complications eCQMs.

I'm sorry about that little technical difficulty.

00:00:32

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 the Chat features. To ask a question, click on the Question Mark icon in the audience Toolbar.

I'm sorry, we are having a brief moment of technical difficulties. Here we are. We're back right where I needed to be. Sorry about that everyone.

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. The slides are designed to follow Americans with Disability Act rules.

00:01:29

Before we get started, we 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 is too technical for individuals that are new to eCQMs.

We recommend that those that are new 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.

00:01:57

To access the slides, you can find them in the viewer toolbar. 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.

00:02:18

CE credit is offered for this webinar. This webinar is approved for 1 continuing education credit for the entities that are listed on this slide.

00:02:28

To claim the 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. At the end of the webinar, the survey link will be provided.

Tomorrow the link will also be sent via an automated email to your email address used to register for this webinar. For more information on The Joint Commission's continuing education policies, visit the link at the bottom of this slide.

00:03:00

The learning objectives for this session are: Navigate to the Measure Specifications, Value Set, Measure Flow Diagrams, and Technical Release Notes. Apply concepts learned about the logic and intent for the PC-02 & -07 eCQMs. Prepare to implement the PC-02 and -07 eCQMs for the 2024 eCQM reporting period and identify common issues and questions regarding the PC-02 and PC-07 eCQMs.

00:03:30

These topics are not covered in today's webinar. Basic eCQM Concepts. Topics related to chart abstracted measures. Process improvement efforts related to these measures and eCQM validation.

00:03:43

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. Melissa Breth, Valery Danilack, Kelley Franklin Susan Funk, Marilyn Parenzan and Susan Yendro.

00:04:12

The agenda for today's discussion follows. Demonstrate eCQI Resource Center Navigation. Review the measure flow and algorithm, Review changes made to the PC-02 and PC-07 eCQMs, review frequently asked questions and then we will have a facilitated audience Q&A segment.

00:04:33

We would now like to highlight some of the resources available on the CMS eCQI Resource Center. The eCQI Resource Center provides a centralized location for news, information, tools and standards related to eCQMs. The majority of tools and resources within the eCQI Resource Center are openly available and provide a foundation for the development, testing, certification, implementation, reporting and continuous evaluation of eCQMs.

00:05:01

We will now share a quick demo that illustrates navigation to the eCQI Resource Center. This video will demonstrate how to navigate the eCQI Resource Center website to locate the measure Specifications, Value Sets, and Technical Release Notes for all measures in the CMS program. Here's a landing page for the eCQI Resource Center. Note the web address of eCQI.HealthIT.gov. Click on the orange horizontal rectangle for Eligible Hospital, Critical Access Hospital eCQMs. Here, you can select the Reporting Period that you are interested in. For the purposes of this demo, I will select 2024. Click “apply filters” and you will see multiple resources listed.

00:06:21

Click on the EH/CAH eCQM tab. Here you will see a list of the 12 eCQMs available for Eligible Hospital and Critical Access Hospitals. Let's select the Cesarean Birth eCQM, which is also referred to as PC-02 for short or CMS 334. Here you will see all the measure information for this particular measure. We're going to click on the Specifications and Data Elements tab. Here, you can find the HTML file, the measure package zip file, and the Technical Release Notes for this measure. The Value Sets are also listed here. We will take a quick look at the HTML document, which is also referred to as the Human Readable by clicking on the file name. The HTML file opens. This is where you find all details related to the measure. The top portion of the document highlighted in gray is referred to as the metadata or Header Information. Here you will find relevant data for the measure, including the version number of the measure, the measure steward, the measure developer. Additional information like related to the rationale, the clinical recommendation statement. And here you see all the references that were used when building the eCQM measure.

Scrolling through all the references, you will find additional Guidance for implementing the measure. And down at the bottom of the metadata, you will find definitions for each of the population criteria. Beyond the metadata, you will find the definitions for the population criteria. And then further down you will see the definitions that are used, making up the logic. Continuing to scroll, you will see all the functions that are used by the measure. Then we get into the terminology. Notice these first couple of lines are the direct reference codes that are used by the measure, and then the Value Sets are listed here. Then we get into the QDM data elements. The supplemental data elements. And if this is a risk adjusted measure, that information would be listed here.

00:09:10

This is your source of truth. For all of the measure details. I went through this very quickly, but wanted you to be aware of how to locate this document and to have a basic understanding of its contents. So back to the eCQI Resource Center. The next item is the zip file. Click on this link and then click to open the zip file. Here, you will see all the files that make up the measure package. Note: The first file is the HTML file we just looked at. I will not go into detail on all of these files, but if you want to know more, go to the Get Started with eCQMs site on this eCQI Resource Center.

00:10:01

Next, we look at the Technical Release Notes. By clicking on this link and opening up the Excel spreadsheet. Here is a nice, concise list of all of the changes to the measures for the 2024 reporting period. In the first column you will see the details of the change listed here. The next column indicates the type of change. Did it impact the Header, the Logic or the Value Set. The next column is the specific section of the measure that was impacted.

In this last column, you will see the source of change. Going back to the eCQI Resource Center website again, we can access the Value Sets by clicking the link under Value Sets. You are now taken to the Value Set Authority Center, also known as the VSAC. You will see all the Value Sets used for this eCQM. Please notice that you must be signed into the Value Set Authority Center to see the details within each Value Set. I will log in to the VSAC now by clicking on sign in and then by clicking the log in button. If I would like to see the details of the Abnormal Presentation Value Set. I click on the OID, and all of the codes making up that Value Set are displayed.

00:11:45

Please note that if you prefer to download the Value Sets, select all Value Sets by clicking in this box. And click download. This will return a zip file containing each Value Set in a separate Excel document. If you prefer to have all of the Value Sets in one file, go back to the home page. Select the Eligible Hospital/Critical Access Hospital eCQM tab again. Select the reporting period that you're interested in. I'm going to stick with 2024. And click “apply filters”.

00:12:25

On this page, you will see eCQM and Hybrid Measure Value Sets as well as eCQM Direct Reference Code List. Let's look at the Value Sets. Open the most recent reporting year or whatever year you're interested in. I'm going to stick with 2024 and then click on the May 2023 release. You will see several available downloads. Choosing the first option. I will select data sorted by CMS ID in Excel format. Opening the downloaded Excel file. So, open the Excel spreadsheet here. And here you will see all the tabs for all the different measures. Let's stick with CMS 334. And here you see the CMS ID and NQF number. Value Set name and Value Set OID for every code, for every Value Set within the measure. Scrolling over to column L. You will see the actual codes within each Value Set. The Code Description and the Code System. Note that direct reference codes are not listed here as they are not included in Value Sets. You will find information on direct reference codes in the measure specifications or from the file on the eCQM Resources tab that I just called out. This concludes our eCQI Resource Center Navigation demo.

Hello, everyone. We're going to wait just a second while our presenters get the screen pulled up after our demo and when the screen is up, Kelley feel free to take it away. You'll be our first presenter.

Thank you, Susan.

00:14:44

Now we will provide some background information for ePC-02, Cesarean Birth and ePC-07 Severe Obstetric Complications. CMS adopted ePC-02 and ePC-07 for use in the Hospital Inpatient Quality Reporting program beginning with Calendar Year 2023 reporting period and Fiscal Year 2025 payment determination. Organizations can self-select to report the measures to CMS for Calendar Year 2023 reporting period. With mandatory reporting beginning with Calendar Year 2024 reporting period, Fiscal Year 2026 payment determinations.

ePC-02 and ePC-07 were optional measures for the 2023 Joint Commission ORYX requirements, and TJC is considering making them required for reporting year 2024. Be sure to check the ORYX Requirements page in the fall for the final decisions.

00:16:01

ePC-02 was endorsed in December of 2022. ePC-07 was submitted for trial use endorsement for the Spring 2023 Cycle.

00:16:16

Now we will discuss ePC-02 in detail. The Cesarean Birth measure looks at the NTSV Cesarean Rate, which is the primary cesarean in first birth, with term Singleton pregnancies in a head down position. This is an important population to focus on because Nulliparous women have 4 to 6 times the Cesarean Birth rate than Multiparous women and therefore the population is the largest driver of the primary Cesarean Birth rate. In addition, a reduction in primary cesarean births will reduce the number of women having repeat C-sections, as almost 90% of mothers who have a primary C-section will go on to have subsequent cesarean births.

Although cesarean delivery can be lifesaving for the fetus, the mother or both in certain cases, the rapid increase in the rate of cesarean births without evidence of decreases in maternal or neonatal morbidity or mortality raises significant concern that cesarean delivery is overused. Studies have also shown an increased risk of severe maternal morbidities for cesarean delivery compared to vaginal deliveries. The Cesarean Birth measure can assist organizations in monitoring their quality improvement efforts to reduce the NTSV cesarean rate. Caesarean birth rates have improved.

However, there are still hospitals with rates over 30%. It is important to note that the clinical intent of the PC-02 Exclusions is to get to the NTSV population, not to exclude from maternal health conditions that may increase the risk for cesarean delivery. However, we have added some Exclusions for conditions which are absolute indications for cesarean birth. More about that on the next slide.

00:18:30

The measure earned endorsement in 2022 from the National Quality Forum, which was the consensus based entity at that time. This year we are introducing a new approach to determine Gestational Age. The logic will evaluate ICD10 and SNOMED codes to determine weeks gestation, but only if the first two approaches are not available. Therefore, Gestational Age will be determined in the following order of precedence.

One. The Gestational Age is calculated using the American College of Obstetricians and Gynecologists ReVITALize guidelines. Two. The Gestational Age is obtained from a discrete field in the electronic health record. This option is only used when the calculated Gestational Age is not available. Number three the Gestational Age is based on ICD10 or SNOMED codes. Indicative of weeks gestation. This option is only used when results from items one and two are not available.

After feedback from a Perinatal Technical Expert Panel or TEP, it was determined that Placenta Accreta and Vasa Previa are absolute reasons for a caesarean birth and were therefore added to the list of Denominator Exclusions.

I will now turn the presentation over to Melissa who will cover the technical changes.

Thank you, Kelley.

00:20:08

To reiterate, the measure description for PC-02 is Nulliparous patients with a term Singleton baby in a head down or Vertex position who are delivered by caesarean section.

The Initial Population is inpatient hospitalizations for patients age greater than or equal to eight years, and less than 65 admitted to the hospital for inpatient acute care who undergo a Delivery Procedure with a discharge date that ends during the measurement period.

The Denominator is inpatient hospitalizations for Nulliparous patients, delivering a live term single newborn greater than or equal to 37 weeks of gestation completed. The measure defines Nulliparous as a patient with Gravida one or Parity zero or preterm and term births zero.Denominator Exclusions are inpatient hospitalizations with abnormal presentation or Placenta Previa, Accreta, or Vasa Previa during the encounter. Please note that throughout this presentation, red font is indicative of a change made during the most recent annual update cycle.

The Numerator is inpatient hospitalizations delivered by caesarean section. Please note ePC-02 is an inverse measure and therefore, generally speaking, lower scores are better. Last year we provided clarification that The Joint Commission does not want to encourage inappropriately low caesarean rates that may be unsafe to patients. Acceptable PC-02 rates are 30% or lower. However, there is not an established threshold for what rate may be too low. PC-06 serves as a balancing measure for PC-02 to guard against any unanticipated or unintended consequences and to identify unforeseen complications that may arise.

00:22:35

As measure developers, we strive to assure that the eCQM is aligned with their companion chart based measure if one exists. In the past, chart based PC-02 and the eCQM PC-02 slightly digressed in determining if a patient was Nulliparous. The chart based measure included a data element entitled previous live births and Abstractors were instructed to answer no, if a patient had a previous stillbirth or fetal demise. This would keep the patient in the measure. However, the eCQM would not include the patient with previous stillbirth or fetal demise greater than 20 weeks as Parity would not be zero. Parity is defined as the number of pregnancies reaching 20 weeks gestation regardless of the outcome.

Effective July 1st of 2023,the chart based measure data element of previous live births was changed to previous births and documentation of previous births greater than or equal to 20 weeks, regardless of the outcome, should now be abstracted as yes, and the patient will not be included in the measure. Therefore, the eCQM and chart based abstracted measure are now aligned. The language in the eCQM addressing this digression has been removed.

00:24:16

To be consistent and to add flexibility to implementers. We added EarliestOf and relevantPeriod to the LastGravida last history, pre-term birth, last history, term birth LastParity definitions. This will cause the NormalizeInterval to be invoked, which is called by the EarliestOf function. The NormalizeInterval function's purpose is to help simplify logic that may have either a date/time or an interval associated with it. It allows for flexibility on the reporting of the measure. The measure can accommodate institutions that use an interval or a date/time to represent the time that the assessment was performed. The NormalizeInterval function will take the data and normalize or convert it to that so that it can be used in the measure for calculation.

We added as DateTime logic to the last estimated delivery date function, which simplifies the logic allowing us to remove the TJC.truncate time and formatted Last Estimated Delivery Date Functions.

00:25:46

As Kelley mentioned earlier this year, we are introducing a third approach to determine Gestational Age or GA, which entails evaluating the coding to determine if a patient is 37 to 42 weeks gestation. This change required the addition of a new Value Set.

The Placenta Previa Value Set was renamed to Placenta Previa or Accreta or Vasa Previa to reflect the additional conditions based on the Technical Expert Panel recommendation.

As happens every year, multiple Value Sets have code additions and/or deletions due to terminology updates or based on review by technical experts, subject matter experts, and or public feedback. See the Value Set for more details.

00:26:50

Next, we would like to share the Measure Flow Diagram with you. The Measure Flow Diagrams provide a high level overview of the algorithm flows and can be found on the eCQI Resource Center. The Measure Specifications are the source of truth, but the Measure Flow Diagrams can be helpful in understanding the main concepts. Navigate to the eCQI Resource Center at eCQI.HealthIT.gov. And click on Eligible Hospital/Critical Access Hospitals eCQMs. Next select the reporting period you are interested in and click on the eCQM Resources tab.

00:27:46

Now scroll through the eCQM Resources and click on the eCQM Flows zip file. Once you open the zip file, you will see the measure flows for all the measures in the CMS Hospital Inpatient Quality Reporting Program.

00:28:09

The Initial Population main definition for ePC-02 is delivery encounter with Age range. Three conditions must be met to qualify for this definition. 1: An inpatient encounter must be present. 2: the patient greater than or equal to eight and less than 65 years of Age. And 3: there must be procedure code from the Delivery Procedure Value Set with a start date during the hospitalization encounter.

If the criteria is met, the patient is in the Initial Population. If not, the patient is not in the Initial Population and processing ends.

00:29:03

The Denominator Flow Diagram is a little more complex and will be covered in the next two slides. The main definition is Singleton Delivery Encounters at 37 Plus Weeks. Gravida One Parity Zero No Previous Births. To start, one of the three definitions must be met to determine that Gestational Age is greater than or equal to 37 weeks. The first is the calculated Gestational Age greater than or equal to 37 weeks. The calculated Gestational Age is based on ACOG ReVITALize definition and is the preferred method of determining Gestational Age. The second is the estimated Gestational Age. If the calculated Gestational Age is null, the estimated Gestational Age is the next preferred method in the hierarchy to determine Gestational Age.

The third and last way to determine Gestational Age is based on ICD10 or SNOMED codes. This is an addition to the logic this year. This is the lowest in the hierarchy. Calculated and estimated Gestational Age must be null to invoke this logic. If one of these definitions is met, they must now intersect with the encounter with Singleton delivery definition, as the measure only includes single births. If the criteria is not met, processing ends. If the criteria is met, the measure flow continues on to the next page.

00:30:56

We continue to determine if the Denominator is met, determining if the Gravida is one or the Parity equals zero or both. Preterm and term births are equal to zero. If just one of these conditions are met, the patient will be in the Denominator. If not, processing ends. Note the A1, A2, A3, notations in the small diamonds. We will refer back to these notations when we get to sample calculation.

00:31:38

Now that we have our Denominator cases, we need to determine if any should be excluded. There are two definitions that could be met. The first is if there is an encounter with abnormal presentation and the second is if the encounter has Placenta Previa or Accreta or Vasa Previa. If either is met, the patient meets the Denominator Exclusion. If not met, the patient continues on through the algorithm to be considered if the Numerator is met. Again, note the B1 and B2 and the small diamonds to be used later in the sample calculation.

Now our Numerator is fairly straightforward. Did the patient have a caesarean birth during the encounter? No. The patient is not in the Numerator. Yes, the patient is in the Numerator. And again, note the C notation in the small diamond. Now that the Numerator, Denominator, and Denominator Exclusions are defined, we can plug the quantities into the calculation formula. Here you see the diamond notations referenced from the previous slides. So now that you have a high-level overview of the logic flow, we will dive into the specifics of the logic.

00:33:21

The main Initial Population definition is Delivery Encounter with Age Range, which is stored in the PCMaternal library. The PCMaternal library stores definitions and functions, which are used by both maternal measures in the CMS program, i.e., PC-02 and PC-07, as well as PC-01 in The Joint Commission ORYX program. Delivery Encounter with Age Range identifies patients that had a qualifying Delivery Procedure during the hospitalization. You may recall that the hospitalization function returns the total interval from the start of any immediately prior emergency department visit or OB Triage visit through the observation visit to the discharge of the given encounter. The DayOf logic accounts for delivery procedures that may not have times day of uses, the calendar date only and does not use hours, minutes and seconds for the timing comparison.

This definition calls the definition entitled Encounter with Age range, which is also stored in the PCMaternal library. The Age in Years At Function is a built in CQL operator that calculates the patient's age at the time designated in the logic, in this case at the start of the encounter. There are no changes to the Initial Population logic.

00:35:14

The Denominator definition is Singleton Delivery encounters at 37 weeks gestation Gravida 1 Parity 0, No Previous Births. We will look at each line of this logic in detail.

00:35:34

Let's start with the first definition in the union statement Delivery Encounter with Calculated Gestational Age Greater Than or Equal to 37 Weeks. The initial patient population Delivery Encounter with Age Range is our starting point. Then the Calculated Gestational Age Function is used to narrow the population.

This function is stored in the PCMaternal library. It calculates the Gestational Age based on ACOG's ReVITALize definition. The function calculates the difference in days between the time of delivery and the estimated delivery date subtracts that from 280 and divides by 7. This year we removed "Formatted" from the Last Estimated Delivery Date due to the addition of the DateTime logic in the last estimated delivery date function. For now, let's look at the Last Time of Delivery function in greater detail.

00:36:45

Let's start with the Delivery Encounter with Gestational Age Greater Than or Equal to 37 Weeks definition. Three definitions are unioned here to reflect three approaches to determining Gestational Age. Recall thatthroughout this presentation, red font indicates changes to the logic this year. Therefore, you see that the third definition has been added to identify patients with Gestational Age greater than or equal to 37 weeks based on coding.

00:37:25

This function's purpose is to gather all assessments that document Delivery DateTime, sort these items by the relevant date/time that the assessment was performed, and identify the last assessment. It then stores the results of that assessment at the Last Time of Delivery. There are no changes to this function this year.

If you would like to learn more about the EarliestOf function, please go to the eCQI Resource Center, Teach Me CQL Video series. The link is provided on the Resources page at the end of this presentation.

A frequently asked question relates to the logic just presented. The LastTimeOfDelivery function uses the EarliestOf function. Why is this when we are trying to identify the last time of delivery assessed?

The **"last" and **"EarliestOf" operators may seem contradictory in this logic. The "Earliest Of" operator evaluates the time of delivery relevant date/time and relevant period for every assessment of time of delivery.

If both the relevant date/time and relevant period are present, we choose the relevant date/time. If only the relevantPeriod is specified, the starting point of the period is used. Otherwise, the end point of the period is used. Then all of the results of "earliest of" dates are sorted and the "Last" one is chosen.

00:39:18

The LastEstimatedDeliveryDate function identifies the last time the delivery, the estimated delivery date, or due date was assessed 42 weeks or less prior to or on the date of delivery, and stores the result of that assessment. The only change made to this function is that we added as DateTime to constrain the function's final result as a date or a date/time.

00:39:51

Two functions were removed from this measure this year. Since we added as DateTime to the last estimated delivery date function. We found that these functions were no longer needed.

00:40:09

Now that we have defined the LastTimeOfDelivery and the last estimated delivery date, we can plug those values in to the equation to arrive at the calculated Gestational Age.

Now the logic determines if the calculated Gestational Age is greater than or equal to 37.

00:40:33

Let's turn our attention to the second definition of the union statement Delivery Encounter with Estimated Gestational Age Greater Than or Equal to 37 Weeks. This definition calls the calculated Gestational Age function that we just covered to determine if the CGA is null.

Next, it calls the Last Estimated Gestational Age Function from the PCMaternal library.

00:41:04

The **LastEstimatedGestationalAge** function is constructed similarly to the last EDD last time of delivery functions that we just covered. This function's purpose is to gather all assessments that document the patient's estimated Gestational Age. Sort these by items by the relevant date/time that the assessment was performed and identify the last assessment. It then stores the result of that assessment as a quantity representing estimated weeks gestation. Note that the EGA assessment's relevant date/time must be 24 hours or less before or on the last time of delivery.

00:41:57

So, this brings us to another Frequently Asked Question. The **LastEstimatedGestationalAge** function requires that the estimated Gestational Age relevant dateTime be performed 24 hours or less before or on the Date/Time of delivery. Depending on the circumstances, we sometimes document Gestational Age after the delivery date/time.

We have two responses for this question. First, the logic distinguishes between when an assessment is documented in the EHR (author dateTime) and when an assessment is performed (relevant dateTime). So, if you assess a patient's Gestational Age at 0200, patient delivers at 0230 and you don't document until 0300, the assessment relevant dateTime should be mapped to 0200, which is prior to the delivery time. Second, some EHRs calculate Gestational Age automatically, whereby the Gestational Age may continue to advance after delivery. Therefore, the logic specifically looks for a time prior to delivery.

00:43:19

So now that we have the **LastEstimatedGestationalAge**, we go back to the higher-level definition. If the calculated Gestational Age is null and the estimated Gestational Age is greater than or equal to 37 weeks, the definition is met.

00:43:38

And now let's turn our attention to the third definition of the union statement: Delivery Encounter With Gestational Age Greater than or Equal to 37 Weeks Based on Coding.. This definition is new this year and was added to provide more flexibility to hospitals to identify patients with the desired Gestational Age based on coding. If the calculated Gestational Age is null and the estimated Gestational Age is null, then the diagnoses codes are evaluated.

00:44:13

So, circling back to the highest level definition, we union calculated Gestational Age and the estimated Gestational Age and the Gestational Age Based on Coding definitions to identify delivery encounters >= 37 weeks. .

00:44:37

So, coming back to our Denominator definition, the last 12 slides covered the first definition of Delivery Encounter with Gestational Age Greater Than or Equal to 37 Weeks. The next definition, The next definition, Encounter with Singleton Delivery, looks for an encounter diagnosis which represents a Singleton delivery.

00:45:02

Moving down to the where clause, we call four functions and qualify the results directly in the Denominator definition. We are looking for patients who are Gravida one, Parity zero, or preterm, and term birth both equal zero.

The four functions, starting with the word Last, are all structured similarly. We will take a look at LastGravida as an example but first let’s review a question received from a hospital.

Before we get in to the specifics of this logic we share another frequently asked question:

Is there any specific reason for the 4 Assessment Performed of Gravida, Parity, Preterm and Term Births to consider only the relevantDateTime attribute where other measures use relevant DateTime and relevant Period. Should we expect any updates to the current version of the PC-02 measure for CY 2023 reporting?

00:45:35

Our response is clinically, these assessments occur at a high point in time and not over an interval of time. Therefore, relevant period was not added. However, to be consistent and to add flexibility for implementers, we added relevant period and EarliestOf to LastGravida, LastHistoryPretermBirth, LastHistoryTermBirth and LastParity definitions. This will cause the "NormalizedInterval" to be invoked, which is called by the EarliestOf function.

00:46:52

And here in red, you see the addition of the EarliestOf function and the relevantPeriod attribute. The LastGravida function's intent is to look at all assessments of Gravidity where the relevant date/time is 42 weeks or less before delivery. Sort those assessments by the relevant date/time and then store the result from the last assessment as the Gravida to be used to determine if the patient is in the Denominator.

Similarly, LastHistoryPretermBirth, LastHistoryTermBirth and LastParity have all been updated with the EarliestOf function and the relevantPeriod attribute.

00:47:39

So, putting the Denominator definition altogether, we are looking for delivery encounters with Gestational Age greater than or equal to 37 weeks that also had a delivery of a single baby where the LastGravida equal 1 or the LastParity equals 0 or the LastHistoryPre-TermBirth and the LastHistoryofTermBirth are both 0.

00:48:10

Next we move to the Denominator Exclusions, which consists of two exclusions: 1) Encounter with Abnormal Presentation and 2) Encounter with Placenta Previa, Placenta Accreta or Vasa Previa. Note the additions of the Placenta Accreta or Vasa Previa as Denominator Exclusions this year.

00:48:37

Let's start with the Encounter with Abnormal Presentation definition first. We call the Denominator population Singleton Delivery Encounters at 37 Plus Weeks Gravida 1 Parity 0, No Previous Births. We give organizations two options to evaluate abnormal presentation.

First, we look to see if an assessment is performed during the encounter that indicates the fetus is in an abnormal presentation. These six lines of logic define a variable of last abnormal presentation where an assessment is performed before or on the delivery date that indicates Abnormal Presentation.

Next, we look for a diagnosis of Abnormal Presentation and last union that with the variable of abnormal presentation.

00:49:42

Moving on to the Encounter with Placenta Previa definition. If the patient has a diagnosis of Placenta Previa or Accreta or Vasa Previa on the encounter, the definition will be satisfied. Notice the Value Set name has been re… Notice the Value Set name has been revised to reflect the additional Exclusions.

00:50:09

Lastly, our Numerator includes inpatient hospitalizations for cesarean births. The logic looks for a procedure of Cesarean Birth performed during the hospitalization. No changes to the Numerator logic or clinical intent this year. This wraps up our presentation of the ePC-02 logic. I will turn it back to Kelley to introduce ePC-07.

Thank you Melissa.

00:50:41

ePC-07 is Severe Obstetric Complications. TJC developed ePC-07 in collaboration with Yale New Haven Health Services Corporation Center for Outcomes Research and Evaluation, or CORE; and expert advisor Dr. Elliot Main from the California Maternal Quality Care Collaborative, or CMQCC, where he is the Medical Director and Executive Committee Chair.

This is a risk adjusted outcome measure.

00:51:22

Maternal morbidity and mortality pose a serious health threat to pregnant women in the United States, where rates have been on the rise in comparison to other developed nations. These high rates in the United States present unique opportunities for large scale quality measurement and improvement activities. Statistics on preventability vary but suggest that a considerable proportion of maternal mortality and morbidity events could be prevented.

A 2019 report from 14 maternal mortality review committees, conducting a thorough review of pregnancy related deaths, determined that 65.8% of them were preventable. Although there are limited measures to assess variability among hospitals using the CDC definition of Severe Maternal Morbidity or SMM. The US median rate was 1.4% and the highest hospital rate was 12.2%. Studies also show that Non-Hispanic Black women are 3 to 4 times more likely to die from pregnancy related causes than Non-Hispanic White women.

Severe maternal morbidity and mortality impacts the mother's health, increases medical costs and hospital length of stay. One report found that women with SMM delivering vaginally have hospital stays that are 70% longer than women with vaginal deliveries experiencing no SMM and costs that are almost 80% higher.

00:53:12

SMM is defined as unexpected outcomes of labor and delivery that result in significant short- or long-term consequences to a woman's health. The definition by both ACOG and the Society for Maternal Fetal Medicine. The CDC specifically defines by 22 indicators defined by international classification of diseases, 10th revision or ICD10 diagnosis and procedure codes. Some SMM examples include acute renal failure, acute respiratory distress and blood transfusions. More on this later.

An important distinction compared to the CDC model is that our measure uses present on admission (POA) codes to distinguish SMM that may be POA.

The goal of ePC-07 is to assess prevalence of SMM and mortality. Specifications are modeled after a modified version of CDC's SMM indicators with the addition of maternal mortality.

At times we may refer to the CDC indicators of morbidity as SMM, but the outcome of the measure, which includes morbidity and mortality, is referred to as Severe Obstetric Complications or SOC.

Now Valery Danilack from Yale CORE will explain the risk adjustment model for PC-07.

00:54:54

The goal of risk adjustment is to account for patient characteristics and/or comorbidities associated with the measure outcome that are reasonably beyond the control of the hospital. The aim of risk adjustment is to isolate the assessment of quality of care. Risk adjustment accounts for case mix differences between hospitals, and levels the playing field, allowing for better comparisons between hospitals on the care patients receive at the hospital. Risk variables included in the risk model must be factors that were present on admission when the patient arrives at the hospital.

Risk adjustment is achieved through the development of risk models, which are typically multivariable regression models that include all risk factors as covariates.

00:55:43

We identified candidate risk variables predictive of Severe Obstetric Complications for consideration in the measure risk adjustment model by utilizing literature and research findings. In addition, we identified candidate risk variables from the list of hospital core clinical data elements.

We also sought input from our clinical expert, consultant and other clinical experts, patients and other experts in the technical expert panel.

Again, only conditions or comorbidities that were present on admission were included in risk adjustment.

00:56:21

Following the identification of risk adjustment variables, a risk model was developed for the Severe Obstetric Complications and Severe Obstetric Complications, excluding blood transfusion-only encounters.

Due to very low prevalence of a few risk variables in the risk model of severe complications excluding transfusion-only encounters. Human Immunodeficiency Virus was combined with autoimmune disease and Obstetric Venous Thromboembolism was combined with long-term anticoagulant medication use for the model of Severe Obstetric Complications, excluding transfusion-only encounters only.

Otherwise, the same risk variables were included in the risk models for the Severe Obstetric Complications outcome and the Severe Obstetric Complications excluding blood transfusion-only encounters outcome.

00:57:15

Social risk factors were considered dependent on the availability of information in the EHR. Economic or housing instability was included in the model and was chosen due to support in research literature for its inclusion and availability in the EHR.

The Severe Obstetric Complications Risk Adjustment methodology report is available on the eCQI Resource Center.

00:57:44

Race/ethnicity were not considered for risk adjustment. Instead, they were planned for stratification of the measure scores. This is to illuminate outcome disparities by race/ethnicity rather than adjust outcomes by race/ethnicity. Illumination of outcome disparities by race/ethnicity would be most informative and impactful in incentivizing improvements in the quality and equity of maternal care. Back to you, Kelley.

00:58:12

Thank you Valery. ePC-07 uses Value Sets to group each category of SMM diagnosis codes. When hospitals are reviewing their Numerator cases, these categories can be used to identify potential areas for quality improvement as well as opportunities to improve coding documentation.

It is also important to understand that the conditions which are used in the risk adjustment model adjust the rate to account for the severity of cases present on an admission. They are not excluded from the measure. The Denominator exclusion criteria for this measure will be discussed in an upcoming slide.

Also, when looking at ePC-07 rates, they will be reported per 10,000 delivery hospitalizations.

00:59:07

To reiterate, the measure description for ePC-07 is patients with Severe Obstetric Complications which occur during the inpatient delivery hospitalization.

Now we will take a close look at how ePC-07 populations are defined. The Initial Population is defined as inpatient hospitalizations for patients age greater than or equal to eight years, and less than 65, admitted to the hospital for inpatient acute care, who undergo a delivery procedure with the discharge date that ends during the measurement period.

The Denominator is inpatient hospitalizations for patients delivering stillborn or live birth with greater than or equal to 20 weeks gestation completed. Denominator Exclusions are patients with confirmed diagnosis of COVID, with COVID-related respiratory conditions or patients with confirmed diagnosis of COVID with COVID-related respiratory procedures.

01:00:21

The Numerator is inpatient hospitalizations for patients with Severe Obstetric Complications. You may recall from earlier in the presentation we mentioned CDC's SMM indicators, here are those indicators that are used to define the Numerator in addition to a discharge disposition of expired.

One, Severe Maternal Morbidity diagnosis, which must be coded as not present on admission to get into the Numerator.

Two, Severe Maternal Morbidity procedures, and three, discharge disposition equals expired.

Note that the CDC groups acute heart failure and pulmonary edema as one SMM indicator, and hence we often hear that CDC's models include 21 indicators as opposed to the 22 listed here.

01:01:25

This measure is risk adjusted using the pre-existing conditions listed here. Note that the BMI greater than or equal to 40 categories has been renamed to morbid obesity to more accurately reflect the clinical intent. Present on admission codes are used to determine if any of the conditions are pre-existing. Additional variables used for risk adjustment are the heart rate, systolic blood pressure, white blood cell count, and hematocrit.

The first resulted value 24 hours prior to the start of the encounter and before time of delivery are used for the vital signs and laboratory tests.

01:02:16

As Valery mentioned, the measure reports two outcomes: All complications and a subset of the Numerator population referred to as Stratum1: Delivery Hospitalizations with Severe Obstetric Complications excluding hospitalizations for transfusion was the only SOC. You may be wondering why the measure is reported as excluding transfusions only. Blood transfusions generally.. are generally in response to excessive bleeding around delivery or in response to a pre-existing chronic condition andaccount for the greatest proportion of patients identified as having an Obstetric Complication. But patients for whom this is the only identified Numerator event may represent a less severe outcome experience.

The second outcome requires the patients who experience a blood transfusion during the delivery hospitalization also experience at least one other Numerator event to be counted as having a Severe Obstetric Complication.

The overall hospital level measure scores are calculated as a risk adjusted proportion of the number of delivery hospitalizations for women who experience an SOC as defined by the Numerator by the total number of delivery hospitalizations in the Denominator during the measurement period. The hospital level measure score will be reported as a rate per 10,000 delivery hospitalizations. The second outcome, reported as stratum one is the delivery hospitalizations with SOC, excluding hospitalizations for transfusion, was the only SOC divided by the number of encounters in Denominator less than less the number of encounters in Denominator Exclusions again as a rate of per 10,000 delivery hospitalizations.

01:04:35

Just as we already described during the ePC-02 presentation. This year, we are introducing a new approach to determine Gestational Age, and that is using the ICD10 or SNOMED codes to identify Gestational Age when the calculated and reported Gestational Ages are not present.

I will now turn it over to Melissa to cover some of the technical changes.

01:05:05

Thanks, Kelley. The risk variable BMI greater than or equal to 40 definition was renamed to “Risk Variable Morbid Obesity” to align with the renaming of the corresponding Value Set. More on this on the next slide.

01:05:22

Again, as already described during the ePC-02 presentation, we added as DateTime logic to the last estimated delivery date function, which simplifies the logic allowing us to remove the TJC.TruncateTime and formatted Last Estimated Delivery Date functions.

01:05:45

Just as we described during the ePC-02 presentation, we added a third method to capture Gestational Age using diagnosis codes. The Value Set 20 to 42 Plus Weeks Gestation contains those codes.

Multiple Value Sets had code additions or deletions due to terminology updates or review by technical experts, Subject Matter Experts and/or public feedback. See the Value Set file and the Technical Release Notes for more details.

The asthma, HIV other Pre-eclampsia and Obstetrical VTE Value Sets have been renamed based on recommended Value Set naming conventions.

The BMI greater than or equal to 40 Value Set was renamed to Morbid or Severe Obesity as we removed the Z-codes representing BMI greater than 40. The coding guidelines state that Z-codes representing BMI should not be used for pregnant patients. The Z codes in the Value Set were replaced with E66.01 and E66.2, Morbid Obesity Codes.

01:07:11

Next, we would like to share the Measure Flow Diagram with you. The measure flows provide a high-level overview of the algorithm flows and can be found on the eCQI Resource Center. The measure specifications are the source of truth, but the measure flow diagrams can be helpful in understanding the main concepts.

Moving in to the Measure Flow Diagram for ePC-02, we will skip over the Initial Population as it is identical to ePC-02 initial population.

01:07:47

PC-07's Denominator is similar to PC-02 in that three different approaches exist to evaluate the Gestational Age. The first is the calculated Gestational Age Greater Than or Equal to 20 Weeks. The calculated Gestational Age is based on ACOG's ReVITALize definition and is the preferred method of determining Gestational Age.

The second is the estimated Gestational Age. If the calculated Gestational Age is null, the estimated Gestational Age is the next preferred method in the hierarchy to determine Gestational Age.

The third and last way to determine Gestational Age is based on ICD10 or SNOMED codes. This is the lowest in the hierarchy calculated and estimated Gestational Age must be null to invoke this logic. If the criteria is not met, processing ends, and the case is not in the measure. If the criteria are met, the case is in the denominator.

And just as you saw in the ePC-02 Measure Flow Diagram, the A1, A2, A3 notations in the small diamonds will be used in the calculation.

01:09:07

Moving on to the Denominator Exclusions. A patient must have COVID diagnosis, and a respiratory condition related to COVID or a respiratory support procedure such as ventilation performed during the encounter. If the criteria is met, the patient will be excluded from the Denominator. If not, the patient moves on to determine if the Numerator is met.

01:09:36

A patient will get in the Numerator if one of three definitions are met. Delivery encounters with a Severe Obstetric Complication or Severe Obstetric Procedure excluding blood transfusion. Two, expirations or Three, blood transfusion was performed during the encounter.

Just as you saw with PC-02, a sample calculation is provided to determine the performance rate.

01:10:09

Now we will study the measure logic in detail.

The Initial Population definition is Delivery Encounter with Age Range, which is stored in the PCMaternal library and is identical to ePC-02's Initial Population, which we have already covered.

01:10:27

Which takes us to the Denominator. Now we are looking at looking for patients who deliver a stillborn or live birth at greater than or equal to 20 weeks. Similar to ePC-02, the Denominator definition, Delivery Encounters At Greater than or Equal to 20 Weeks Gestation, unions three definitions: one that reports the calculated Gestational Age, one that reports the estimated Gestational Age, and the new definition this year, which has been added to identify patients with Gestational Age greater than or equal to 20 weeks based on coding.

The Denominator logic is the same as ePC-02 with the exception that ePC-07 is looking for Gestational Age greater than or equal to 20 weeks. So, we will not repeat the common logic here.

01:11:29

Next we move on to our Denominator Exclusions, which are patients with confirmed diagnosis of COVID, with COVID-related respiratory condition, or patients with confirmed diagnosis of COVID with COVID-related respiratory procedure. We start with our Denominator definition of Delivery Encounters Greater Than or Equal to 20 Weeks Gestation. Then we add on a qualification of a confirmed COVID diagnosis. And a diagnosis of COVID-related respiratory conditions or COVID-19- related respiratory procedure where the procedure starts during the hospitalization encounter.

01:12:16

PC-07 Numerator reads: Inpatient hospitals for patients with severe obstetric complications, including the following: Severe maternal morbidity diagnoses, Severe maternal morbidity procedures, discharge disposition equals Expired.

Please note PC-07 is an inverted measure. In other words, a lower calculated performance rate indicates a better clinical care. So, the less patients in the numerator, the better the performance rate.

You can see that the main definition calls three additional definitions: Severe Obstetric Complication Diagnosis or Procedures Excluding Blood Transfusions, Expirations, Blood Transfusions.

While the blood transfusion is a Severe Obstetric Complication procedure, these procedures are kept separate for the purposes of stratification, which we will cover later.

Note that the parentheses were removed from the last definition to align with the CQL style guide.

01:13:28

Let's start with the first definition in the union statement, Delivery Encounters with Severe Obstetric Complications, Diagnosis, or Procedure Excluding Blood Transfusion.

We start with the Denominator definition and then add diagnosis of severe maternal morbidity. And the diagnosis must not be present on admission or unable to determine. Note that the equal sign has been replaced with the word “is” based on recommended Value Set naming conventions. OR we have a procedure of Severe Maternal Morbidity where the procedure starts during the hospitalization encounter.

01:14:16

Next, let's look at the second definition of the Numerator statement, Delivery Encounters with Expiration.

This is a simple definition that looks at the Denominator cases with a discharge disposition of expired.

01:14:34

Lastly, let's look at the third definition of the Numerator statement, Delivery Encounters With Blood Transfusion. Again, we start with the Denominator definition. Look for a procedure with a blood transfusion and the transfusion starts during the hospitalization encounter. Recall DayOf was added last year to allow for blood transfusion procedures that have only date and no time. In the 2022 version of the measure. If there was no start time associated with the blood transfusion, the start time would default to 0000 or midnight.

Therefore, if a patient had a blood transfusion on the encounter start date, the procedure would not qualify as 0000 time would be prior to the start time of the encounter.

So, putting all three definitions together with union statements, if any of these conditions are met, the patient will be in the Numerator.

01:15:45

Now we will move into the stratification portion of the logic. This logic identifies a subset of the Numerator population, those patients with severe obstetric complications, excluding cases where the transfusion was only severe obstetric complication. The Stratification definition intersects a Stratification Encounter definition with a definition titled, Delivery Encounters with Severe Obstetric Complications Excluding Blood Transfusions. The intersect clause will return encounters that are common to both of these definitions.

The only changes is the parentheses that have been removed from the definition names to align with the CQL style guide.

01:16:42

Let's talk about the Stratification Encounter definition first. In eCQMs, stratification can occur at any population level in our measure. Defining the Stratification Encounter assures that any Denominator exclusion case that also satisfies a number condition will not be stratified.

01:17:08

Now let's turn our attention to the second definition in the Intersect statement, Delivery Encounters with Severe Obstetric Complications Excluding Blood Transfusions.

This definition unions two definitions. The first one is Delivery Encounters with Severe Obstetric Complications Diagnosis or Procedure (Excluding Blood Transfusion). This includes patients with a Severe Obstetric ComplicationDiagnosis or a procedure indicative of a severe obstetric complication other than blood transfusion, as we already described in the Numerator. Cases with blood transfusions are not excluded from the definition if they have another complication. Thereby, patients who only had an SOC of blood transfusion would not qualify for this definition.

The second definition captures any Expirations. These two definitions are unioned and then intersected with the Stratification Encounter definition to provide the cases that meet the Stratification criteria.

01:18:24

Now we will transition to the Risk Adjustment Logic. But first, let's review a Frequently Asked Question. I understand that PC-07 is a risk adjusted measure. Is a patient with preexisting conditions listed on the risk variable list excluded from the measure?

Answer. Risk adjustment does not exclude a case from the measure numerator or denominator. The only Denominator Exclusions are inpatient hospitalizations for patients with confirmed diagnosis of COVID with COVID-related respiratory condition or patients with confirmed diagnoses of COVID with COVID-related respiratory procedure.

However, patients with conditions that are defined as risk variables will cause your performance rates to adjust accordingly.

01:19:24

ePC-07 is risk adjusted using one of the pre-existing conditions, lab results, or vital signs that we covered earlier in the presentation. We will start with the pre-existing conditions. Using Anemia as an example, our Risk Variable Anemia definition starts with the Denominator qualifying encounters. And then we look for a diagnosis code from the Anemia Value Set and the Anemia diagnosis code must have a present on admission code of Yes or Exempt. Note that the equal sign was stricken from and replaced with is to align with the Value Set naming conventions.

We repeat the same logic for the remaining pre-existing conditions. You may question why we include the present admission indicator of Exempt when evaluating risk variables. Our goal is to identify conditions that are present on admission when doing risk adjustment. There are over 37,000 codes that are designated as Exempt from POA reporting. On the Resources page at the end of the slide deck, we have provided a link to the CDC website for the detailed list of ICD10 CM codes that do not require the use of a POA indicator. The codes and categories on this Exempt list are for circumstances regarding the health care encounter or factors influencing health status that do not represent a current disease or injury. Or that describe conditions that are always present on

admission. Therefore, we include exempt codes when identifying risk variable by definition they are present on admission.

Please pay attention to this next comment on the importance of submitting risk variable data. TJC and CMS will re-estimate the risk model from all the risk adjustment variable data submitted in QRDA1 files by hospitals, and then we'll use the new model to calculate the risk adjusted rates. If risk variable data is not provided, then your performance rate will not be risk adjusted. Specific risk variable templates are not needed in the QRDA1 one files to submit your data. The risk variable definitions are specified in the logic and risk. Variable data should be sent with eCQM data in the QRDA1 file.

01:22:27 Two of the pre-existing conditions are handled differently. They are Maternal Age and Preterm Birth. Maternal Age is based on the mother's date of birth and is straightforward. Let's talk about Preterm birth.

The first part of the definition uses the calculated Gestational Age function to determine if the mother is preterm. In other words, she is greater than or equal to 20 weeks and less than or equal to 36 weeks gestation. If calculated, Gestational Age is null, then estimated Gestational Age is used.

The second half of the logic applied if Calculated Gestational Age and Estimated Gestational Age are both null. Then we look for a diagnosis code in the pre-term birth Value Set that is present on admission or exempt.

01:23:25

Now we will review the lab results that are considered for risk adjustment. We are looking for the first resulted hematocrit or white blood cell count 24 hours prior to the start of the encounter and before the time of delivery.

A function is used to gather the data and the function is called FirstLabTestWithEncounterId. We start with our Denominator definition. Then we express a “let” statement to define the first lab from a specified lab list. And the lab result DateTime must be during the interval of the start of the hospitalization encounter for 1440 minutes, which is 24 hours up to the time of delivery.

Then we sort those results by the result DateTime so that the first result can be used. The function returns the first labs encounter ID the result, and the lab test date/time.

01:24:33

Similar to the lab result logic, we are looking for the first resulted heart rate or blood pressure 24 hours prior to the start of the encounter and before the time of delivery.

A function is used to gather the data and the function is called FirstPhysicalExamWithEncounterId. We start with the Denominator definition.

Then we express a "Let” statement to define the first exam from the specified exam list. And then the exam result DateTime must be during the interval of the start of the hospitalization encounter minus 1440 minutes up to the time of delivery. Then we sort all those results by the result date/time so that the first result can be used.

The function returns the first physical exams encounter ID result and the relevant date/time of the exam.

01:25:40

Lastly, we share with you the Risk Variable Lab and Physical Exam Results definition, which pulls together the first vital signs and lab values that we just discussed. You see the FirstPhysicalExamWithEncounterId and FirstLabTestsWithEncounterId functions that we just covered in the previous slide highlighted here. The function calls the respective vital sign and lab tests Value Sets.

The comments provide guidance on the units to be used when submitting data for the final vital signs. For the vital signs, heart rate should be reported as beats per minute and systolic blood pressure as millimeters of mercury.

For the lab tests, hematocrit is to be reported as a percentage and WBCs as thousands per microliter.

01:26:42

And to close, we have one more Frequently Asked Question for ePC-07.

There are a lot of risk variables associated with ePC-07. Do we need to map each one of these individually in our QRDA submission?

[Answer] The risk variable definitions are included in the specifications and risk variable data should be sent with the eCQM data in the QRDA1 file. Specific risk variable templates are not needed in the QRDA1 files and therefore there is no need for additional submission process for risk variables as compared with other data elements.

And this wraps up our PC-07 presentation. Back to you, Susan.

01:27:36

Great. Thanks so much and everyone thanks for staying on that was able to give us the additional time.

On this slide we have a few additional resources and links that lead out to, to additional resources and, and things that will be helpful for you in your eCQM work. I won't read them all, but I want to highlight the last two. The ONC Issue Tracking System is where clinical and technical questions about these eCQMs should be submitted. So, if you want a quicker response than waiting for the written Q&A, you can also submit them via that issue tracking system. And then the last one is for the CDC website for a detailed list of the ICD10 codes that do not require use of a POA indicator.

Next slide, please.

01:28:27

Where we typically would go into a live Q&A segment, with us being as far over the time as we are… Our team has been responding to as many of the questions as they can keep up with in writing in the background. So, in the interest of being able to give everyone back their day, we are going to skip the audio portion of the live Q&A segment.

Next slide, please.

01:28:55

In terms of the written Q&A document, just to assure everyone, we will post all of the recording links, slides, transcripts and Q&A documents for all of these Expert to Expert webinars and all of the previous and On-Demand ones are also all available at the link that's shown on this slide.

This series incorporates expertise from The Joint Commission, Centers for Medicare and Medicaid Services, Mathematica and other measure stewards. The 2024 eCQM Annual Update Webinar series will continue until February 2024 to address all the CMS for the 2024 reporting period. Next slide, please.

01:29:35

Before this session concludes a few words about the CE survey. We use your feedback to inform future content and to assess the quality of our educational programs. You can access the survey in two ways.

On the next slide, we will provide you a QR code that you can scan with your mobile device to immediately access the survey. If you missed that QR code, tomorrow the link will be provided within an automated email that is sent to the email address you used to register.

To obtain your certificate at the end of the survey. When you click submit, you are redirected to a page from which you can print or download your PDF CE Certificate. If you miss that on screen displayed CE certificate, you will also receive an automated email that includes the link to the CE Certificate. And with that we are on our final slide.

01:30:26

Thank you to Melissa, Valery and Kelley for your presentations, and to all of our content experts that were in the background answering the submitted questions.

Finally, thanks to all of you that were able to attend the full broadcast. We will leave this slide up for just a few momentsso, participants that would like to can scan the QR code to get to the survey.

Have a great day.

Question	Answer
Will performance reports be issued by CMS, akin to HRRP, HACRP, and other performance HSRs?	CMS will provide hospitals with confidential reporting on these two measures prior to the information being publicly reported.
Please explain why the Denominator Exclusions don't include diagnoses involving abnormal fetal heart rate.	The Cesarean Birth measure (ePC-02) does not include abnormal fetal heart rate as a denominator exclusion because fetal distress can be a subjective indication. Also, some fetal distress may resolve with labor management. ePC02 is designed to measure the rates of cesarean births among a subset of the general obstetric population of women while also keeping the burden of data collection to a minimum. The measure focuses on mothers having their first birth who are at the highest risk of primary cesarean birth when compared to mothers who have experienced a previous vaginal birth. The measure is designed to be an accurate way for leaders to identify whether a hospital's rate of cesarean births for women included in this select population is within the optimal range. Hospitals whose Cesarean Birth measure rates are not within optimal range are encouraged to explore and evaluate differences in the medical and nursing management of women in labor.
Has there been any consideration for excluding long labors with continued failure to descent and/or decrease in fetal heart tones?	The Cesarean Birth measure is not intended to include all possible conditions which may result in a cesarean delivery. Fall outs should be reviewed for potential quality improvement opportunities such as in labor management. Abnormal fetal heart tracings can be subjective, and the Technical Advisory Panel felt it should not be included in the exclusion criteria. The measure is designed to be an accurate way for leaders to identify whether a hospital's rate of cesarean births for women included in this select population is consistent with the rate of cesareans within this same population at another hospital. Hospitals whose Cesarean Birth measure rates are higher than rates at other hospitals are encouraged to explore and evaluate differences in the medical and nursing management of women in labor.
Can you please explain why prolapsed cord is not an exclusion?	Prolapsed cord was discussed in the December 2022 Technical Advisory Panel (TAP) for possible exclusion criteria in PC-02. The TAP felt that the etiology of a prolapse is usually a labor management issue and should be kept in the measure for potential quality improvement purposes. These fall outs are not expected to greatly increase the hospital's rates.

Question	Answer
How about the patient who had a C-section due to previous intrauterine surgery (i.e. myomectomy)?	The Perinatal Care Technical Advisory Panel reviewed myomectomy as a possible exclusion for PC-02. While this condition may be an appropriate indication for a cesarean birth, it is not an absolute indication as the extensiveness of the surgery and condition may vary. The TAP felt the codes are not specific enough to identify the varying conditions and that these cases would be based on an individual's specific history. The Cesarean Birth measure (PC-02) is designed to measure the rates of cesarean births among a subset of the general obstetric population of women while also keeping the burden of data collection to a minimum. The measure is designed to be an accurate way for leaders to identify whether a hospital's rate of cesarean births for women included in this select population is consistent with the rate of cesareans within this same population at another hospital. Hospitals whose Cesarean Birth measure rates are higher than rates at other hospitals are encouraged to explore and evaluate differences in the medical and nursing management of women in labor.
What about higher gravida due to miscarriages <20 wk (i.e. G=3, P=0020)?	The cesarean birth measure logic will identify the patient as nulliparous if the Gravida=1 or Parity = 0 or Preterm/Term Births = 0. Any of these conditions would identify the case as nulliparous.
Does placenta accreta automatically include the entire placenta accreta spectrum (to include accreta/increta/and percreta)? If so, why not state placenta accreta spectrum and vasa previa?	The current value set includes placenta accreta but does not include codes for placenta percreta or placenta increta. There is a planned future update to include all 3 placenta accreta spectrum codes in the value set. Please review the release notes for when this update is available.
Does TJC have guidance in regards to definition of hemorrhage? ACOG defines it as 1000mL lost regardless of delivery method. ICD-10 defines it as >500mL for vaginal deliveries and >1000mL for C/Sections. What is TJC's definition?	While TJC does not define hemorrhage, the standards cite ACOG's definition of maternal hemorrhage as defined by the American College of Obstetricians and Gynecologists (ACOG) as a cumulative blood loss of greater than or equal to 1,000 mL, or blood loss accompanied by signs or symptoms of hypovolemia, within 24 hours after the birth process.

Question	Answer
Is there a recommended rate range for facilities for PC-07? What rate range would be recommended for improvement opportunities?	The Joint Commission does not have a recommended rate for ePC-07 performance, but a lower rate is better. It is recommended that facilities monitor for trends in the rates and review their cases to guide quality improvement efforts.
Why arrest of labor based on ACOG guidelines does not meet PC-02 exclusion?	The Cesarean Birth measure is not intended to include all possible conditions which may result in a cesarean delivery. Fall outs should be reviewed for potential quality improvement opportunities such as in labor management. The measure is designed to be an accurate way for leaders to identify whether a hospital's rate of cesarean births for women included in this select population is consistent with the rate of cesareans within this same population at another hospital. Hospitals whose Cesarean Birth measure rates are higher than rates at other hospitals are encouraged to explore and evaluate differences in the medical and nursing management of women in labor.
What is the logic for COVID and related procedures being in the exclusion, but not RSV, influenza, and related procedures?	Covid exclusions with respiratory conditions were added due to the severity of cases that were being seen during the pandemic and the guidance that had been frequently revised based on the latest research. The Joint Commission continues to monitor the literature, COVID data, and guidance to update the measures. Please continue to review the release notes for any future updates.
Why are the ages different for AIM criteria which is 12-55 years and CDC age 8 - 65 year? There should be a standardization of the ages.	The Joint Commission determined the age range based on data for the youngest and oldest deliveries in the United States. While these extremes are rare, the measure is designed to capture all potential delivery cases. The age range is aligned for the Mother Initial Patient Population used in The Joint Commission's Perinatal Care Measure set.
Will ePC-07 require manual abstraction like ePC-02?	ePC-07 is an eCQM only. There is no chart abstracted version. ePC-07, as with all eCQMs, requires organizations to work with their IT and/or EMR vendors to map the clinical data to the appropriate discrete fields within the EMR. It is recommended that this be done far in advance of the submission deadlines to allow time for facilities to assure proper mapping and validation.
What is the PC-02 national standard, goal? Will CMS reimbursements be affected by these rates?	The Joint Commission has set a threshold for public reporting ePC-02 on Quality Check of greater than 30% for the two-year rate and if the most current year's rate is greater than 30%. A rate greater than 30% is about two standard deviations from the mean two-year rate. The target rate for Healthy People 2030 is 23.6% which is a national average goal, not a hospital goal. Very low rates are not always better in these cases, and The Joint Commission does not want to encourage inappropriately low rates that may be unsafe to patients.

Question	Answer
Should the heading for slides 71 and 72 be for ePC-07 instead of ePC-02 as listed?	Thank you for pointing that out. You are correct. The heading for slides 71 and 72 should indicate ePC-07 and not ePC-02.
Can you please explain barriers to estimated gestational age (EGA) not populating on the report and solutions?	Estimated gestational age (EGA) must be assessed 24 hours before or on the time of delivery. The time the EGA is documented in the record does not matter. Therefore, in the case of a precipitous delivery, it is important to obtain EGA prior to or at the time of delivery but it can be documented after delivery to be included in the measure. This response is based on the hospital appropriately mapping the assessment time to the relevant date/time per the logic and not to the author date/time.
Can clinical content/events in the EHR that is documented by nursing staff be mapped for gestational age and other elements	Yes. It is acceptable to map nursing documentation to data elements such as gestational age, delivery date/time and estimated due date.
Explain the mapping of patient information and how this is obtained when the documentation is completed per paper or dictation.	Electronic clinical quality measures (eCQMs) require that data be documented in discrete fields so that the data can be retrieved electronically. Therefore, documentation on paper cannot be retrieved for eCQMs. Regarding dictation, some applications incorporate natural language processing which gives computers the ability to understand text and spoken words. Please consult your Information Technology staff to determine if your organization has this capability.
For those that are live on either of these measures as eCQMs, what are the most common issues you've run into with mapping?	ePC02 and ePC07 logic relies heavily on date/time stamps. Specific data elements include date/time of delivery, assessment of gestational age, estimated due date, gravidity, parity and history of term/preterm births. For example, the assessment of gestational age must be 24 hours or less before or on the time of delivery.
ePC07: If a pre-existing diagnosis is not mentioned in the H&P; how far back in the electronic record will comorbidity data be pulled?	ePC07 risk variable logic is looking for pre-existing diagnoses to be indicated on the current encounter with a present on admission code equal to Yes or Exempt.

Question	Answer
Is the preferred mapping for ICD-10 codes the Patient Problem List or the Discharge billing ICD-10 codes?	Each hospital needs to determine where the most accurate documentation resides in your electronic health record and then map accordingly.
In building the eCQM for PC 02, the section for previous births, can that be mapped to the chart utilizing ICD 10 codes (i.e., maternal care from a previous scar from a C/section) or is the entire section to be mapped to the OB history in the EMR?	The logic requires reporting integers for Gravida, Parity, PreTerm and Term Births. ICD10 codes will not reveal these quantities.
My understanding of PC-02 is that the Denominator Exclusion for Abnormal Presentation requires that the diagnosis for Abnormal Presentation must be placed before the time of delivery? How does timing this work? Why is this condition appropriate for the eCQM, when it doesn't exist for the chart abstracted measure?	The denominator exclusion logic for a diagnosis of abnormal presentation only requires that a diagnosis of abnormal presentation be present on the current encounter. You may be thinking of the logic where an "assessment" of abnormal presentation must be performed before or on the time of delivery.

Question	Answer
Are we only to map transfusions that occur on the day of the delivery? Is this a 24-hour period from admission of the mother? Birth of the baby? Can you please explain why we are not capturing transfusions during the postpartum period? Thank you	All transfusions with a start date during the encounter will qualify the patient for the numerator. The definition "Delivery Encounters with Blood Transfusion" qualifies transfusion timing as "starts during day of" the encounter. The "day of" operator ignores times and only considers dates when evaluating data. If a patient is admitted at 0600 on 8/5/2023 and a blood transfusion was started on 8/5 with no time indicated, the "day of" operator will ignore the time and consider the numerator met since 8/5 is during the encounter which started on 8/5. The reason for using the "day of" operator is many hospitals use claims data when mapping procedures and blood transfusions can be coded as procedures. Typically claims data does not contain procedure times. Here is another example: Delivery encounter start date: 8/5/2023 Blood transfusion start date: 8/6/2023 Delivery encounter end date: 8/7/2023 The patient qualifies for the numerator as the blood transfusion start date of 8/6/23 is during the encounter which spans 8/5 to 8/7.
Capturing outcomes: The ICD-10 codes at our hospital are the source of truth for maternal outcomes, not the problem list. If the source of truth are the ICD final codes, can we ignore the problem list in the EMR when mapping?	The hospital should decide the source of truth for all data elements used in eCQMs and map to those fields accordingly. The eCQM does not prescribe specifically where to find the data in the EHR.
Where will you pull the needed data elements to calculate the gestational age?	The hospital will determine where in the EHR to find the delivery date/time and estimated due date which are the elements used to calculate gestational age.

Question	Answer
For PC-07, for cases to be in the numerator, does the severe maternal morbidity diagnosis code have to be the principal diagnosis code? For example, if all other elements are met and sepsis is one of the secondary diagnosis codes, would the patient fall into the numerator, or does it have to be principal diagnosis for it to be included?	To qualify for the numerator, diagnoses do not have to be flagged as the principal diagnosis. Secondary diagnoses can meet the numerator also. However, the diagnoses must be flagged as NOT present on admission to meet the numerator.
Are we able to use coding to determine EGA at delivery for the 2024 measures? If so, Will the coded value require a date/time?	Calculated gestational age (GA) is the preferred method for determining GA. Reported estimated GA is the second in the hierarchy and coding is the third. All are acceptable approaches for reporting GA. A date/time does not need to be associated with the codes when using the 3rd option in the hierarchy to determine gestational age: The GA is based on ICD10 or SNOMED codes indicative of weeks gestation. This option is only used when results from calculated or reported GA are not available.
Should documentation of gestational age be before or at delivery? What happens if documentation is made after?	Gestational age should be documented 24 hours or less before or on the delivery date/time. As mentioned in the webinar, the logic distinguishes between when an assessment is documented in the EHR (author dateTime) and when an assessment is performed (relevant dateTime). So, if you assess a patient's gestational age at 0200, patient delivers at 0230, and you don't document until 0300, the assessment relevant dateTime should be mapped to 0200 which is prior to the delivery time. Additionally, some EHR's calculate gestational age automatically whereby the gestational age may continue to advance after delivery. Therefore, the logic specifically looks for a time prior to or on delivery. We are considering adding additional logic to the measure which would include gestational age assessments performed after delivery but on the same day of delivery.
Can date/time of birth be used to capture "Procedure date and time"?	If the hospital determines the date/time of birth is equivalent to the delivery procedure date/time, it would be acceptable to map the date/time of birth to the delivery procedure date/time.

Question	Answer
For PC-02 Gravida, Parity, Preterm and Term Birth should this not also be similar to gestational age where this information is prior to date and time of birth?	Gravida, Parity, Preterm and Term Births can be assessed 42 weeks or less before the time of delivery. The reason for this more generous timing constraint compared to the gestational age assessment is due to the fact that these 4 attributes will not change until the patient delivers. Gestational age advances every 24 hours and therefore needs to be as close to the delivery date/time as possible for accuracy.
What if the Gravida is greater than 1 yet Parity is 0?	The patient is nulliparous if: a. Parity = 0 or b. Gravidity = 1 or c. Preterm & Term Births both = 0. Any one of these 3 conditions will qualify the patient for the denominator if >= 37 weeks gestation. Therefore, if Gravida is >1 and Parity = 0, the patient will qualify for the denominator.
Does the first definition conflict with the third definition? The first excludes Blood transfusion and the 3rd one includes blood transfusion. "Delivery Encounters with Severe Obstetric Complications Diagnosis or Procedure (Excluding Blood Transfusion)" union "Delivery Encounters with Expiration“ union "Delivery Encounters with Blood Transfusion"	The 3 definitions you quoted are unioned together to identify all severe obstetric complication (SOC) numerator cases. The first definition "Delivery Encounters with Severe Obstetric Complications Diagnosis or Procedure (Excluding Blood Transfusion)" captures all cases with a diagnosis in the SMM Diagnoses value set or a procedure in the SMM procedure value set. Due to stratification requirements, blood transfusion was deliberately excluded from the SMM procedure value set and this definition. The third definition "Delivery Encounters with Blood Transfusion" captures cases with blood transfusions. Therefore, the union of all 3 definitions provides a comprehensive list of all SOC cases.

Question	Answer
To clarify, if a patient meets the numerator for PCO7 but had a blood transfusion during the encounter then they are excluded	A blood transfusion will not remove the patient from the numerator. For reporting year 2024, the eCQM is structured to show an overall performance rate including any severe obstetric complication (SOC). Blood transfusion is considered an SOC and will place the patient in the numerator. The measure is then stratified whereby Stratum 1 reports SOC excluding hospitalizations where transfusion is the only SOC.
Our hospital has a High-Risk Perinatal Center where pts are admitted prior to labor. They are transferred to L&D when in labor. Is the PC-07 measure initiated on admission to HRPC or L&D?	ePC07 includes the encounter where the patient delivers. The logic looks at any emergency or observation or OB Triage visit that ends 1 hour or less before the inpatient delivery encounter and includes those visits as part of the inpatient delivery encounter.
Does the formula change if our facility doesn't have 10,000 delivery hospitalizations per year?	No, the formula does not change if your organization performs < 10,000 deliveries per year. The same formula applies even if your organization performs < 10,000 deliveries per year.
Please explain the logic for using a rate per 10,000 deliveries. This rate will be difficult to assess, as this is different from our other PC measures.	Severe Obstetric Complications are rare occurrences and are commonly calculated per 10,000 deliveries. For the SOC measure, the hospital-level measure score will be reported as a rate per 10,000 delivery hospitalizations to allow for comparisons.
I am new to this. What is the best resources to learn more?	The eCQI Resource Center contains a wealth of learning opportunities on the "Get Started with eCQMs" page (https://ecqi.healthit.gov/ecqms). Additionally, to view previously recorded educational eCQM webinars, go to The Joint Commission Expert to Expert Webinars page (https://www.jointcommission.org/measurement/quality-measurement-webinars-and-videos/expert-to-expert-webinars/#sort=%40resourcedate%20descending).
How would I submit a question/concern about a coding discrepancy I found on PC-07?	Please submit any questions to the ONC JIRA CQM Issue Tracker at https://oncprojectracking.healthit.gov/support/projects/CQM/summary.

Question	Answer
Will the ePCO2 Fallouts be adjusted?	ePC02 is not a risk adjusted measure. ePC07 is risk adjusted.
ePC07: Does the numerator have to be NOT POA before you look at the stratifications? If it is POA then you stop, correct?	The ePC07 numerator can be met in 3 ways: 1. Severe maternal morbidity diagnoses (not present on admission that occur during the current delivery encounter) 2. Severe maternal morbidity procedures 3. Discharge disposition of expired Once the numerator is met, stratification occurs on cases in the numerator.
Will PC-07 show 2 numerator options then: one that includes transfusions and one that excludes transfusions only?	For reporting year 2024, the eCQM is structured to show an overall performance rate including any severe obstetric complication (SOC). The measure is then stratified whereby Stratum 1 reports SOC excluding hospitalizations where transfusion was the only SOC.
Will ePC-07 report the SMM rate and a rate for the subcategory of transfusions only?	For reporting year 2024, the eCQM is structured to show an overall performance rate including any severe obstetric complication (SOC). The measure is then stratified whereby Stratum 1 reports SOC excluding hospitalizations where transfusion was the only SOC.
Where may we find a list of the ICD10 codes and other details for this measure? Thank you.	ePC07 Value sets for reporting year 2023 and 2024 and ePC02 value sets for reporting year 2024 can be found on the eCQI Resource Center, under each respective measure, on the "Specifications and Data Elements" tab. ePC02 value sets for reporting year 2023, can be found on the eCQI Resource Center, on the eCQM Resources tab (https://ecqi.healthit.gov/eh-cah?qt-tabs_eh=0) under the heading "EH/CAH Value Sets CMS334".
The Change in BMI to morbid obesity needs changes in the coding sets to capture through logic?	The BMI value set name and codes have been updated to reflect morbid obesity codes instead of BMI codes as ICD-10 coding guidelines indicate BMI codes are not to be assigned for pregnant patients.
ePC-07: This measure is dependent on our EHR vendor's assistance. What is TJC doing to collaborate with EHR third party vendors?	Vendors may join the educational webinars and have access to resources through the eCQI Resource Center. Vendors are also represented on measure developer workgroup calls and have an opportunity to provide feedback on new measures during the public comment periods.

Question	Answer
Any recommendations for how to validate data for eCQMs?	On Slide 8 the eClinical Subject Matter Experts have indicated that they will not be covering issues related to eCQM validation during this webinar.
For the Last Estimated Due Date data element, where should the "result" be placed in the QRDA file?	In the QRDA file, the datetime result should be placed under @value with data type “xsitype = “TS” as seen below: <!-- QDM Attribute: Result --> <value xsi:type="TS" value="202309090500" />
What happens if your organization switches EHR's during the middle of a quarter? How is eCQM submission completed?	TJC's Direct Data Submission Platform (DDSP) is not able to receive data from two separate EHR vendors for the same quarter. Organizations in this scenario have 2 options: 1) Aggregate the data from the two EHR vendors and submit one file. It may be challenging to aggregate the patients that were re-admitted to the same hospital under the separate EHRs. Each QRDA I document must contain quality data for one patient, for all encounters that occurred during the calendar quarter being reported, and for all eCQMs being submitted for the patient. 2) The second option is to submit an extenuating circumstance request (ECR) for the affected quarter and then submit the QRDA files for the remaining quarters using the new EHR. The Joint Commission ECR forms and information are available via the DDSP “Need Help?” “Learning & Resources” tab and also on our website via the ORYX FAQs (https://www.jointcommission.org/measurement/oryx-faqs/)
Are CAH facilities required to participate.	Yes. Under the Medicare Promoting Interoperability Program eligible hospitals and CAHs must use eCQMs to report on clinical quality measures selected by CMS, as part of being a meaningful EHR user. Reporting the Severe Obstetric Complications and Cesarean Birth eCQM is mandatory beginning with CY 2024 reporting period. For TJC, CAHs are required to submit any combination of three (3) measures applicable to patient population/ services offered. CAHs may select to submit the PC eCQMs to meet this requirement.
Our hospital reports chart abstracted PC-02 and PC-07. Are we able to submit the chart abstracted or do we have to move to eCQM measures or submit both?	ePC-07 is an eCQM only. There is no chart abstracted version. Submission of ePC-02 is a required eCQM for 2024 for both CMS and The Joint Commission. For Joint Commission only, if you have an exception for eCQM submission, you will need to submit the chart-abstracted PC-02 measure.

Question	Answer
If our hospital does not have OB, do we need to watch this webinar?	According to CMS guidance - To successfully submit the required eCQMs for the Hospital IQR Program and the Medicare Promoting Interoperability Program, report the eCQMs as any combination of the following: - Accepted QRDA Category I files with patients meeting the initial patient population of the applicable measures - Zero denominator declarations - Case threshold exemptions For TJC, if the hospital does not provide obstetric services, they are not required to submit PC measures and they should not submit zeros. If you are a TJC accredited hospital, you can attend DDSP Office Hours or refer to DDSP User help documents for more details on this process.
In what type of Hospitals do the ePC-07 measures mostly apply? Only because we have not seen this measure yet.	The PC measures apply to hospitals that provide obstetrical services; the denominator is specific to delivery episodes.
When will these ePC measures be publicly reported?	In the FY 2023 IPPS/LTCH PPS final rule, CMS finalized policies that further incrementally increases eCQM data that is publicly reported from four to six eCQMs for the CY 2024 reporting period/FY 2026 payment determination and subsequent years. The Joint Commission continues to evaluate when to begin publicly reporting eCQM data and will provide additional information to participating HCOs in advance of posting eCQM data on Quality Check.
For the CMS IQR program, when submitting QRDA file, will hospitals only submit for Medicare payer or does the measure include all-payers? Thank you.	Hospitals should submit all-payer data. CMS is expecting one QRDA file per patient, per quarter, including all episodes of care and applicable measures in the reporting period. Medicare Beneficiary Identifier (MBI) is not required for HQR but should be submitted if the payer is Medicare and the patient has an MBI number assigned.