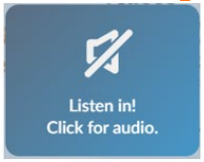
Pioneers in Quality

Expert to Expert Webinar Series

2023 Annual Updates
ePC-05 Exclusive Breast Milk Feeding
ePC-02 Cesarean Birth
ePC-07 Severe Obstetric Complications

December 6, 2022

Webinar Audio – Information & Tips



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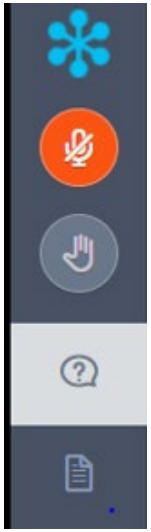

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Welcome!

But first things first…

"Get Started with eCQMs"

The Joint Commission

CMS Mathematica Progress Together

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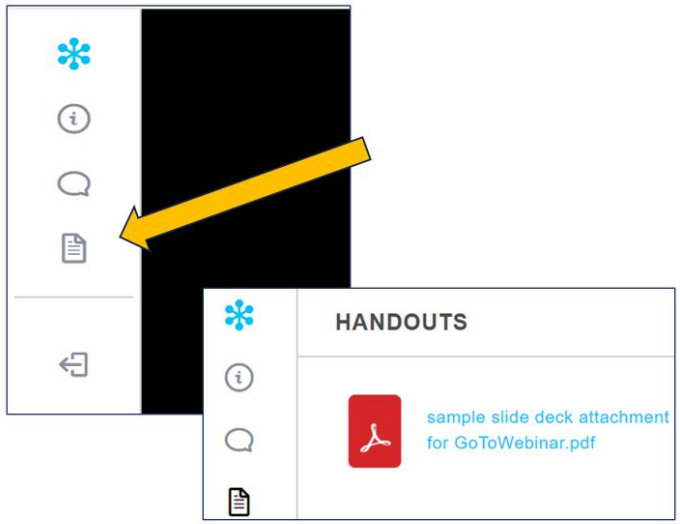

Slides will also be available here within a couple weeks:
https://www.jointcommission.org/measurement/pioneers-in-quality/pioneers-in-quality-expert-to-expert-series/

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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-05, PC-02, PC-07 eCQMs
- Prepare to implement the PC-05, PC-02, PC-07 eCQMs for the 2023 eCQM reporting period
- Identify common issues and questions regarding the PC-05, PC-02, 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 navigation to measure specifications, value sets, measure flow diagrams and technical release notes
- Review the measure flow/algorithm
- Review changes made to PC-05, PC-02, PC-07 eCQMs
- FAQs
- Facilitated Audience Q&A Segment

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

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

Live Demo

ePC-05
Exclusive Breast Milk Feeding

ePC-05 Rationale

- The intent of the measure is to increase the number of newborns who are exclusively fed breast milk (human milk) during the birth hospitalization
- Human milk feeding is the recommended standard for infant feeding
- Well documented short- and long-term medical and developmental advantages of breastfeeding exist
- Healthy People, CDC and many other organizations actively promote this goal

ePC-05 Rationale (continued)

- Continue to see an opportunity for improvement
- The quarterly average for accredited organizations submitting the eCQM remained steady at 54-55% from 2017-2020.
- It is not anticipated or expected that measure rates will reach 100% numerator compliance.
- Evidence suggests that a 70% threshold is a more reasonable target for many organizations.

ePC-05 Measure Specifications

Description: ePC-05 Exclusive breast milk feeding during the newborn's entire hospitalization

Initial Population	Denominator	Denominator Exclusion	Numerator
Inpatient hospitalizations for single newborns born in the hospital that ends during the measurement period	Same as Initial Population	Inpatient hospitalization with any of the following conditions: • Admitted to the NICU or transferred to a regular ICU • Transferred to an acute care facility, or other health care facility	Inpatient hospitalization
• An estimated gestation age at birth >=37 weeks OR • Birth weight >=3000 grams without an estimated gestational age at birth		• Expired during hospitalization • LOS > 120 days • Galactosemia • Parenteral nutrition	Newborns who were fed breast milk only since birth

ePC-05 Measure Changes from 2022 to 2023 - Clinical

Measure Components	2022 Reporting Year	2023 Reporting Year
Header Guidance	Only one birth weight value should be recorded. In cases where there is conflicting data, use the document recording the birth weight closest to the time of delivery.	Only one birth weight value should be recorded. In cases where there is conflicting data, use the document recording the birth weight closest to the **start of encounter**.
Header Denominator Exclusions	Admitted to the Neonatal Intensive Care Unit (NICU)	Admitted to the Neonatal Intensive Care Unit (NICU) **or transferred to a regular intensive care unit (ICU)**

ePC-05 Measure Changes from 2022 to 2023 – Clinical (continued)

Measure Components	2022 Reporting Year	2023 Reporting Year
Value Sets	Neonatal Intensive Care Unit (NICU) (2.16.840.1.113762.1.4.1029 .205)	Added 1 HSLOC code (1269-0), Neonatal Care Level 4,based on terminology update.
Rationale and References		Updated Rationale and selected references to reflect updated references.

ePC-05 Measure Changes from 2022 to 2023 - Technical

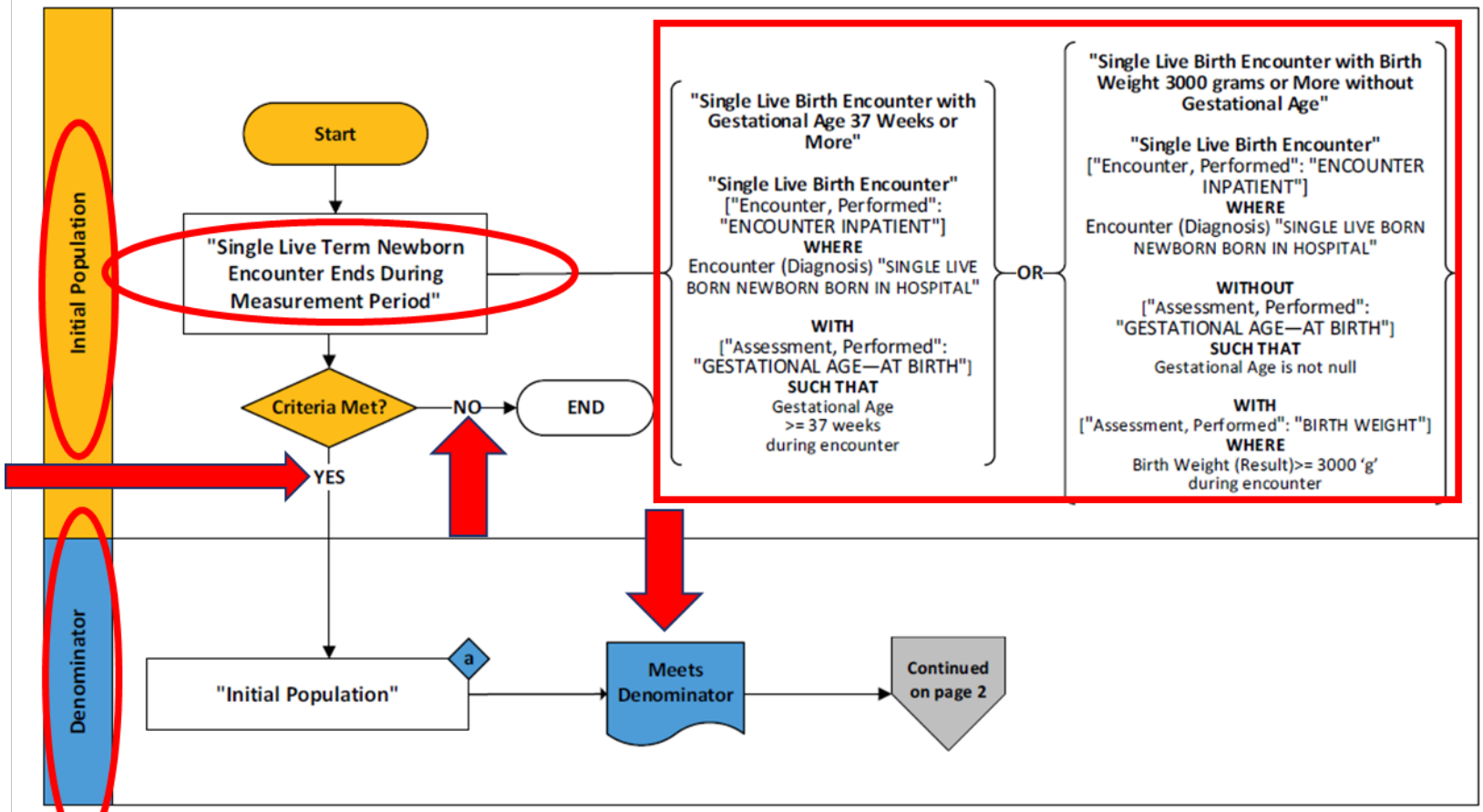
Measure Components	2022 Reporting Year	2023 Reporting Year
Initial Population Definition Name Change	PCNewborn. "Single Live Term Newborn Encounter During Measurement Period"	PCNewborn. "Single Live Term Newborn Encounter **Ends** During Measurement Period"
Denominator Exclusion Definition Name Change	Single Live Term Newborn Encounter with Newborn to NICU or Discharge to Acute Care or Other Health Care Facility or Expired	Single Live Term Newborn Encounter with **NICU or ICU Admission or Selected Discharge Disposition**

ePC-05 Measure Flow Diagram

2023 eCQM Flow – **CMS9v11: Exclusive Breast Milk Feeding (PC-05)*** NQF# 0480e

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

Measure Flow Diagram



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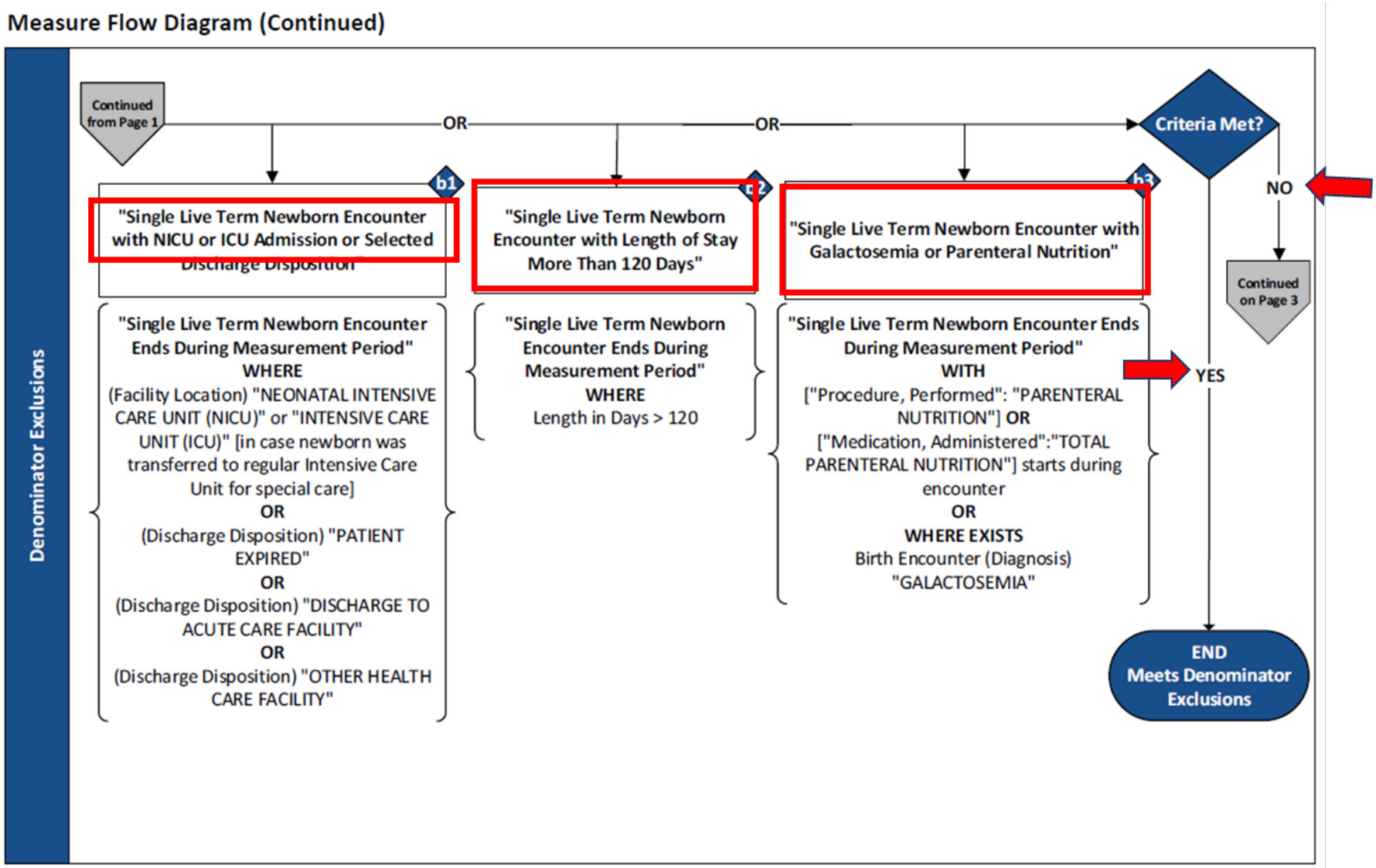
ePC-05 Measure Flow Diagram (continued 1)



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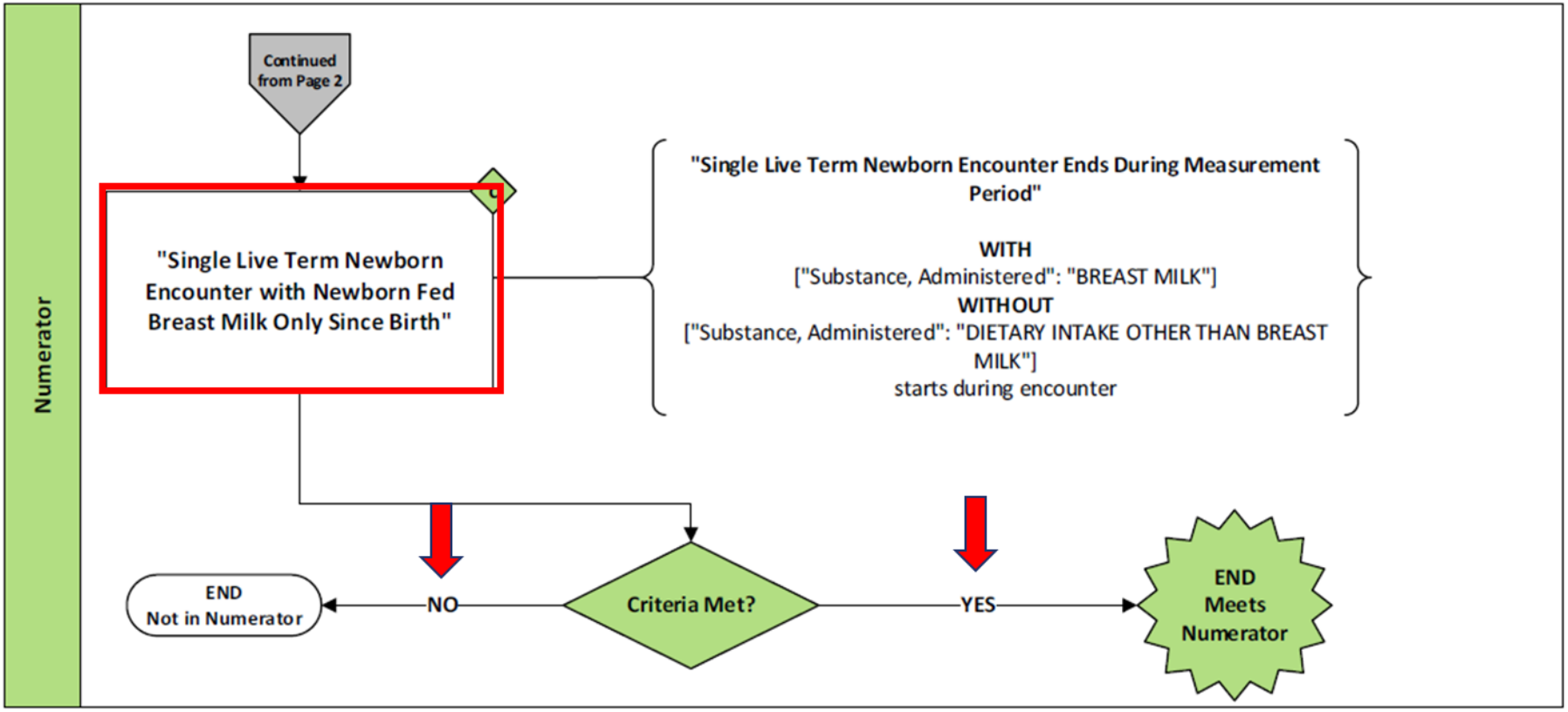
ePC-05 Measure Flow Diagram (continued 2)

Measure Flow Diagram (Continued)



Sample Calculation

$$\text{Performance Rate} = \frac{\text{Numerator (c = 60)}}{\text{Denominator (a = 100) - Denominator Exclusions (b1 + b2 + b3 = 20)}} = 75\%$$

ePC-05 Measure Flow Diagram (continued 3)

Measure Flow Narrative

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

Measure Description	This measure is reported as the overall rate which includes all newborns that were exclusively fed breast milk during the entire hospitalization

Initial Population	Start by identifying the initial population criteria as:
	• inpatient hospitalizations for single live term newborns who were born in the hospital that ends during the measurement period, and with either of the following conditions:
	  • an estimated gestational age at birth of >=37 weeks
	  • a birth weight >= 3000 grams without an estimated gestational age at birth

Denominator	The denominator is the same as the initial population
Denominator Exclusions	The denominator exclusions criteria identify a subset of the denominator population by excluding inpatient hospitalizations for newborns with any of the following: • admitted to the neonatal intensive care unit (NICU) or transferred to a regular intensive care unit (ICU) • transferred to an acute care facility, or other health care facility • expired during the hospitalization • a length of stay greater than 120 days that ends during the measurement period • a diagnosis of galactosemia • subject to parenteral nutrition

ePC-05 Measure Flow Diagram (continued 4)

Measure Flow Narrative (Continued)

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

Numerator	The numerator criteria identify a subset of the denominator population (that did not meet the denominator exclusions criteria) by including inpatient hospitalizations for newborns who were fed breast milk only since birth

ePC-05 Initial Population

PCNewborn.”Single Live Term Newborn Encounter **Ends** During Measurement Period”

PCNewborn.Single Live Term Newborn Encounter Ends During Measurement Period

("Single Live Birth Encounter with Gestational Age 37 Weeks or More"
union
"Single Live Birth Encounter with Birth Weight 3000 grams or More without Gestational Age") SingleLiveTermEncounter
where
SingleLiveTermEncounter.relevantPeriod ends during day of "Measurement Period"

ePC-05 Initial Population (continued 1)

Single Live Birth Encounter with Gestational Age 37 Weeks or More

"Single Live Birth Encounter" SingleLiveBornEncounter
with ["Assessment, Performed": "Gestational age--at birth"]
GestationalAge
such that GestationalAge.result >= 37 weeks
and Global."EarliestOf"(GestationalAge.relevantDatetime,
GestationalAge.relevantPeriod) during
SingleLiveBornEncounter.relevantPeriod

Single Live Birth Encounter

["Encounter, Performed": "Encounter Inpatient"] InpatientEncounter
where exists (InpatientEncounter.diagnoses EncounterDiagnoses
where EncounterDiagnoses.code in "Single Live Born Newborn Born in Hospital")

ePC-05 Initial Population (continued 2)

Single Live Birth Encounter with Birth Weight 3000 grams or More without Gestational Age

```
"Single Live Birth Encounter" SingleLiveBornEncounter
  without
["Assessment, Performed": "Gestational age--at birth"]    GestationalAge
  such that Global."EarliestOf" ( GestationalAge.relevantDatetime,
      GestationalAge.relevantPeriod ) during
      SingleLiveBornEncounter.relevantPeriod
      and GestationalAge.result is not null
  with ["Assessment, Performed": "Birth Weight"] BirthWeight
  such that Global."EarliestOf" ( BirthWeight.relevantDatetime,
      BirthWeight.relevantPeriod ) during
      SingleLiveBornEncounter.relevantPeriod
  and BirthWeight.result >= 3000 'g'
```

ePC-05 Denominator

"Initial Population"

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ePC-05 Denominator Exclusions

"Single Live Term Newborn Encounter with **NICU or ICU Admission or Selected Discharge Disposition"**

union

"Single Live Term Newborn Encounter with Length of Stay More Than 120 days"

union

"Single Live Term Newborn Encounter with Galactosemia or Parenteral Nutrition"

ePC-05 Denominator Exclusions (continued 1)

Single Live Term Newborn Encounter with NICU or ICU Admission or Selected Discharge Disposition

```
PCNewborn."Single Live Term Newborn Encounter Ends During
Measurement Period" QualifyingEncounter
    where exists ( QualifyingEncounter.facilityLocations Location
        where Location.code in "Neonatal Intensive Care Unit (NICU)"
    or Location.code in "Intensive Care Unit“))
    or QualifyingEncounter.dischargeDisposition in "Patient Expired"
    or QualifyingEncounter.dischargeDisposition in "Discharge To Acute
        Care Facility”
    or QualifyingEncounter.dischargeDisposition in "Other Health Care
        Facility"
```

ePC-05 Denominator Exclusions (continued 2)

Single Live Term Newborn Encounter with Length of Stay More Than 120 days

PCNewborn."Single Live Term Newborn Encounter Ends During Measurement Period" QualifyingEncounter
 where Global."LengthInDays"
 (QualifyingEncounter.relevantPeriod) > 120

ePC-05 Denominator Exclusions (continued 3)

Single Live Term Newborn Encounter with Galactosemia or Parenteral Nutrition

```
( PCNewborn."Single Live Term Newborn Encounter Ends During Measurement
    Period" QualifyingEncounter
  with ( ["Procedure, Performed": "Parenteral Nutrition"]
  union ["Medication, Administered": "Total Parenteral Nutrition"] )
    ParenteralNutrition
  such that Global."NormalizeInterval" ( ParenteralNutrition.relevantDatetime,
    ParenteralNutrition.relevantPeriod ) starts during
    QualifyingEncounter.relevantPeriod)
  union
 (PCNewborn."Single Live Term Newborn Encounter Ends During Measurement
    Period" QualifyingEncounter
   where exists ( QualifyingEncounter.diagnoses BirthEncounterDiagnoses
      where BirthEncounterDiagnoses.code in "Galactosemia“) )
```

ePC-05 Numerator

Single Live Term Newborn Encounter with Newborn Fed Breast Milk Only Since Birth

```
PCNewborn."Single Live Term Newborn Encounter Ends During
Measurement Period" QualifyingEncounter
  with ["Substance, Administered": "Breast Milk"] BreastMilkFeeding
  such that Global."NormalizeInterval"
      (BreastMilkFeeding.relevantDatetime,
      BreastMilkFeeding.relevantPeriod ) starts during
      QualifyingEncounter.relevantPeriod
  without ["Substance, Administered": "Dietary Intake Other than Breast
      Milk"] OtherFeeding
   such that Global."NormalizeInterval" ( OtherFeeding.relevantDatetime,
      OtherFeeding.relevantPeriod ) starts during
      QualifyingEncounter.relevantPeriod
```

ePC-05
Frequently Asked Questions

ePC-05 Frequently Asked Question

Question: When is the estimated gestational age (EGA) date/time assessed for the newborn to populate into the initial population?

Answer: The EGA is evaluated after newborn is delivered and is assessed anytime during the inpatient encounter. This is not the time the EGA value was entered in the EHR system. In order to capture this, the logic uses the Earliest function from the Global Common Library. The “EarliestOf” function returns the starting point of the relevant period if a starting boundary is specified. Otherwise, it returns the ending point of the period.

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 ORYX requirements and will continue to be optional measures in 2023.
- Therefore, throughout this presentation, “changes” will be referred to even though the measures are new to the CMS program.

ePC-02 & ePC-07: NQF Endorsement

- Submitted ePC-02 & ePC-07 for NQF Endorsement for the Spring 2022 Cycle
- Passed Scientific Methods Panel and Standing Committee
- Final endorsement decision this Fall

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)
- Removal of pressure to not perform Cesarean Birth led to a skyrocket in Cesarean Births
- 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 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 or placenta 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 2022 to 2023 - Clinical

Measure Components	2022 Reporting Year	2023 Reporting Year
Improvement Notation	Improvement noted as a decrease in rate	Within Optimal Range
Rationale and References		Updated rationale and references to reflect updated references

ePC-02 Measure Changes from 2022 to 2023 - Technical

Measure Components	2022 Reporting Year	2023 Reporting Year
Initial Population Logic to calculate patient's age	Global.CalendarAgeIn YearsAt function used to calculate patient's age	Native CQL function **AgeInYearsAt** used to calculate patient's age LOINC code 21112-8 (Birth date) is no longer required and has been removed.
Initial Population Logic to determine if delivery procedure was performed during encounter	Logic looked to see if delivery procedure was performed during encounter. If no start time was associated with the procedure, the start time defaulted to 0000.	Added **"day of"** to account for delivery procedures that may not have times and only dates.

ePC-02 Measure Changes from 2022 to 2023 – Technical (continued 1)

Measure Components	2022 Reporting Year	2023 Reporting Year
Supplemental Data Element	Not addressed	**"Variable Calculated Gestational Age"** was added to the PC Maternal library and was added as a supplemental data element.
Denominator Logic that determines calculated gestational age	Not addressed	Added **TruncateTime** function to convert the Estimated Delivery Date from date only to date and time.
Changes to multiple definition names to increase clarity.	Example: Delivery Encounter with Calculated Gestational Age changed to →	Delivery Encounter with Calculated Gestational Age **Greater than or Equal to 37 Weeks**

ePC-02 Measure Changes from 2022 to 2023 – Technical
(continued 2)

Measure Components	2022 Reporting Year	2023 Reporting Year
Modified 3 definitions to use the denominator as the primary source instead of the initial population.	Example: Delivery Encounter with Cesarean Birth started with PCMaternal."Delivery Encounter with Age Range" changed to →	Delivery Encounter with Cesarean Birth started with **PCMaternal."Delivery Encounter with Age Range" starts with "Singleton Delivery Encounters at 37 Plus Weeks Gravida 1 Parity 0, No Previous Births"**
Denominator	Denominator complicated by unnecessary definitions	Simplified denominator by decreasing nesting resulting in deletion of 4 definitions.

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 )))

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

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**"

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 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 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 ~~*as DateTime*~~ 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 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

"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**"

ePC-02 Denominator (continued 11)

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 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
  where ( ( "LastGravida"(SingletonEncounterGE37Weeks)= 1 )
     or ( "LastParity"(SingletonEncounterGE37Weeks)= 0 )
     or ( ( "LastHistoryPretermBirth"(SingletonEncounterGE37Weeks)= 0 )
     and ( "LastHistoryTermBirth"(SingletonEncounterGE37Weeks)= 0 )))
```

ePC-02 Denominator (continued 13)

LastGravida(Encounter "Encounter, Performed")

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

ePC-02 Denominator (continued 14)

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"

"Encounter with Abnormal Presentation"

union

"Encounter with Placenta Previa"

ePC-02 Denominator Exclusions (continued 1)

Encounter with Abnormal Presentations

"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 2)

Encounter with Placenta 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"

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-02
Frequently Asked Questions

ePC-02 Frequently Asked Question

Question:

The logic uses 2 different datatypes to capture abnormal presentation: 1) Assessment Performed and 2) Encounter Performed, diagnosis. It looks like these 2 datatypes are using the same value set of Abnormal Presentation. Is this correct?

Answer:

The same value set ("Abnormal Presentation", 2.16.840.1.113762.1.4.1045.105) is used for the QDM data type of "Assessment, Performed" and "Diagnosis". The "Abnormal Presentation" grouping value set contains ICD and SNOMED codes representing a fetus in an abnormal position in the uterus.

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 21 indicators defined by ICD10 diagnoses and procedure codes.
- 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 (continued)

- 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

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

* 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

The Joint Commission

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

• Anemia • Asthma • Autoimmune Disease • Bariatric Surgery • Bleeding disorder • BMI • Cardiac Disease • Gastrointestinal Disease • Gestational Diabetes • HIV • Housing Instability • Hypertension • Maternal Age • Mental Health Disorder • Multiple Pregnancy	• Neuromuscular Disease • Other Pre-eclampsia • Placenta Previa • Placental Abruption • Placental Accreta Spectrum • Pre-existing Diabetes • Preterm Birth • Previous Cesarean • Pulmonary Hypertension • Renal Disease • Severe Pre-eclampsia • Substance Abuse • Thyrotoxicosis • Long-term Anticoagulant Use • Obstetric VTE	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 • ~~*Platelets (for future consideration)*~~

ePC-07 Measure Specifications

All complications	Stratification
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 2022 to 2023 - Clinical

Measure Components	2022 Reporting Year	2023 Reporting Year
Risk Adjustment	Simply stated “Pre-existing conditions”	Modified Risk Adjustment heading to clarify that pre-existing conditions **and variables must be present on admission.**
Numerator	Numerator was stated as: Inpatient hospitalizations for patients with severe obstetric complications	Clarified numerator heading to: Inpatient hospitalizations for patients with severe obstetric complications **(not present on admission that occur during the current delivery encounter).**
Multiple Sections	Platelets was included as a risk variable for future consideration only.	Removed platelet references and logic.

ePC-07 Measure Changes from 2022 to 2023 - Technical

Measure Components	2022 Reporting Year	2023 Reporting Year
Risk Adjustment	No guidance regarding submission	Guidance added to Risk Adjustment metadata regarding submission of risk variables.
Risk Adjustment	Simply stated Maternal Age	Maternal Age **(derived from birthdate)**
Stratification & Rate Aggregation	Nontransfusion only SOC (excluding cases where transfusion was the only SOC)	**Delivery hospitalizations with SOC** (excluding **hospitalizations** where transfusion was the only SOC).

ePC-07 Measure Changes from 2022 to 2023 – Technical

(continued 1)

Measure Components	2022 Reporting Year	2023 Reporting Year
Supplemental Data Element	Not addressed	**"Variable Calculated Gestational Age"** was added to the PC Maternal library and was added as a supplemental data element.
Denominator Logic that determines calculated gestational age	Not addressed	Added **TruncateTime** function to convert the Estimated Delivery Date from date only to date and time.
Numerator	Blood transfusion starts during hospitalization	Added **"day of"** to Delivery Encounters with Blood Transfusion to allow for blood transfusion procedures that have only date and no time.

ePC-07 Measure Changes from 2022 to 2023 – Technical

(continued 2)

Measure Components	2022 Reporting Year	2023 Reporting Year
Changes to multiple definition names to increase readability	Example: Encounter Greater than or Equal to 20 Weeks Gestation Completed with Expiration changed to →	**Delivery Encounters with Expiration**
Risk Variable Logic	Renamed "Risk Variable BMI" to →	"Risk Variable BMI **Greater Than or Equal to 40**"
Value Set	Renamed "BMI" value set to →	"BMI**>=40**"
Value Set	"BMI>=40" value set contained Z codes representing BMI	**Zcodes representing BMI>= 40 were removed and replaced with E66.01 and E66.2 (morbid obesity) codes.**

ePC-07 Measure Changes from 2022 to 2023 – Technical

(continued 3)

Measure Components	2022 Reporting Year	2023 Reporting Year
Value Set	Renamed "COVID 19 Related Respiratory Conditions" grouping value set name to →	**"Respiratory Conditions related to COVID 19"**
Value Set	Renamed "COVID 19 Related Respiratory Procedures" grouping value set to →	**"Respiratory Support Procedures related to COVID 19"**

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 ~~*Completed*~~"

"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"

ePC-07 Denominator Exclusions

"Delivery ~~*Encounter Greater than or Equal to 20 Weeks Gestation Completed*~~Encounters with COVID and Respiratory Condition or Procedure"

"Delivery Encounters **At** Greater than or Equal to 20 Weeks Gestation ~~*Completed*~~"
TwentyWeeksPlusEncounter
where exists (TwentyWeeksPlusEncounter.diagnoses EncounterDiagnoses
where EncounterDiagnoses.code in "COVID 19 Confirmed“)
and (exists (TwentyWeeksPlusEncounter.diagnoses EncounterDiagnoses
where EncounterDiagnoses.code in “~~*COVID 19 Related*~~ Respiratory Conditions **Related to COVID 19**"
or exists (["Procedure, Performed": “~~*COVID 19 Related*~~ 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 ~~*Greater than or Equal to 20 Weeks Gestation Completed*~~ with Severe Obstetric Complications"

"Delivery Encounters ~~*Greater than or Equal to 20 Weeks Gestation Completed*~~ with Severe Obstetric Complications Diagnosis or Procedure (Excluding Blood Transfusion)"

union

"Delivery Encounters ~~*Greater than or Equal to 20 Weeks Gestation Completed*~~ with Expiration“

union

"Delivery Encounters ~~*Greater than or Equal to 20 Weeks Gestation CompletedEncounters*~~ with Blood Transfusion"

ePC-07 Numerator (continued 1)

"Delivery Encounters ~~*Greater than or Equal to 20 Weeks Gestation Completed*~~ with Severe Obstetric Complications Diagnosis or Procedure (Excluding Blood Transfusion)"

"Delivery Encounters **At** Greater than or Equal to 20 Weeks Gestation ~~*Completed*~~" TwentyWeeksPlusEncounter
where exists (TwentyWeeksPlusEncounter.diagnoses EncounterDiagnoses where EncounterDiagnoses.code in "Severe Maternal Morbidity Diagnoses" and EncounterDiagnoses.presentOnAdmissionIndicator in "Present on Admission = 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 2)

“Delivery Encounters ~~*Greater than or Equal to 20 Weeks Gestation Completed*~~ with Expiration“

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

where TwentyWeeksPlusEncounter.dischargeDisposition in "Patient Expired"

ePC-07 Numerator (continued 3)

"Delivery Encounters ~~*Greater than or Equal to 20 Weeks Gestation Completed*~~ with Blood Transfusion"

"Delivery Encounters **At** Greater than or Equal to 20 Weeks Gestation ~~*Completed*~~"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 (continued 4)

Numerator: "Delivery Encounters ~~*Greater than or Equal to 20 Weeks Gestation Completed*~~ with Severe Obstetric Complications"

"Delivery Encounters ~~*Greater than or Equal to 20 Weeks Gestation Completed*~~ with Severe Obstetric Complications Diagnosis or Procedure (Excluding Blood Transfusion)"
union
"Delivery Encounters ~~*Greater than or Equal to 20 Weeks Gestation Completed*~~ with Expiration“
union
"Delivery Encounters ~~*Greater than or Equal to 20 Weeks Gestation CompletedEncounters*~~ with Blood Transfusion"

ePC-07 Stratification

Stratum 1: "Stratification Encounter" intersect "Delivery Encounters ~~*Greater than or Equal to 20 Weeks Gestation Completed*~~ with Severe Obstetric Complications (Excluding Blood Transfusions)"

Stratification Encounter
"Numerator" except "Denominator Exclusion“

Delivery Encounters ~~*Greater than or Equal to 20 Weeks Gestation Completed*~~ with Severe Obstetric Complications (Excluding Blood Transfusions)

"Delivery Encounters ~~*Greater than or Equal to 20 Weeks Gestation Completed*~~ with Severe Obstetric Complications Diagnosis or Procedure (Excluding Blood Transfusion)"
Union “Delivery Encounters ~~*Greater than or Equal to 20 Weeks Gestation Completed*~~ with Expiration”

ePC-07 Stratification (continued 1)

Stratification Encounter

"Numerator" except "Denominator Exclusion"

ePC-07 Stratification (continued 2)

Delivery Encounters ~~*Greater than or Equal to 20 Weeks Gestation Completed*~~ with Severe Obstetric Complications (Excluding Blood Transfusions)

"Delivery Encounters ~~*Greater than or Equal to 20 Weeks Gestation Completed*~~ with Severe Obstetric Complications Diagnosis or Procedure (Excluding Blood Transfusion)“

Union

“Delivery Encounters ~~*Greater than or Equal to 20 Weeks Gestation Completed*~~ with Expiration”

ePC-07 Risk Adjustment Logic

Risk Variable Anemia

Risk Variable Anemia

"Delivery Encounters **At** Greater than or Equal to 20 Weeks Gestation **Completed**" TwentyWeeksPlusEncounter
where exists
(TwentyWeeksPlusEncounter.diagnoses EncounterDiagnoses where EncounterDiagnoses.code in "Anemia" and EncounterDiagnoses.presentOnAdmissionIndicator in "Present On Admission = Yes or Exempt")

ePC-07 Risk Adjustment Logic (continued 1)

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 (continued 2)

FirstLabTestWithEncounterId

FirstLabTestWithEncounterId
(LabList List<QDM.PositiveLaboratoryTestPerformed>)

"Delivery Encounters **At** Greater than or Equal to 20 Weeks Gestation ~~*Completed*~~" 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 (continued 3)

FirstPhysicalExamWithEncounterId

FirstPhysicalExamWithEncounterId
(ExamList List<QDM.PositivePhysicalExamPerformed>)

"Delivery Encounters **At** Greater than or Equal to 20 Weeks Gestation ~~*Completed*~~" 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 (continued 4)

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, ~~*platelets as 10*3/uL*~~
FirstHematocritLab: **"FirstLabTestWithEncounterId"**(["Laboratory Test, Performed": "Hematocrit lab test"]),
FirstWhiteBloodCellCount: **"FirstLabTestWithEncounterId"**(["Laboratory Test, Performed": "White blood cells count lab test"]),"])
~~*FirstPlateletLab: "FirstLabTestWithEncounterId"(["Laboratory Test, Performed": "Platelet count lab test"])*~~ }

ePC-07
Frequently Asked Questions

ePC-07 Frequently Asked Question

Question: **Does the Estimated Gestational Age (EGA) have to be documented at the exact time of delivery or can the EGA field be completed after delivery?**

Answer: **The logic for the PC measures require that the EGA documentation must occur 24 hours or less before or on the time of delivery. The reason for this is, depending on the EHR, the gestational age could continue to advance after delivery. The intent is to capture the gestational age at the time of delivery.**

ePC-07 Frequently Asked Question (continued 1)

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 Frequently Asked Question (continued 2)

Question: **Regarding the logic that states: starts during day of "PCMaternal.HospitalizationWithEDOBTriageObservation". Is that meant to include start time if it is before the hospitalization start/time but is on the day of the start of the hospitalization? The same with the end for that logic, if it starts on the day of the end of the hospitalization, but after the End Dt/Tm for the Inpatient Encounter, it would be included in this logic, right?**

Answer: **Yes, your interpretation is correct. By adding 'day of" to the logic as "starts during day of "PCMaternal.HospitalizationWithEDOBTriageObservation", the qualifying timeframe is extended to be "anytime on the same day of". Therefore, as long as the start time occurred on same day of the start of the hospitalization, the condition will be satisfied including start time is prior to start of hospitalization time. Same concept is applied to "starts on the day of the End of the Hospitalization".**

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/icd-10-cm.htm

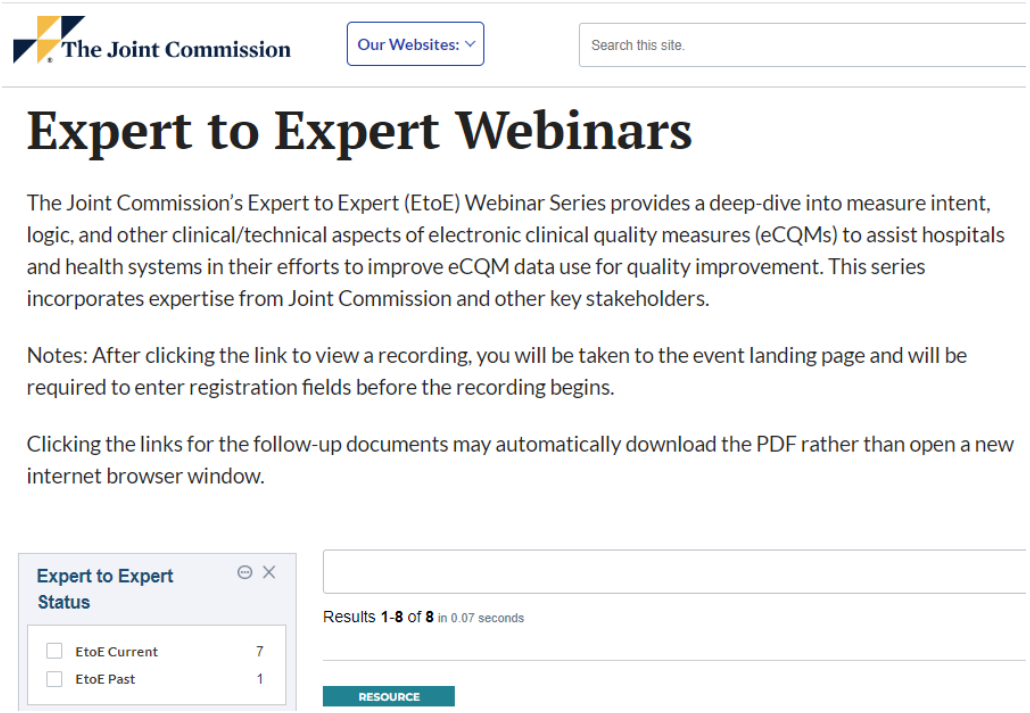
Live Q&A Segment

- 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/



Expert to Expert Annual Update Webinars

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

- Registration is open now for Dec 13 ED-2 webinar:
  https://attendee.gotowebinar.com/register/1712789953902670349

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

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Joint Commission Pioneers in Quality Expert to Expert Webinar Series 2023 Annual Updates ePC-02, ePC-05, ePC-07 eCQMs

Broadcast Date: December 6, 2022

00:03
Welcome everyone and thank you for joining us for this Expert to Expert Series Webinar 2023 Annual Updates for Perinatal Care PC-02, 05, and 07 eCQMs.

00:22
Before we start, just a few comments about today's webinar platform. Audio is by Voice Over Internet Protocol only. Click the button that reads "Listen in! Click for audio."

00:32
Then use your computer speakers or headphones to listen. There are no dial in lines. Participants are connected in listen-only mode. Feedback or dropped audio are common for live streaming events. Refresh your screen or rejoin the event if this occurs. We will not be recognizing the Raise a Hand or Chat features. To ask a question, click on the Question Mark icon in the audience toolbar. A panel will open for you to type your question and submit. We would like to welcome you to our webinar.

01:05
Before we get started, we do want to explain that this webinar is fairly technical in nature and requires a baseline understanding of eCQMs. Participant feedback from previous webinars indicated that the content may have been too technical for individuals new to eCQMs. If you are new to eCQMs, this content might be too technically advanced for your comprehension. We recommend that those new to eCQMs visit the eCQI Resource Center at the hyperlink listed on this slide, you'll find a collection of resources to help you get started with eCQMs.

01:43
The slides are available now and can be found within the viewer toolbar. To access the slides, click on 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.

01:58
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03:25
The learning objectives for this session are:

- Navigate to the measure specifications, value sets, measure flow diagrams, and technical release notes.
- Apply concepts learned about the logic and intent for the PC-05, 02 and 07 eCQMs.
- Prepare to implement the PC-05, 02 and 07 eCQMs for the 2023 eCQM reporting period and
- identify common areas and questions regarding the PC-05, 02, and 07 eCQMs.

03:59
This webinar does not cover these topics: basic eCQM concepts, topics related to chart abstracted measures, process improvement efforts related to this measure and eCQM validation.

04:14
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:

Raquel Belarmino, Valery Danilack, Susan Funk, Chris Walas and Susan Yendro.

04:44
The agenda for today's discussion follows:

- Demonstrate navigation to the measure specifications, value sets, measure flow diagrams, and technical release notes.
- Review the measure flow and algorithm
- Review changes made to PC-05, 02, and 07,
- Frequently Asked Questions,
- And then a Facilitated Audience Q&A segment.

05:07
We will now share a demo that illustrates navigation to the eCQI Resource Center to show the measure specifications, value sets, measure flow diagrams, and technical release notes.
05:30
Thank you, Susan. Before we dive into our measures, we would like to refer you to the eCQI Resource Center website where you can find the measure specifications, measure flow diagrams, value sets and technical release notes for all measures in the CMS program.

05:47
We will go ahead and click on the link indicated on the right-hand corner to take us to the eCQI Resource Center website.

05:54
Here is the landing page for the eCQI Resource Center. We'll go ahead and hover over the eCQMs item on the main menu and click on the Eligible Hospitals Critical Access Hospital eCQM link. We will select the reporting period year of 2023. You will see multiple resources listed below. We will focus on the four items highlighted in red on the previous slide. Starting with the eCQM Specifications for Hospital Quality Reporting.

05:58
We'll go ahead and click on this link to open the zip file.

06:30
The zip file will download and will appear in the bottom left-hand corner of your screen. Let's go ahead and click on that arrow to open the file.

06:37
You will see additional zip files listed for each of the measures including the CMS program. Double click on the measure you are interested in viewing. I will choose CMS-9 which is PC-05 Exclusive Breast Milk Feeding. Now you see all of the files in the measure package.

06:55
I will not go into detail on all of these files. If you want to know more, go to the "Get Started with eCQM" site on the eCQI Resource Center. We will take a quick look at the HTML document which is also referred to as the Human Readable File which is located here. I'll go ahead and double click on that file name and the HTML file opens. This is where you'll find all of the details related to the measure. The top portion of the document highlighted in Gray is referred to as metadata or header information. You will find a lot of information here, beginning with the title of the measure, the identifier, the version number. If the measure is NQF endorsed, you will have a number here as well. You will also find the measure, developer and description of the measure here.

07:45
Moving along you will find the rationale, references and as well as the helpful guidance located here. This is important to review and implementing the measure. Below that you will see the population defined in an easy to understand language and any supplemental data elements used for the measure as well. Scrolling down you will see the population criteria's and all of the definitions making up the measure and they are listed here in alphabetical order. And below the definition, are the functions.

08:18
Next we have the terminology which consists of value sets or direct reference codes. We also have the data criteria QDM data elements followed by the supplemental data elements. And risk adjustment variables if applicable for the measure.

08:35
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 how to have a basic understanding of its contents.

08:45
Next, let us go back to the eCQI Resource Center website to see where we can download the value sets. We can download the value sets by clicking the eCQM and hybrid measure value set link.

08:58
This will take us to the VSAC website. You will see the value sets listed after back as 2013. Please notice that you must be signed into the Value Set Authority Center to access the value sets. I will log into the VSAC now.

09:15
Let's open the most recent reporting year 2023 by clicking on the May 2022 release. You will see several available Downloads. Choosing the first option, I will select the data sorted by CMS ID in Excel format.

09:32
Let's go ahead and open that Excel file on the bottom left-hand corner. I will select the measures that I'm interested in viewing.

09:43
Here we have a various tab with the other CMS measures. I will go ahead and stick with the CMS-9 to see the available columns here. Here you can see the CMS ID number, value set number, value set Object Identifier commonly referred to as the OID QDM category and other pertinent information for every code and every value set for the measure. Note that difference 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's specifications.

10:17
I will now go ahead and navigate back to our eCQI resource site to take a look at where we can locate the technical release notes. You can either open a PDF file containing TRNs for all measures or zip file containing TRNs in a separated Excel file. I will choose the second option and open CMS-9.

10:47
Here is a nice concise list of all the changes to the measures for 2023 reporting year. Participant feedback from previous webinars asked for a concise list of changes to the measure, so we hope this meets your needs. In addition to the information, we will cover in this webinar.

11:02
Notice the first column contains the technical release notes. The second column contains the type of TRN, for example the header, logic, or value set. The TRNs are sorted by the type of TRNs. So, all header changes are grouped, as are all logic changes and all values set changes. The last thing we would like to review is the measure flows. I will go ahead and navigate back to the eCQI website and click on the eCQMs flows link.

11:34
This will open a zip file and the measure flows are in a PDF format for each measure as you can see here. Select the flow you are interested in viewing, but for now I'll stay with the CMS-9 again.

11:49
We will be walking through the measure flows later in the presentation, but let's look at the measure flow at a high level. Please note, eCQM flows are designed to assist in interpretation of the eCQM logic and calculation for performance rates. The eCQM flows provide an overview of each of the population criteria components and associated data elements that lead to the inclusion or Exclusion into the measure. These flows are intended to be used as an additional resource when implementing eCQMs and should not be used in place of the eCQM specifications. Now let's go ahead and take a look at the eCQM flow. Here you can see the CMS number and version number of the measure. The diagrams include a horizontal rule for every population applicable to the measure.

12:40
This measure has an Initial Population, a Denominator, a Denominator Exclusion and Numerator. You will see an algorithm guiding you through each population. Standard flow chart symbols are used. For example, a diamond is used to indicate a question or decision and input symbols are used for denoting input and outputs.

13:07
After the diagram you will find a sample calculation and after that 2 pages describing each population using a narrative. Stay tuned for more details on the measure flows later in the presentations.

13:20
Now I will turn the presentation over to Chris Walas who will introduce PC-05 Exclusive Breast Milk Feeding Measures.

13:59
Raquel, are you able to bring up your screen? Hi yes, I am selecting my screen right now.

14:48
Everyone, please hold tight for just a moment while we get the screen sharing up and running. Thank you, Raquel. Now we will introduce PC-05 Exclusive Breast Milk Feeding.
15:21
Exclusive Breast Milk Feeding for the first six months of life is recommended by many health organizations, such as the American Academy of Pediatrics and Department of Health and Human Services. There are documented health benefits for both infants and mothers, including decreased risk of diabetes. Increasing the rates of Exclusive Breast Milk Feeding has long been a goal by the World Health Organization, CDC, and Healthy People Initiatives.

16:02
We continue to see room for improvement in Exclusive Breast Milk Feeding rates. The average quarterly rate for accredited organization submitting ePC-05 remains at 54 to 55%, slightly above the national quarterly average of 52 to 53% during the same time.

16:21
Due to the limited, due to the limited Exclusion criteria and support for maternal feeding choice, the measure is not expected to reach 100%. A 70% threshold is more reasonable target which has been reached by some organizations.

16:41
For the 2023 reporting year, there are no changes to the population descriptions for 2022. Let's take a quick overview of the populations for the ePC-05 measure. The Initial Population is inpatient hospitalizations for single newborns born in the hospital that ends during the measurement period with either of the following conditions: an estimated Gestational age at birth of greater or equal to 37 weeks or a birth weight greater or equal to 3000 grams when estimated Gestational age is not available.

17:18
Data shows that the majority of newborns with Gestational age 37 weeks or more have a birth weight 3000 grams or more. Birth weight 3000 grams or more is a proxy to capture term newborns without Gestational age recorded in the EHR system. The Denominator is the same as the Initial Population. The Denominator Exclusion criteria is inpatient hospitalizations for newborns who were with any of the following conditions: Admitted to the NICU or transferred to a regular intensive care unit transferred to an acute care facility or other healthcare facility, expired during the hospitalization, a length of stay greater than 12 days that ends during the measurement period. A diagnosis of Galactosemia. Received parenteral nutrition, which is captured by a procedure or medication codes. The Numerator is inpatient hospitalization for newborns who are fed breast milk only since birth. Please note this does include a human donor milk as well.

18:29
We will summarize the major measure changes for 2023. Please note that throughout this presentation we use red font to highlight changes from last year.

18:41
For reporting year 2022, the Guidance section stated only one birth weight value should be recorded. In cases where there is conflicting data use the document recording the birth weight closest to the time of delivery.

18:58
For reporting year 2023, the Guidance was clarified to use the birth weight closest to the start of the encounter to align with the encounter definition that is used in this measure. The Denominator Exclusions narrative on the header has been updated to include reference to ICU to align with the logic and intent. Header changes to both the Guidance and Denominator Exclusion sections did not require any changes to the logic for reporting year 2023.

19:30
For 2023, there was one healthcare facility patient care location HSLOC code, which was added Neonatal Care Level 4 to the NICU value set based on terminology update. HSLOC is a standard terminology used to define patient location in the hospital. Also, the rationale and references were updated to reflect more current literature. I now turn the presentation over to Raquel. To cover the technical aspects of PC-05.

20:07
Thanks Chris. I will now present some of the technical changes to the measure.

20:12
Let us look at the first measure component on the slide. The Initial Population for 2023 is the same as 2022 with one exception. The Initial Population definition name has been updated to include the word ends to align with the existing logic that states Ends During Day Of Measurement Period and to follow the clinical quality language CQL style guide. The CQL Style Guide promotes standardization of ours measure specifications.

20:43
Note that this definition PCNewborn. "Single Live Term Newborn Encounter Ends During Measurement Period" is stored in the PC newborn library, as evidenced by the prefix PC newborn. As a refresher, the newborn library is a shared library that houses common logic that all newborn measures use.

21:03
Next we have renamed Single Live Term Newborn Encounter with Newborn to NICU or Discharge to Acute Care or Other Healthcare Facility or Expire to Single Life Term Newborn Encounter with NICU or ICU, admission or selected discharges disposition to align with the logic and provide clarity. This definition is a Denominator Exclusion.

21:29
Please note definition name changes have no impact to the measure outcome.

21:36
Let's review the measure flow diagram for PC-05. As previously mentioned, measure flow diagram can be found on the eCQI Resource Center. In the interest of time, I will only demonstrate the flow diagram for PC-05. Therefore, please review PC-02 and PC-07 measure flow diagrams on your own time.

22:01
On top of the document header you will see this is the measure flow diagram for 2023 eCQM. Here you will also see the CMS number and version number which is CMS-9 version 11 and the measure name.

Please note when reviewing the full diagram, the left side shows the definition, and the right side has brackets. That calls out the definition name and provides a high-level view of the logic that is expressed.

22:32
Let's start with the first row, Initial Population. The first rectangle shows the measure evaluates for Single Live Term Newborn Encounter Ends During Measurement Period. Let us look at the brackets on the right side to view the logic for that definition. The logic will evaluate for inpatient hospitalizations for single live newborns who are born in the hospital that ends during the measurement period and with either of the following conditions: an estimated Gestational age at birth of greater equal to 37 weeks or a birth weight greater or equal to 3000 grams when an estimated Gestational age is not available.

23:15
If patient does not meet this criteria, you will follow the algorithm to “No” and see that the patient is not in the Initial Population and therefore processing would end here. If patient meets criteria follow the algorithm to yes, then the patient is in the Initial Population and processing proceeds to the Denominator.

23:39
Moving along to the 2nd row, which is the Denominator, the patient will meet the Denominator criteria as well since the Denominator is equal to the Initial Population. Then we move on to the Denominator Exclusion processing. We will continue to the next slide to page 2 of the flow diagram to view the Denominator Exclusion process.

24:06
Let us look at the Denominator Exclusion process. The logic will evaluate for inpatient hospitalizations for newborns who were with any of the following conditions. Admitted to the NICU or transferred to a regular intensive care unit, ICU. Transferred to an acute care facility or other healthcare facility or expired during the hospitalization. A length of stay greater than 120 days that ends during the measurement period. A diagnosis of Galactosemia or receives parenteral nutrition.

24:43
A patient does not meet any of the conditions you will follow the algorithm to yes and see that the patient meets a Denominator Exclusion and the processing ends there. If patient does not have any of these conditions. You will follow the algorithm to “No” and Numerator logic is evaluated.

25:04
We will continue to the next slide to page 3 of the flow diagram to view the Numerator process.
25:04
Let us look at the Numerator process. The logic will evaluate for inpatient hospitalizations for newborns who are fed breast milk only since birth. If the answer is yes, patient will meet the Numerator and process ends there.

25:28
If the if answer is no, the patient will not be in the Numerator and process ends there. At the bottom of Page 3 on the flow diagram you see the calculations for the Overall Performance Rate. The Numerator is divided by the Denominator minus the Denominator Exclusion.

25:50
The last two pages shows the measure flow narrative. Here you will see the population criteria displayed with a narrative description. And here's the last page of the measure flow narrative.

26:05
Now that we have complete overview the flow diagram, let us look at the measure logic together. We will start by reviewing the Initial Population. The Initial Population definition is PCNewborn. "Single Live Term Newborn Encounter Ends During Measurement Period."

26:23
The only change is we added ends to the definition name as mentioned previously to align with the existing logic that states Ends During Day of Measurement Period. As a reminder, new changes for 2023 will be indicated by red font throughout the presentation. This Initial Population has two definitions, listed and constructed with a union. "Single Live Birth Encounter with Gestational Age of 37 Weeks or More." Union "Single Live Birth Encounter with Birth Weight 3000 grams or More Without Gestational Age." Union means or. This means the logic will look to see if the newborn either has a Gestational age greater than 37 weeks or more, or a birth weight greater or equal to 3000 grams. If no estimated Gestational age is available.

27:18
The last point indicates that encounter must end during the day of the measurement period. As a refresher “day of’ was added last year due to a time zone offset issues. Day of, uses the calendar date only and does not use hours, minutes and seconds for the timing comparison.

27:38
All cases within the measurement period with the Gestational age of 37 weeks or more or birth weight 3000 grams or more are captured and evaluated in the Initial Population. Let us look at the two Union definitions within the Initial Populations in greater detail. The first Union definition is Single Live Birth Encounter with Gestational Age 37 Weeks or More.

28:07
This will evaluate for a Single Live Newborn with an estimated Gestational age at birth of great equal to 37 weeks. Note that a direct reference code is used to capture Gestational age at birth instead of a value set. This is because when a concept can be actually captured with only one code, value of sets are not to be used and the direct reference code is called directly. The logic uses the earliest function from the Global Common Library. This function is called Earliest Of. The EarliestOf function returns the starting point of the relevant. If a starting boundary is specified, otherwise it returns to ending point of the period.

28:56
As you can see, this definition is calling out single live birth encounter definition where they encounter diagnosis attribute identifies a single live newborn born in the hospital value set. This will evaluate the newborn status of an inpatient encounter, any diagnosis indicating a single live newborn.

29:21
Next, let us discuss the second Union definition. For the Initial Population, this is the single live birth encounter with birth weight 3000 grams or more without Gestational age. Here you'll see the single live birth. Encounter called again, as we saw in the previous slide. Now we are trying to identify patients who did not have a Gestational age on the EHR. So, we use similar logic that we saw on the previous slide as if we are looking for Gestational age. And then we add the operator without to capture those newborns without Gestational age. If there is no Gestational age, we then evaluate if there is a birth weight greater equal than 3000 grams during the encounter.

30:11
Please note that we use the same EarliestOf function here as discussed on the previous slide to capture the birth weight closest to the start of encounter.

30:24
As we mentioned earlier, the Denominator is the same as the Initial Population. The definition is simply called Initial Population. So, then the definition is PC Newborn Single Life Term. Newborn Encounter Ends During Measurement Period. This becomes the qualifying encounter to continue moving through the measure algorithm.

30:48
For your reporting year 2023, there were no changes made to the Denominator. The Denominator Exclusion has three definitions, and they are "Single Live Term, Newborn Encounter with NICU or ICU Admission or Selected Discharge Disposition." Or "Single Life Term Newborn Encounter with Length of Stay More Than 120 Days", or "Single Live Term Newborn Encounter with Galactosemia or Parenteral Nutrition."

31:24
The three definitions are joined by a union, which means if the newborn meets either of these definitions, they will be excluded from the Denominator. We will now look at the three Denominators Exclusion definitions one at a time.

31:44
The first definition Single Live Term Newborn Encounter with NICU or ICU Admission or Selected Discharge Disposition covers the first 3 Denominator Exclusions. Admitted to the NICU or transfer to a regular intensive care unit, ICU. As a reminder, the intensive care unit was added for reporting year 2022 as Exclusion in order to capture newborn who was transferred to a general ICU in addition to NICU use for special care or temporary stay.

32:12
This change was based on feedback from hospitals. If you recall earlier, we use single life term newborn encounter ends during measurement period as the qualifying encounter. To continue moving through the measure. We use the encounter perform attributes of facility locations and code to identify a neonatal intensive care unit or intensive care unit.

32:39
The other two Exclusions this definition covers are expired during the hospitalization. Transferred to an acute care facility or other healthcare facility. We use the attribute this discharge disposition to identify patient expired or discharged to acute care facility or other healthcare facility

33:02
Any newborns transferred or discharged to any one of these locations will be excluded from the Denominator. For reporting year 2023, there were no concept changes made to the Denominator Exclusions from 2022.

33:18
The second definition Single Live Term Newborn Encounter with Length of Stay More Than 120 Days covers the 4th Denominator, Exclusion of Newborn with a Length of Stay Greater Than 120 Days. For reporting year 2023, there were no changes to this definition.

33:39
The third and last definition Single Live Term Newborn Encounter with Galactosemia or Parenteral nutrition covers the last two Denominator Exclusion of newborn with a diagnosis of Galactosemia or subject to parenteral nutrition. The first portion of this definition will exclude encounters for the newborn receives parenteral nutrition.

34:03
The logic will capture this by looking at either a procedure or medication administered indicative of Parenteral nutrition during the encounter. The procedure performed and medication performed data types both have relevant datetime and relevant timing attributes. This logic applies the normalize interval function to the Parenteral nutrition collection. To assess the timing elements.

34:29
The second portion would exclude newborns with encounter diagnosis of Galactosemia. Patients with the diagnosis of Galactosemia during the encounter will be excluded from the Denominator. For reporting year 2023, there were no concept changes to this definition. Next we will discuss the Numerator. The Numerator is single life term newborns who are fed breast milk only since birth. We start with our qualifying encounter, as you have seen previously.

35:00
Next, we look for documentation of breast milk feeding that starts during the encounter. The logic uses the breast milk value set to capture this. The intent of the breast milk value set is to capture newborn who receives breast milk.

35:16
And then we looked to see that there was no other dietary intake except breast milk. The dietary intake other than breast milk value set, includes substances such as water, formula and glucose. This logic also applies the normalize interval function to the substance administered data type. Timing attributes to assess either relevant datetime or other feeding dot relevant. For reporting year 2023, there were no concept changes to this definition.

35:50
Now we will review a frequently asked question for PC-05.

35:57
"When is the estimated age EGA date/time As for the newborn to populate into the Initial Population?"

36:06
The EGA is evaluated after newborn is delivered and is assessed anytime during the inpatient encounter.

36:14
This is not the time the EGA value was entered into the EHR system. In order to capture this, the logic uses the Earliest function from the Global Common Library. The "EarliestOf" function returns the starting point of the relevant if a starting boundary is specified. Otherwise, it returns the ending point of the period.

36:40
Now we will transition to the maternal measures ePC-02 Cesarean Birth and ePC-07 Severe Obstetric Complications. In August, CMS released its final rule for the fiscal year 2023 hospital inpatient prospective payment system. CMS adapted ePC-02 and ePC-07 for use in the Hospital Inpatient Quality Reporting Program.

37:06
Organizations can self-select to report the measures to CMS for calendar year 2023 reporting period, fiscal year 2025 payment determination with mandatory reporting beginning with calendar year 2024 reporting period and fiscal year 2026 payment determination.

37:28
ePC-02 and ePC-07 were optional measures for the 2022 TJC ORYX requirements and will continue to be optional measures in 2023. Therefore, throughout this presentation we will refer to "changes" even though the measures are new to the CMS program. ePC-02 and ePC-07 were submitted for NQF Endorsement in the Spring 2022 Cycle. We are awaiting final endorsement decision this fall. Now we will discuss ePC-02 in detail.
38:03
The Cesarean birth measure looks at the NTSV Cesarean rate, which is a primary Cesarean in first births with Term Singleton pregnancies in a head down position. This is an important population to focus on because Nulliparious woman has four to six time the Cesarean birth rate then Multiparous woman and therefore the NTSV population is the largest driver of the primary Cesarean birth rate in addition a reduction in primary Cesarean birth. Will reduce the number of women having repeat C-sections as almost 90% of mothers who have a primary C-section will have subsequent Cesarean birth.

38:47
Although Cesarean delivery can be life saving 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 delivery.

39:14
The Cesarean birth measure can assist organizations in monitoring their quality improvement efforts to reduce the NTSV Cesarean rate. Cesarean 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 for maternal health conditions that may increase the risk for Cesarean delivery.

39:44
To reiterate, the measure description for PC-02 is Nulliparous patients with the Term Singleton baby and head down or Vertex position who are delivered by Cesarean section. There are no changes to the population descriptions this year. The Initial Population is inpatient hospitalizations for patients age greater than or equal to 8 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 Nulliparous patients delivering a live term Singleton newborn greater than or equal to 37 weeks of gestation completed. Denominator Exclusions are inpatient hospitalization with abnormal presentation or placenta previa during the encounter.

40:40
The Numerator is inpatient hospitalizations delivered by Cesarean section.

40:45
Please note ePC-02 is an inverse measure and therefore generally speaking, lower scores are better. More on this on the next slide.

40:56
The improvement notation was changed from decrease in rate to within optimal range. The Joint Commission does not want to encourage inappropriately low Cesarean rates that may be unsafe for patients. Acceptable PC-02 rates are 30% or lower. However, there is not an established threshold for what rate might be too low. PC-06 unexpected complications in term newborns serves as a balancing measure for PC-02 to guard against any unanticipated or unintended consequences and to identify unforeseen complications that might arise as a result of quality improvement activities and efforts for this measure.

41:38
In order to identify areas for improvement, hospitals may want to review results based on specific ICD-10 codes or patient populations. Data could then be analyzed further determine specific patterns or trends to help reduce Cesarean birth. The ePC-02 rationale and references have been updated to reflect the updated references in the literature. I will now turn the presentation over to Raquel, who will cover the technical changes.

42:10
Thank you Chris. We replaced the Global.CalendarAgeInYearsAt function with the Native CQL function AgeInYearsAt to take advantage of existing sequel features and increase human readability. As a result of this change, the LONIC code 2112-8 is no longer required and has been removed from the terminology section of the human readable specification.

42:36
The second item on this slide pertains to logic that assures the delivery procedures was performed on the current encounter. In the 2022 version of the measure, if there was no start time associated with the delivery procedure, the start time would default to 000. Therefore, if a patient's delivery date was the same as encounter start date, the patient would be excluded from the measure as the 0000 time would be prior to the start time of the encounter for 2020.

43:06
For reporting year, we added day of to PCMaternal.Delivery encounter with age range to account for delivery procedures that may not have times. Calculated Gestational age was included in this measure. Several years ago this year variable Calculated Gestational Age, CGA definition was added to the PC Maternal Library and was added as a supplemental data element.

43:34
The intent is to establish a variable to represent CGA. CGA is a supplemental data element to store the Calculated Gestational age result from the Calculated Gestational Age function. The data element enables the capturing and saving of the CGA for data analysis post data receipt. Hospitals do not need to submit any additional data to comply with this definition. We added Truncate Time function to convert the estimated delivery date from date only to date and time. The reason for this, while clinically the EDD is reported as date only, the quality data model does not support date only at this time.

44:17
Multiple definition names were changed to increase clarity. For example, Delivery Encounter With Calculated Gestational Age was changed to Delivery Encounter with Calculated Gestational Age Greater Than or Equal to 37 weeks. We modified 3 definitions to use the Denominator as a primary source instead of the Initial Population. We simplify Denominator by decreasing nesting resulting in deletion of four definitions. We will demonstrate these changes in more detail when we review the logic.

44:52
The main Initial Population definition is Delivery Encounter with Age Range, which is stored in the PC Maternal Library. During the presentation of PC-05. The PC Newborn Library was reference which is a shared library that houses common logic used by the newborn measures. Similarly, the PC Maternal Library source definitions and functions which are used by both maternal measures CMS program i.e., PC-02 and PC-07. As well as PC-01 and The Joint Commission ORYX program.

45:27
Delivery encounters with age range identifies patients that had a qualifying delivery procedure during this hospitalization. Recall that the hospitalization function that we added last year 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. This year, we added day of to account for delivery procedures that may not have times as previously mentioned. Day of uses time or date only and does not use hours, minutes and seconds for the timing comparison.

46:05
This definition calls the definition and titled Encounter with Age Range, which is also stored in the PC Maternal Library. This year, we replaced the Global. Calendar AgeInYearsAt function with the native CQL function AgeInYearsAt to take advantage of existing CQL features and increase human readability.

46:27
We no longer need to reference the LOINC code of 2112-8 which represented birth date. AgeInYearsAt is a built-in CQL operator calculates the patients age, the time designated in the logic. In this case at the start of the encounter. The Denominator definition is Singleton Delivery Encounter at 37 Plus Weeks, Gravida 1, Parity 0, No Previous Births.

46:54
There is no change in the clinical intent of the Denominator. We streamline the logic and eliminating the need for four definitions. Last year we had four separate definitions to define Gravida equals one, Parity equals 0, Pre-term Births equals zero and Term Births equals 0. This year we call the functions and qualify the results directly in the Denominator definition.

47:20
Let's start with the delivery encounter with Gestational age greater than or Equal to 37 weeks definition. The names of the two definitions that are unioned in this definition were expanded to provide more clarity regarding the criteria weeks gestation.

47:36
Let's start with the first definition in the Union statement, Delivery Encounter with Calculated Age Calculated Gestational Age Greater Than Equal 37 week. This definition calls the calculated Gestational Age function. Function was introduced 2 years ago and is stored in the PC maternal library. Place of Gestational age based on ACOG revitalized definition. The function calculates the difference in days between the time of delivery and estimated delivery date, subtracts that from 280 and divides by 7. This year we added formatted to the last estimated delivery date.

48:16
We will come back to this in the next few slides.

48:21
Let's talk about the last time of delivery function first. This function's purpose is to gather all assessments that document delivery date time. Sort these items by relevant datetime that the assessment was performed and identified the last assessment. And stores the result of that assessment as the last time of delivery. There are no changes to this function this year.

48:49
The last and EarliestOf operators may seem contradictory in this logic. The EarliestOf operator evaluates the time of delivery, relevant datetime and relevant period for every assessment of time of delivery.

49:03
If both are present, we choose the EarliestOf the relevant datetime or the relevant start period of the assessment. Then all of the EarliestOf dates are sorted and the last one is chosen.

49:18
The last estimated delivery date function identifies the last time the estimated delivery date was assessed 42 weeks or less prior to or on delivery date and stores the result of that assessment. The only change made to this function is removal of as DateTime. The reason for this is while clinically the estimated delivery date is reported as date only, the quality data model does not support date only at this time. Two new functions were added to the PC Maternal Library this year. As mentioned, while clinically the estimated delivery time is reported as date only, the quality data model does not support date only at this time.

50:00
Therefore, we added the PCMaternal.FormattedLastEstimatedDeliveryDate function which calls the Truncate Time function from the TJC library. Truncate time is used to convert date only to datetime. Time is populated as 0,0,0,0.

50:20
Now that we have defined the last time of delivery and the formatted last estimated delivery time. We can plug those values into the equation to arrive at the calculated Gestational Age. Now the logic determines if the calculated Gestational age is greater or equal to 37.

50:41
Let's turn our attention to the second definition of the Union statement. Delivery Encounter with Estimated Gestational Age Greater 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 PC Maternal Library.

51:07
The last estimated Gestational age function is constructed similarly to the last EDD and the last time a delivery functions that we just covered.

51:16
This function's purpose is to gather all assessments that document the patient's estimated Gestational age. Sort these items by the relevant datetime that the assessment was performed and identified the last assessment. It then stores the results of that assessment as a quantity representing estimated weeks gestation.

51:36
Note that the EGA assessments relevant datetime must be 24 hours or less before or on the last day of delivery. So now that we have our last EGA, we go back up to the delivery encounter with Estimated Gestational Age definition.

51:53
The calculated Gestational age is the preferred method of reporting Gestational age. If the calculated Gestational age is null, i.e., it is not available, then the EGA is used. The logic determines the last EGA is greater or equal than 37.

52:15
So, circling back to the higher-level definition. We union the calculated Gestational age and estimated Gestational age definitions to identify delivery encounters greater or equal to 37 weeks.

52:28
So, coming back to our main Denominator definition, the last 10 slides covered the first definition of the delivery encounter, which is station age greater than equal to 37 weeks. The next definition encounter was Singleton delivery looks for encounter diagnosis, which is an attribute of the encounter data type.

52:50
Moving down to the delivery, encounter diagnosis last four lines of the Denominator definition. As already mentioned, we streamlined the logic, eliminating the need for four definitions. Last year we had four separate definitions to define gravity equals one, Parity equals 0, Preterm Births equals zero, and Term Births equals 0. This year, we call the four functions and qualify the results directly in a Denominator definition. No changes were made to the four functions this year.

53:21
Before function starting with the word last are all structured similarly. Let's take a look at the last Gravida as an example. The last Gravida functions intent is to look at all assessments of Gravidity where the relevant datetime is 42 weeks or less before delivery. Sort those assessments by the relevant datetime and then store the results from the last assessment as the Gravida to be used to determine if the patient is in the Denominator.

53:51
So, putting the Denominator definition altogether, we are looking for delivery encounters which is station age greater equal to 37 weeks, also had a delivery of a single baby where the last Gravida equals one, or the last Parity equals zero. Or the last history term birth and the last history of term birth are both 0.

54:15
Next we move to the Denominator Exclusions, which consist of two Exclusions: 1. Encounter with one encounter with abnormal presentation and 2. Encounter with Placenta Previa. Let's start with Encounter with Abnormal Presentation definition first.

54:34
This year, instead of calling the Initial Population, we call the Denominator population Singleton delivery or 37 plus weeks gravida. 1 Parity of 0. No previous births. Elias was changed to qualifying encounter to reflect the Denominator. No other changes were made to this definition. We give organizations two options to evaluate abnormal presentation.

54:59
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 defines a variable of last abnormal presentation before or on the delivery date.

55:14
Next, we'll look for a diagnosis of abnormal presentation and last, union that with a variable of abnormal presentation. Moving on, the Encounter with Placenta Previa definition just as you saw on the previous slide. This year instead of calling the Initial Population, we call the Denominator population. "Singleton Delivery Encounter at 37 Plus Weeks Gravida 1 Parity 0. No previous births."

55:40
The alias was changed to qualifying encounters to reflect the Denominator. No other changes were made to this definition. The patient has a diagnosis of Placenta Previa on the encounter the definition will be satisfied.

55:56
Lastly, our Numerator includes inpatient hospitalizations for Cesarean births. The logic looks for a procedure Cesarean birth performed during the relevant period. Just like with the Denominator Exclusion definitions this year, instead of calling the Initial Population, we call the Denominator population. The alias was changed to qualifying encounter to reflect the Denominator.

56:19
Now we will review a frequently asked question for PC 2.

56:25
"The logic uses two different data types to capture abnormal presentations: One assessment Performed and two encounter performed diagnosis. It looks like these two data types are using the same value set of abnormal presentation. Is this correct?"
56:41
The same value set ("Abnormal Presentation") is used for the QDM data type of "Assessment, Performed and Diagnosis." The "Abnormal Presentation" grouping value set contains ICD and SNOMED codes representing a fetus in an abnormal position in the uterus.

57:02
Now we will move on to our final measure for this webinar ePC-07 severe obstetric complications.

57:09
TJC developed ePC-07 in collaboration with Yale New Haven Health Services Corporation, Center for Outcomes Research and Evaluation, CORE and expert advisor, Doctor Eliot Maine, CMQCC California maternal Quality Care Collaborative medical director and executive committee chair. This is a risk adjusted outcome measure.

57:35
Maternal morbidity and mortality pose serious health threats 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 preventive preventability vary but suggest that a considerable proportion of maternal mortality and morbidity events could be prevented.

58:04
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%.

58:34
Studies also show that Non-Hispanic Black women are three to four 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.

58:53
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.

59:10
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 CDC specifically defines SMM by 21 indicators. Defined by International Classification of Diseases, 10th revision ICD-10 codes, diagnosis and procedure codes. Some SMM examples include acute renal failure, acute respiratory distress and blood transfusion. More on this later.

59:40
The goal of ePC-07 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 or SOC. Now Valery Danilack from Yale CORE will explain the risk adjustment model for PC-07.

01:00:14
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.

01:00:30
Risk adjustment accounts for case mix, differences between hospitals and levels of 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.

01:01:05
We identified candidate risk variables predictive of severe fetal 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.

01:01:24
We also sought input from our clinical expert, consultant and other clinical experts, patients and experts in the technical expert panel. Again, only conditions or comorbidities that were present on admission were included in risk adjustment.

01:01:41
Following the identification of risk adjustment variables, a risk model was developed for the severe obstructive complications and severe of surgical complications, excluding blood transfusion only encounters. Due to very low prevalence of a few risk variables in the risk model of severe obstetric complications, excluding transfusion only encounters, HIV 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 severe surgical complications and severe of surgical complications excluding blood transfusion only encounters.

01:02:36
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 and research literature for its inclusion and availability in the EHR.

01:02:56
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 to 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, Chris.

01:03:23
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 admissions. They are not excluded from the measure.

01:03:56
The Denominator Exclusion criteria for this measure will be discussed in an upcoming slide also when looking at PC-07 rates, they will be reported per 10,000 delivery hospitalizations. To reiterate the measure description for PC-07 is patients with severe obstetric complications which occurred during the inpatient delivery hospitalization. Now we take a close look at how ePC-07 populations are defined.

01:04:27
The Initial Population is defined as inpatient hospitalizations for patients age greater than equal to 8 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. The Denominator is inpatient hospitalizations for patients delivering stillborn or live birth with greater than equal to 20 weeks 0 days gestation completed. Denominator Exclusions are patients with confirmed diagnosis of COVID with COVID related respiratory condition or patients with confirmed diagnosis of COVID with COVID related respiratory procedure.

01:05:19
The Numerator is inpatient hospitalizations for patients with Severe Obstetric Complications. You may recall from earlier in the presentation we mentioned CDC's 21 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, 2 severe morbidity maternal morbidity procedures; note that the CDC groups acute heart failure and pulmonary edema as one SMM indicator and hence a total of 21 indicators as opposed to the 22 we have listed here and then three discharge disposition expired.

01:06:06
This measure is risk adjusted using the preexisting conditions listed here. Present on admission codes are used to determine if the condition is pre-existing. Additional variables used for risk adjustment are heart rate, systolic blood pressure, white blood cell count, and hematocrit. Platelets were included in the original version of the measure for future consideration only and have been removed this year until further notice.

01:06:34
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.

01:06:46
As Valery mentioned, the measure reports 2 outcomes, all complications and a subset of the Numerator population referred to as stratum one delivery hospitalizations with SOC excluding hospitalizations where transfusion was the only SOC.

01:07:04
The overall hospital level measure scores are calculated as a risk adjusted proportion of the number of delivery hospitalizations for women who experience the SOC as defined by the Numerator.

01:07:17
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, where transfusion was the only SOC divided by the number of encounters in the Denominator, less the number of encounters in the Denominator Exclusions times 10,000.

01:07:54
There were a few clinical changes to the measure for reporting year 2023. For risk adjustment, the heading was modified to clarify that pre-existing conditions must be present on admission. Clarification was also added to the Numerator heading inpatient hospitalizations for patients with severe obstetric complications not present on admission that occurred during the current delivery encounter.

01:08:19
Finally, platelet references and logic were removed. As they were initially in the measure for future use only, and we'll now turn it over to Raquel.

01:08:33
Thank you, Chris. I will start by highlighting some of the technical changes to the measure. The guidance regarding submission of risk variable data. The risk variable definitions are included in the specifications and risk variable data should be sent with eCQM data in the QRDA 1 file. Specific risk variable templates are not needed in the QRDA one files. Added derived from birth date to risk variable, maternal age to signal to implement no additional data elements needed. This measure stratifies cases where the only SOC was transfusion. This can be a difficult concept to express in writing.

01:09:12
We attempted to clarify this year by restating the concept as delivery hospitalizations with SOC, excluding hospitalizations where transfusion was the only SOC. Calculated Gestational Age was previously included in this measure. This year variable Calculated Gestational Age, CGA definition was added to the PC Maternal library was added as a supplemental data element.

01:09:38
The intent is to establish a variable to represent CGA. CGA is a supplemental data element to store the calculated Gestational age result from the calculated Gestational age function.

01:09:51
The data element enables the capturing and saving of the CGA for data analysis post data receipt.

01:09:57
Hospitals do not need to submit any additional data to comply with this definition. Added TruncateTime function to convert the estimated delivery time from date only to date and time.

01:10:10
The reason for this is while clinically the EDD is reported as date only, the quality data model does not support date only at this time. Reporting year 2023, we added “day of” to bring counters with blood transfusion to allow for blood transfusion procedures that have only date and no time. In 2022 version of the measure, if there was no start time associated with the blood transfusion, the start time would default 0000. Therefore, if a patient had a blood transfusion on encounter start date, the procedure would not qualify as the 0,0,0,0 time would be prior to the start time of encounter.

01:10:51
Multiple definition names were changed to increase clarity. For example, delivery encounter is greater than or equal to 20 weeks gestation completed with expiration was changed to delivery encounters with expiration. The "Risk of Variable BMI" definition was renamed to "Risk Variable BMI Greater Equal 40" as well as the value set. Zcodes representing BMI greater equal to 40 were removed from the BMI greater or equal 40 value set and replaced with E66.01 and E66.2 morbid obesity codes per coding guideline Zcodes representing BMI are not to be used during pregnancy.

01:11:36
Updated COVID-19 related respiratory conditions. Grouping value set name to "Respiratory Conditions related to COVID-19" OID remained the same. Updated COVID-19 related respiratory procedures grouping value set to "Respiratory Support Procedures Related to COVID-19" OID remained the same. Extensional value set names and metadata modified also.

01:12:06
The main Initial Population definition is "Delivery Encounter with Age Range, which is stored in the PC Maternal library and is identical to the ePC-02 Initial Population which we have already covered. Which takes us to the Denominator. Now we're looking for the patients who deliver stillborn or live birth at greater equal 20 weeks.

01:12:27
The Denominator definition “Delivery Encounters at greater than or equal to 20 weeks gestation unions 2 definitions. One that reports the calculated Gestational age and the other estimated Gestational age.

01:12:40
The Denominator logic is the same as ePC-02, with the exception that ePC-07 is looking for Gestational age greater equal to 20 weeks. So, we will not repeat the common logic here.

01:12:53
Next, we move on to our Denominator Exclusions, which our patients would confirm diagnosis of COVID with COVID related respiratory condition or patients would confirm diagnosis of COVID with COVID related respiratory procedures. We shortened the title for increased readability.

01:13:11
We start with our Denominator definition of "Delivery Encounters Greater Equal to 20 Weeks Gestation”.

01:13:17
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. Note the changes in the names of these last two value sets for clarity. Where the procedure starts during the hospitalization encounter. PC-07 Numerator reads inpatient hospitalizations for patients with severe obstetric complications, including the following. Severe maternal morbidity diagnosis, severe maternal morbidity procedures, Discharge disposition equals expired.

01:13:55
Please note PC-07 is an inverted measure. In other words, a lower calculated performance rate indicates better clinical care.

01:14:04
So, the less patients in the Numerator, the better the performance rate. You can see that the end definition calls three additional 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 purpose of stratification, which we will cover later.

01:14:35
Let's start with the first definition, union statement. Delivery encounters with severe obstetric complication diagnosis or procedures excluding blood transfusion. We start with the Denominator definition and then add diagnosis of severe maternal morbidity, and the diagnosis must not be present at admission or unable to determine. Or we have a procedure of the severe maternal morbidity where the procedure starts during the hospitalization encounter.

01:15:07
Next, let's look at the second definition of the Numerator statement. Delivery encounters with expiration. Again, no change the definition name for enhanced readability. This is a simple definition that looks at the Denominator cases with the discharge disposition of expired.

Lastly, let's look at the third definition of the Numerator statement, "Delivery Encounters with Blood Transfusion."

01:15:30
Again, we start with the Denominator definition, look for a procedure of blood transfusion, and the transfusion starts during the hospitalization encounter. Notice that we added day of this year to allow for blood transfusion procedures that have only date, 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 0,0,0,0.

Therefore, if a patient had a blood transfusion on encounter start date, the procedure would not qualify as the 0,0,0,0 time would be prior to the start time of the encounter.

01:16:12
So, putting all the three definitions together with Union statements, if any of these conditions are met, the patient will be in the Numerator. Now we will move to the stratification portion of the logic.

01:16:24
This logic identifies a subset of the Numerator population. Those patients with Severe Obstetric Complications, including cases where transfusion was the only severe obstetric complication.

01:16:36
The stratification definition intersects a stratification encounter definition with a definition titled Delivery Encounters with Severe Obstetric Complication Excluding Blood Transfusion. The intersect clause will return encounters that are common to both of these definitions.

01:16:56
Let's talk about the stratification encounter definition first. An eCQM stratification couldn't occur at any population level, and our measure defining the stratification encounter assures that any Denominator Exclusion case that also satisfies a Numerator condition will not be stratified.

01:17:15
Now let's turn our attention to the second definition in the Intersect statement, Delivery Encounters with Severe Obstetric Complication Including Blood Transfusions. This definition unions the 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 complication diagnosis or procedure indicative of Severe Obstetric Complications other than blood transfusion. As we already described in the Numerator.

01:17:50
Cases with blood transfusions are not excluded from this definition if they have another complication. Thereby, patients who only had SOC of blood transfusion would not qualify for this definition. The second definition captures any expiration. These two definitions are union and then intersected with stratification encounter definition to provide the cases that meet the stratification criteria.

01:18:17
As previously mentioned, ePC-07 is risk adjusted using one of the pre-existing conditions, lab results are vital signs. We will start with the existing conditions using anemia as an example. So, our risk variable anemia definition starts with our 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. We repeat the same logic for the remaining resisting conditions.

01:18:49
You may question why we include the present admission indicator of exempt when evaluating risk variables. Our goal is to identify conditions that were present at admission when doing risk adjustment. There are 37,000 codes that are designated as exempt from POA reporting.

01:19:06
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 ICD-10 CM codes that do not require the use of a POA indicator. The codes and categories on this examples are for circumstances regarding the healthcare encounter or factors influencing health status that do not represent a current disease or injury that describes conditions that are always present at an on admission.

01:19:33
Therefore, we include exempt codes when identifying risk variables as by definition they are present on admission. Please pay attention to this next comment on the importance of submitting risk variable data. TJC will re-estimate the risk model from all the risk adjustment variable data submitted in QRDA files by hospitals and then we'll use the same model to calculate the risk adjusted rates.

01:20:00
If risk variable data is not provided, then your performance rate will not be a risk adjusted specific risk variable templates are not needed in the QRDA 1 file 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 QRDA 1 file.

01:20:22
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 it's straightforward. Let's talk about the preterm birth.

01:20:34
The first part of the definition uses the calculated Gestational age function to determine if the mother is preterm. In other words, is she greater 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.

01:20:52
The second-half the logic is applied if calculated Gestational age and estimated Gestational age are both null, then we look for a diagnosis code in the preterm birth value set that is present on admission or exempt.

01:21:07
Now we will review the lab results that are considered for the risk adjustment. We're 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.

01:21:19
Recall that we remove platelets as a risk variable this year. If function is used to gather this data and the function is called FirstLabTestWithWithEncounterId, we start with our Denominator definition. Then we express a let statement, to define the first lab from specified lab test. And the lab result datetime must be during the interval of the start of the hospitalization encounter. 1440 minutes, which is 24 hours up to time of delivery. Then we sort all those results by result they time so that the 1st result can be used. The function returns the first labs encounter ID, the result in the lab result date time.

01:22:04
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 this data and the function is called first physical exam with encounter ID. We start with our Denominator definition. Then we express a let statement to define the first exam from specified exam list and the exam result date time must be during the interval of the starting of the hospitalization encounter 1440 minutes which is 24 hours up to the time of delivery.

01:22:41
Then we sort all those results by the result they time so that the 1st result can be used. The function returns the first physical exams, encounter ID result and the relevant datetime of the exam.

01:22:57
Lastly, we share with you the risk variable, lab and physical exam results definitions which pulls together the first vital signs and lab values that we just discussed. You see the FirstPhysicalExamWithEncounterID and 1st lab test with functions that we just covered on the previous slides highlighted here. The functions calls the respective vital sign and lab test value sets.

01:23:19
The comments provided guidance on the unit to be used when submitting data. For the vital signs heart rate should be reported as beats per minute and systolic blood pressure as millimeters of mercury. For the lab results, the hematocrit is to be reported as a percentage and WBC's as thousands per microliter.

01:23:39
Let's take a look at some frequently asked questions for PC-07.

01:23:44
"Does the estimated Gestational age have to be documented at the exact time of delivery or can the EGA field be completed after delivery?"

01:23:54
The logic for the PC measures requires that the EGA documentation must occur 24 hours or less before or on the time of delivery. So, the reason for this is, depending on the EHR, the Gestational age could continue to advance after delivery. The intent is to capture the Gestational age at the time of delivery.

01:24:18
"I understand PC-07 is a risk adjusted measure. As a patient with pre-existing conditions listed on the risk variable list excluded from the measure? 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 procedures. "Regarding the logic that states starts during day of "PCMaternal.HospitalizationWithEDOBTriage Observation". Is that meant to include start time if it is before the hospitalization start time but is on the day of the start of the hospitalization? The same with the end for that logic if it starts on the day of the end of hospitalization but after the End Date/Time for the Inpatient Encounter, it would be included in this logic, right?"

01:25:21
Yes, your interpretation is correct. By adding 'day of' to the logic as 'starts during day of "PCMaternal. HospitalizationWithEDOBTriageObservation", the qualifying timeframe is extended to the "anytime on the same day of".

01:25:39
Therefore, as long as the start time occurred on the same day of the start of the hospitalization, the condition will be satisfied including start time is prior to start of hospitalization time. Same concept is applied to "starts on the day of the End of the Hospitalization."

01:25:59
Back to you, Susan.

01:26:02
Great. Thanks to all of our presenters for all of your parts in this in this broadcast today.

01:26:07
And we're going to share just a some additional resources here. And we have a link out to the eCQI Resource Center, Teach Me Clinical Quality Language Video Series, Pioneers in Quality landing page, Expert to Expert series landing page, the ONC Issue Tracking System and the CDC website where you can find the list of the ICD-10 codes that do not require the use of a POA indicator.

01:26:37
Our experts have been answering the questions received live throughout the broadcast, so we will not have time to do the live Q&A at the end of the session.

01:26:46
We are coming up on time, but we will publish all of the answers that we've included in the question pane that we've been sending out to the audience as they've been coming in. And we'll answer on the the handful that we didn't get to during the session in the written document.

01:27:10
As a reminder, the webinar recording is always accessible by the via the Expert-to-Expert webinars page. You'll also be able to find these slides, transcripts and when it's available, the Q&A document from that same slide. And from that same link.

01:27:29
Just a quick promotional note about the Expert-to-Expert webinar series we started in August with Joint Commission's PC-01 and PC-06 eCQMs continued with Stroke on October 25th and will continue until January 2023. The series incorporates expertise from The Joint Commission, CMS Mathematica and other measures stewards to address the 2023 eCQM annual updates for STK, VTE, PC, ED, Safe Opioid Use and the Hyper and Hypoglycemia measures and we've included the link to the next one that is coming up on December 13th for the ED-2 eCQM. Information will be available at the link displayed on this slide as each webinar is offered.

01:28:15
Before this session concludes, a few words about the CE survey. We use your feedback to inform future content and assess the quality of our educational programs tomorrow an automated e-mail sent to the participants e-mail address will be received that will give you the link to the survey. So whatever e-mail address you used to register, that is the one where you should check for that survey link.

01:28:40
At the end of the survey, when you click submit, you are redirected to a page from which you can print or download a PDF CE Certificate. An automated e-mail will also be sent to you that includes the link to a principal and downloadable PDF CE Certificate.

01:28:59
Thank you to all of our presenters that presented on the webinar on especially thanks out to our content experts that were in the background answering all of the live submitted questions. And thanks to all of you who attended today's broadcast.

01:29:12
Have a great day.