



STATE OF NEW JERSEY

DEPARTMENT OF HEALTH

M2: PC-02 Cesarean Birth

Quality Improvement Program – New Jersey (QIP-NJ)
Chart-Based Measure Specification Guidance

Agenda

- Presentation Information
- M2 Overview
- M2 Flowchart
- Standard Reporting Template
- Understanding Measure Criteria
- Examples with Sample Data
- How to Calculate Performance
- Conclusion



Acronyms Used in this Presentation

Acronym	Definition
CPT	Current Procedure Terminology
DOB	Date of Birth
EHR	Electronic Health Record
HCPCS	Healthcare Common Procedure Coding System
ICD-10 CM	International Classification of Diseases (Clinical Modification)
ICD-10 PCS	International Classification of Diseases (Procedure Coding System)
LOINC	Logical Observations, Identifiers, Names, Codes
M2	PC-02 Cesarean Birth
UBREV	UB-04 Revenue Codes
UTD	Unable to Determine
VSC	Value Set Compendium



Presentation Information

Objectives: By the end of the presentation, viewers should be able to:

- Define the numerator & denominator criteria for M2;
- State exclusion and exception criteria for M2;
- Identify value sets used to define M2 measure criteria;
- Calculate performance for a sample set of data.

Reference Materials: Viewers are advised to reference the following program materials while listening to the presentation.

- [QIP-NJ Measurement Specifications and Submission Guidelines \(Databook\)](#)
- [QIP-NJ Databook Value Set Compendium \(VSC\)](#)

Disclaimer: This presentation was recorded in July 2021. QIP-NJ measure specifications may be updated annually to align with changes published by the measure stewards. Hospitals participating in QIP-NJ should reference the latest version of the QIP-NJ Measurement Specifications and Submission Guidelines for the most accurate description of each measure's criteria.



M2 Overview

Measure Description

This measure assesses the rate of nulliparous women 8 to 64 years of age with a term, singleton baby in a vertex position delivered by Cesarean birth.

Refer to the Databook document for:

- Statewide Benchmark
- Measure Steward & Version



Measure M2: PC-02 Cesarean Birth

Measure Description:

This measure assesses the rate of nulliparous women 8 to 64 years of age with a term, singleton baby in a vertex position delivered by Cesarean birth.

Data Source:

Chart/EHR

NQF #:

Based on 0471

Measure Steward:

The Joint Commission

Measure Steward Version:

November 20, 2020

Statewide Benchmark:

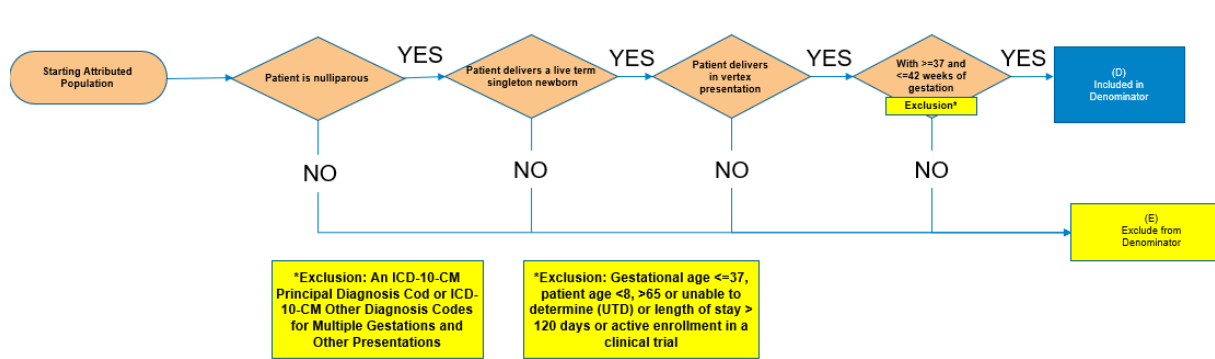
23.6/1,000 deliveries

M2 Flowchart

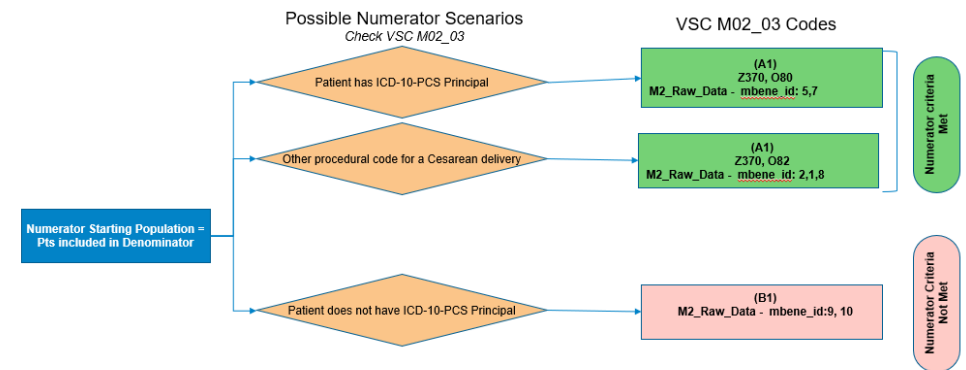
M2 Flowchart Overview

The measure itself requires both a denominator (eligible patient population) and a numerator (measure compliant patient population). The flowchart below has been developed to assist in identifying the measures data elements and how they should be treated throughout the calculation process.

Denominator Workflow

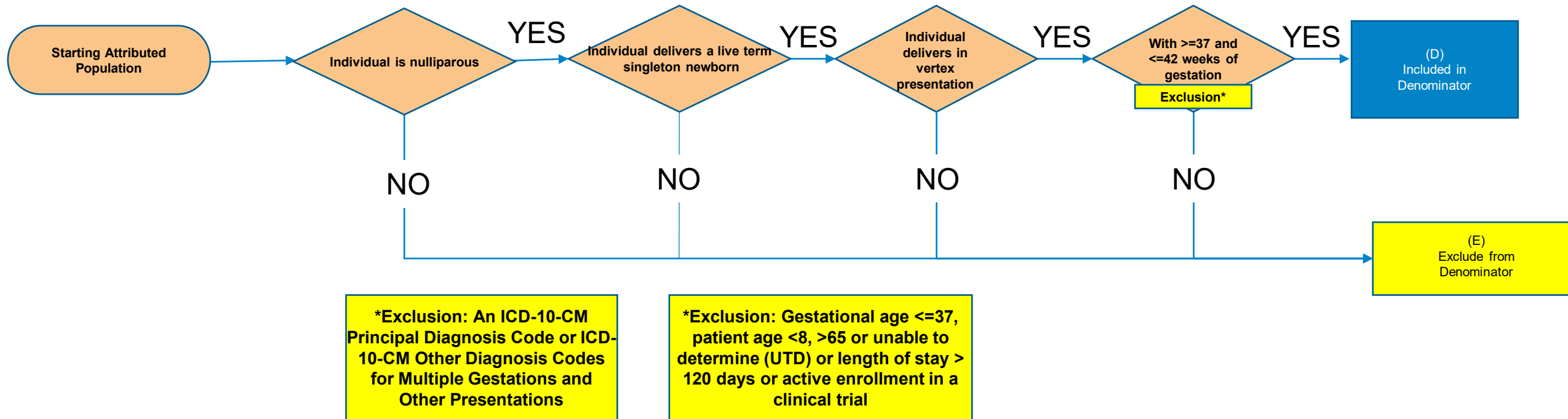


Numerator Workflow

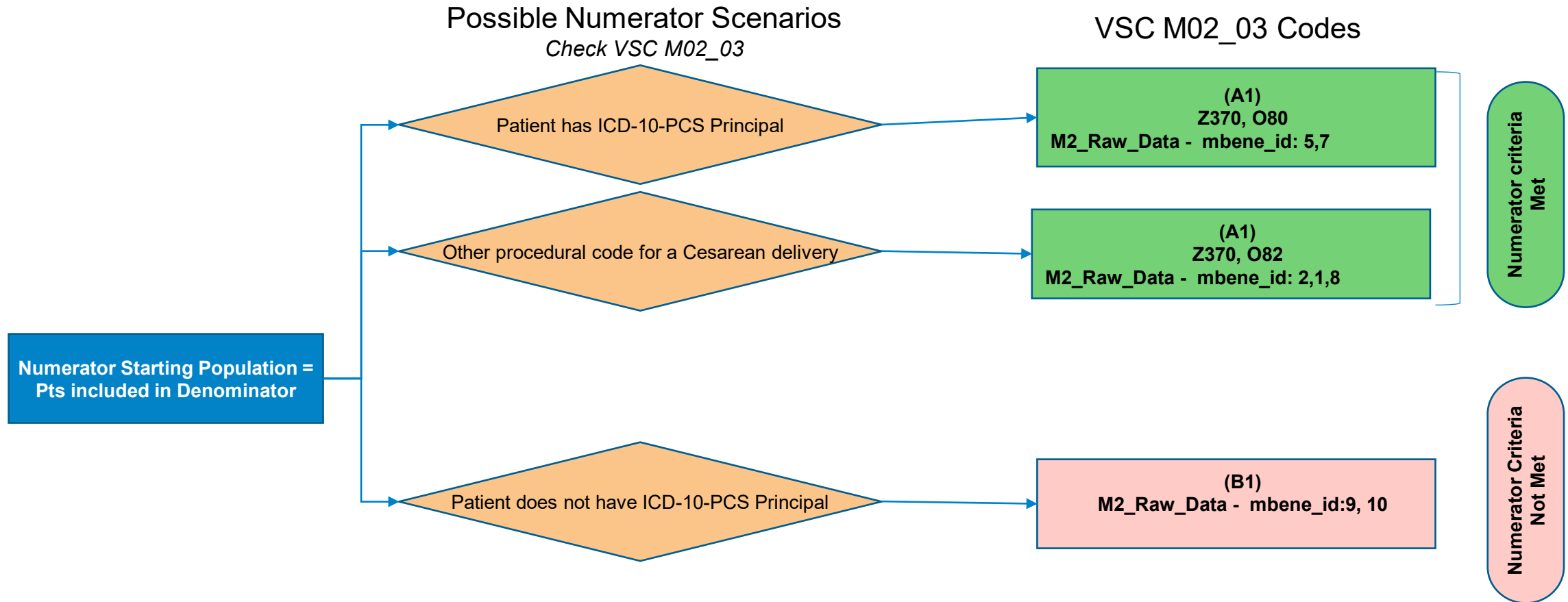


M2 Flowchart Part 1: Denominator

The portion of the measure's workflow below provides an overview of how the eligible individual denominator is calculated using available data sources.



M2 Flowchart Part 2: Numerator



Standard Reporting Template

Key Variables

Individual data elements - required metadata of each file

M_DOB	Date of individual's birth
M_ELEMT	Data element component

Date and time data elements

SVC_DT	Service date
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Clinical & diagnostic data elements (Use attribution roster to query the chart/EHR)

RES_VAL	Result value indicator; Use C=CPT, D=Discharge Status H=HCPCS I=ICD10CM, J= ICD10PCS, L=LOINC, N= NDC, P(NJ)=POS, R = RXNORM, S=SNOMED, T=(UB)TOB, U=UBREV, Z=OTHER (ONE value per row per member)
CODE_VAL	Reflects the value that is indicated in RES_VAL
RES_VALP	If there are additional components to RES_VAL, including procedure modifiers

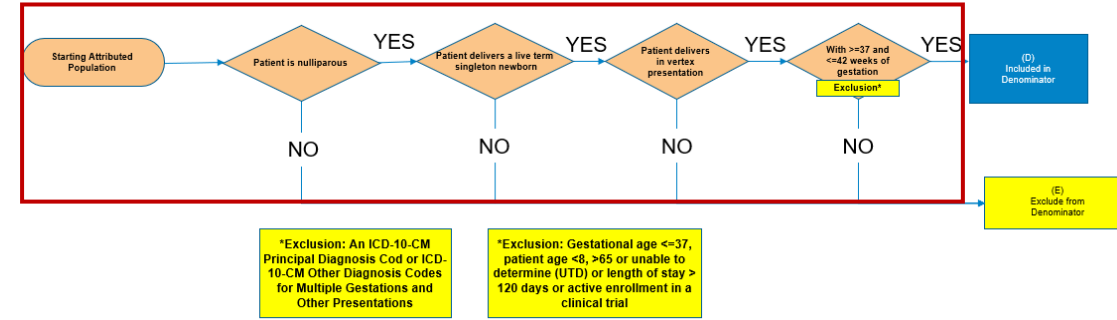
Measure-specific data elements (Use attribution roster to query the chart/electronic health record (EHR))

NULLIP	Is mother nulliparous? (M2)
VERTEX	Is baby in vertex position? (M2)



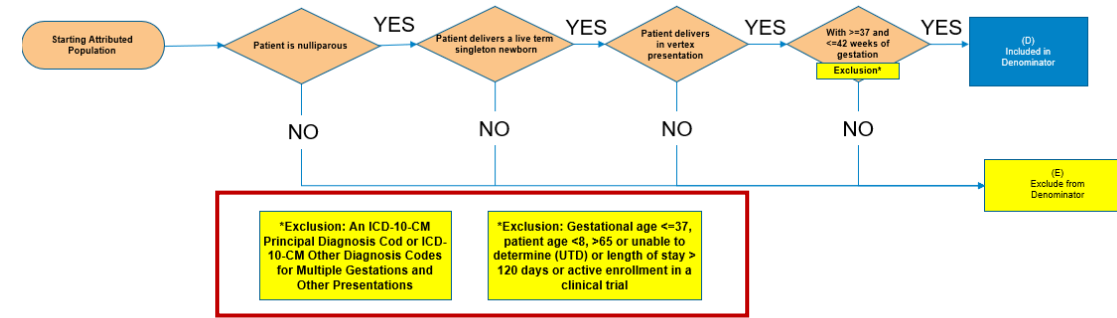
Understanding Measure Criteria

M2: Denominator Criteria



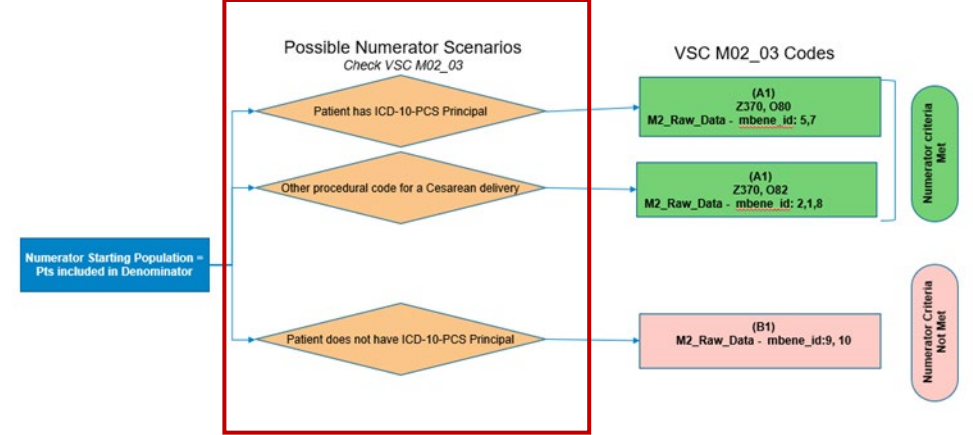
Criteria	Data Elements	Value Set Reference	Variables
Individual is nulliparous	Encounter Code	Standard Reporting Template – column "NULLIP"	NULLIP
Individual delivers a live term singleton newborn	Encounter Code	Table M02_00	RES_VAL, CODE_VAL
Individual delivers in vertex presentation	Encounter Code Encounter Date	Table M02_01 > Standard Reporting Template – column "VERTEX"	RES_VAL, CODE_VAL, VERTEX
Gestational age is >= 37	Encounter Code	Table M02_02	RES_VAL, CODE_VAL

M2: Exclusion Criteria



Criteria	Data Elements	Value Set Reference	Variables
An ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Codes for Multiple Gestations and Other Presentations	<ul style="list-style-type: none"> Exclusionary diagnosis code 	Table M02_04	RES_VAL, CODE_VAL
Gestational age <= 37	<ul style="list-style-type: none"> Encounter code 	Table M02_02	RES_VAL, CODE_VAL
Individual is > 8 years of age, >= 65 years of age or UTD	<ul style="list-style-type: none"> Patient DOB 	N/A	M_DOB
Individual has a length of stay > 120 days	<ul style="list-style-type: none"> Length of stay code 	N/A	SVC_DT, ADMT_DT, DICH_DT
Individual is actively enrolled in a clinical trial	<ul style="list-style-type: none"> Exclusionary diagnosis code 	Table M02_04	RES_VAL, CODE_VAL

M2: Numerator Criteria



Criteria	Data Elements	Value Set Reference	Variables
Individual has an ICD-10-PCS Procedure Code for a Cesarean delivery	<ul style="list-style-type: none"> ICD-10-PCS Procedure Code 	Table M02_03	RES_VAL, CODE_VAL

Examples with Sample Data

Sample Individual #1

Sample Individual #1: Profile

- Gender: Female
- DOB: 2/3/1989 (Age: 31)
- Admit Date: September 16, 2020
- Encounter Date: September 16, 2020
- Discharge Date: September 19, 2020
- ICD-10-CM Codes:
 - Z370 (live singleton newborn) (D)
 - O80 (vertex presentation), (D) > column “VERTEX”
 - Z3A38 (38th week gestation completed) (D)
- ICD-10-PCS Code: 10D00Z3 (C-section) (N)
- Additional information: nulliparous (data element extracted from EHR) (D) > column “NULLIP”

Test Your Knowledge:
Performance has been met for this individual. From this profile, can your hospital explain why performance has been met?

Figure 1. (Note: certain columns from the “EMR_IN” template are hidden to showcase the measure-specific data elements)

M_ID	M_YR	HOSP_ID	M_DOB	M_GENDER	M_SAMP	M_ELEMT	SVC_DT	ADMT_DT	DICH_DT	RES_VAL	CODE_VAL	NULLIP	VERTEX
M002	0	4136900	2/3/1989	F	0	N	9/16/2020	9/16/2020	9/19/2020	J	10D00Z3		
M002	0	4136900	2/3/1989	F	0	D	9/16/2020	9/16/2020	9/19/2020	I	Z370	1	1
M002	0	4136900	2/3/1989	F	0	D	9/16/2020	9/16/2020	9/19/2020	I	Z3A38		

Sample Individual #1: Denominator

1. First, DOH acknowledges the assumption that this individual has been attributed to your hospital and is nulliparous.
2. Next, ensure that this individual has delivered a live term singleton newborn in vertex presentation and that the gestational age is great than or equal to 37. (Table M02_01, Table M02_02).
 - ✓ This individual's ICD-10 Codes of Z370 and 080 means they have delivered a live term singleton newborn in vertex presentation and thus can be included in the dominator.
 - ✓ The individual's gestational weeks ICD-10 code is Z3A38, meaning the newborn is at 38 gestational weeks. They can thus be included in the denominator.
3. Lastly, check for exclusions (Table M02_04).
 - ✓ This individual does not have an exclusionary diagnosis code, does not have a gestational age less 37 weeks, is not aged less than 8 or more than 65 years old, or does not have a length of stay greater than 120 days, so they are included in the denominator.

Include in Denominator

Sample Individual #1: Numerator

1. To determine if performance was met from the attributed population, determine if the individual had an ICD-10-PCS Procedure Code for a Cesarean delivery (Table M02_03).
 - ✓ The individual had an ICD-10-PCS Procedure Code for a Cesarean delivery (10D00Z3)

Performance Met

Sample Individual #2

Sample Individual #2: Profile

- Gender: Female
- DOB: 4/3/1977 (Age: 43)
- Admit Date: September 24, 2020
- Encounter Date: September 25, 2020
- Discharge Date: September 28, 2020
- ICD-10-CM Codes:
 - Z370 (live singleton newborn) (D)
 - O82 (vertex presentation), (D) > column “VERTEX”
 - Z3A39 (39th week gestation completed) (D)
- ICD-10-PCS Code: 0KQM0ZZ (does not denote C-section) (N)
- Additional information: nulliparous (data element extracted from EHR) (D) > column “NULLIP”

Figure 2. (Note: certain columns from the “EMR_IN” template are hidden to showcase the measure-specific data elements)

M_ID	M_YR	HOSP_ID	M_DOB	M_GENDER	M_SAMP	M_ELEMT	SVC_DT	ADMT_DT	DICH_DT	RES_VAL	CODE_VAL	NULLIP	VERTEX
M002	0	4136900	4/3/1977	F	0	D	9/25/2020	9/24/2020	9/28/2020	I	Z370	1	1
M002	0	4136900	4/3/1977	F	0	D	9/25/2020	9/24/2020	9/28/2020	I	Z3A39		
M002	0	4136900	4/3/1977	F	0	N	9/25/2020	9/24/2020	9/28/2020	J	0KQM0ZZ		

Sample Individual #2: Denominator

1. First, DOH acknowledges the assumption that this individual has been attributed to your hospital and is nulliparous.
2. Next, ensure that this individual has delivered a live term singleton newborn in vertex presentation with a gestational age greater than 37 weeks. (Table M02_01).
 - ✓ This individual's ICD-10 Code is 082, which means they have delivered a live term singleton newborn in vertex presentation and thus can be included in the denominator.
 - ✓ The individual's gestational weeks ICD-10 code is Z3A39, meaning the newborn is at 39 gestational weeks. They can thus be included in the denominator.
3. Lastly, check for exclusions (Table M02_04).
 - ✓ This individual does not have an exclusionary diagnosis code or a length of stay greater than 120 days, so they are included in the denominator.

Include in Denominator

Sample Individual #2: Numerator

1. To determine if performance was met from the attributed population, determine if the individual had an ICD-10-PCS Procedure Code for a Cesarean delivery (Table M02_03).
 - ✓ The individual did not have an ICD-10-PCS Procedure Code for a Cesarean delivery (OKQM0ZZ)

Performance Not Met

Sample Individual #3

Sample Individual #3: Profile

Test Your Knowledge:
 This individual has an exclusion. From this profile, can your hospital explain why they will be excluded from the Denominator?

- Gender: Female
- DOB: 9/3/1979 (Age: 41)
- Encounter Date: October 15, 2020
- ICD-10-CM Code: O30003 (Twin pregnancy, unspecified number of placenta and...number of amniotic sacs, third trimester) (E)
 - missing (vertex presentation), (D) > column “VERTEX”
 - missing (week gestation completed) (D)
- ICD-10-PCS Code: missing (denotes C-section) (N)
- Additional information: nulliparous (data element extracted from EHR) (D) > column “NULLIP”

Figure 3. (Note: certain columns from the “EMR_IN” template are hidden to showcase the measure-specific data elements)

M_ID	M_YR	HOSP_ID	M_DOB	M_GENDER	M_SAMP	M_ELEMT	SVC_DT	ADMT_DT	DICH_DT	RES_VAL	CODE_VAL
M002	0	4136900	9/3/1979	F	0	N	10/15/2020			I	O30003

Sample Individual #3: Denominator

1. First, DOH acknowledges the assumption that this individual has been attributed to your hospital and is nulliparous.
2. Next, ensure that this individual has delivered a live term singleton newborn in vertex presentation (Table M02_01), their gestational age is greater than 37 weeks (Table M02_02), and that there are no exclusions (Table M02_04).
 - × This individual's ICD-10-CM Code is 030003, which means they experienced a twin pregnancy with an unspecified number of placenta and unspecified number of amniotic sacs in their third trimester. This is an exclusionary code, and they are thus excluded from the denominator.

(E)
Exclude from
Denominator

How to Calculate Performance

Calculating Performance: Subgroups

For this sample calculation, there is a starting attributed population of 30 individuals.

Subgroup Criteria	Subgroup Counts
Starting Population (Attributed)	30
Exclusions	2
Individual Has ICD-10 PCS Principal Code	1
Other Procedure Code for a Cesarean Delivery	1
Individual Does Not Have ICD-10 Principal Code	26

Calculating Performance: Denominator

- First, calculate the **eligible population** for M2 from the starting attributed population.
- **Eligible population (M2):** Attributed nulliparous individuals delivering a live term singleton newborn in vertex presentation.

Starting Attributed Population – Exclusions = Eligible Population

Subgroup Criteria	Subgroup Count
Starting Population (Attributed)	30
Exclusions	2
Eligible Population (Denominator)	28

Calculating Performance: Numerator

- Next, calculate the *numerator compliant individual population* from the eligible population.
- **Measure Compliant Individual Population (M2):** Individuals in the eligible population having an ICD-10-PCS Procedure Code for a Cesarean delivery.

ICD-10 PCS Principal Code or Other Procedure Code for a Cesarean Delivery = Measure Compliant Individual Population

Subgroup Criteria	Subgroup Count
Individual Has ICD-10 PCS Principal Code	1
Other Procedure Code for a Cesarean Delivery	1
Measure Compliant Individual Population	2

Calculating Performance: Percentage

- Finally, derive the proportion of the eligible population that is measure compliant. This value is the hospital's performance on the measure.

(Measure Compliant Individual Population / Eligible Population) * 1000 = Individual Hospital Performance

Subgroup Criteria	Subgroup Count
Measure Compliant Individual Population	2
Eligible Population	28
Individual Hospital Performance	71.4/1,000 deliveries

Conclusion

More Information

For more information about data submission, please review the standard reporting templates and associated guides available on the QIP-NJ website: <https://qip-nj.nj.gov/participants.html>.

For more information about the measures, please reference the QIP-NJ Databook FAQ document: <https://qip-nj.nj.gov/resources.html>.

With any additional questions or concerns, please contact QIP-NJ@PCGUS.com.