New Jersey Hospital Maternity Care Report Card, 2023

Measure Algorithms

Office of Healthcare Quality and Informatics

Prepared by:

Daniel Armstrong, MPH
Erin Mayo, DVM, MPH
Estifanos Baye, PhD, MPH
Emily Farrell, MPH
Veronica Daddio, MSc
Alexandra Brown, MPH
Jordan J. Steiner, PhD, LSW, MA
Stephen L. Firsing III, PhD, MPA, MA
Mehnaz Mustafa, MPH, MSc

January 2025

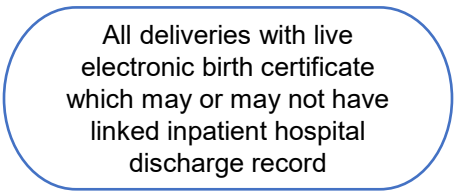
Table of Contents

Age Category.... 4
Diabetes Mellitus: Pre-existing and Gestational.... 5
Diabetes Mellitus: Pre-existing and Gestational Table.... 6
Educational Attainment.... 7
Epidural or Spinal Anesthesia.... 8
Episiotomy.... 9
Gestational Age.... 10
Hypertension: Pre-existing and Gestational.... 11
Induction of Labor.... 12
Insurance Coverage.... 13
Insurance Coverage Table.... 14
Length of Stay.... 15
Method of Delivery.... 16
Method of Delivery Table.... 17
Method of Delivery Type.... 18
Method of Delivery Type Table.... 19
Nulliparous, Term, Singleton, Vertex (NTSV) Cesarean Delivery.... 20
Nulliparous, Term, Singleton, Vertex (NTSV) Cesarean Delivery Table.... 21
Obstetric Hemorrhage.... 22
Parity: Nulliparous.... 23
Post-Admission Infection.... 24
Pre-eclampsia.... 25
Pre-existing Anemia.... 26
Race and Ethnicity.... 27
Race and Ethnicity Table.... 28
Severe Maternal Morbidity (SMM).... 29
Severe Maternal Morbidity (SMM): Acute Myocardial Infarction and Aneurysm.... 30
Severe Maternal Morbidity (SMM): Acute Renal Failure.... 31
Severe Maternal Morbidity (SMM): Adult Respiratory Distress Syndrome (ARDS).... 32
Severe Maternal Morbidity (SMM): Air and Thrombotic Embolism.... 33
Severe Maternal Morbidity (SMM): Amniotic Fluid Embolism.... 34
Severe Maternal Morbidity (SMM): Blood Transfusion.... 35
Severe Maternal Morbidity (SMM): Cardiac Arrest/Ventricular Fibrillation.... 36
Severe Maternal Morbidity (SMM): Disseminated Intravascular Coagulation (DIC).... 37
Severe Maternal Morbidity (SMM): Eclampsia.... 38
Severe Maternal Morbidity (SMM): Heart Failure or Arrest During Surgery/Procedure.... 39
Severe Maternal Morbidity (SMM): Hysterectomy.... 40
Severe Maternal Morbidity (SMM): Puerperal Cerebrovascular Disorders.... 41
Severe Maternal Morbidity (SMM): Puerperal Cerebrovascular Disorders Table.... 42
Severe Maternal Morbidity (SMM): Pulmonary Edema or Acute Congestive Heart Failure 43
Severe Maternal Morbidity (SMM): Sepsis.... 44
Severe Maternal Morbidity (SMM): Severe Anesthesia Complications.... 45
Severe Maternal Morbidity (SMM): Shock.... 46
Severe Maternal Morbidity (SMM): Sickle Cell Disease with Crisis.... 47
Severe Maternal Morbidity (SMM): Temporary Tracheostomy or Ventilation.... 48
Shoulder Dystocia.... 49
Third- and Fourth-Degree Perineal Lacerations.... 50
Third- and Fourth-Degree Perineal Lacerations Table.... 51
Trial of Labor.... 52
Vaginal Birth After Cesarean (VBAC) 53
Vaginal Birth After Cesarean (VBAC) Table.... 54
References.... 55

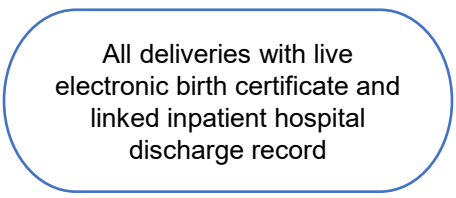
Measure Algorithms

The notes below pertain to the measure algorithms listed in this document. For additional information about the data linkage process, please view the corresponding Methodology document.

Denominator Note: When the below denominator step is included in a measure algorithm, it means that all live electronic birth certificate (EBC) records were included, and those records may or may not be linked to inpatient hospital discharge records.



Denominator Note: When the below denominator step is included in a measure algorithm, it means that live EBC records that were linked to inpatient hospital discharge records were included.

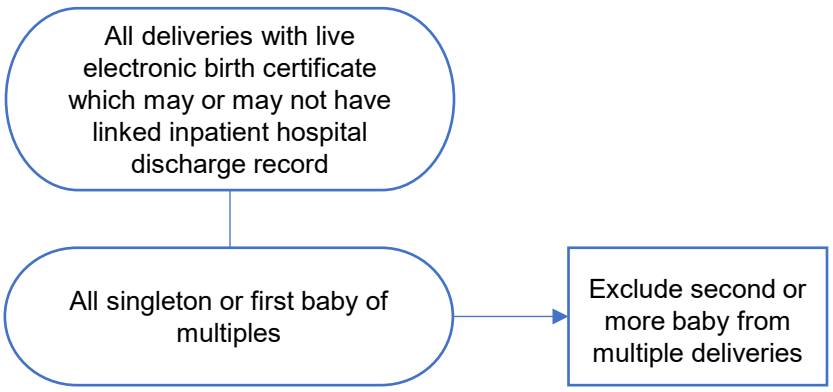


Numerator Note: To determine the numerator for all measures, unlinked records use live EBC records only and linked records may use EBC records and/or inpatient hospital discharge records, depending on the measure. If a primary data source (i.e., EBC or inpatient hospital discharge) is used for a measure, that primary data source is indicated with an asterisk (*) within the measure algorithm.

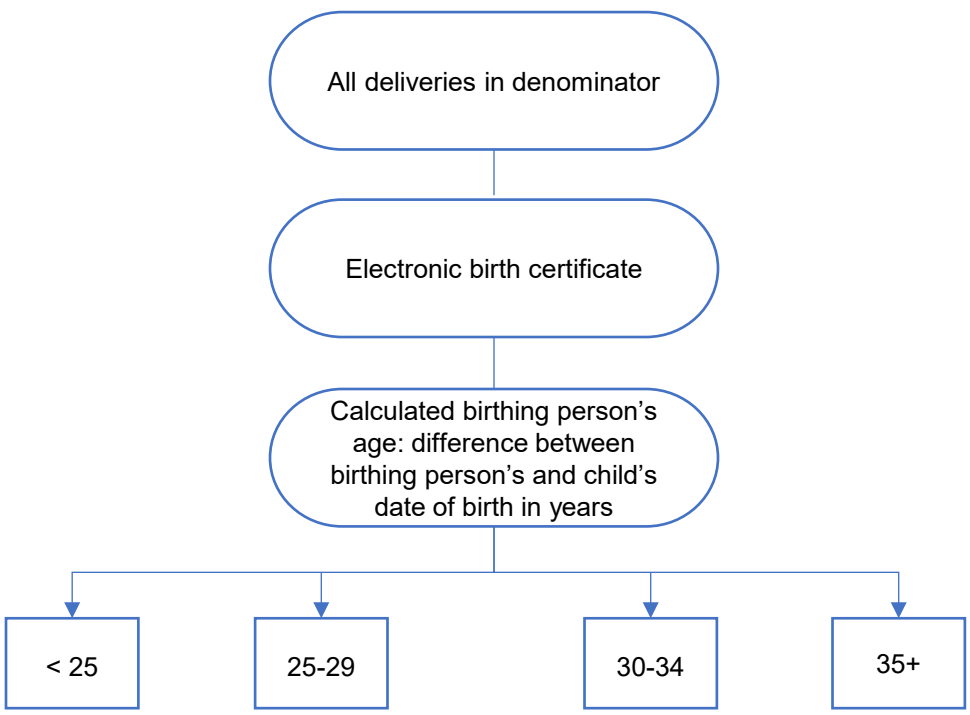
Age Category

Description: Age of birthing person in year categories.

Denominator:



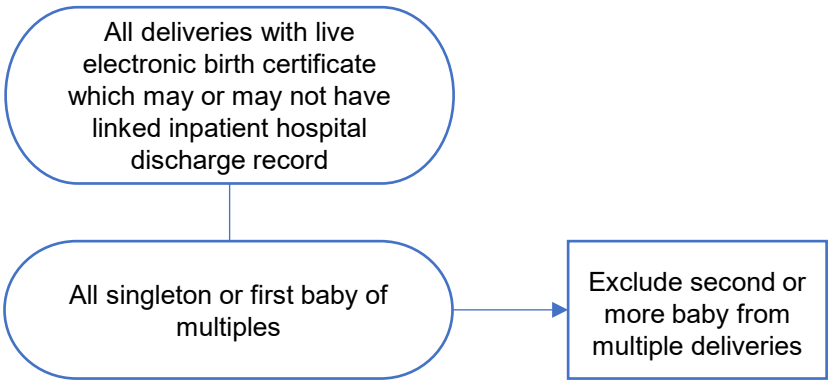
Numerator:



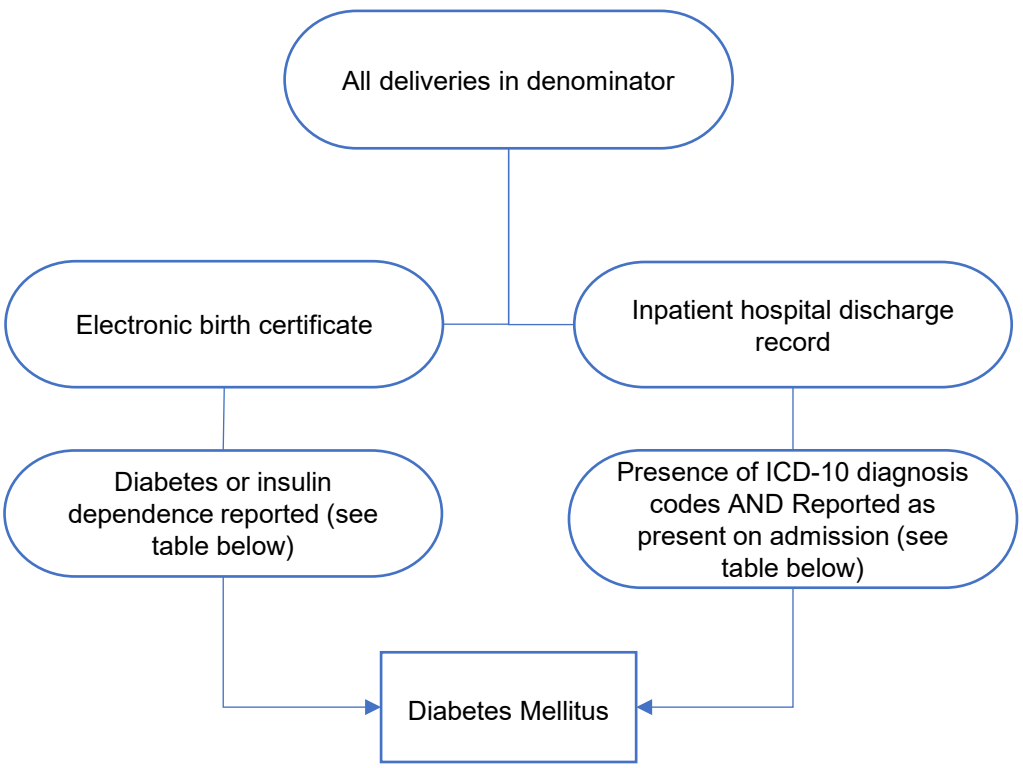
Diabetes Mellitus - Pre-existing and Gestational

Description: Diabetes that a birthing person has before getting pregnant (preexisting). Diabetes that is diagnosed during pregnancy (gestational).

Denominator:



Numerator:



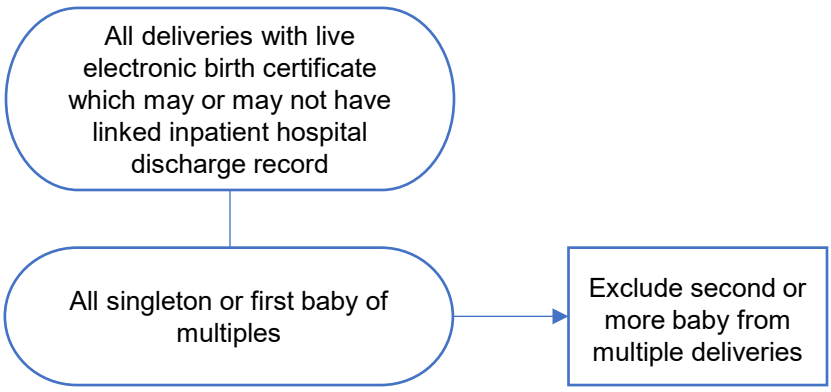
Diabetes Mellitus - Pre-existing and Gestational

Category	Criteria
Electronic birth certificate: Vital Events Registration and Information (VERI) – August 2021 forward **Primary Section:** Prenatal Care **Subsection:** Maternal Risk Factors During This Pregnancy **Field:** Select medical risk factors of mother during this pregnancy:	Diabetes (gestational) OR Diabetes (pre-pregnancy)
Electronic birth certificate: Vital Information Platform (VIP) – up to August 2021 **Primary Section:** Prenatal II **Subsection:** Maternal Risk Factors NCHS **Field:** Select all that apply:	Diabetes OR Diabetes type: Pre-pregnancy (Insulin Dependent or Non-Insulin Dependent) OR Gestational (Insulin Dependent or Non-Insulin Dependent)
ICD-10 Diagnosis Codes for Diabetes Mellitus – Pre-existing and Gestational	E08.00, E08.01, E08.10, E08.11, E08.21, E08.22, E08.29, E08.311, E08.319, E08.321, E08.329, E08.331, E08.339, E08.341, E08.349, E08.351, E08.352, E08.353, E08.354, E08.355, E08.359, E08.36, E08.37, E08.39, E08.40, E08.41, E08.42, E08.43, E08.44, E08.49, E08.51, E08.52, E08.59, E08.610, E08.618, E08.620, E08.621, E08.622, E08.628, E08.630, E08.638, E08.641, E08.649, E08.65, E08.69, E08.8, E08.9, E09.00, E09.01, E09.10, E09.11, E09.21, E09.22, E09.29, E09.311, E09.319, E09.321, E09.329, E09.331, E09.339, E09.341, E09.349, E09.351, E09.352, E09.353, E09.354, E09.355, E09.359, E09.36, E09.37, E09.39, E09.40, E09.41, E09.42, E09.43, E09.44, E09.49, E09.51, E09.52, E09.59, E09.610, E09.618, E09.620, E09.621, E09.622, E09.628, E09.630, E09.638, E09.641, E09.649, E09.65, E09.69, E09.8, E09.9, E10.10, E10.11, E10.21, E10.22, E10.29, E10.311, E10.319, E10.321, E10.329, E10.331, E10.339, E10.341, E10.349, E10.351, E10.352, E10.353, E10.354, E10.355, E10.359, E10.36, E10.37, E10.39, E10.40, E10.41, E10.42, E10.43, E10.44, E10.49, E10.51, E10.52, E10.59, E10.610, E10.618, E10.620, E10.621, E10.622, E10.628, E10.630, E10.638, E10.641, E10.649, E10.65, E10.69, E10.8, E10.9, E11.00, E11.01, E11.10, E11.11, E11.21, E11.22, E11.29, E11.311, E11.319, E11.321, E11.329, E11.331, E11.339, E11.341, E11.349, E11.351, E11.352, E11.353, E11.354, E11.355, E11.359, E11.36, E11.37, E11.39, E11.40, E11.41, E11.42, E11.43, E11.44, E11.49, E11.51, E11.52, E11.59, E11.610, E11.618, E11.620, E11.621, E11.622, E11.628, E11.630, E11.638, E11.641, E11.649, E11.65, E11.69, E11.8, E11.9, E13.00, E13.01, E13.10, E13.11, E13.21, E13.22, E13.29, E13.311, E13.319, E13.321, E13.329, E13.331, E13.339, E13.341, E13.349, E13.351, E13.352, E13.353, E13.354, E13.355, E13.359, E13.36, E13.37, E13.39, E13.40, E13.41, E13.42, E13.43, E13.44, E13.49, E13.51, E13.52, E13.59, E13.610, E13.618, E13.620, E13.621, E13.622, E13.628, E13.630, E13.638, E13.641, E13.649, E13.65 E13.69, E13.8, E13.9, O24.0, O24.01, O24.011, O24.012, O24.013, O24.019, O24.02, O24.03, O24.1, O24.11, O24.111, O24.112, O24.113, O24.119, O24.12, O24.13, O24.410, O24.414, O24.419, O24.420, O24.424, O24.429, O24.430, O24.434, O24.439, O24.3, O24.31, O24.32, O24.33, O24.311, O24.312, O24.313, O24.319, O24.8, O24.81, O24.82, O24.83, O24.811, O24.812, O24.813, O24.819, O24.9 , O24.91, O24.92, O24.93, O24.911, O24.912, O24.913, O24.919,Z79.40 - AND – Present on Admission marked 'Yes'

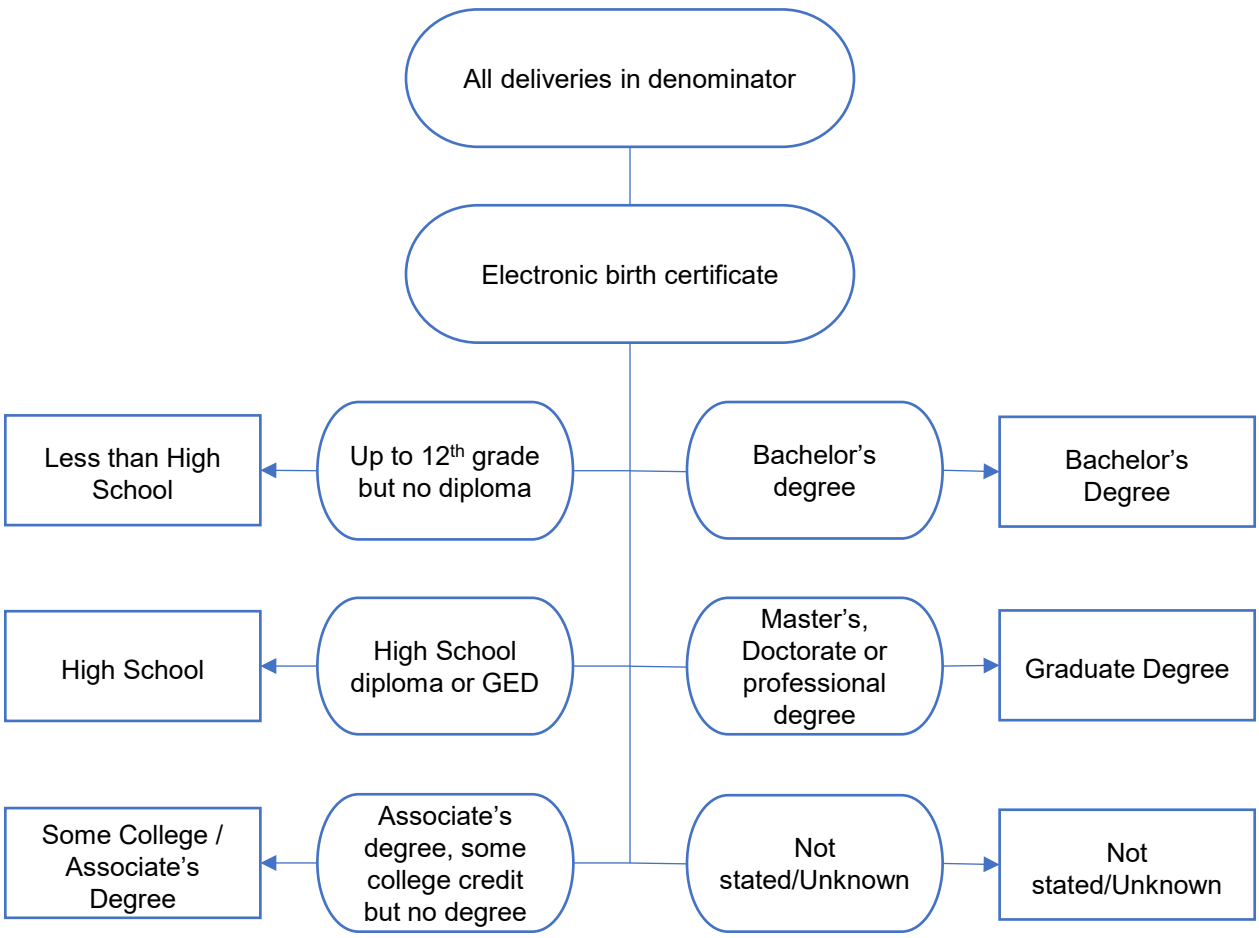
Educational Attainment

Description: Birthing person's educational attainment in categories.

Denominator:



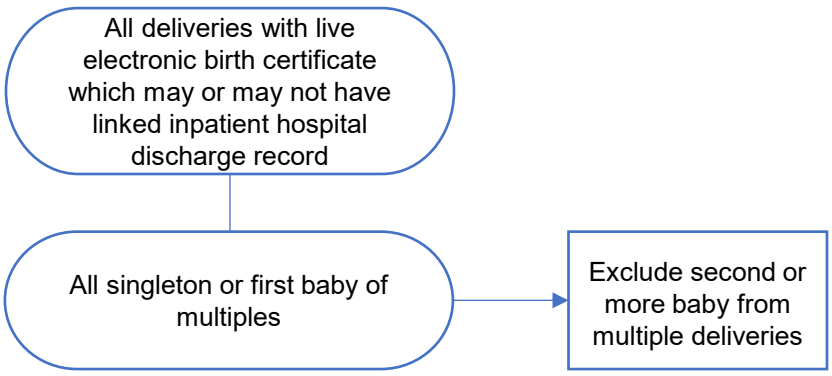
Numerator:



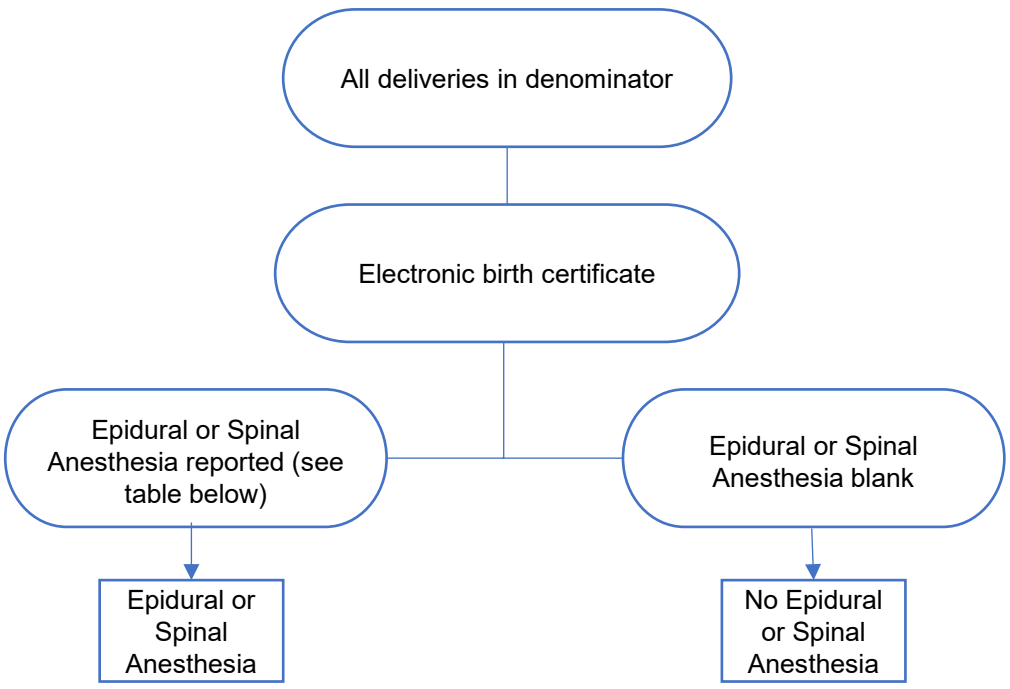
Epidural or Spinal Anesthesia

Description: Epidural or spinal anesthesia is an injection administered to relieve pain during childbirth.

Denominator:



Numerator:

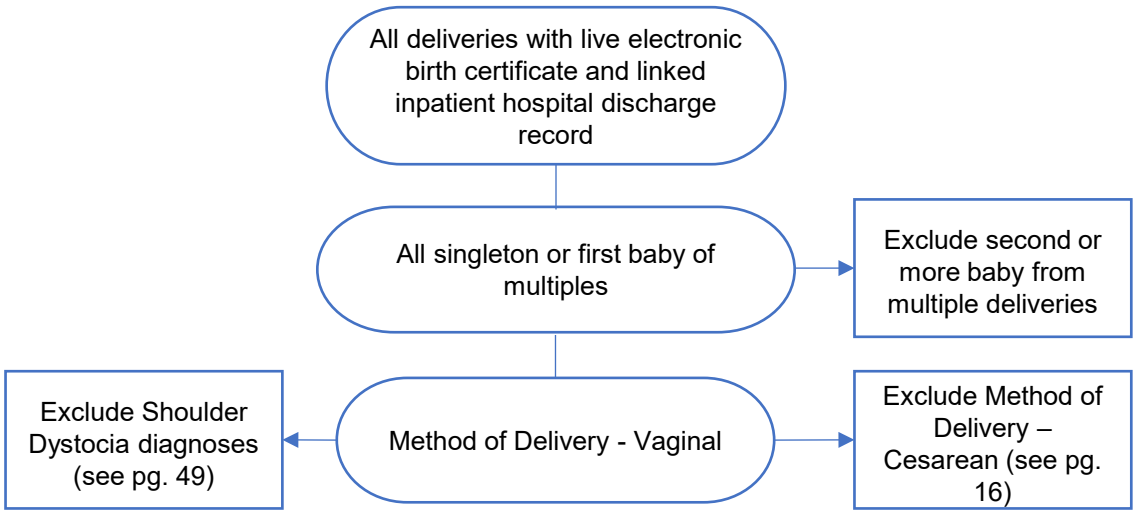


Category	Criteria
Electronic birth certificate: Vital Events Registration and Information (VERI) – August 2021 forward **Primary Section:** Labor and Delivery **Subsection:** Labor **Field:** Characteristics of Labor and Delivery: (select all that apply)	Epidural or Spinal Anesthesia during labor
Electronic birth certificate: Vital Information Platform (VIP) – up to August 2021 **Primary Section:** Labor and Delivery II **Subsection:** **Field:** Characteristics of Labor & Delivery – NCHS (check all that apply)	Epidural or Spinal Anesthesia during labor

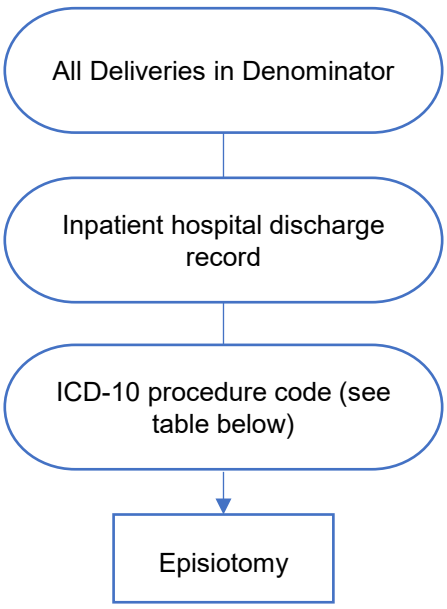
Episiotomy

Description: A surgical incision made at the opening of the vagina during childbirth, to aid a difficult delivery and prevent rupture of tissues.

Denominator:



Numerator:

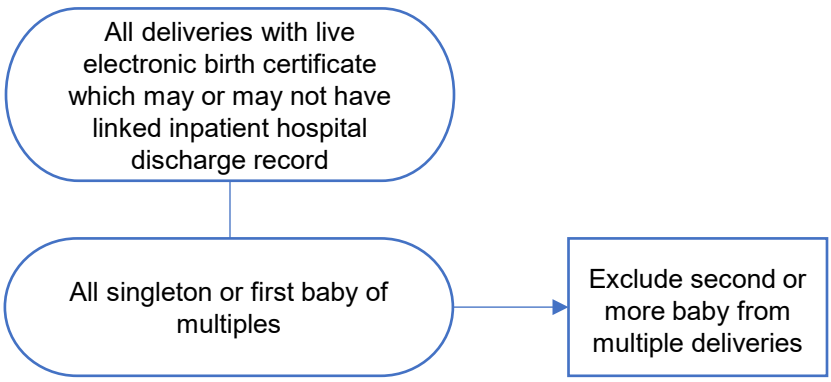


Category	Criteria
ICD-10 Procedure Code for Episiotomy	0W8NXZZ

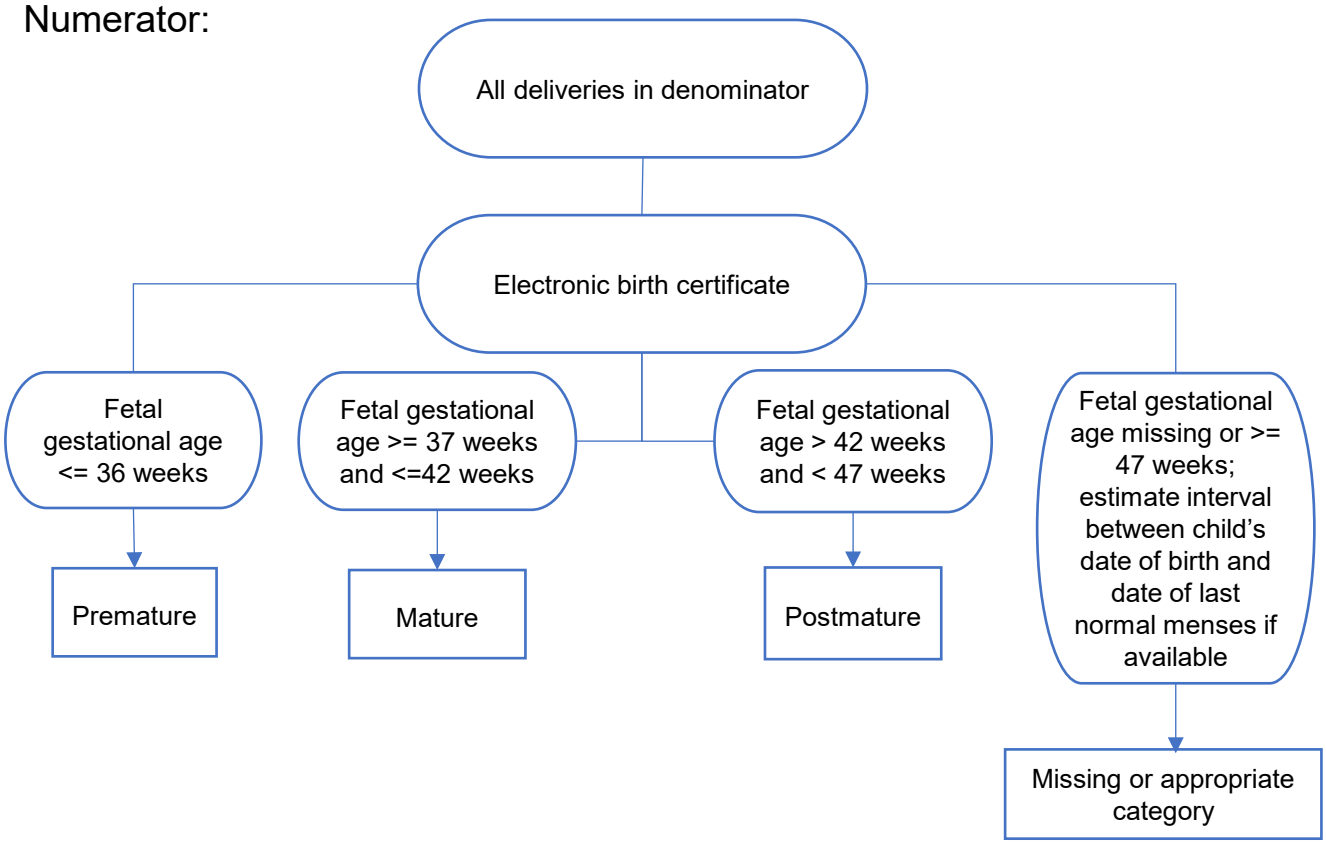
Gestational Age

Description: Term used during pregnancy to describe how far along the pregnancy is. It is measured in weeks +/- days, from the first day of the birthing person's last menstrual cycle to the delivery date.

Denominator:



Numerator:

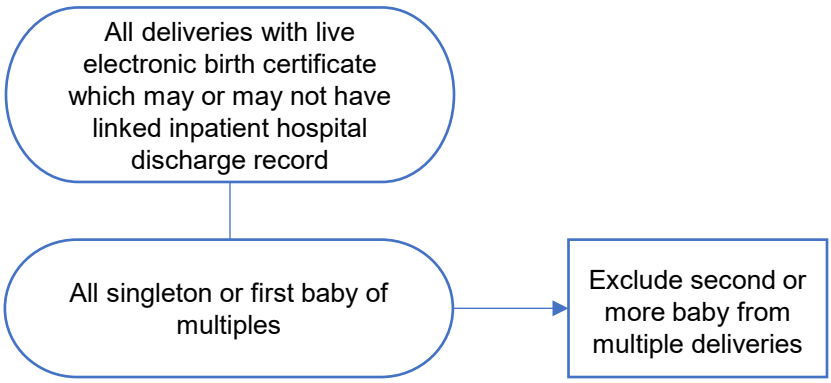


Category	Criteria
Electronic birth certificate: Vital Events Registration and Information (VERI) – August 2021 forward **Primary Section:** Labor and Delivery **Subsection:** Infant Delivery Details **Field:** Obstetric Estimate of Gestation:	Completed weeks and days
Electronic birth certificate: Vital Information Platform (VIP) – up to August 2021 **Primary Section:** Labor & Delivery I **Subsection:** Delivery Information **Field:** Obstetric Estimate of Gestation	Weeks and days
Electronic birth certificate: Vital Events Registration and Information (VERI) – August 2021 forward **Primary Section:** Prenatal Care **Subsection:** Prenatal Care Info for this Pregnancy **Field:** Date of Last Normal Meses Began:	Date
Electronic birth certificate: Vital Information Platform (VIP) – up to August 2021 **Primary Section:** Prenatal 1 **Field:** Date last normal menses began:	Date

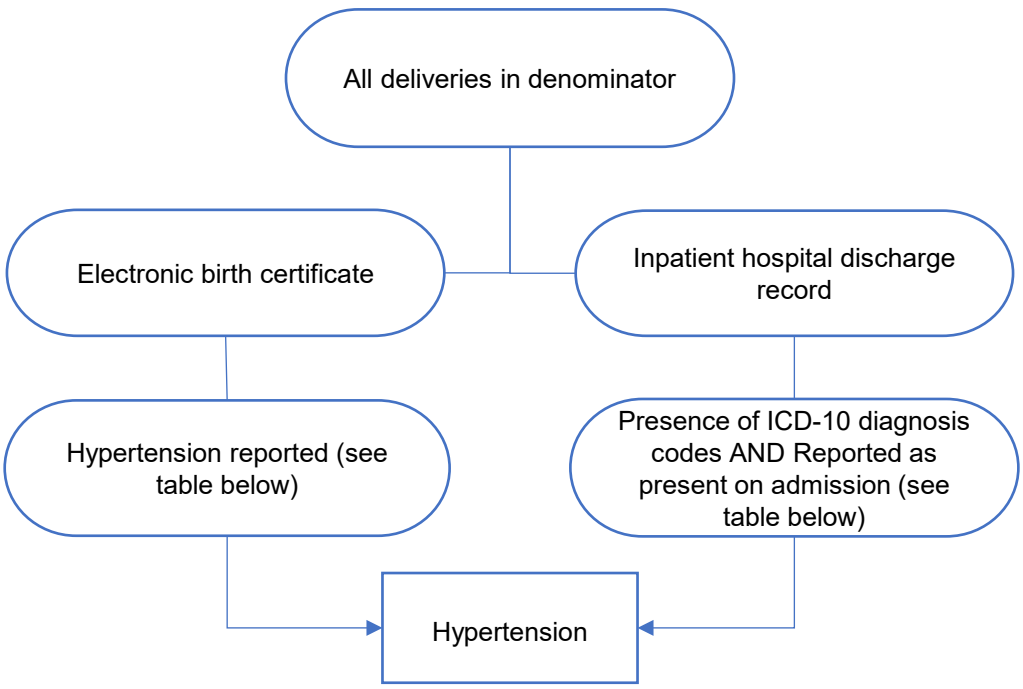
Hypertension - Pre-existing and Gestational

Description: High blood pressure that a birthing person has before getting pregnant or that develops in the first half of pregnancy, before 20 weeks (pre-existing). High blood pressure that happens after 20 weeks of pregnancy (gestational).

Denominator:



Numerator:

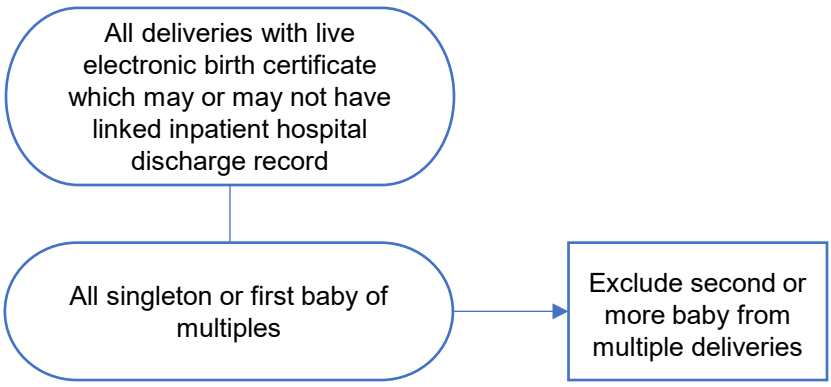


Category	Criteria
Electronic birth certificate: Vital Events Registration and Information (VERI) – August 2021 forward **Primary Section:** Prenatal Care **Subsection:** Maternal Risk Factors During This Pregnancy **Field:** Select medical risk factors of mother during this pregnancy:	Hypertension (gestational) OR Hypertension (pre-pregnancy)
Electronic birth certificate: Vital Information Platform (VIP) – up to August 2021 **Primary Section:** Prenatal II **Subsection:** Maternal Risk Factors NCHS **Field:** Check all that apply:	Hypertension OR Hypertension – Pre-pregnancy (chronic) OR Hypertension – Gestational (PIH, preeclampsia)
ICD-10 Diagnosis Codes for Pre-existing and Gestational Hypertension	I10, I11.0, I11.9, I12.0, I12.9, I13.0, I13.10, I13.11, I13.2, I15.0, I15.1, I15.2, I15.8, I15.9, O10.011, O10.012, O10.013, O10.019, O10.02, O10.03, O10.111, O10.112, O10.113, O10.119, O10.12, O10.13, O10.211, O10.212, O10.213, O10.219, O10.22, O10.23, O10.311, O10.312, O10.313, O10.319, O10.32, O10.33, O10.411, O10.412, O10.413, O10.419, O10.42, O10.43, O10.911, O10.912, O10.913, O10.919, O10.92, O10.93, O11.1, O11.2, O11.3, O11.9, O13.1, O13.2, O13.3, O13.9 - AND – Present on Admission marked 'Yes'

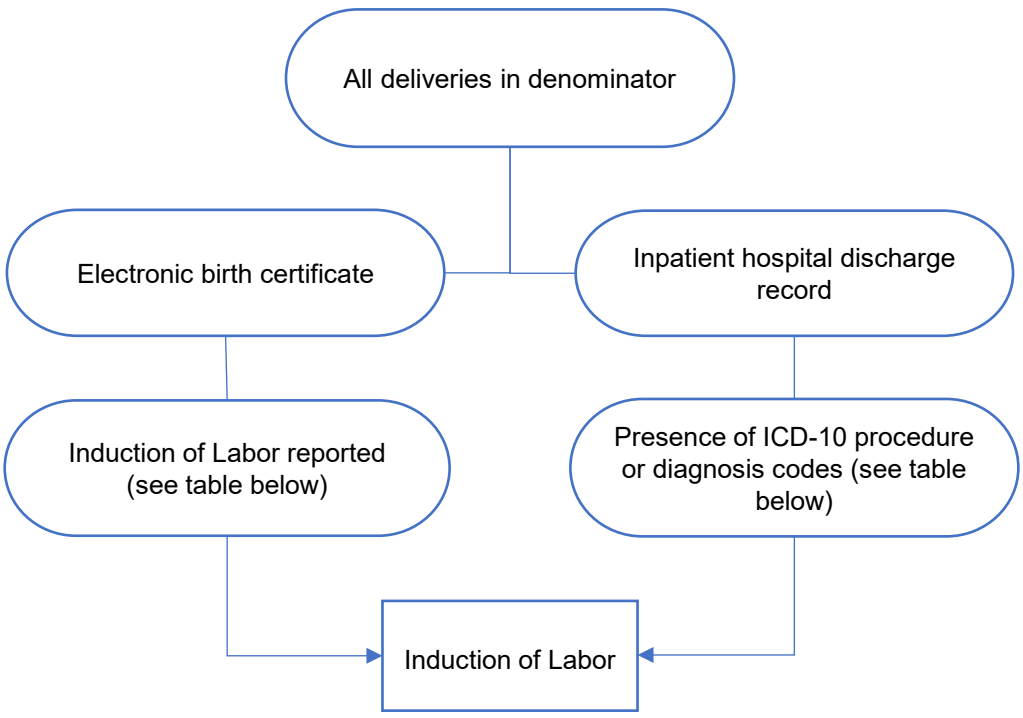
Induction of Labor

Description: A procedure that uses medications or other methods to bring on (induce) labor.

Denominator:



Numerator:

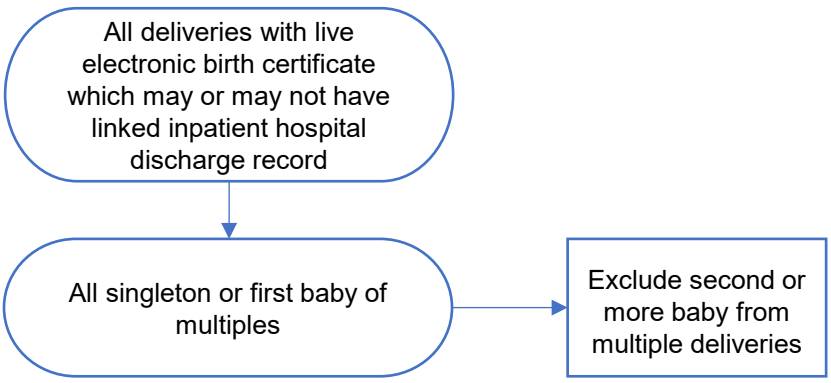


Category	Criteria
Electronic birth certificate: Vital Events Registration and Information (VERI) – August 2021 forward **Primary Section:** Labor and Delivery **Subsection:** Labor **Field:** Characteristics of Labor and Delivery: (select all that apply)	Induction of Labor
Electronic birth certificate: Vital Information Platform (VIP) – up to August 2021 **Primary Section:** Labor and Delivery II **Subsection:** **Field:** Characteristics of Labor & Delivery – NCHS (check all that apply)	Induction of Labor
ICD-10 Procedure Codes for Induction of Labor	0U7C7ZZ, 0U7C7DZ, 3E033VJ, 3E0P7GC, 3E0P7VZ
ICD-10 Diagnosis Codes for Induction of Labor	O61.0, O61.1, O61.8, O61.9

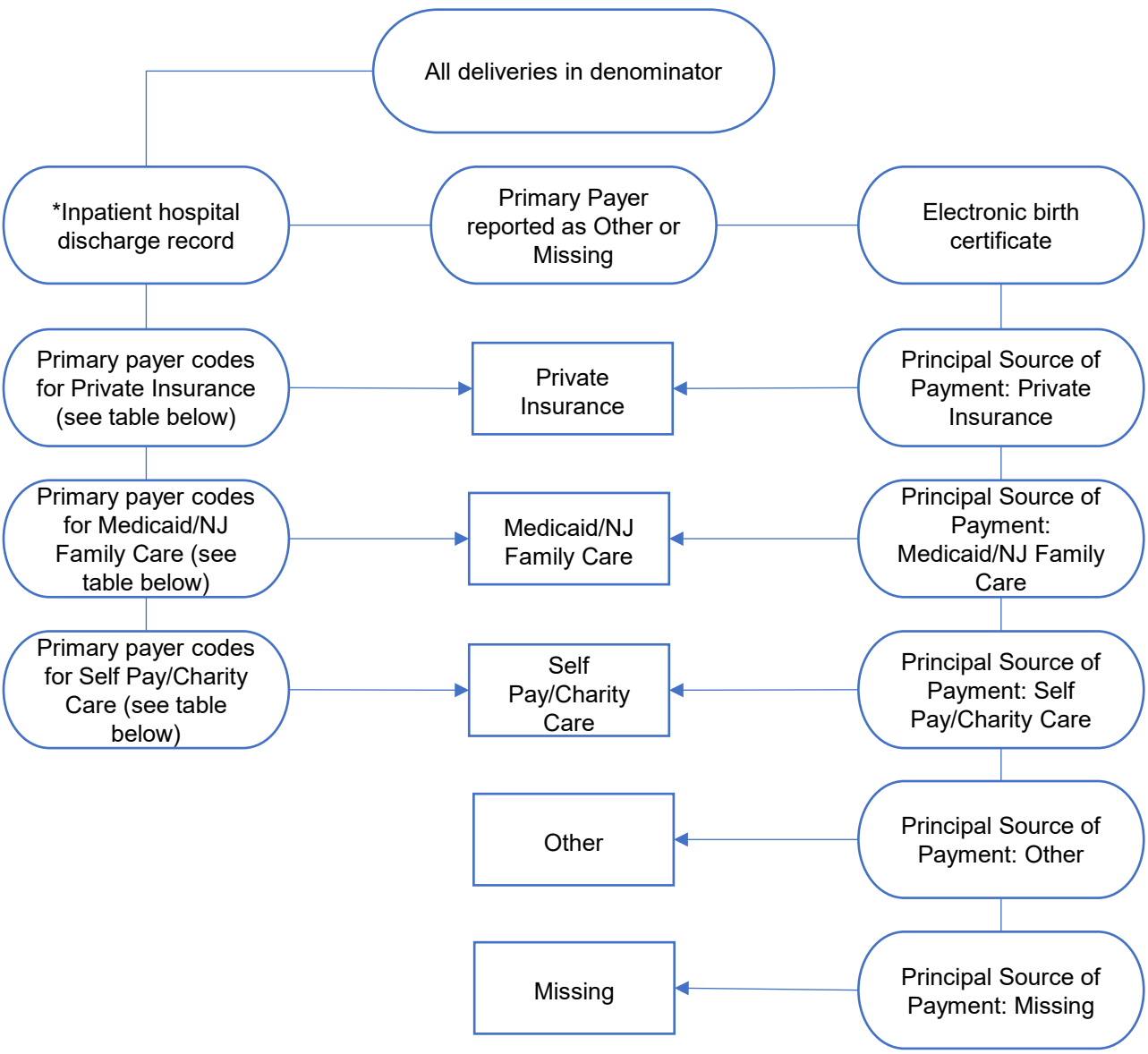
Insurance Coverage

Description: Type of insurance provider for delivery hospitalization.

Denominator:



Numerator:

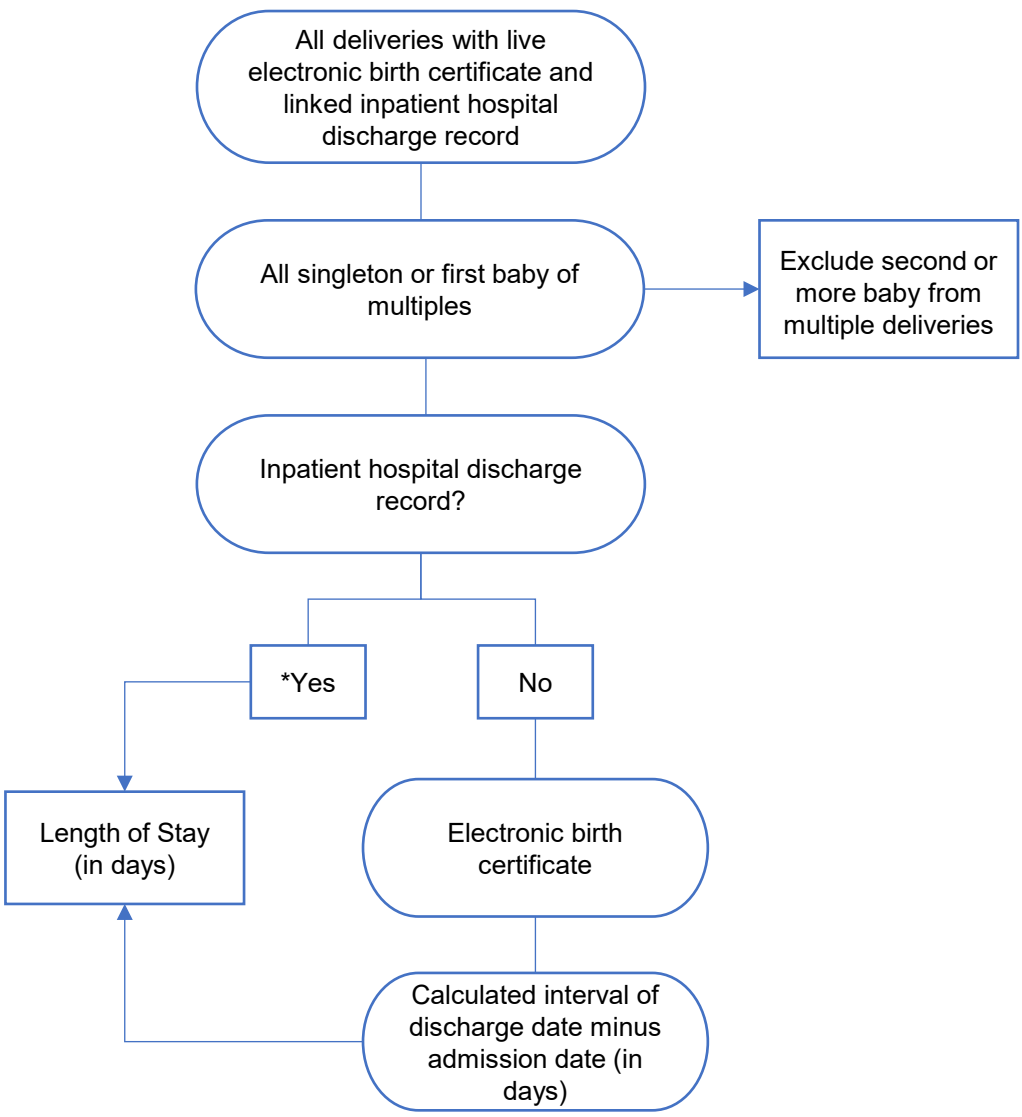


Insurance Coverage

Category	Criteria
Electronic birth certificate: Vital Events Registration and Information (VERI) – August 2021 forward **Primary Section:** Demographics **Subsection:** Insurance Information **Field:** Principal sour of Payment for this Pregnancy	Private Insurance, Medicaid/NJ Family Care, Self-Pay, Other, Charity Care, Unknown
Electronic birth certificate: Vital Information Platform (VIP) – up to August 2021 **Primary Section:** Admission **Subsection:** **Field:** Principal Source of Payment	Medicaid/NJ Family care, Other, Private Insurance, Self-Pay/Charity Care, Unknown
PRIME (Primary payer) codes for Private Insurance[2]	590, 600, 610, 611, 612, 613, 614, 619, 621, 622, 623, 624, 383, 511, 710, 951, 199, 512, 513, 516, 517, 521, 529
PRIME (Primary payer) codes for Medicaid[2]	200, 210, 211, 212, 213, 219, 220, 230, 250, 260, 290, 291, 299, 361
PRIME (Primary payer) codes for Self-Pay/Charity Care[2]	039, 522, 810

Length of Stay

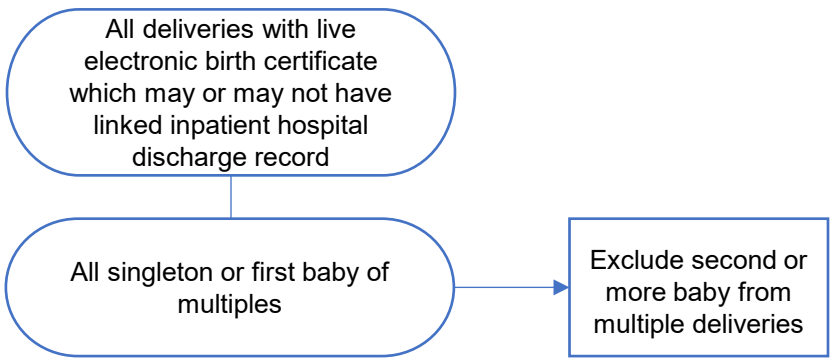
Description: Number of days a birthing person admitted/stayed in a hospital (discharge date minus admission date).



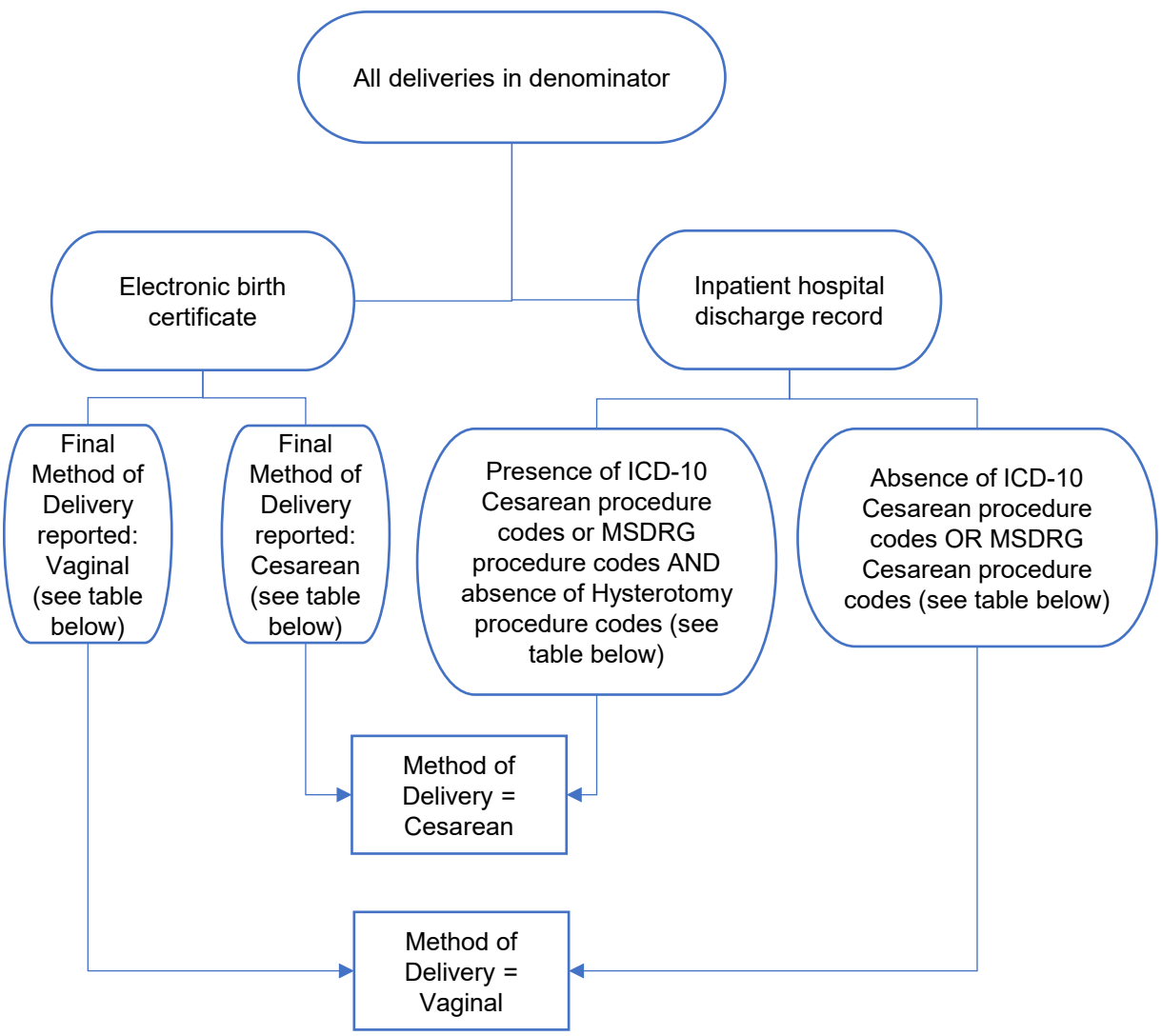
Method of Delivery

Description: A vaginal delivery is birth of the fetus(es) through the vagina. Cesarean birth is the delivery of a baby through incisions (surgical cuts) made in the belly and uterus.

Denominator:



Numerator:



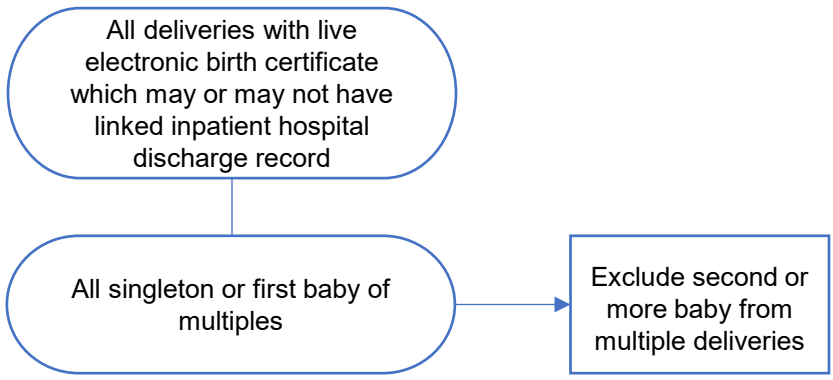
Method of Delivery

Category	Criteria
Electronic birth certificate: Vital Events Registration and Information (VERI) – August 2021 forward **Primary Section:** Labor and Delivery **Subsection:** Method of Delivery & Details **Field:** Final Method of Delivery:	Vaginal/Spontaneous OR Vaginal/Forceps OR Vaginal/Vacuum OR Cesarean with Trial of Labor OR Cesarean – NO Trial of Labor
Electronic birth certificate: Vital Information Platform (VIP) – up to August 2021 **Primary Section:** Labor & Delivery I **Subsection:** Method of Delivery **Field:** Final route & method of delivery?	Vaginal OR Cesarean
ICD-10 Procedure codes for Cesarean delivery (based on criteria from AHRQ Quality Indicators)[3]	10D00Z0,10D00Z1,10D00Z2
Hysterotomy Procedure codes (based on criteria from AHRQ Quality Indicators)[3]	10A00ZZ, 10A03ZZ, 10A04ZZ
MS-DRG Cesarean delivery codes	783-788

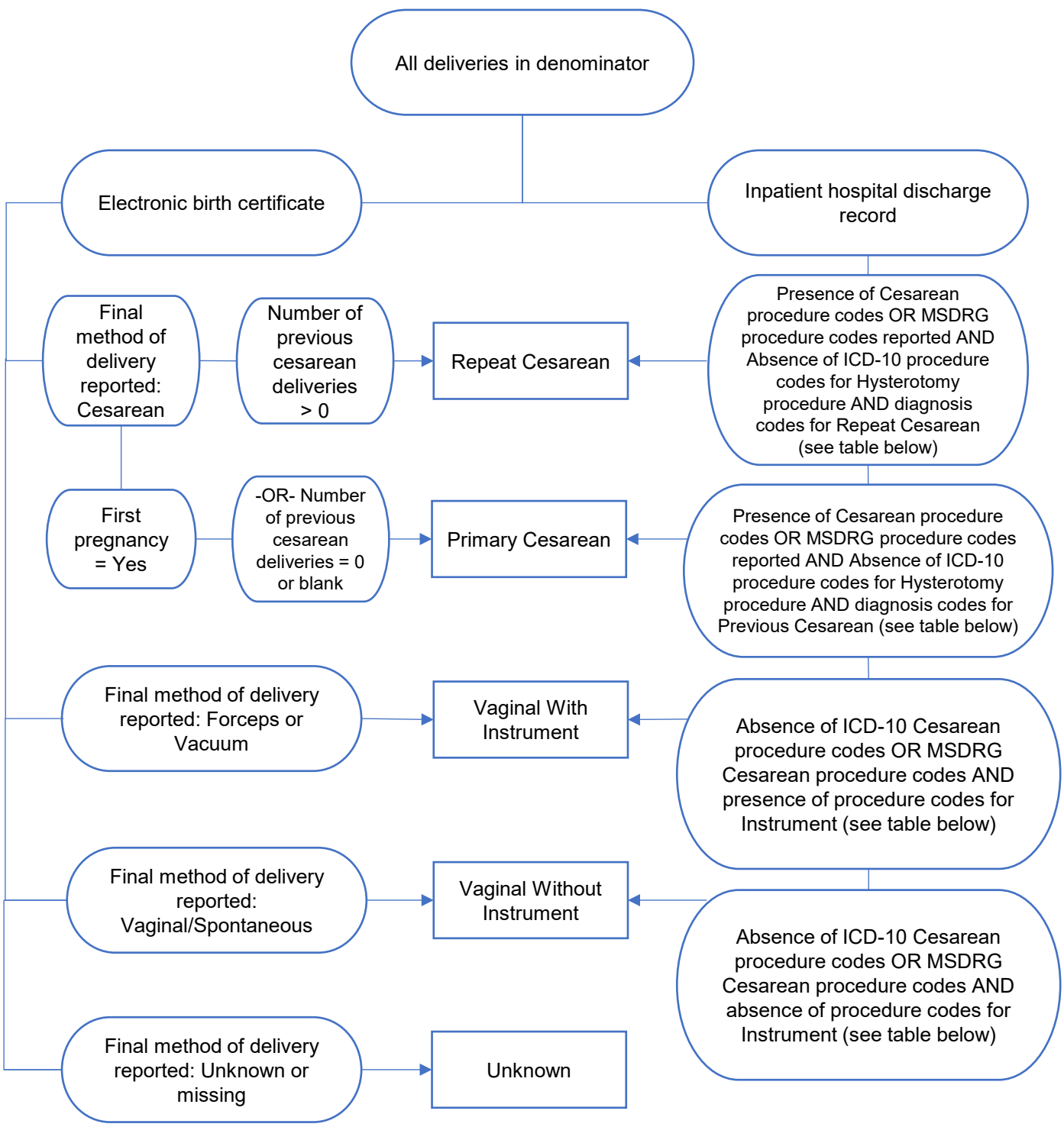
Method of Delivery Type

Description: Primary Cesarean is the delivery of a baby through incisions (surgical cuts) made in the abdomen and uterus of a birthing person without a prior cesarean birth. Repeat Cesarean is the delivery of a baby through incisions (surgical cuts) made in the abdomen and uterus in a birthing person with a prior cesarean birth. Vaginal with Instrument is a vaginal birth of a baby performed with the help of forceps or a vacuum device. Vaginal Without Instrument is a vaginal birth of a baby performed without the help of forceps or a vacuum device.

Denominator:



Numerator:



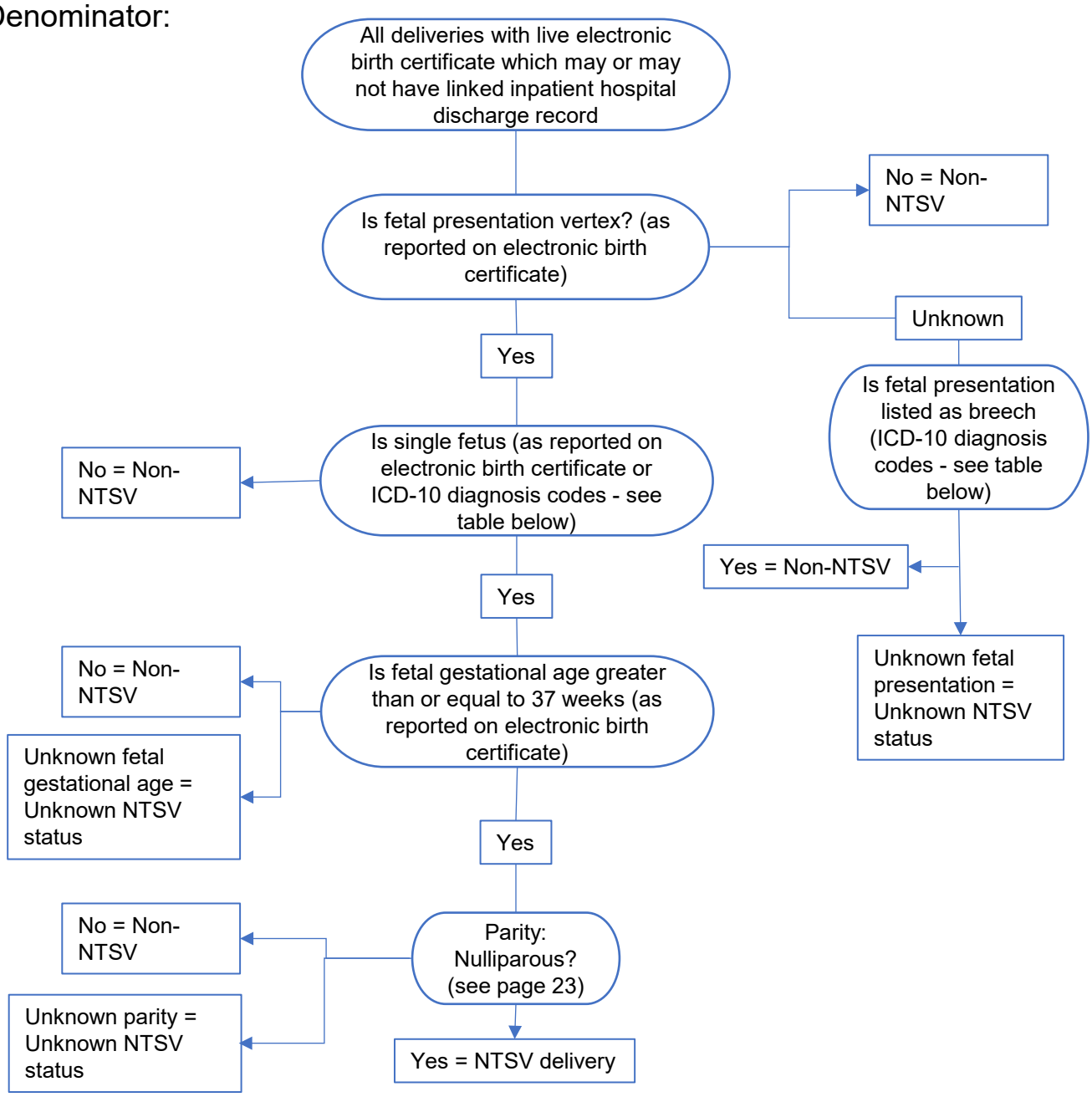
Method of Delivery Type

Category	Criteria
Electronic birth certificate: Vital Events Registration and Information (VERI) – August 2021 forward **Primary Section:** Labor and Delivery **Subsection:** Method of Delivery & Details **Field:** Final Method of Delivery: AND **Primary Section:** Prenatal Care **Subsection:** Pregnancy History **Field:** Is this Mother's first pregnancy? AND **Primary Section:** Prenatal Care **Subsection:** Pregnancy History **Field:** Number of Previous Cesareans:	Vaginal/Spontaneous, Vaginal/Forceps, Vaginal/Vacuum, Cesarean with Trial of Labor, or Cesarean – NO Trial of Labor Yes or No # or Missing
Electronic birth certificate: Vital Information Platform (VIP) – up to August 2021 **Primary Section:** Labor & Delivery I **Subsection:** Method of Delivery **Field:** Final route & method of delivery? AND **Primary Section:** Prenatal I **Subsection:** **Field:** Is this mother's first pregnancy? AND **Primary Section:** Prenatal II **Subsection:** Maternal Risk Factors NCHS **Field:** Mother had a previous cesarean delivery, if yes, how many	Vaginal or Cesarean Yes or No Yes/No, #, or Missing
ICD-10 Procedure codes for Cesarean delivery (based on criteria from AHRQ Quality Indicators)[3]	10D00Z0,10D00Z1,10D00Z2
MS-DRG Cesarean delivery codes	783-788
ICD-10 Diagnosis codes for Repeat/Previous Cesarean	O34.21, O34.211, O34.212, O34.219, O66.41
Hysterotomy Procedure codes (based on criteria from AHRQ Quality Indicators)[3]	10A00ZZ, 10A03ZZ, 10A04ZZ
Procedure codes for Instrument (based on criteria from AHRQ Patient Safety Indicators)[4]	10D07Z3, 10D07Z4, 10D07Z5, 10D07Z6, 10D07Z8

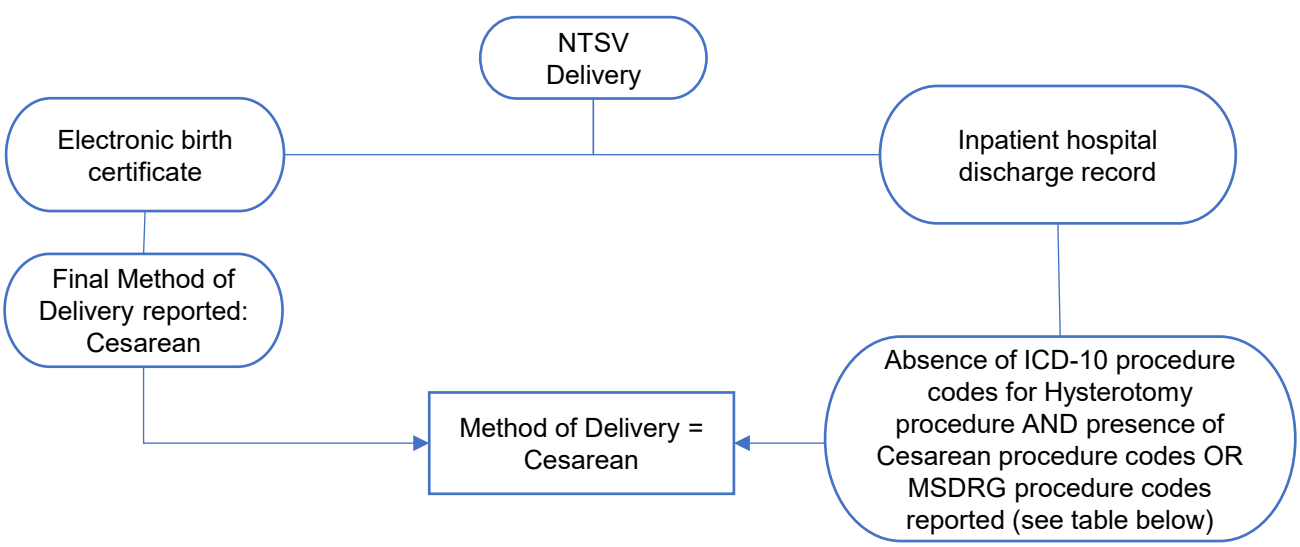
Nulliparous, Term, Singleton, Vertex (NTSV) Cesarean Delivery

Description: Nulliparous, Term, Singleton, Vertex (NTSV) cesarean births identifies the proportion of live babies born at or beyond 37.0 weeks gestation to birthing person in their first pregnancy, that are singleton (no twins or beyond) and in the vertex presentation (no breech or transverse positions).

Denominator:



Numerator:



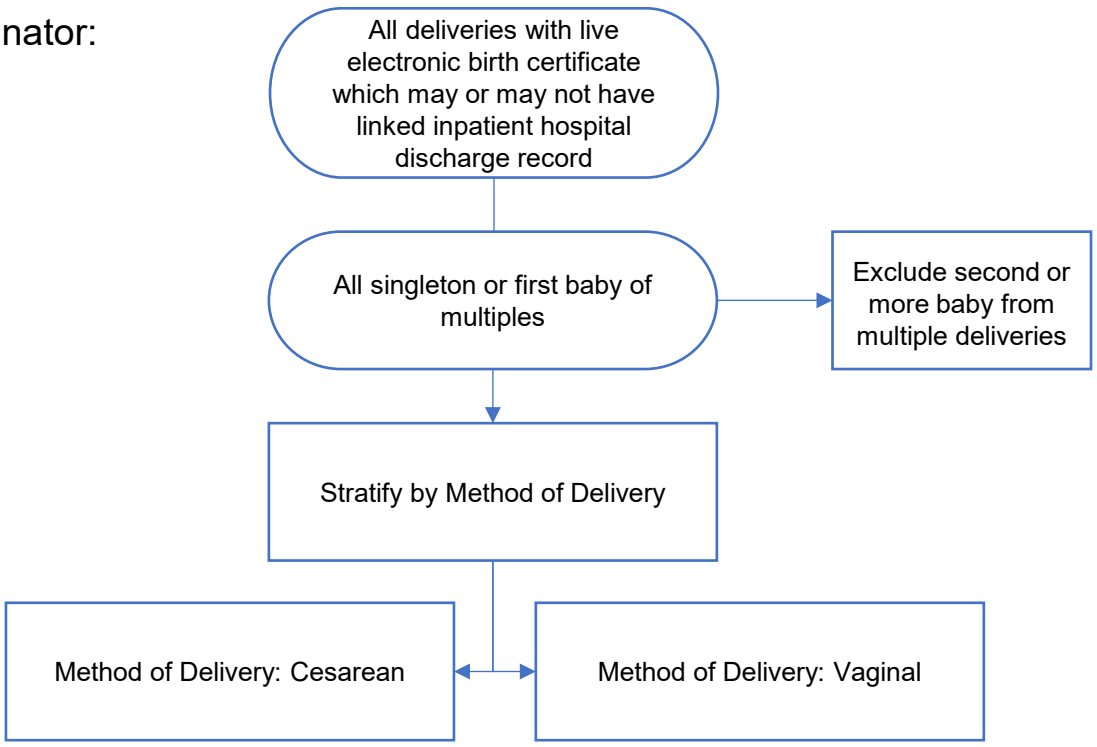
Nulliparous, Term, Singleton, Vertex (NTSV) Cesarean Delivery

Category	Criteria
ICD-10 Diagnosis codes for Breech Delivery	O32.1, O32.1XX0, O32.1XX1, O32.1XX2, O32.1XX3, O32.1XX4, O32.1XX5,
ICD-10 Diagnosis codes for Single Fetus Delivery	Z370, Z371
ICD-10 Diagnosis codes for Repeat Cesarean	O34.21, O34.211, O34.212, O34.219, O66.41
Electronic birth certificate: Vital Events Registration and Information (VERI) – August 2021 forward **Primary Section:** Prenatal Care **Subsection:** Pregnancy History **Field:** Is this the mother's first pregnancy? OR **Primary Section:** Prenatal Care **Subsection:** Pregnancy History **Field:** Date of Last Live Birth: OR **Primary Section:** Prenatal Care **Subsection:** Pregnancy History **Field:** Previous Live Births (Prior to this Pregnancy): a. Number now living: OR **Primary Section:** Prenatal Care **Subsection:** Pregnancy History **Field:** Previous Live Births (Prior to this Pregnancy): c. Were any of those preterm live births (less than 37 weeks)? OR **Primary Section:** Prenatal Care **Subsection:** Pregnancy History **Field:** Previous Live Births (Prior to this Pregnancy): b. Number of Previous Cesareans: OR **Primary Section:** Prenatal Care **Subsection:** Pregnancy History **Field:** Previous Live Births (Prior to this Pregnancy): a. Number now Deceased:	Yes No date reported Missing or 0 No Missing or 0 Missing or 0
Electronic birth certificate: Vital Information Platform (VIP) – up to August 2021 **Primary Section:** Prenatal I **Field:** Is this the mother's first pregnancy? OR **Primary Section:** Prenatal I **Field:** Date of last live birth: OR **Primary Section:** Prenatal I **Field:** Number of Previous Live Births OR **Primary Section:** Prenatal II **Subsection:** Maternal Risk Factors NCHS **Field:** Previous preterm birth OR **Primary Section:** Prenatal II **Subsection:** Maternal Risk Factors NCHS **Field:** Mother had a previous cesarean delivery	Yes No date reported Missing or 0 No Missing or 0

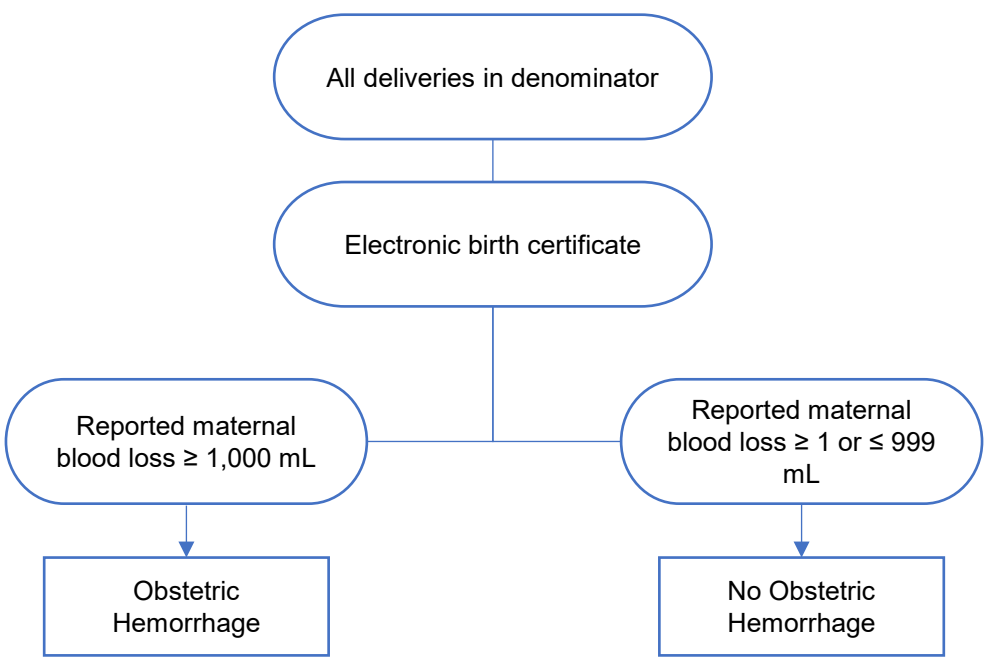
Obstetric Hemorrhage

Description: A cumulative blood loss greater than 1,000 mL (cc) regardless of the method of delivery (i.e., vaginal or cesarean birth).

Denominator:



Numerator:

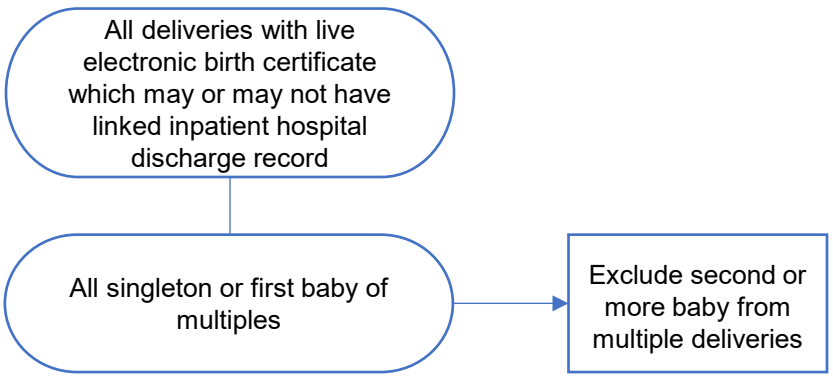


Category	Criteria
Electronic birth certificate: Vital Events Registration and Information (VERI) – August 2021 forward **Primary Section:** Labor and Delivery **Subsection:** Method of Delivery & Details **Field:** Maternal Blood Loss: cc	≥ 1,000 cc
Electronic birth certificate: Vital Information Platform (VIP) – up to August 2021 **Primary Section:** Labor and Delivery I **Subsection:** Delivery Information **Field:** Maternal Blood Loss (cc)	≥ 1,000 cc

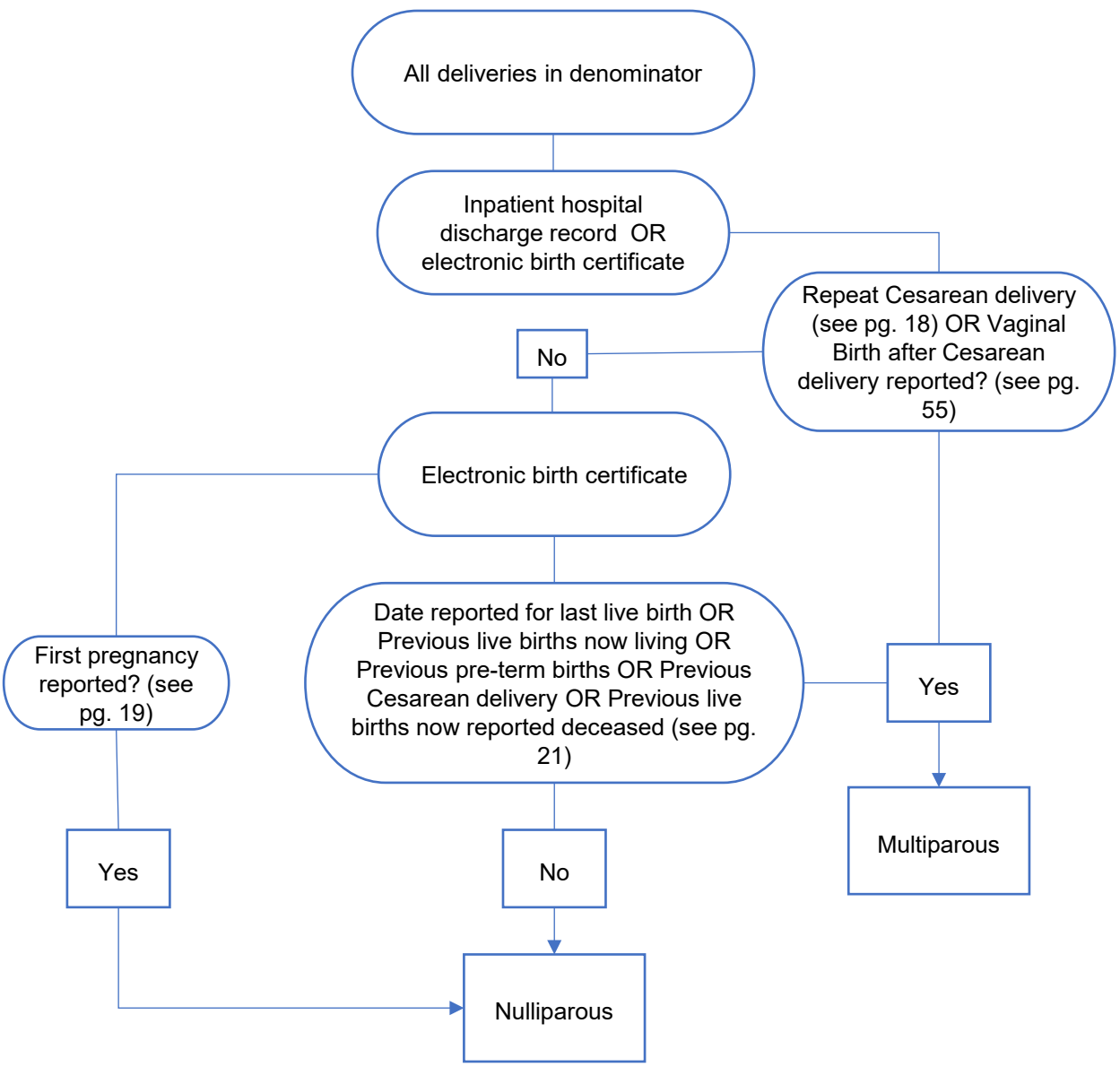
Parity

Description: The number of pregnancies reaching 20 weeks and 0 days of gestation or beyond, regardless of the number of fetuses or outcomes. **Nulliparous** - A birthing person with a parity of zero. **Multiparous** - A birthing person with a parity of ≥ one.

Denominator:



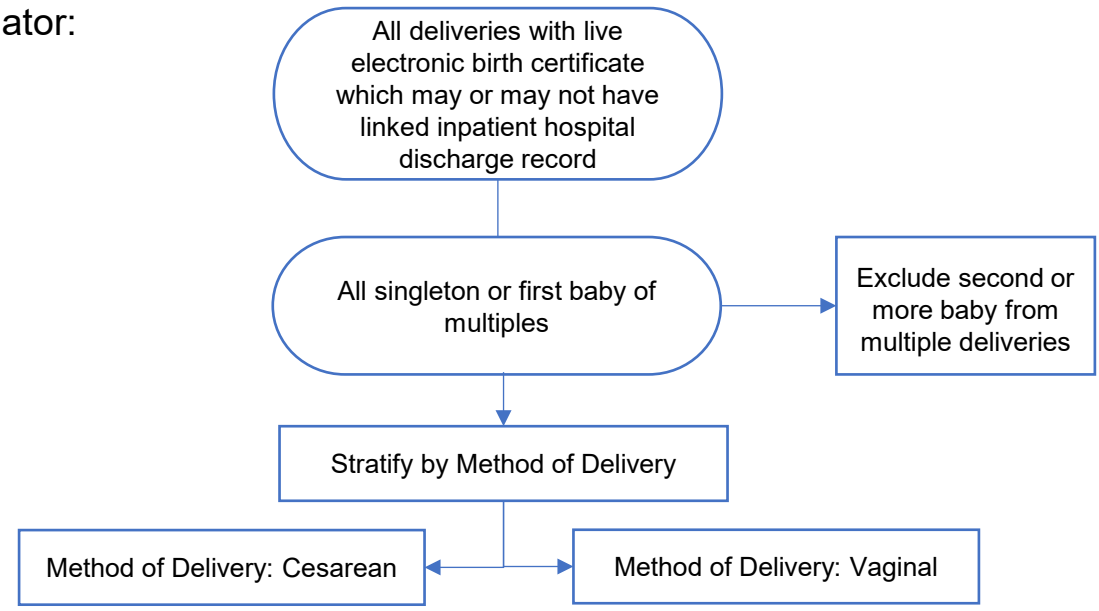
Numerator:



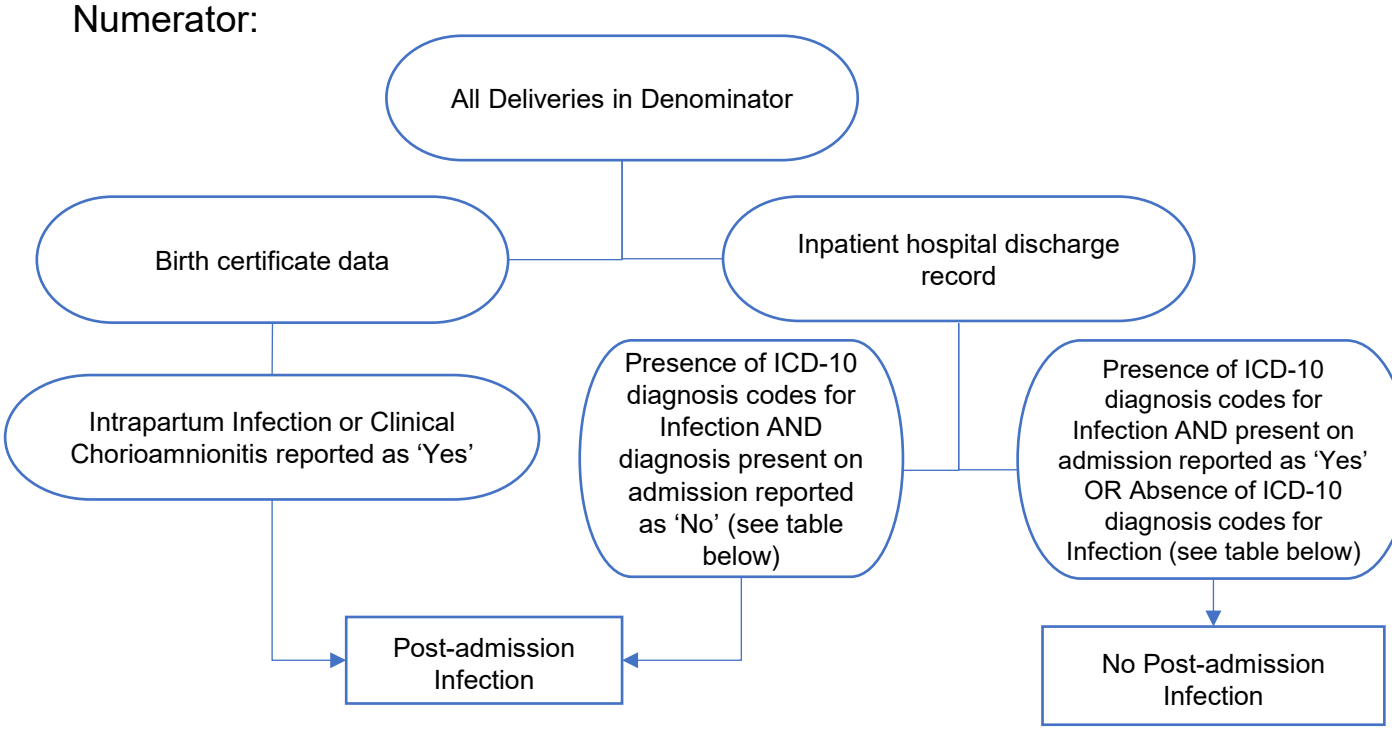
Post-admission Infection

Description: Infection(s) that occur after admission for labor and delivery hospitalization.

Denominator:



Numerator:

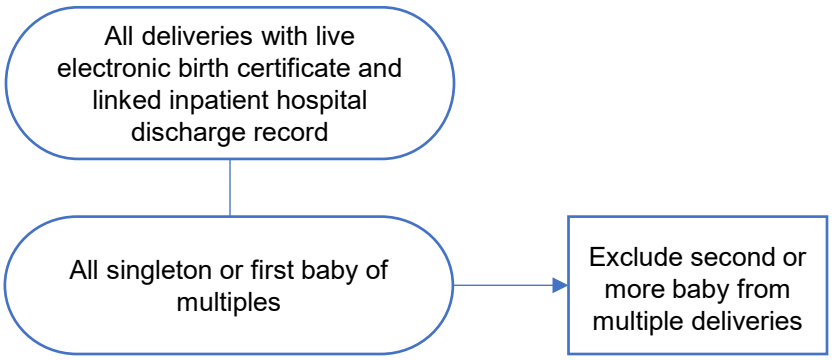


Category	Criteria
Electronic birth certificate: Vital Events Registration and Information (VERI) – August 2021 forward **Primary Section:** Labor and Delivery **Subsection:** Infant Characteristics at Delivery **Field:** Clinical Chorioamnionitis during labor	Yes
Electronic birth certificate: Vital Information Platform (VIP) – up to August 2021 **Primary Section:** Labor and Delivery II **Subsection:** Characteristics of Labor & Delivery **Field:** Clinical Chorioamnionitis diagnosed during labor or maternal temperature is greater than or equal to 38 °C (100.4 °F)	Yes
ICD-10 Diagnosis Codes for Infection	O86.0, O86.00, O86.01, O86.02, O86.03, O86.09, O86.12, O86.21, O86.81, O86.89, O41.121, O41.1210, O41.1211, O41.1212, O41.1213, O41.1214, O41.1215, O41.1219, O41.122, O41.1220, O41.1221, O41.1222, O41.1223, O41.1224, O41.1225, O41.1229, O41.123, O41.1230, O41.1231, O41.1232, O41.1233, O41.1234, O41.1235, O41.1239, O41.129, O41.1290, O41.1291, O41.1292, O41.1293, O41.1294, O41.1295, O41.1299 - AND – Present on Admission marked 'No'

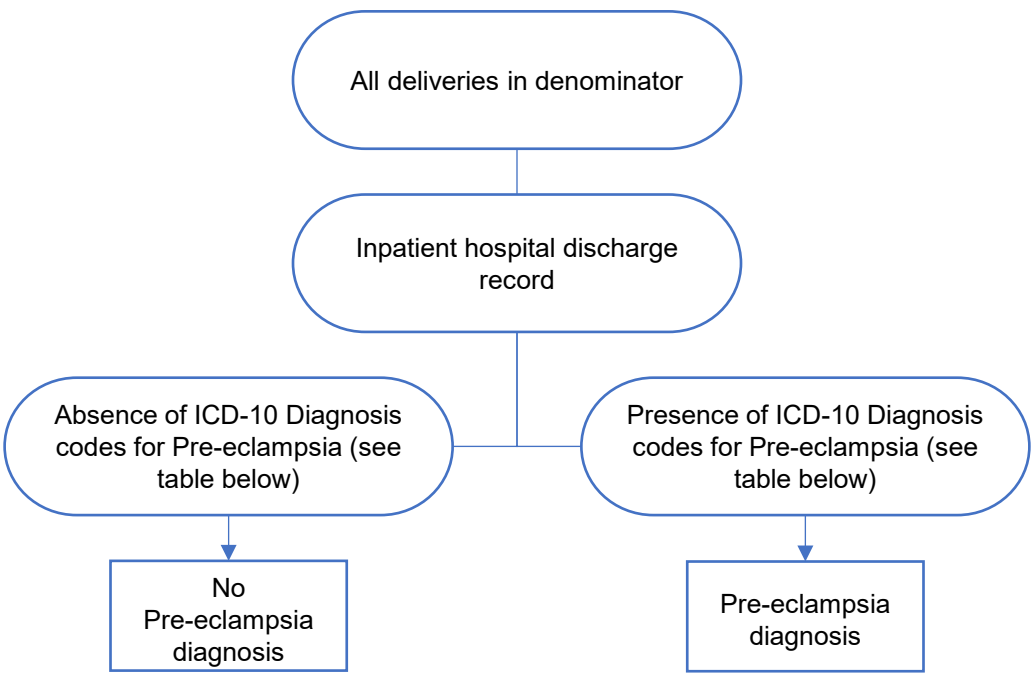
Pre-eclampsia

Description: When a birthing person who previously had normal blood pressure suddenly develops high blood pressure and protein in the urine or other clinical indicators after 20 weeks of pregnancy.

Denominator:



Numerator:

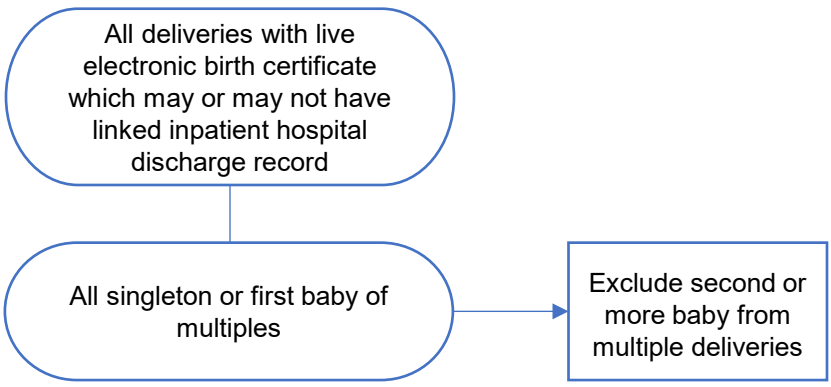


Category	Criteria
ICD-10 Diagnosis codes for Pre-eclampsia based on codes in the California Maternal Quality Care Collaborative (CMQCC) Severe Maternal Morbidity (SMM) Risk Scoring System[5]	O14.1, O14.10, O14.12, O14.13, O14.14, O14.15, O14.2, O14.20, O14.22, O14.23, O14.24, O14.25, O11, O11.1, O11.2, O11.3, O11.4, O11.5, O11.9, O14.0, O14.00, O14.02, O14.03, O14.04, O14.05, O14.9, O14.90, O14.92, O14.93, O14.94, O14.95, O13.1, O13.2, O13.3, O13.4, O13.5, O13.9

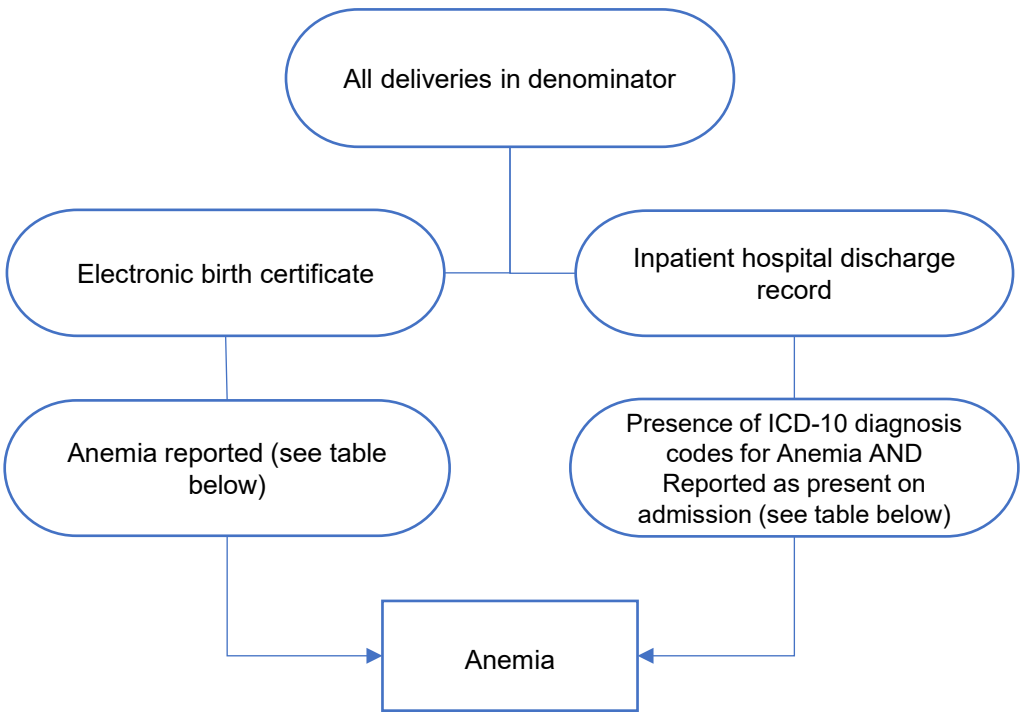
Pre-existing Anemia

Description: Having lower than the normal number of healthy red blood cells during pregnancy.

Denominator:



Numerator:



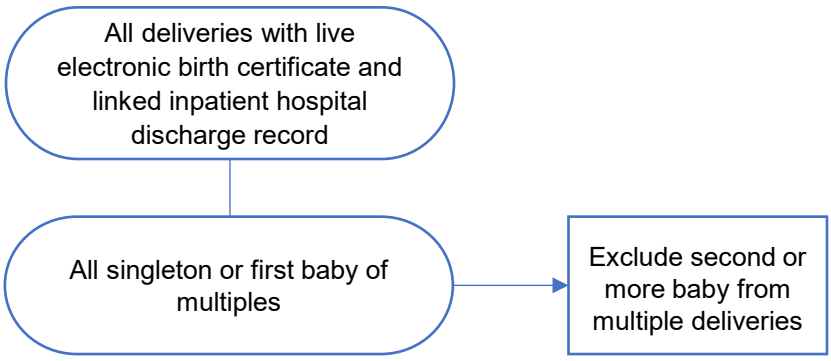
Category	Criteria
Electronic birth certificate: Vital Events Registration and Information (VERI) – August 2021 forward **Primary Section:** Prenatal Care **Subsection:** Maternal Risk Factors During Pregnancy **Field:** Select medical risk factors of mother during this pregnancy	Anemia
Electronic birth certificate: Vital Information Platform (VIP) – up to August 2021 **Primary Section:** Prenatal II **Subsection:** Maternal Risk Factor Other **Field:** Check all that apply	Anemia (Hct <30/ Hgb <10Gm/dl)
ICD-10 Diagnosis codes for Pre-existing Anemia based on codes in the California Maternal Quality Care Collaborative (CMQCC) Severe Maternal Morbidity (SMM) Risk Scoring System[7]	O99.01, O99.02, D50, D55, D56, D58, D59, D57.1, D57.20, D57.3, D57.40, D57.80 - AND – Present on Admission marked 'Yes'

Note that the CMQCC case definition used for this measure was derived from Leonard et al., 2022.[7]

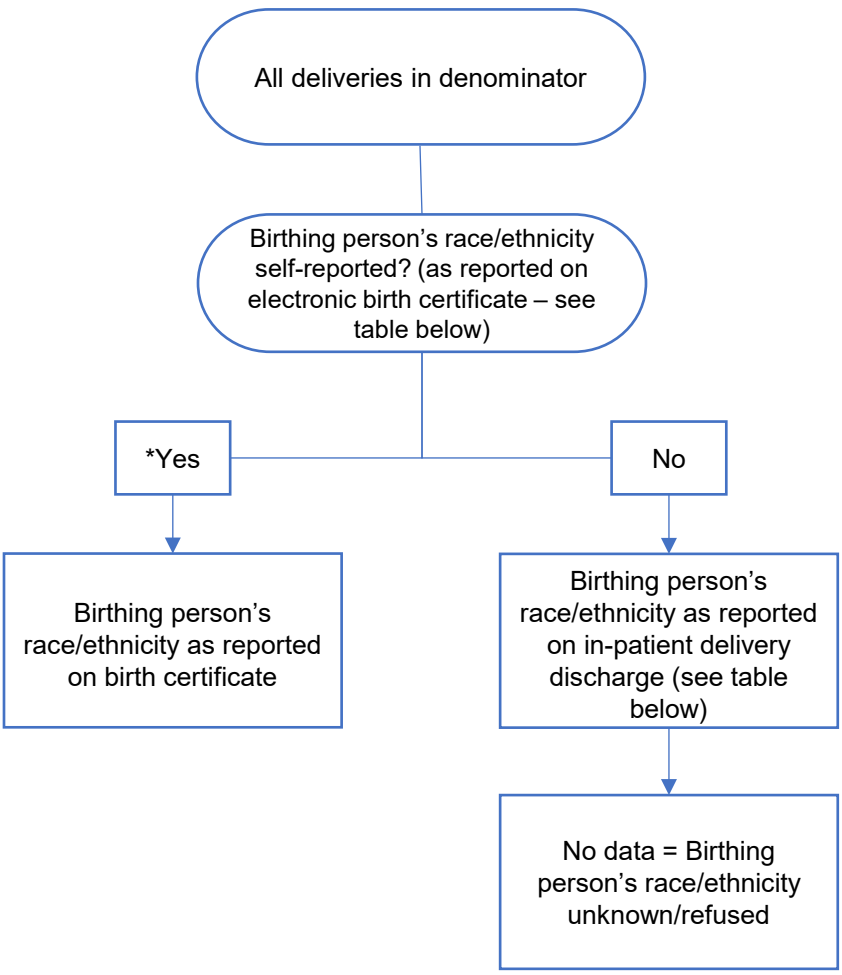
Race and Ethnicity

Description: Birthing person's race and ethnicity.

Denominator:



Numerator:



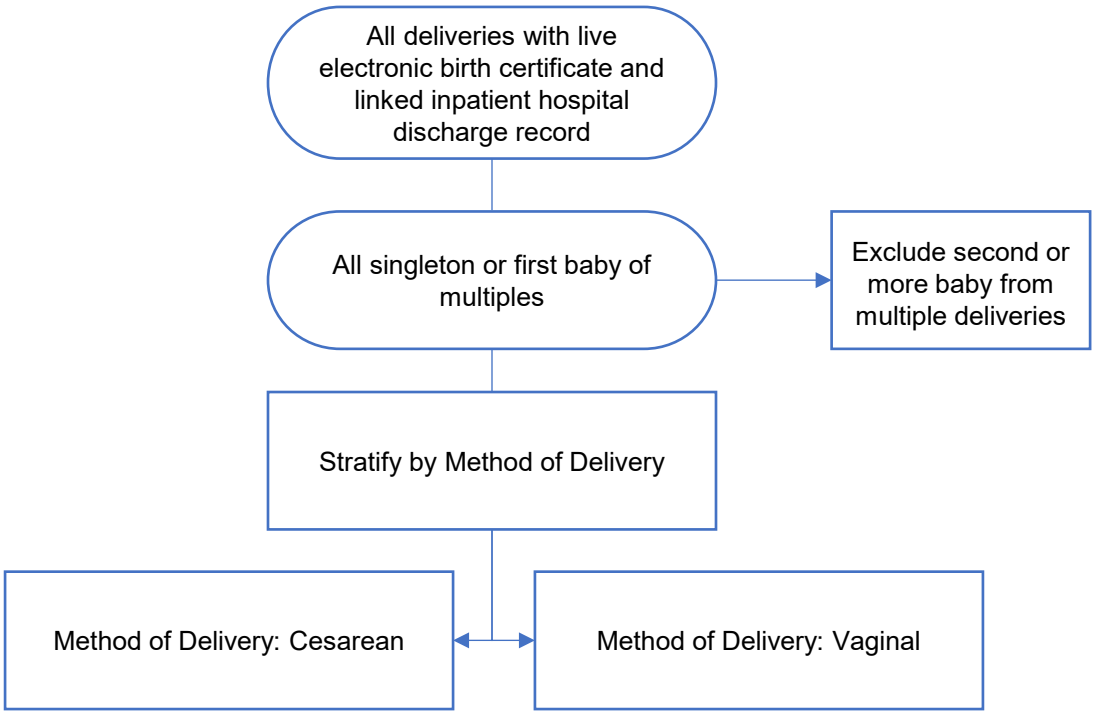
Race and Ethnicity

Category	Criteria
Electronic birth certificate: Vital Events Registration and Information (VERI) – August 2021 forward **Primary Section:** Demographics **Subsection:** Mother/Parent A's Demographics **Field:** Hispanic Origin- Check the box that best describes whether the mother/Parent A is Spanish/Hispanic/Latina.	Not Spanish/Hispanic/Latina, Mexican, Mexican American, Chicana, Puerto Rican, Cuban, Other Spanish/Hispanic/Latina
Electronic birth certificate: Vital Information Platform (VIP) – up to August 2021 **Primary Section:** Mother Demographic **Subsection:** Hispanic Origin ? **Field:** Check the box that best describes whether the mother is Spanish/Hispanic/Latino.	Not Spanish/Hispanic/Latina, Mexican, Mexican American, Chicana, Puerto Rican, Cuban Other Spanish/Hispanic/Latina
Electronic birth certificate: Vital Events Registration and Information (VERI) – August 2021 forward **Primary Section:** Demographics **Subsection:** Mother/Parent A's Demographics **Field:** Race- Check one or more races to indicate what the mother / Parent A considers themselves to be	White, Black or African American, American Indian or Alaskan Native, Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, Other Asian, Native Hawaiian, Guamanian or Chamorro, Samoan, Other Pacific Islander, Other
Electronic birth certificate: Vital Information Platform (VIP) – up to August 2021 **Primary Section:** Mother Demographic **Subsection:** Mother's race ? **Field:** Check one or more races to indicate what the mother considers herself to be	White, Black or African American, Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, Native Hawaiian, Guamanian or Chamorro, Samoan, American Indian or Alaska Native, Other Asian, Other Pacific Islander, Other
Electronic birth certificate reported race/ethnicity: Non-Hispanic White	White (no other races indicated)
Electronic birth certificate reported race/ethnicity: Non-Hispanic Black	Black or African American (no other races indicated)
Electronic birth certificate reported race/ethnicity: Hispanic	Mexican/Mexican American/Chicana, Puerto Rican, Cuban, Other Spanish/Hispanic/Latina (regardless of reported race)
Electronic birth certificate reported race/ethnicity: Asian	Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, Other Asian (no other races indicated)
Electronic birth certificate reported race/ethnicity: Other/Multi-race (including NA/API)	Other Pacific Islander, American Indian or Alaskan Native, Native Hawaiian, Guamanian or Chamorro, Samoan, Other; -or- any combination of race category
Electronic birth certificate reported race/ethnicity: Unk/refused	Hispanic Origin Unknown, Race Unknown
Office of Management and Budget (OMB) Race code for Non-Hispanic White[2]	White
OMB Race code for Non-Hispanic Black[2]	Black or African American
OMB Ethnicity code for Hispanic[2]	Mexican, Mexican American, Chicano, Puerto Rican, Cuban, Central or South American, Other Spanish/Hispanic/Latino
OMB Race codes for Asian[2]	Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, Other Asian
OMB Race codes for Other/Multi-race (including NA/API)[2]	Native Hawaiian, Guamanian or Chamorro, Samoan, Other Pacific Islander, American Indian or Alaskan Native, Other Race, Multiracial: White and Black or African American, Multiracial: White and American Indian or Alaskan Native, Multiracial: White and Asian, Multiracial: Black or African American and American Indian or Alaskan Native
OMB Ethnicity codes for Unknown/Refused[2]	Declined to Answer, Unknown/Unavailable
OMB Race codes for Unknown/Refused[2]	Declined to Answer, Unknown/Unavailable

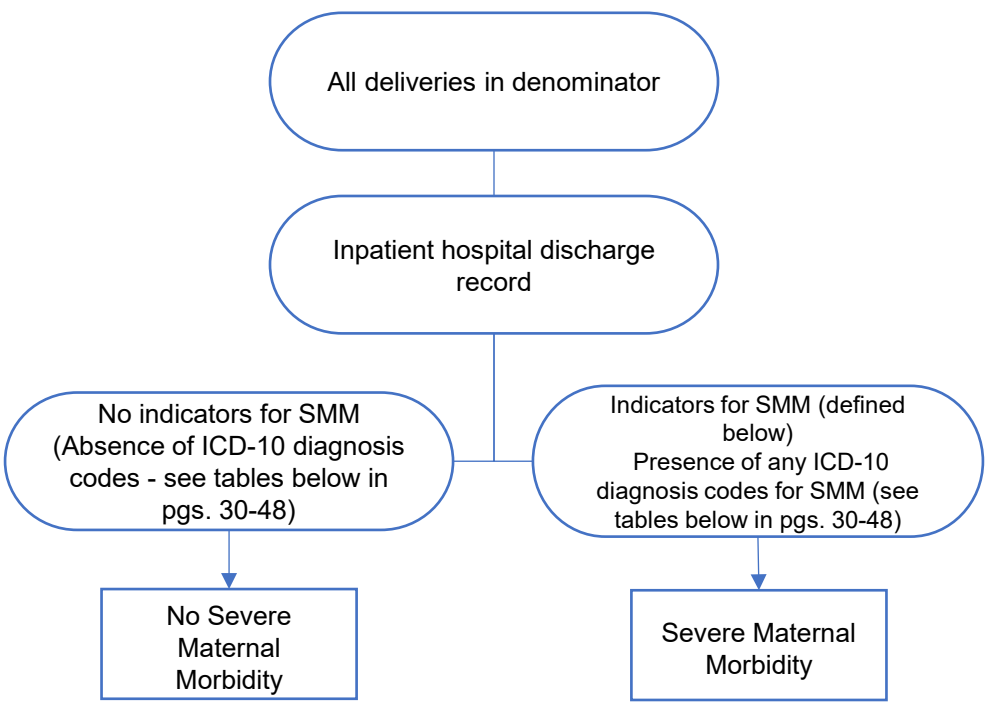
Severe Maternal Morbidity (SMM)

Description: Includes unexpected outcomes of labor (e.g., acute myocardial infarction and aneurysm, acute renal failure) and delivery that result in significant short- or long-term consequences to a birthing person's health.

Denominator:



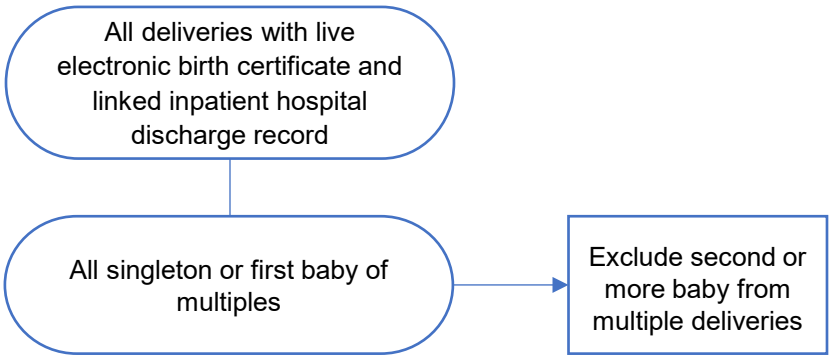
Numerator:



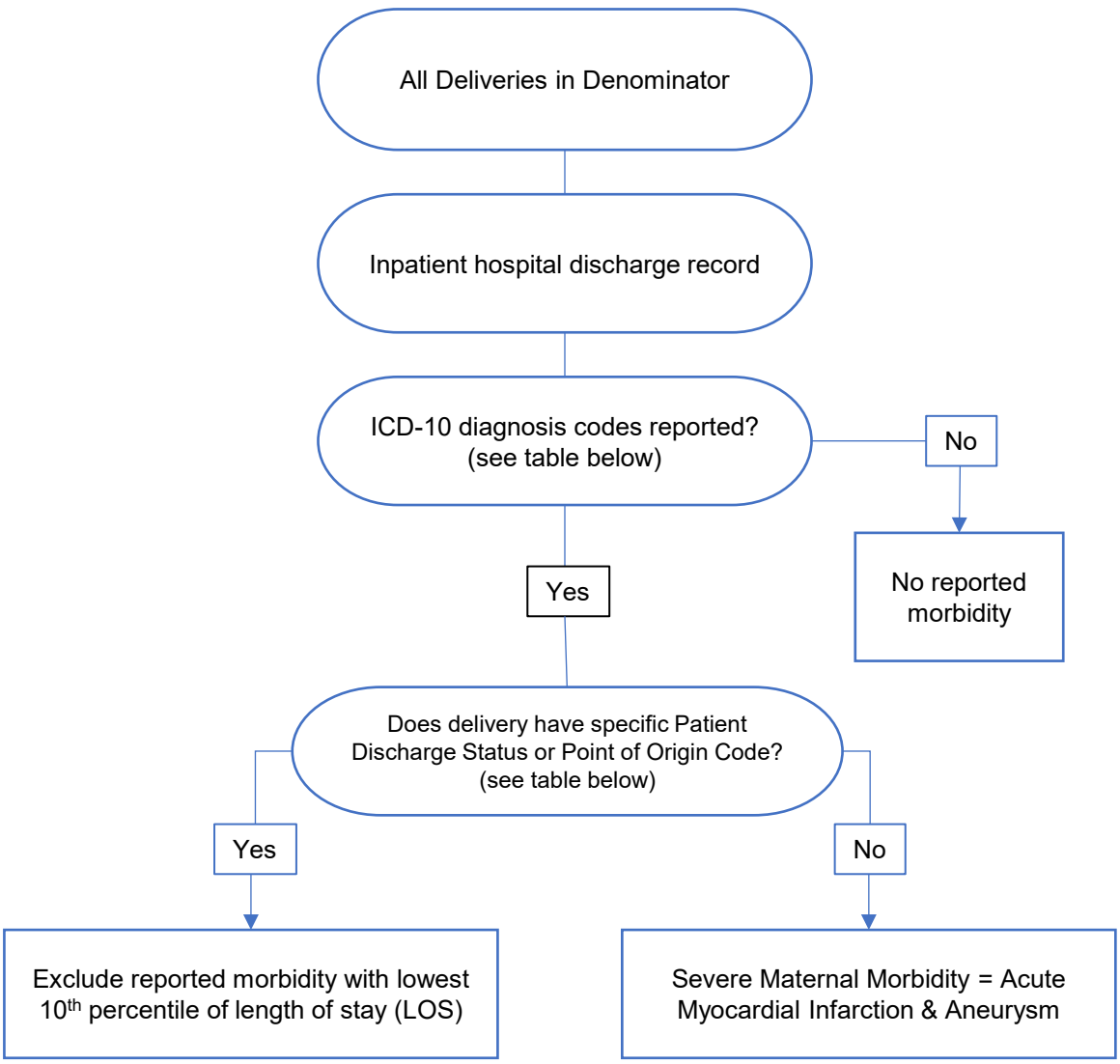
Note that the CDC 2023 SMM case definition was used for this measure and the following SMM measures. The latest CDC case definition was released on May 15, 2024.[6]

Severe Maternal Morbidity (SMM): Acute Myocardial Infarction and Aneurysm

Denominator:



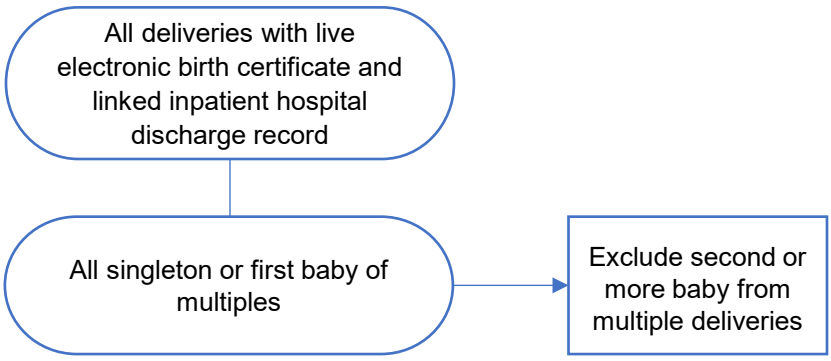
Numerator:



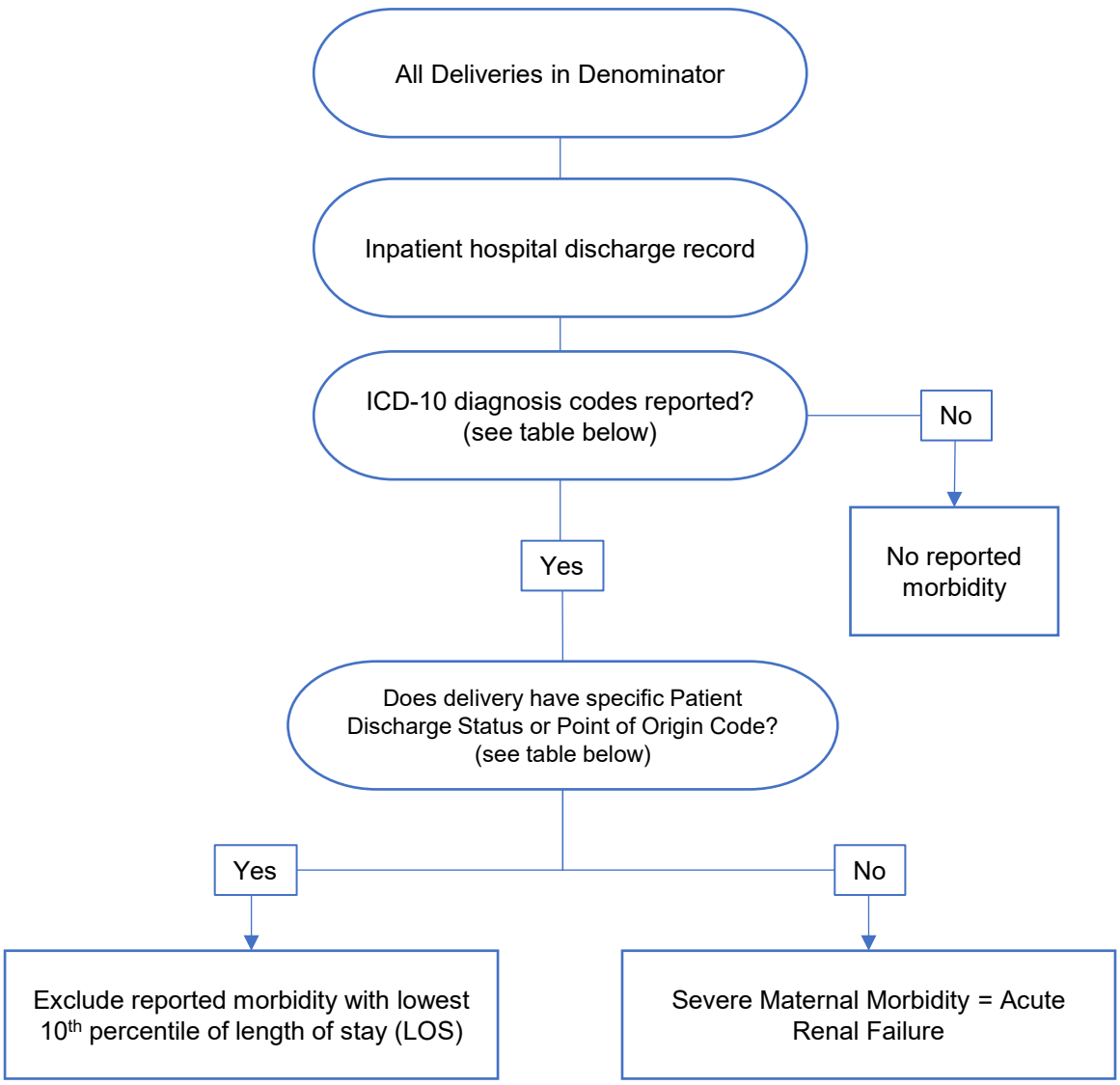
Category	Criteria
Patient Discharge Status (Discharge [Patient] Status Code)[1]	Discharged/Transferred to home/self-care (routine discharge), Discharged to home under care of organized home health service provider, Left against medical advice, Discharged/Transferred to Court/Law Enforcement, Discharged to home or self-care with a planned acute care hospital inpatient readmission
Point of Origin Code (Admission Source Type)[1]	Non-Health Care Facility Point of Origin, Clinic or Physicians Office, Court Law Enforcement
ICD-10 Diagnosis codes for Acute Myocardial Infarction & Aneurysm[6]	I21.01, I21.02, I21.09, I21.11, I21.19, I21.21, I21.29, I21.3, I21.4, I21.9, I21.A1, I21.A9, I22.0, I22.1, I22.2, I22.8, I22.9, I71.00, I71.01, I71.02, I71.03, I71.1, I71.2, I71.3, I71.4, I71.5, I71.6, I71.8, I71.9, I79.0

Severe Maternal Morbidity (SMM): Acute Renal Failure

Denominator:



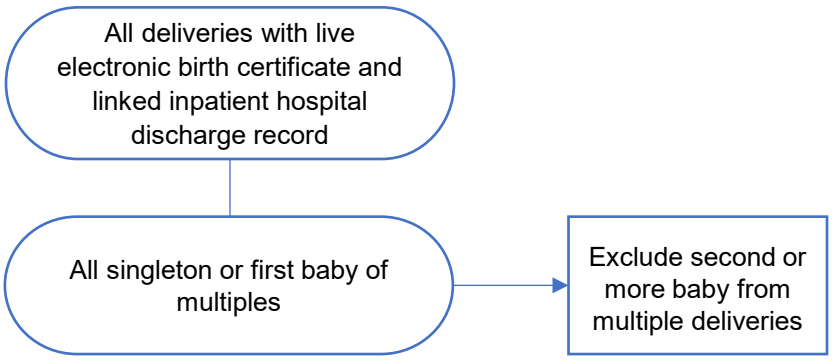
Numerator:



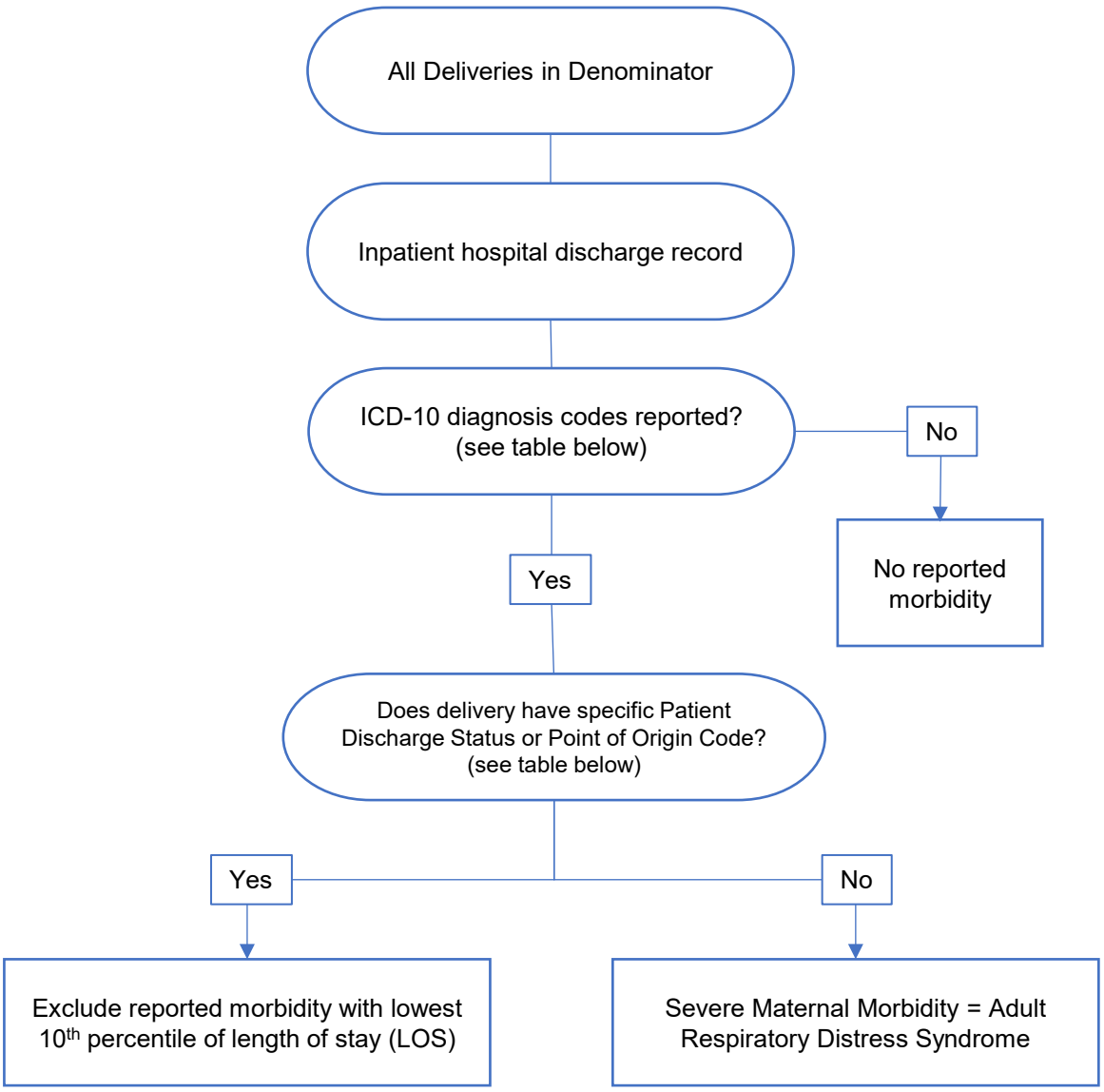
Category	Criteria
Patient Discharge Status (Discharge [Patient] Status Code)[1]	Discharged/Transferred to home/self-care (routine discharge), Discharged to home under care of organized home health service provider, Left against medical advice, Discharged/Transferred to Court/Law Enforcement, Discharged to home or self-care with a planned acute care hospital inpatient readmission
Point of Origin Code (Admission Source Type)[1]	Non-Health Care Facility Point of Origin, Clinic or Physicians Office, Court Law Enforcement
ICD-10 Diagnosis codes for Acute Renal Failure[6]	N17.0, N17.1, N17.2, N17.8, N17.9, O90.4

Severe Maternal Morbidity (SMM): Adult Respiratory Distress Syndrome (ARDS)

Denominator:



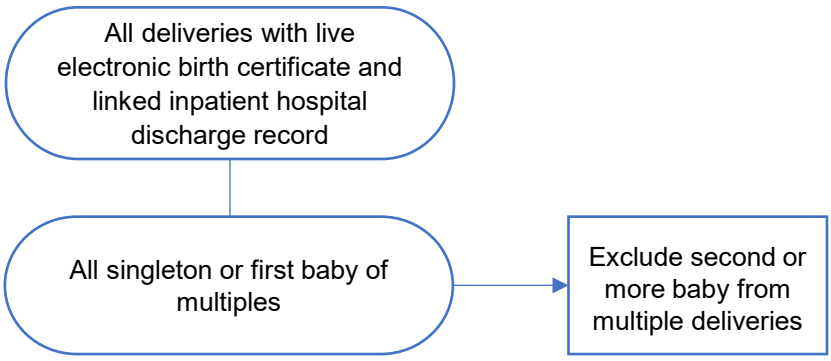
Numerator:



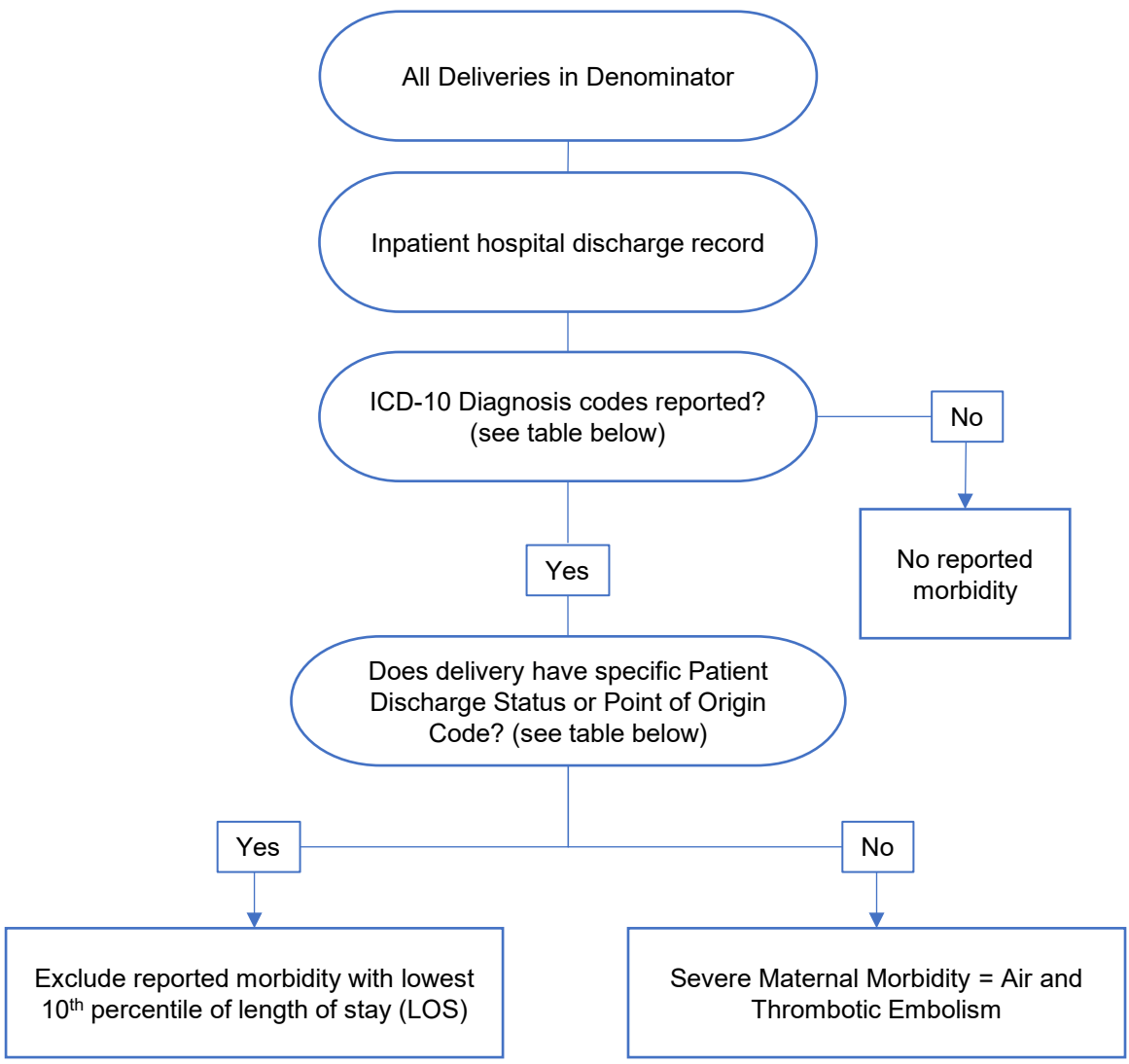
Category	Criteria
Patient Discharge Status (Discharge [Patient] Status Code)[1]	Discharged/Transferred to home/self-care (routine discharge), Discharged to home under care of organized home health service provider, Left against medical advice, Discharged/Transferred to Court/Law Enforcement, Discharged to home or self-care with a planned acute care hospital inpatient readmission
Point of Origin Code (Admission Source Type)[1]	Non-Health Care Facility Point of Origin, Clinic or Physicians Office, Court Law Enforcement
ICD-10 Diagnosis codes for Adult Respiratory Distress Syndrome[6]	J80, J95.1, J95.2, J95.3, J95.821, J95.822, J96.00, J96.01, J96.02, J96.20, J96.21, J96.22, R09.2

Severe Maternal Morbidity (SMM): Air and Thrombotic Embolism

Denominator:



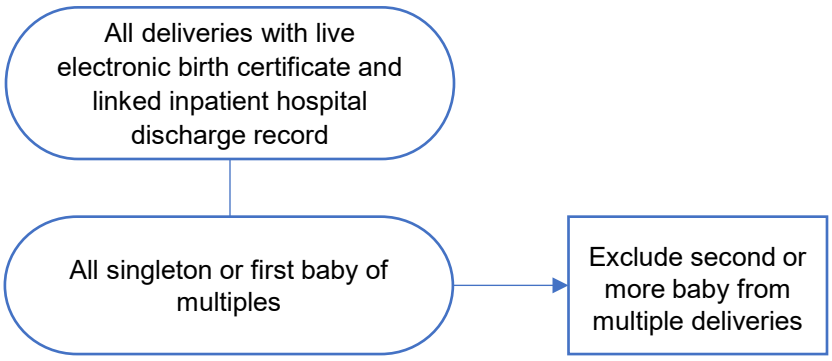
Numerator:



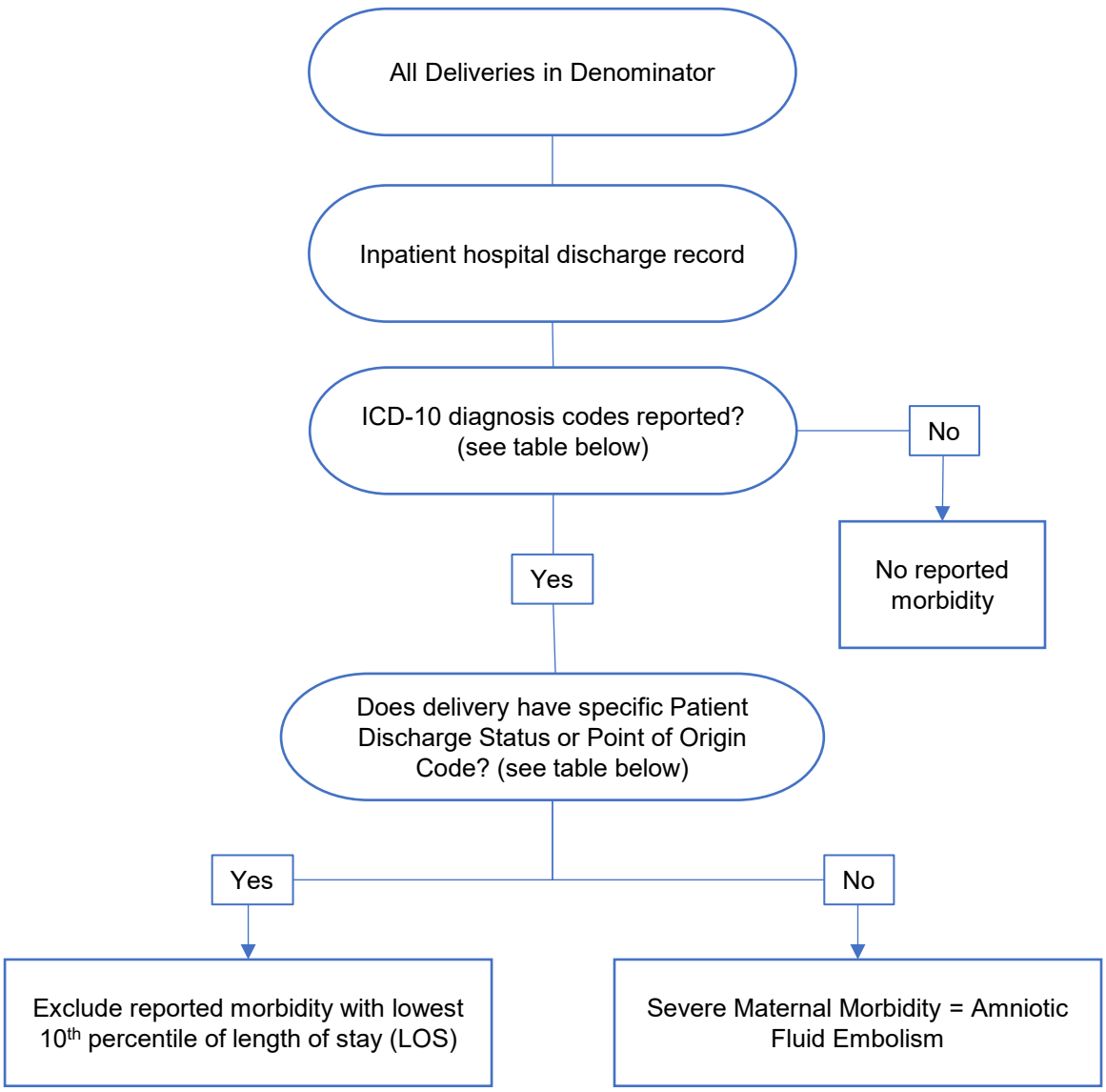
Category	Criteria
Patient Discharge Status (Discharge [Patient] Status Code)[1]	Discharged/Transferred to home/self-care (routine discharge), Discharged to home under care of organized home health service provider, Left against medical advice, Discharged/Transferred to Court/Law Enforcement, Discharged to home or self-care with a planned acute care hospital inpatient readmission
Point of Origin Code (Admission Source Type)[1]	Non-Health Care Facility Point of Origin, Clinic or Physicians Office, Court Law Enforcement
ICD-10 Diagnosis codes for Air and Thrombotic Embolism[6]	I26.01, I26.02, I26.09, I26.90, I26.92, I26.99, O88.011, O88.012, O88.013, O88.019, O88.02, O88.03, O88.211, O88.212, O88.213, O88.219, O88.22, O88.23, O88.311, O88.312, O88.313, O88.319, O88.32, O88.33, O88.81, O88.811, O88.812, O88.813, O88.819, O88.82, O88.83, I26.0

Severe Maternal Morbidity (SMM): Amniotic Fluid Embolism

Denominator:



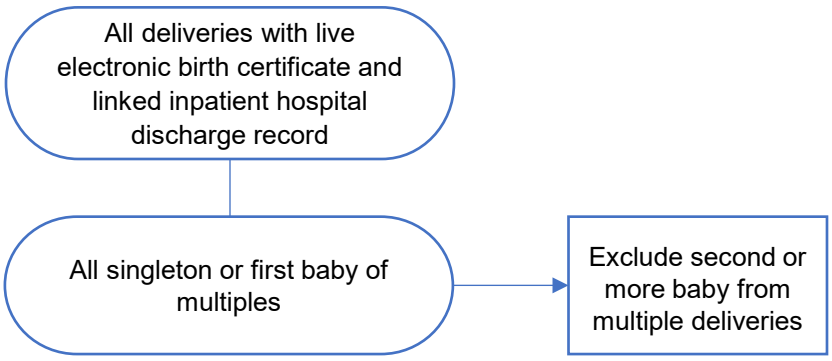
Numerator:



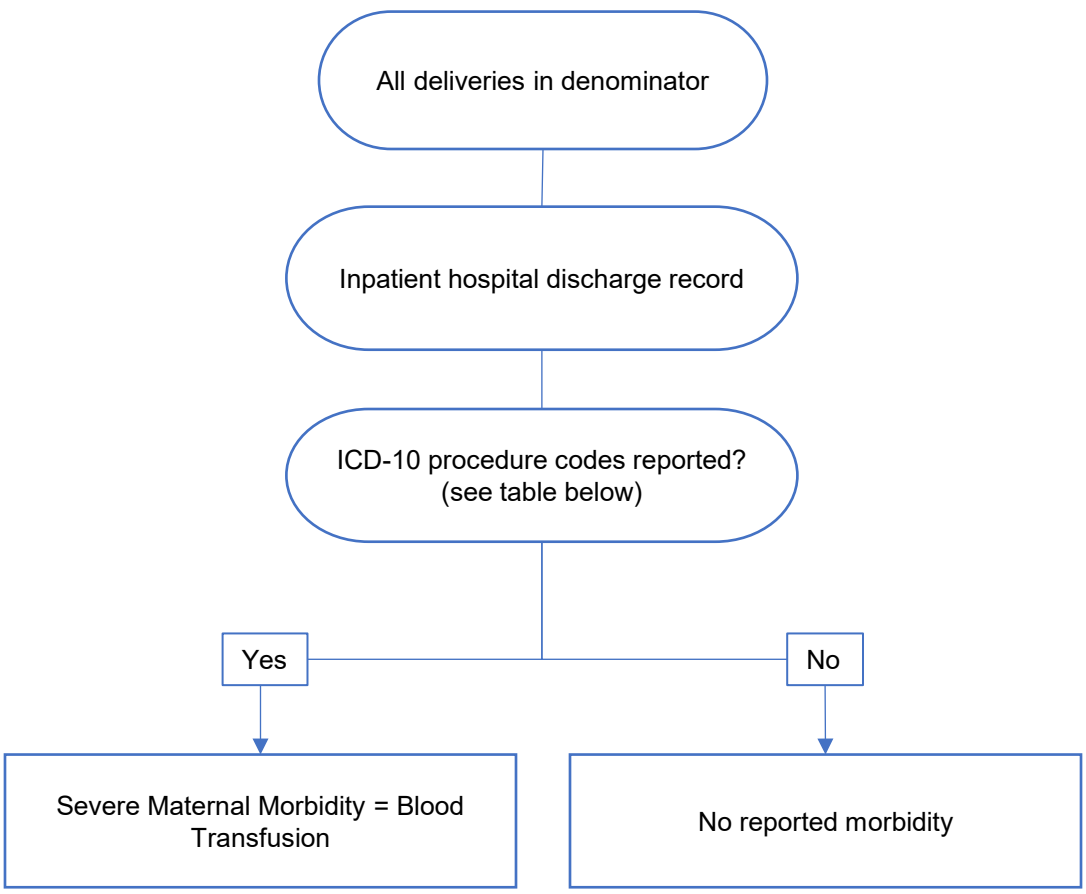
Category	Criteria
Patient Discharge Status (Discharge [Patient] Status Code)[1]	Discharged/Transferred to home/self-care (routine discharge), Discharged to home under care of organized home health service provider, Left against medical advice, Discharged/Transferred to Court/Law Enforcement, Discharged to home or self-care with a planned acute care hospital inpatient readmission
Point of Origin Code (Admission Source Type)[1]	Non-Health Care Facility Point of Origin, Clinic or Physicians Office, Court Law Enforcement
ICD-10 Diagnosis codes for Amniotic Fluid Embolism[6]	O88.111, O88.112, O88.113, O88.12, O88.13

Severe Maternal Morbidity (SMM): Blood Transfusion

Denominator:



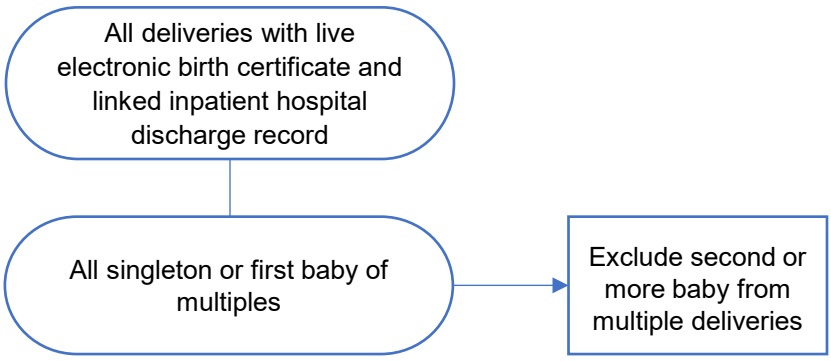
Numerator:



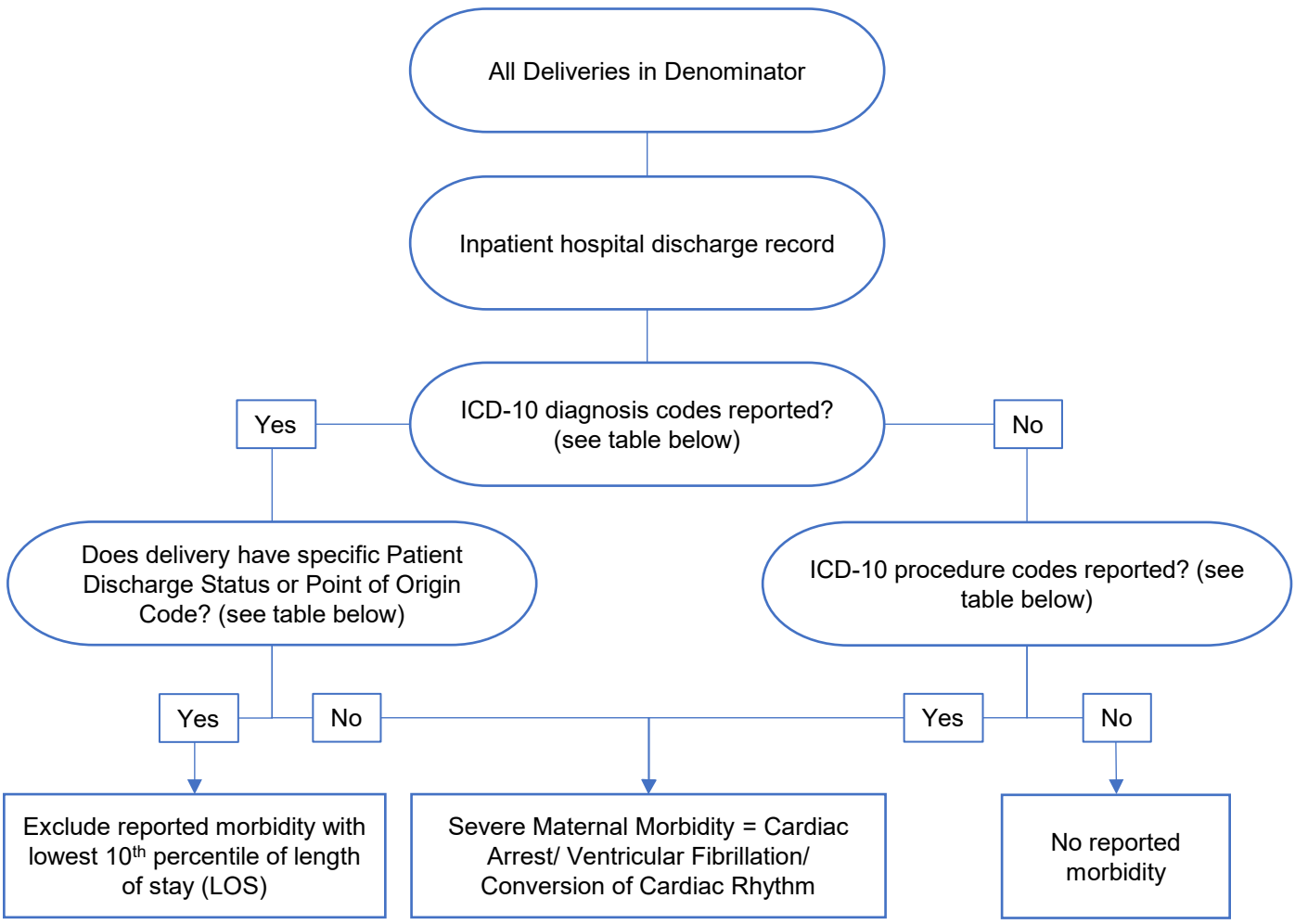
Category	Criteria
ICD-10 Procedure codes for Blood Transfusion[6]	30233H1, 30233L1, 30233K1, 30233M1, 30233N1, 30233P1, 30233R1, 30233T1, 30240H1, 30240K1, 30240L1, 30240M1, 30240N1, 30240P1, 30240R1, 30240T1, 30243H1, 30243K1, 30243L1, 30243M1, 30243N1, 30243P1, 30243R1, 30243T1, 30233N0, 30233P0, 30240N0, 30240P0, 30243N0, 30243P0

Severe Maternal Morbidity (SMM): Cardiac Arrest/Ventricular Fibrillation/Conversion of Cardiac Rhythm

Denominator:



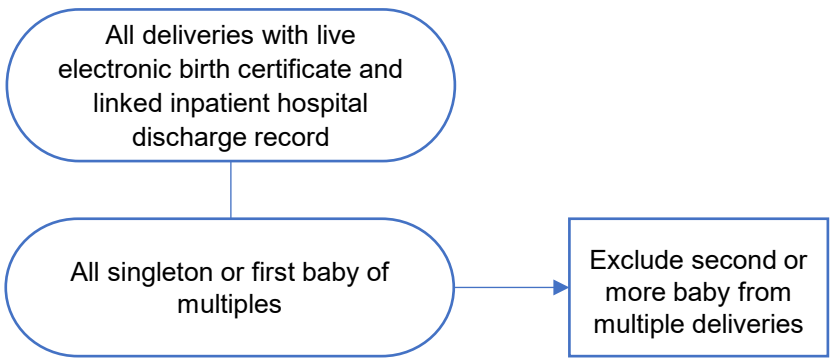
Numerator:



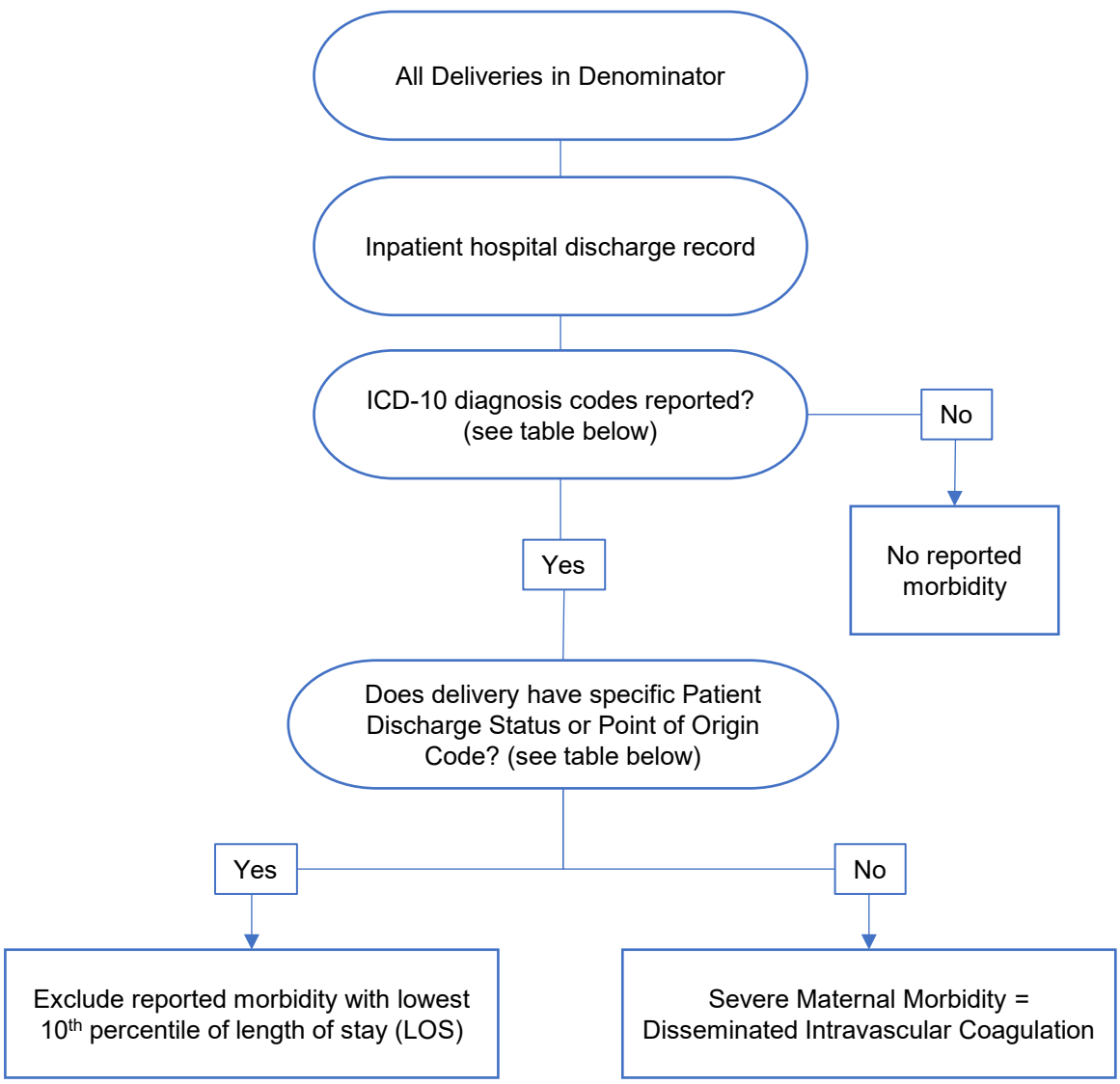
Category	Criteria
Patient Discharge Status (Discharge [Patient] Status Code)[1]	Discharged/Transferred to home/self-care (routine discharge), Discharged to home under care of organized home health service provider, Left against medical advice, Discharged/Transferred to Court/Law Enforcement, Discharged to home or self-care with a planned acute care hospital inpatient readmission
Point of Origin Code (Admission Source Type)[1]	Non-Health Care Facility Point of Origin, Clinic or Physicians Office, Court Law Enforcement
ICD-10 Diagnosis codes for Cardiac Arrest/ Ventricular Fibrillation[6]	I46.2, I46.8, I46.9, I49.01, I49.02
ICD-10 Procedure codes for Conversion of Cardiac Rhythm[6]	5A2204Z, 5A12012

Severe Maternal Morbidity (SMM): Disseminated Intravascular Coagulation (DIC)

Denominator:



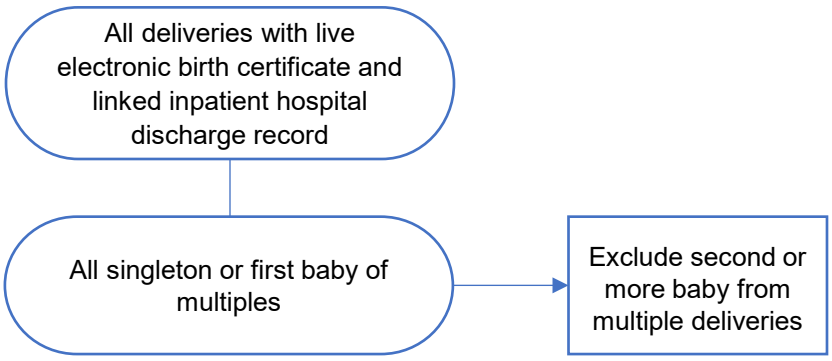
Numerator:



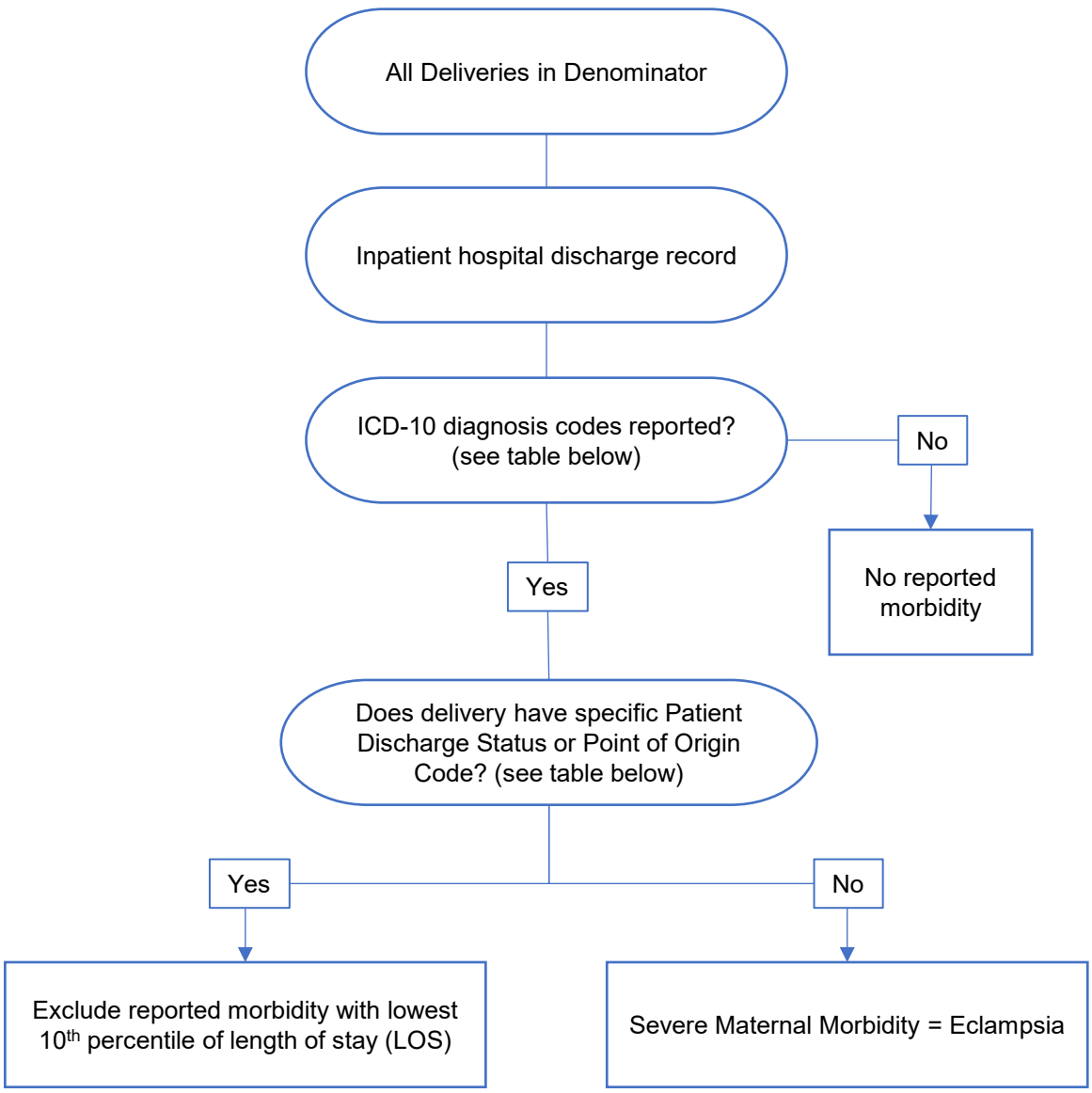
Category	Criteria
Patient Discharge Status (Discharge [Patient] Status Code)[1]	Discharged/Transferred to home/self-care (routine discharge), Discharged to home under care of organized home health service provider, Left against medical advice, Discharged/Transferred to Court/Law Enforcement, Discharged to home or self-care with a planned acute care hospital inpatient readmission
Point of Origin Code (Admission Source Type)[1]	Non-Health Care Facility Point of Origin, Clinic or Physicians Office, Court Law Enforcement
ICD-10 Diagnosis codes for Disseminated Intravascular Coagulation[6]	D65, D68.8, D68.9, O72.3

Severe Maternal Morbidity (SMM): Eclampsia

Denominator:



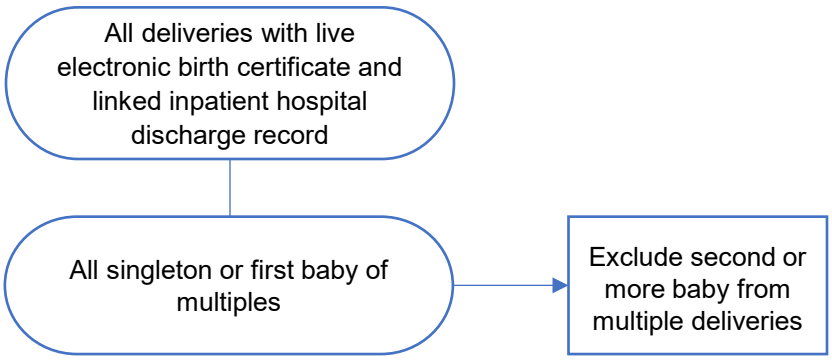
Numerator:



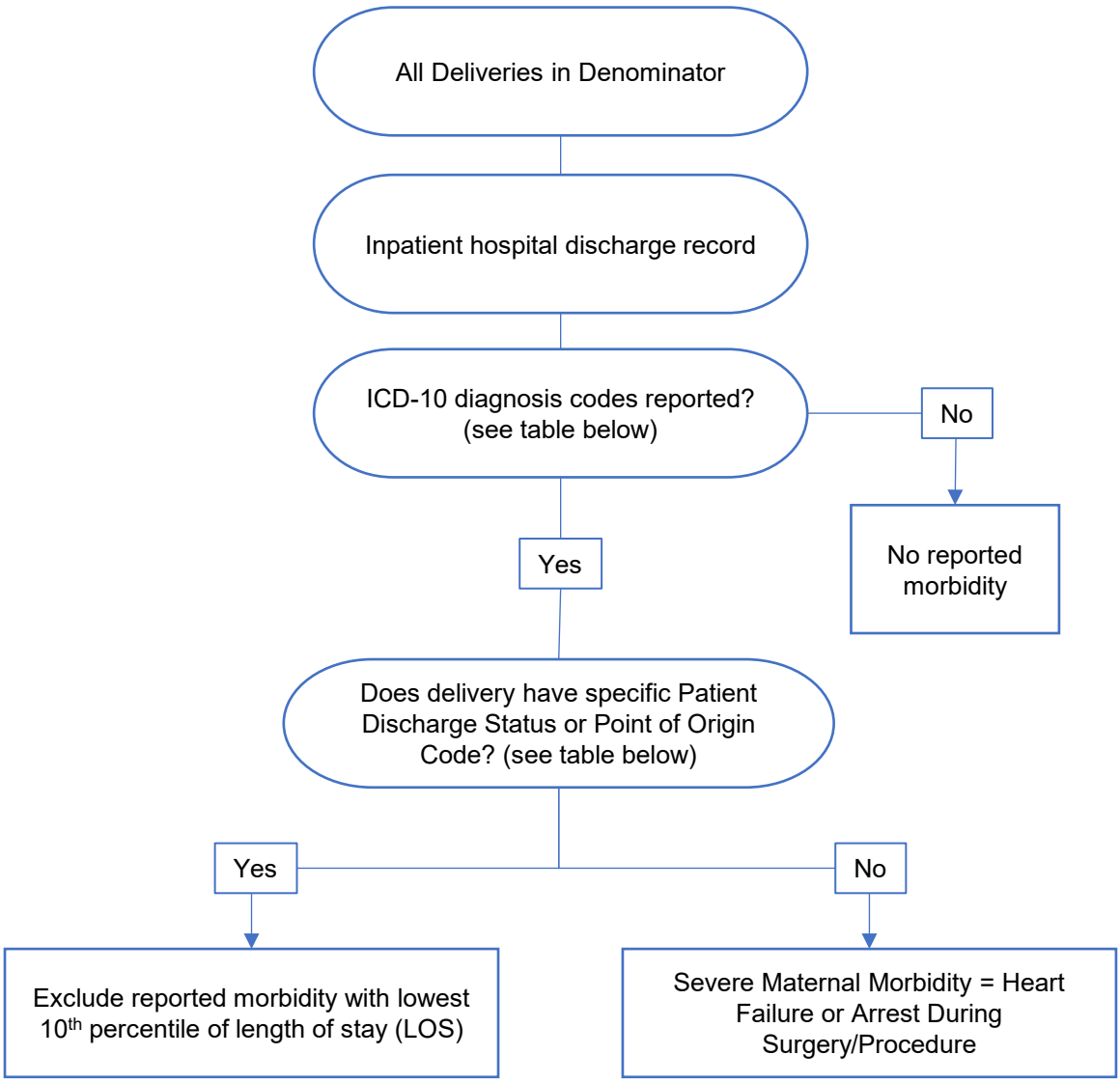
Category	Criteria
Patient Discharge Status (Discharge [Patient] Status Code)[1]	Discharged/Transferred to home/self-care (routine discharge), Discharged to home under care of organized home health service provider, Left against medical advice, Discharged/Transferred to Court/Law Enforcement, Discharged to home or self-care with a planned acute care hospital inpatient readmission
Point of Origin Code (Admission Source Type)[1]	Non-Health Care Facility Point of Origin, Clinic or Physicians Office, Court Law Enforcement
ICD-10 Diagnosis codes for Eclampsia[6]	O15.00, O15.02, O15.03, O15.1, O15.2, O15.9

Severe Maternal Morbidity (SMM): Heart Failure or Arrest During Surgery/Procedure

Denominator:



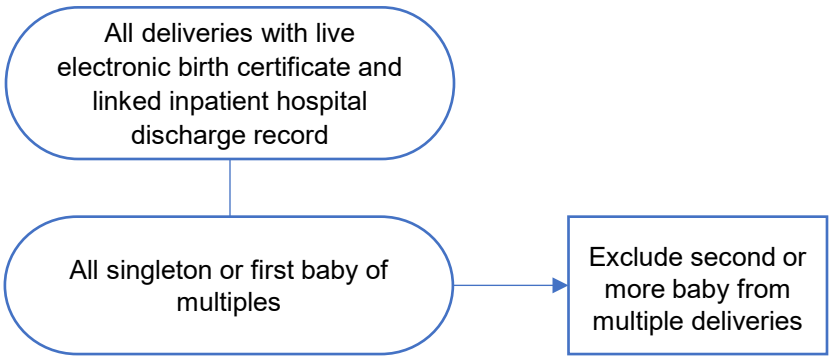
Numerator:



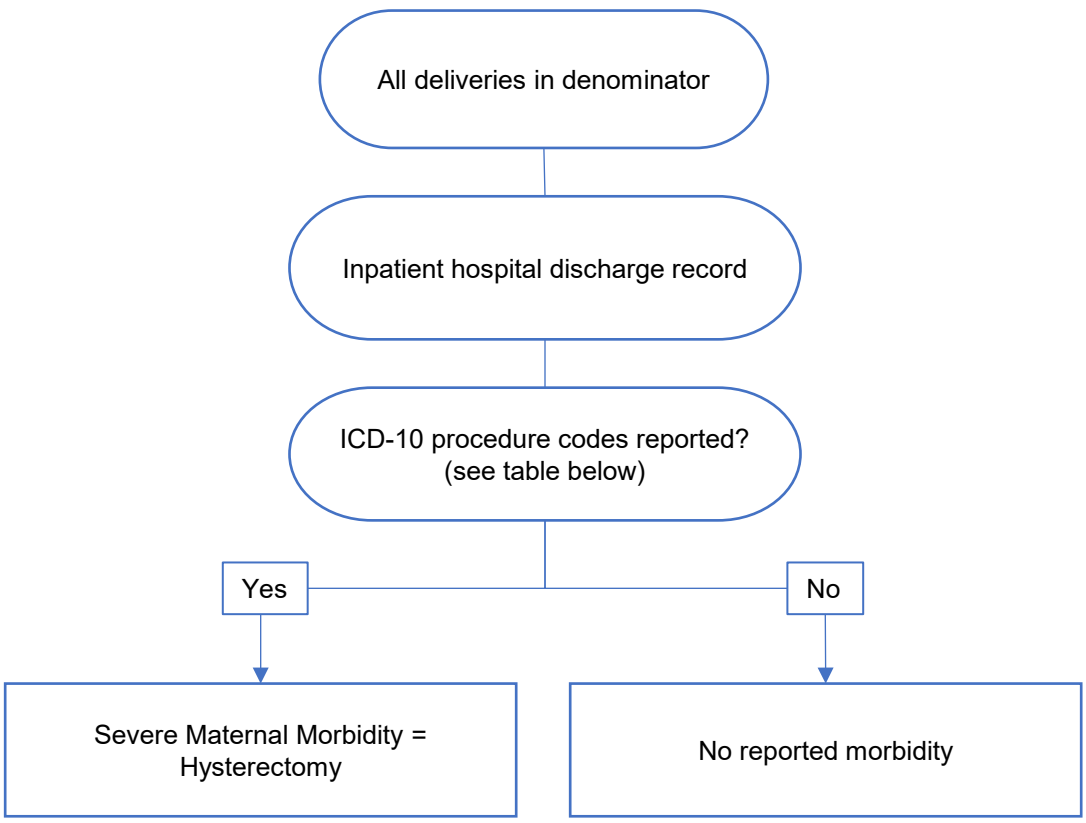
Category	Criteria
Patient Discharge Status (Discharge [Patient] Status Code)[1]	Discharged/Transferred to home/self-care (routine discharge), Discharged to home under care of organized home health service provider, Left against medical advice, Discharged/Transferred to Court/Law Enforcement, Discharged to home or self-care with a planned acute care hospital inpatient readmission
Point of Origin Code (Admission Source Type)[1]	Non-Health Care Facility Point of Origin, Clinic or Physicians Office, Court Law Enforcement
ICD-10 Diagnosis codes for Heart Failure or Arrest During Surgery/Procedure[6]	I97.120, I97.121, I97.130, I97.131, I97.710, I97.711

Severe Maternal Morbidity (SMM): Hysterectomy

Denominator:



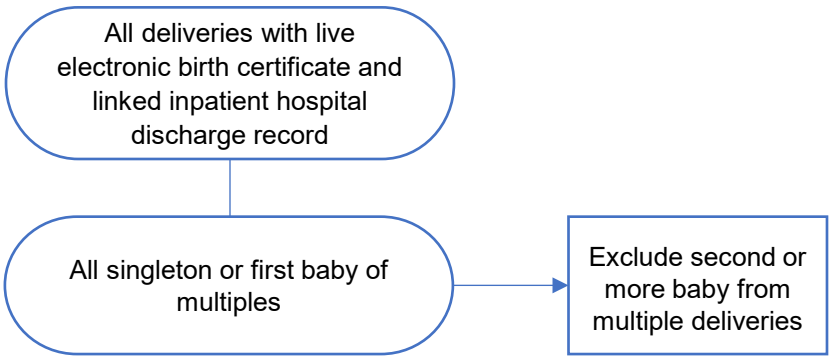
Numerator:



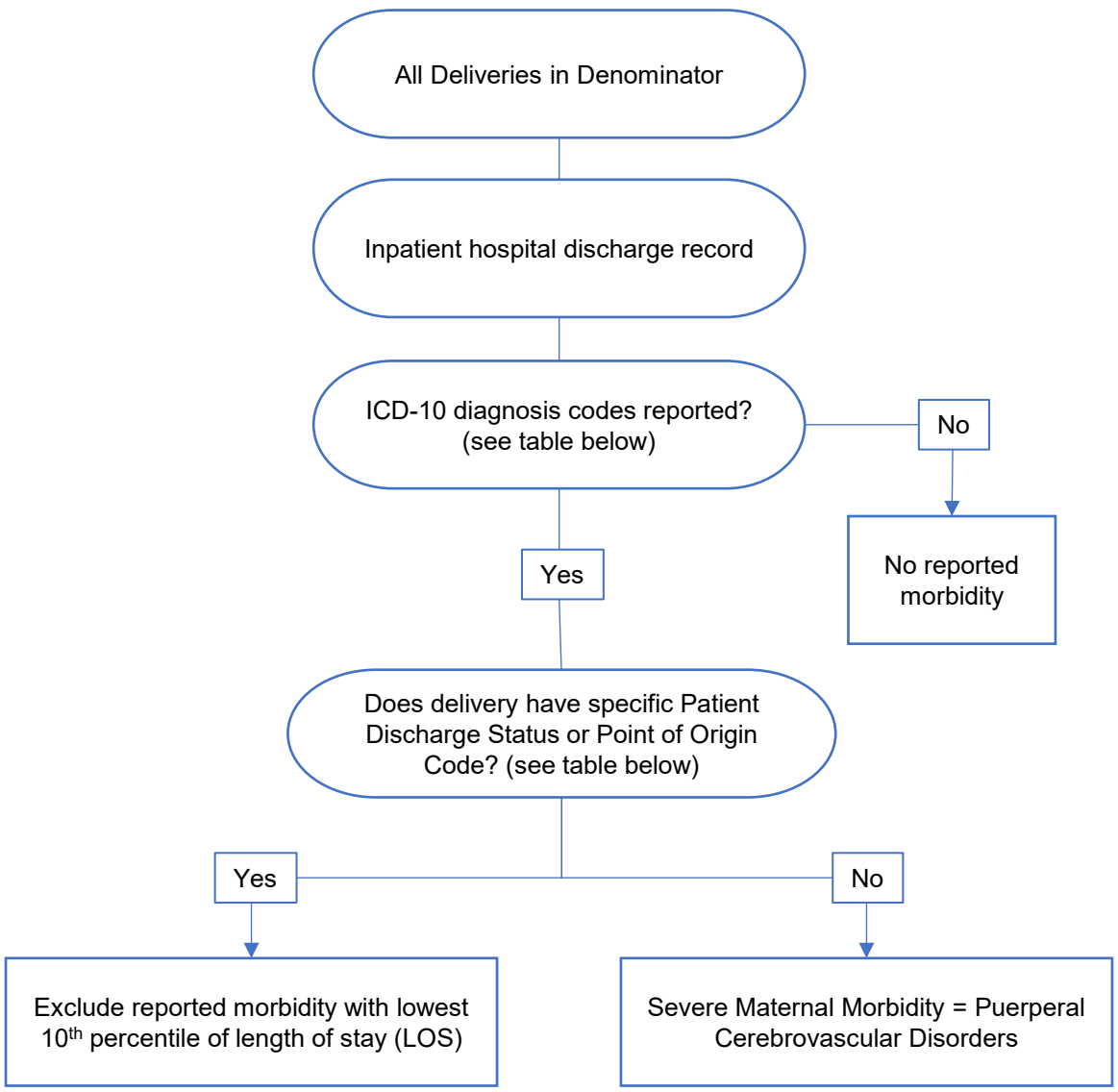
Category	Criteria
ICD-10 Procedure codes for Hysterectomy[6]	0UT90ZZ, 0UT94ZZ, 0UT97ZZ, 0UT98ZZ, 0UT9FZZ

Severe Maternal Morbidity (SMM): Puerperal Cerebrovascular Disorders

Denominator:



Numerator:

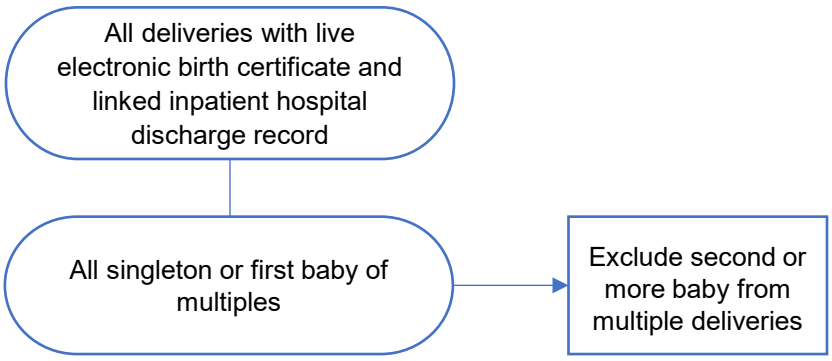


Severe Maternal Morbidity (SMM): Puerperal Cerebrovascular Disorders

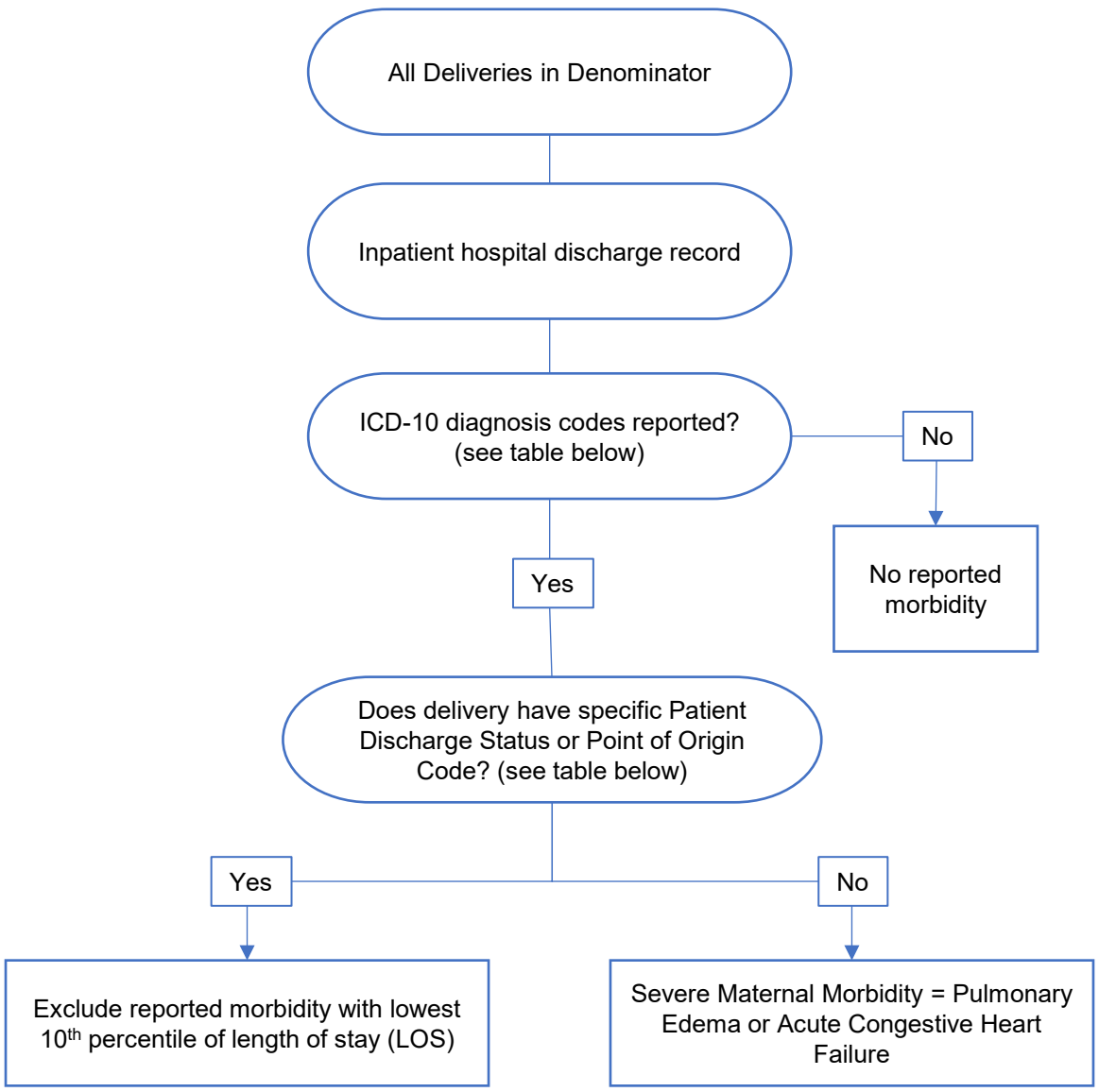
Category	Criteria
Patient Discharge Status (Discharge [Patient] Status Code)[1]	Discharged/Transferred to home/self-care (routine discharge), Discharged to home under care of organized home health service provider, Left against medical advice, Discharged/Transferred to Court/Law Enforcement, Discharged to home or self-care with a planned acute care hospital inpatient readmission
Point of Origin Code (Admission Source Type)[1]	Non-Health Care Facility Point of Origin, Clinic or Physicians Office, Court Law Enforcement
ICD-10 Diagnosis codes for Puerperal Cerebrovascular Disorders[6]	I60.0, I60.01, I60.02, I60.1, I60.10, I60.11, I60.12, I60.2, I60.3, I60.30, I60.31, I60.32, I60.4, I60.5, I60.50, I60.51, I60.52, I60.6, I60.7, I60.8, I60.9, I61.1, I61.2, I61.3, I61.4, I61.5, I61.6, I61.8, I61.9, I62.0, I62.00, I62.01, I62.02, I62.03, I62.1, I62.9, I63.0, I63.00, I63.01, I63.011, I63.012, I63.013, I63.019, I63.02, I63.03, I63.031, I63.032, I63.033, I63.039, I63.09, I63.1, I63.10, I63.11, I63.111, I63.112, I63.113, I63.119, I63.12, I63.13, I63.131, I63.132, I63.133, I63.139, I63.19, I63.2, I63.20, I63.21, I63.211, I63.212, I63.213, I63.219, I63.22, I63.23, I63.231, I63.232, I63.233, I63.239, I63.29, I63.30, I63.31, I63.311, I63.312, I63.313, I63.319, I63.32, I63.321, I63.322, I63.323, I63.329, I63.33, I63.331, I63.332, I63.333, I63.339, I63.34, I63.341, I63.342, I63.343, I63.349, I63.39, I63.40, I63.41, I63.411, I63.412, I63.413, I63.419, I63.42, I63.421, I63.422, I63.423, I63.429, I63.43, I63.431, I63.432, I63.433, I63.439, I63.44, I634.41, I63.442, I63.443, I63.449, I63.49, I63.50, I63.51, I63.511, I63.512, I63.513, I63.519, I63.52, I63.521, I63.522, I63.523, I63.529, I63.53, I63.531, I63.532, I63.533, I63.539, I63.54, I63.541, I63.542, I63.543, I63.549, I63.59, I63.6, I63.8, I63.81, I63.89, I63.9, I65.0, I65.01, I65.02, I65.03, I65.09, I65.1, I65.2, I65.21, I65.22, I65.23, I65.29, I65.8, I65.9, I66.0, I66.01, I66.02, I66.03, I66.09, I66.1, I66.11, I66.12, I66.13, I66.19, I66.2, I66.21, I66.22, I66.23, I66.29, I66.3, I66.8, I66.9, I67.0, I67.1, I67.2, I67.3, I67.4, I67.5, I67.6, I67.7, I67.8, I67.81, I67.82, I67.83, I67.841, I67.848, I67.850, I67.858, I67.89, I67.9, I68.0, I68.2, I68.8, O22.51, O22.52, O22.53, I97.810, I97.811, I97.820, I97.821, O87.3

Severe Maternal Morbidity (SMM): Pulmonary Edema or Acute Congestive Heart Failure

Denominator:



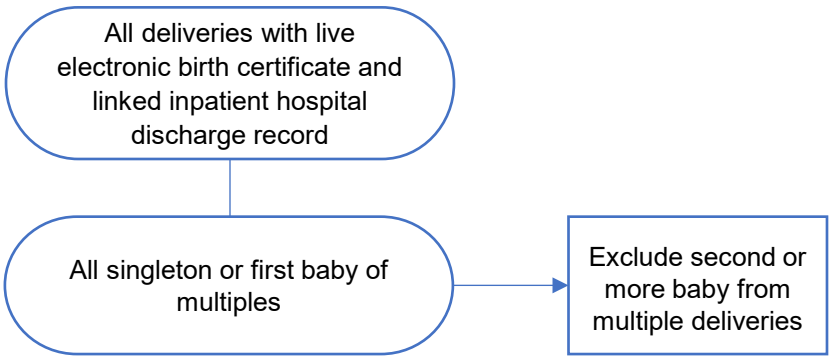
Numerator:



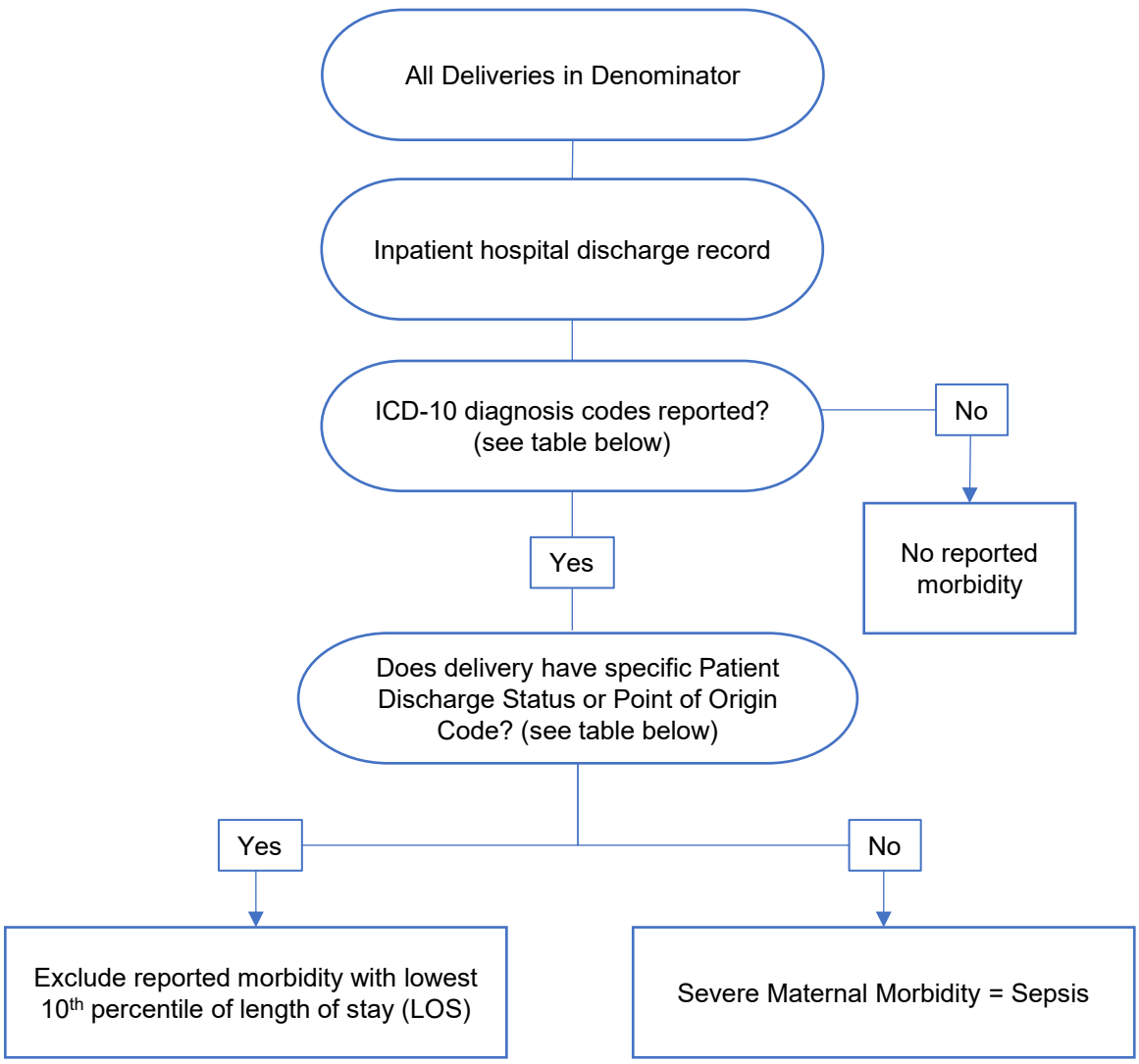
Category	Criteria
Patient Discharge Status (Discharge [Patient] Status Code)[1]	Discharged/Transferred to home/self-care (routine discharge), Discharged to home under care of organized home health service provider, Left against medical advice, Discharged/Transferred to Court/Law Enforcement, Discharged to home or self-care with a planned acute care hospital inpatient readmission
Point of Origin Code (Admission Source Type)[1]	Non-Health Care Facility Point of Origin, Clinic or Physicians Office, Court Law Enforcement
ICD-10 Diagnosis codes for Pulmonary Edema[6]	J81.0, I50.1, I50.20, I50.21, I50.23, I50.30, I50.31, I50.33, I50.40, I50.41, I50.43, I50.9

Severe Maternal Morbidity (SMM): Sepsis

Denominator:



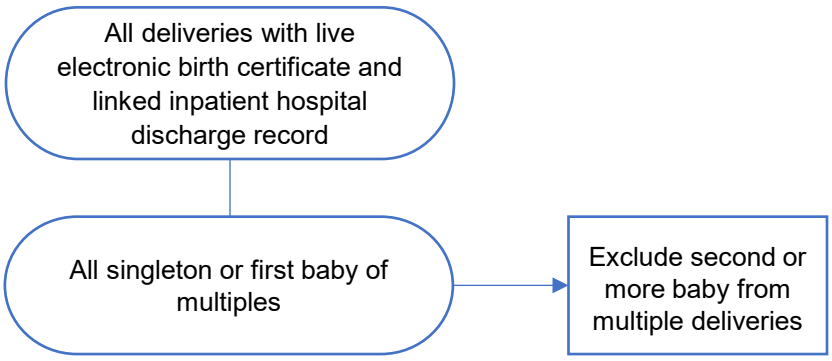
Numerator:



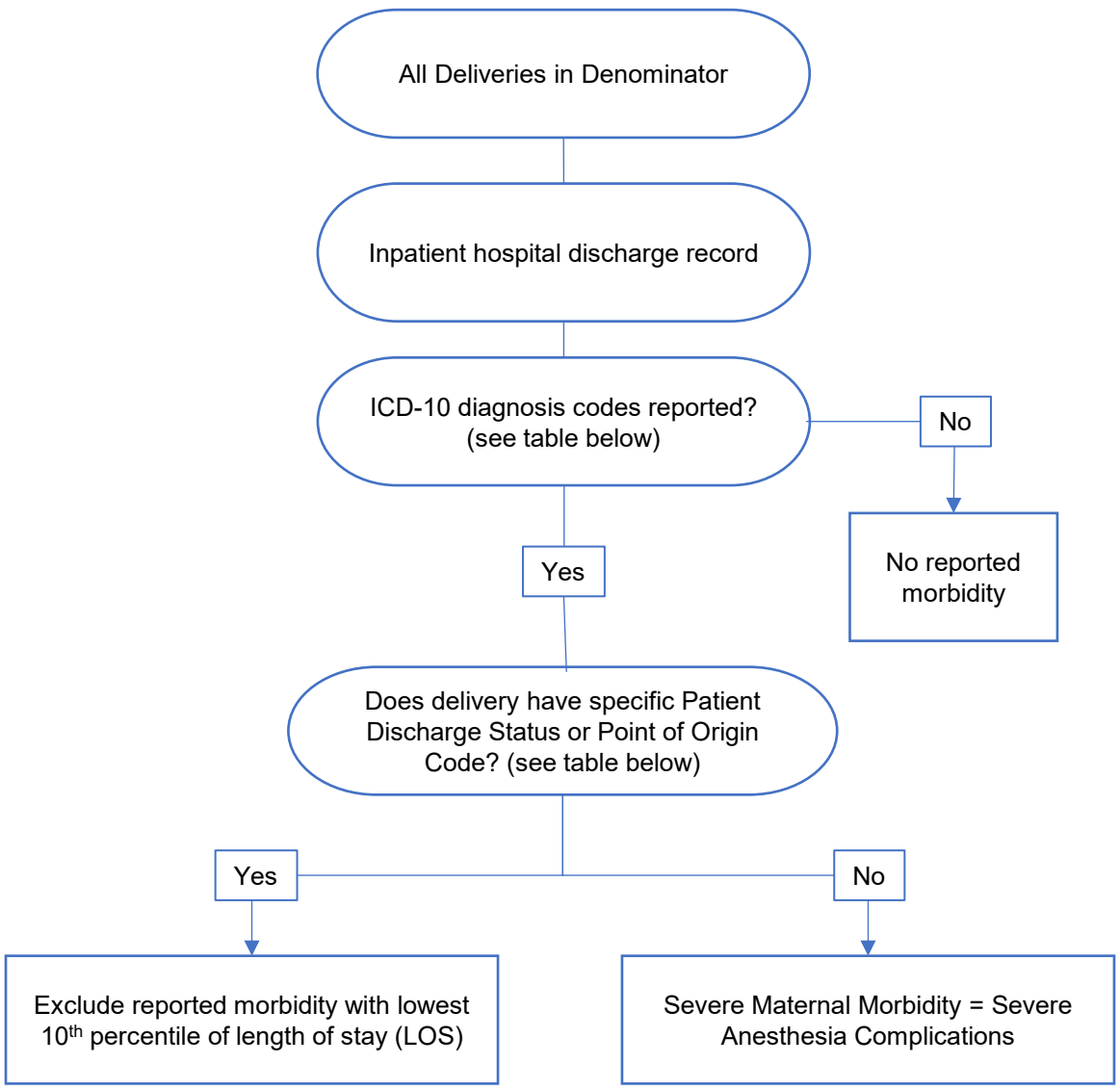
Category	Criteria
Patient Discharge Status (Discharge [Patient] Status Code)[1]	Discharged/Transferred to home/self-care (routine discharge), Discharged to home under care of organized home health service provider, Left against medical advice, Discharged/Transferred to Court/Law Enforcement, Discharged to home or self-care with a planned acute care hospital inpatient readmission
Point of Origin Code (Admission Source Type)[1]	Non-Health Care Facility Point of Origin, Clinic or Physicians Office, Court Law Enforcement
ICD-10 Diagnosis codes for Sepsis[6]	O85, O86.04, T80.211A, T81.4XXA, T81.44, T81.44XA, T81.44XD, T81.44XS, R65.20, A40.0, A40.1, A40.3, A40.8, A40.9, A41.01, A41.02, A41.1, A41.2, A41.3, A41.4, A41.50, A41.51, A41.52, A41.53, A41.59, A41.81, A41.89, A41.9, A32.7

Severe Maternal Morbidity (SMM): Severe Anesthesia Complications

Denominator:



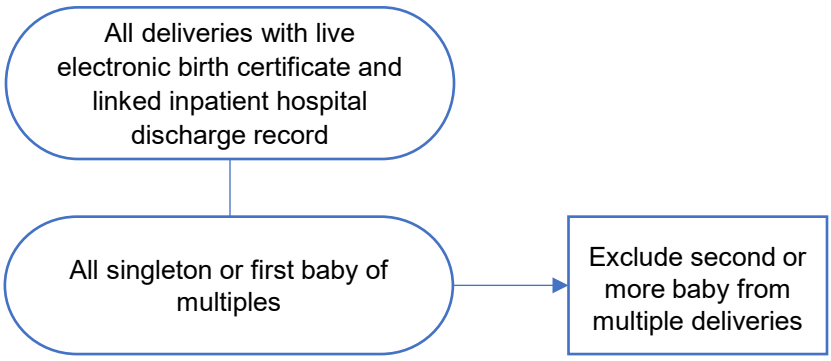
Numerator:



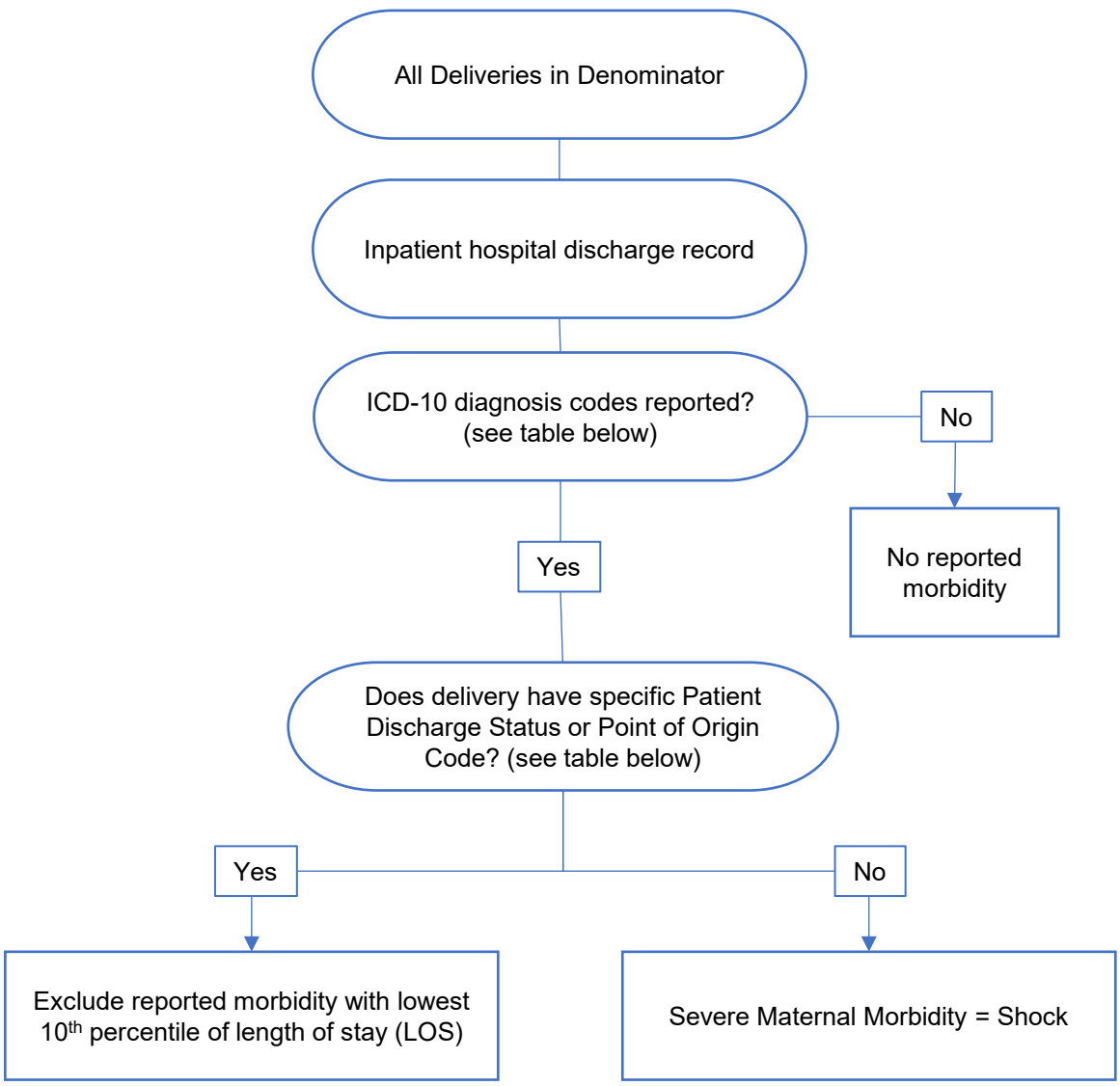
Category	Criteria
Patient Discharge Status (Discharge [Patient] Status Code)[1]	Discharged/Transferred to home/self-care (routine discharge), Discharged to home under care of organized home health service provider, Left against medical advice, Discharged/Transferred to Court/Law Enforcement, Discharged to home or self-care with a planned acute care hospital inpatient readmission
Point of Origin Code (Admission Source Type)[1]	Non-Health Care Facility Point of Origin, Clinic or Physicians Office, Court Law Enforcement
ICD-10 Diagnosis codes for Severe Anesthesia Complications[6]	O74.0, O74.1, O74.2, O74.3, O89.01, O89.09, O89.1, O89.2

Severe Maternal Morbidity (SMM): Shock

Denominator:



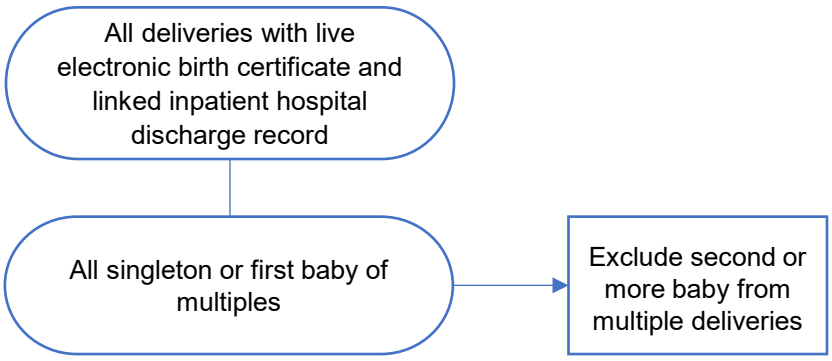
Numerator:



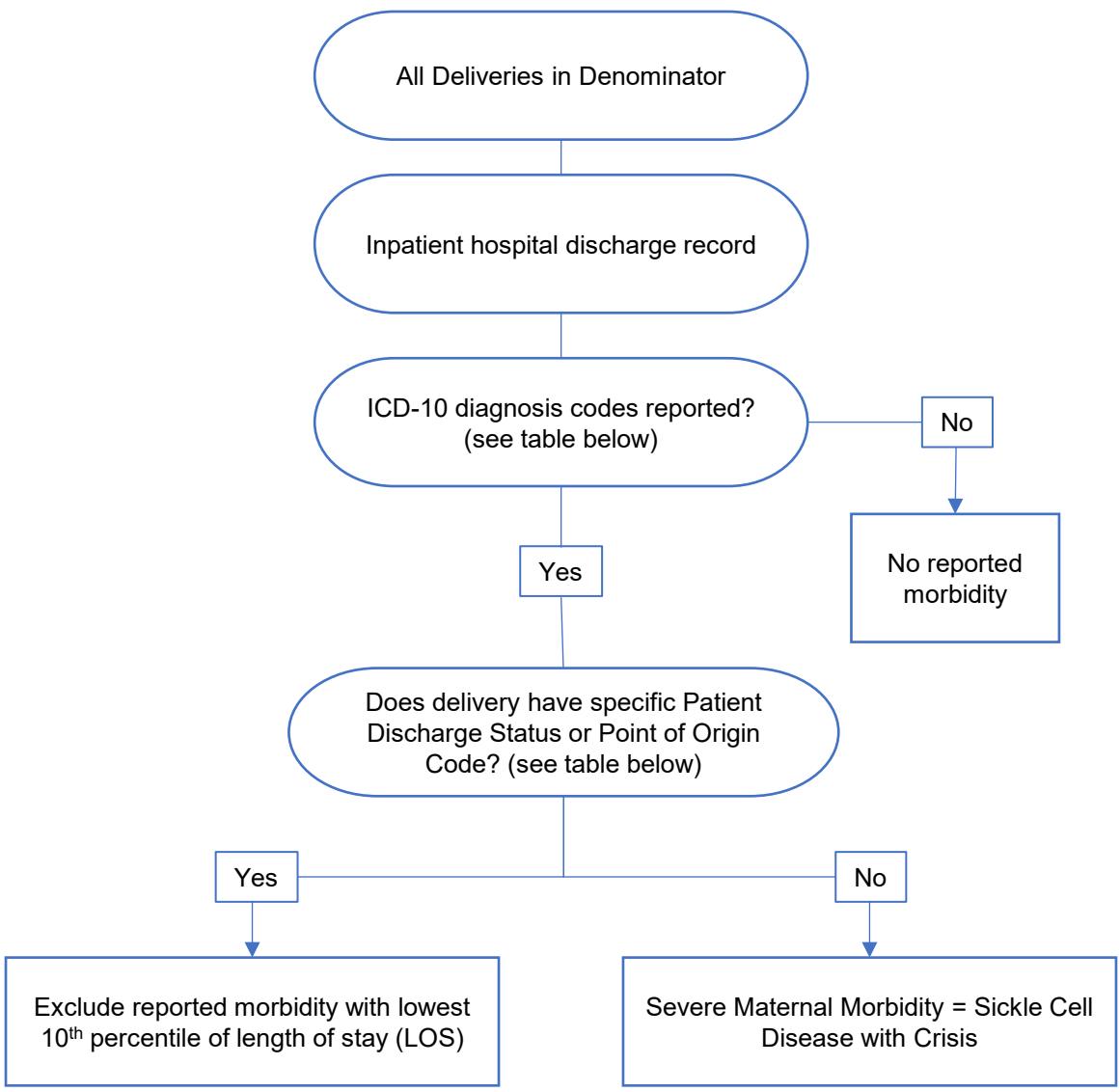
Category	Criteria
Patient Discharge Status (Discharge [Patient] Status Code)[1]	Discharged/Transferred to home/self-care (routine discharge), Discharged to home under care of organized home health service provider, Left against medical advice, Discharged/Transferred to Court/Law Enforcement, Discharged to home or self-care with a planned acute care hospital inpatient readmission
Point of Origin Code (Admission Source Type)[1]	Non-Health Care Facility Point of Origin, Clinic or Physicians Office, Court Law Enforcement
ICD-10 Diagnosis codes for Shock[6]	O75.1, R57.0, R57.1, R57.8, R57.9, R65.21, T78.2XXA, T88.2XXA, T88.6XXA, T81.10XA, T81.11XA, T81.19XA

Severe Maternal Morbidity (SMM): Sickle Cell Disease with Crisis

Denominator:



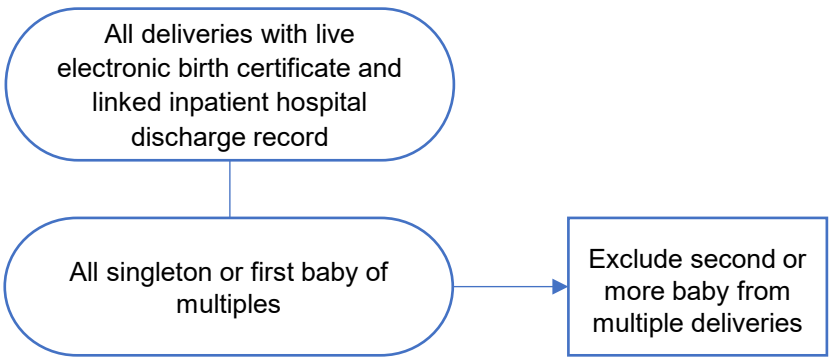
Numerator:



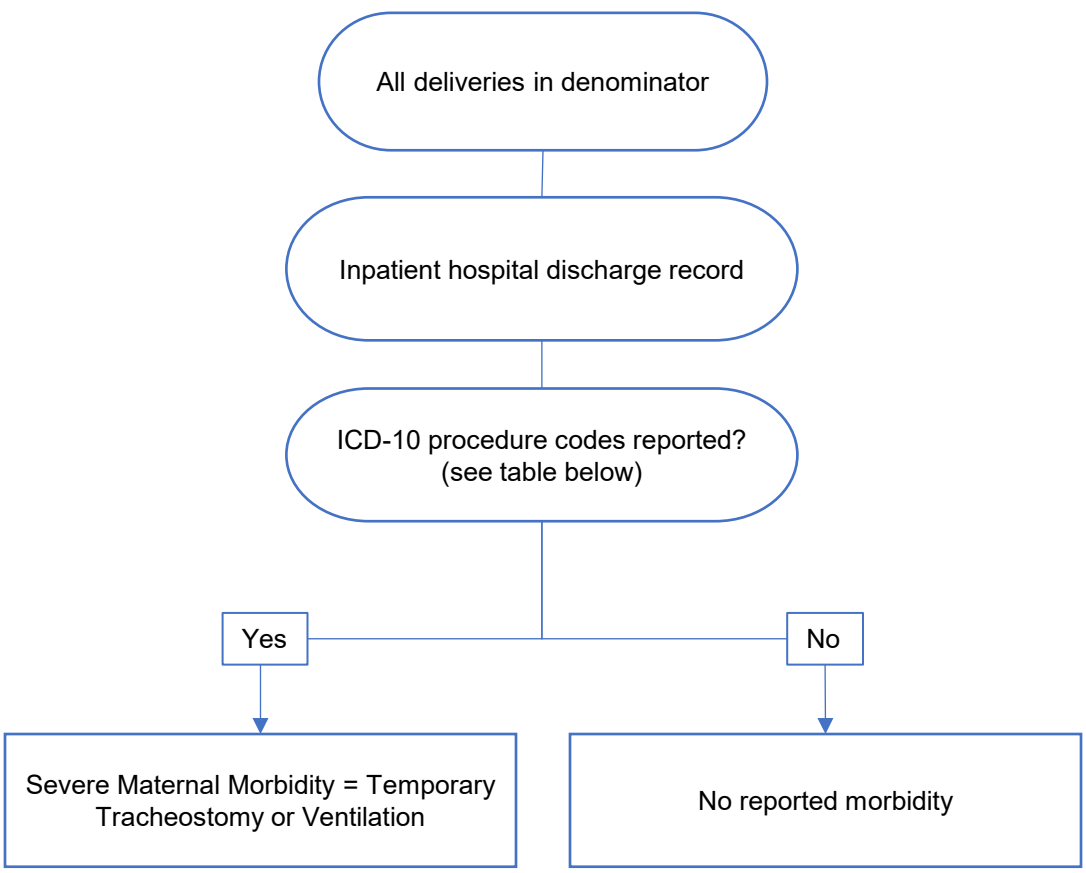
Category	Criteria
Patient Discharge Status (Discharge [Patient] Status Code)[1]	Discharged/Transferred to home/self-care (routine discharge), Discharged to home under care of organized home health service provider, Left against medical advice, Discharged/Transferred to Court/Law Enforcement, Discharged to home or self-care with a planned acute care hospital inpatient readmission
Point of Origin Code (Admission Source Type)[1]	Non-Health Care Facility Point of Origin, Clinic or Physicians Office, Court Law Enforcement
ICD-10 Diagnosis codes for Sickle Cell Disease with Crisis[6]	D57.00, D57.01, D57.02, D57.211, D57.212, D57.219, D57.411, D57.412, D57.419, D57.811, D57.812, D57.819

Severe Maternal Morbidity (SMM): Temporary Tracheostomy or Ventilation

Denominator:



Numerator:

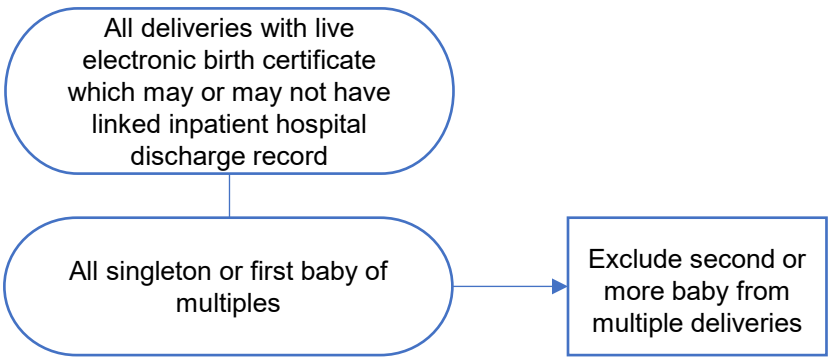


Category	Criteria
ICD-10 Procedure codes for Temporary Tracheostomy or Ventilation[6]	0B110Z4, 0B110F4, 0B113Z4, 0B113F4, 0B114Z4, 0B114F4, 5A1935Z, 5A1945Z, 5A1955Z

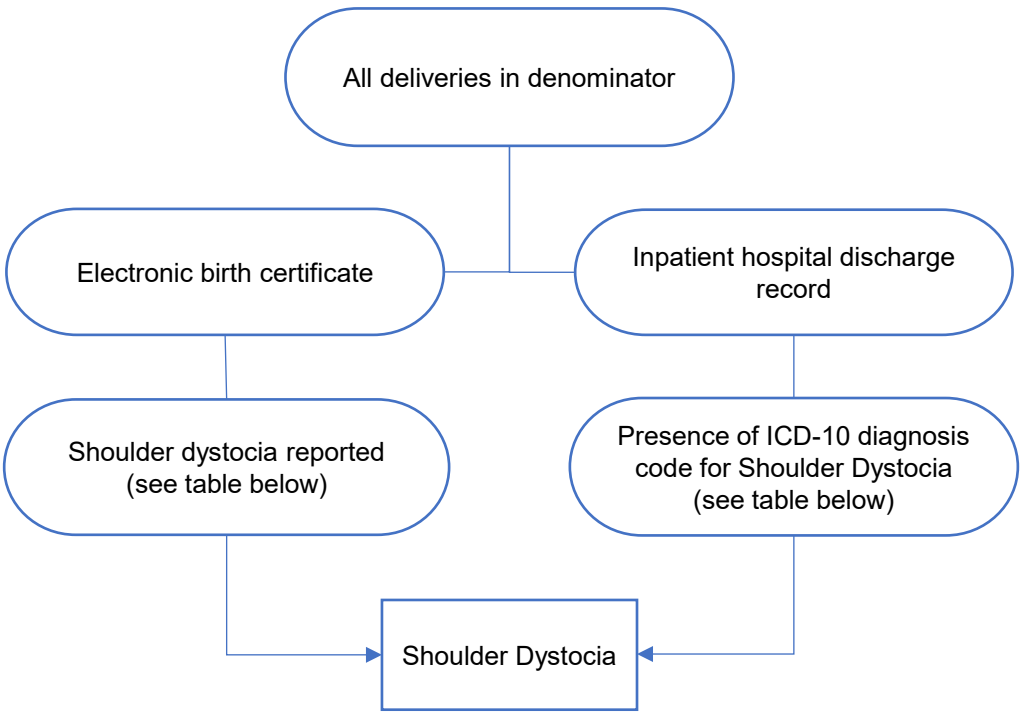
Shoulder Dystocia

Description: A condition in which one or both of a baby's shoulders get caught during childbirth.

Denominator:



Numerator:

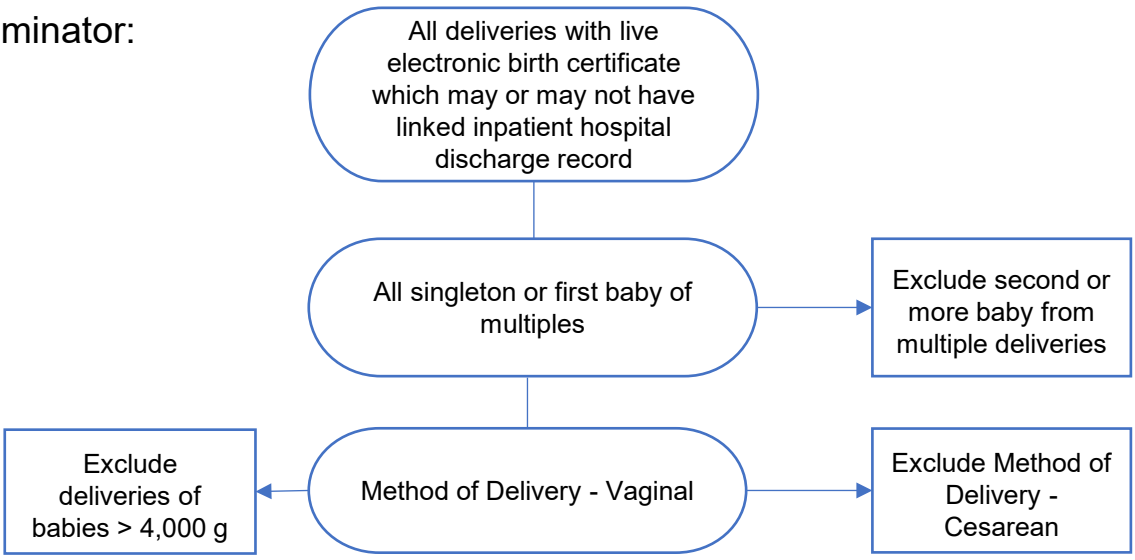


Category	Criteria
Electronic birth certificate: Vital Events Registration and Information (VERI) – August 2021 forward **Primary Section:** Labor and Delivery **Subsection:** Infant Characteristics at Delivery **Field:** Select all that apply	Shoulder Dystocia
Electronic birth certificate: Vital Information Platform (VIP) – up to August 2021 **Primary Section:** Labor & Delivery II **Subsection:** **Field:** Characteristics of Labor & Delivery – Other (check all that apply)	Shoulder Dystocia
ICD-10 Diagnosis Code for Shoulder Dystocia	O66.0

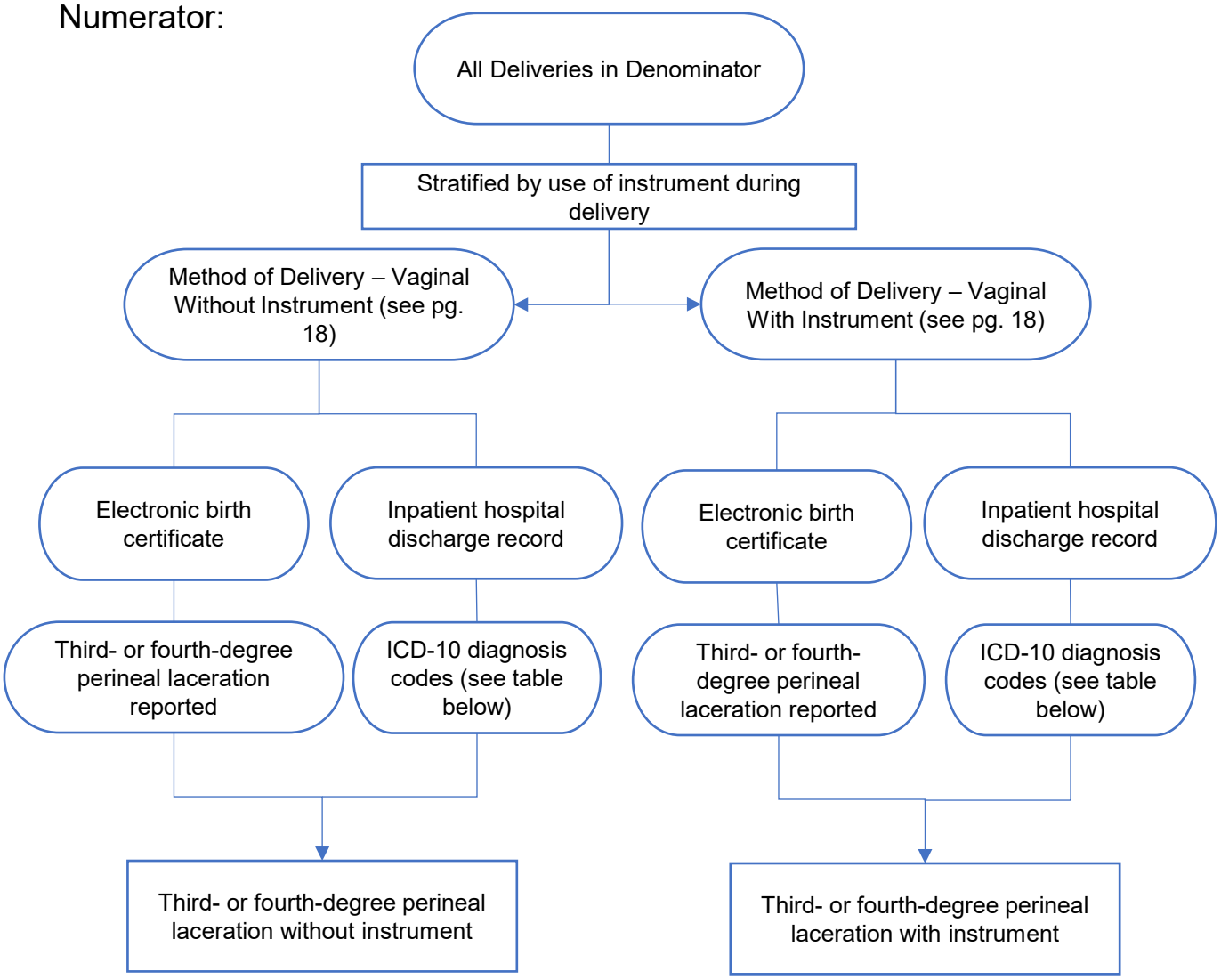
Third- and Fourth-Degree Perineal Lacerations

Description: Third- and fourth-degree perineal lacerations are severe tears of the vagina and perineum that also may involve tissues of the anus.

Denominator:



Numerator:



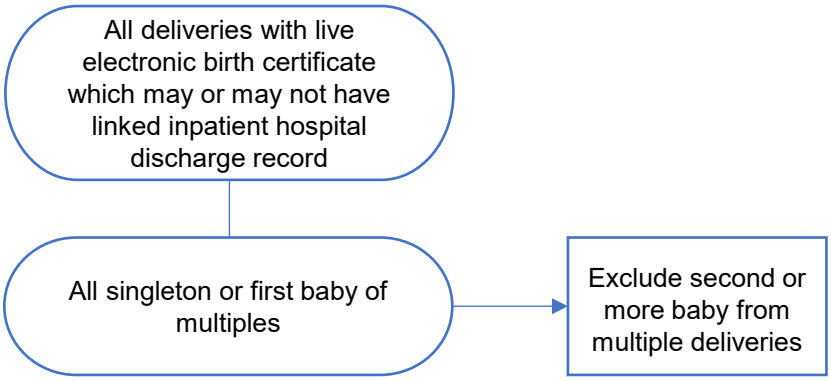
Third- and Fourth-Degree Perineal Laceration

Category	Criteria
Electronic birth certificate: Vital Events Registration and Information (VERI) – August 2021 forward **Primary Section:** Maternal PPD **Subsection:** Maternal Morbidity **Field:** Select all that apply:	Third- or fourth-degree perineal laceration
Electronic birth certificate: Vital Information Platform (VIP) – up to August 2021 **Primary Section:** Maternal Postpartum **Subsection:** Maternal Morbidity **Field:** Select all that apply:	Third- or fourth-degree perineal laceration
Procedure codes for Instrument (based on criteria from AHRQ Quality indicators PSI 18)	10D07Z3, 10D07Z4, 10D07Z5, 10D07Z6, 10D07Z8
ICD-10 Diagnosis codes for Third- or Fourth-Degree Perineal Laceration	O70.2, O70.20, O70.21, O70.22, O70.23, O70.3

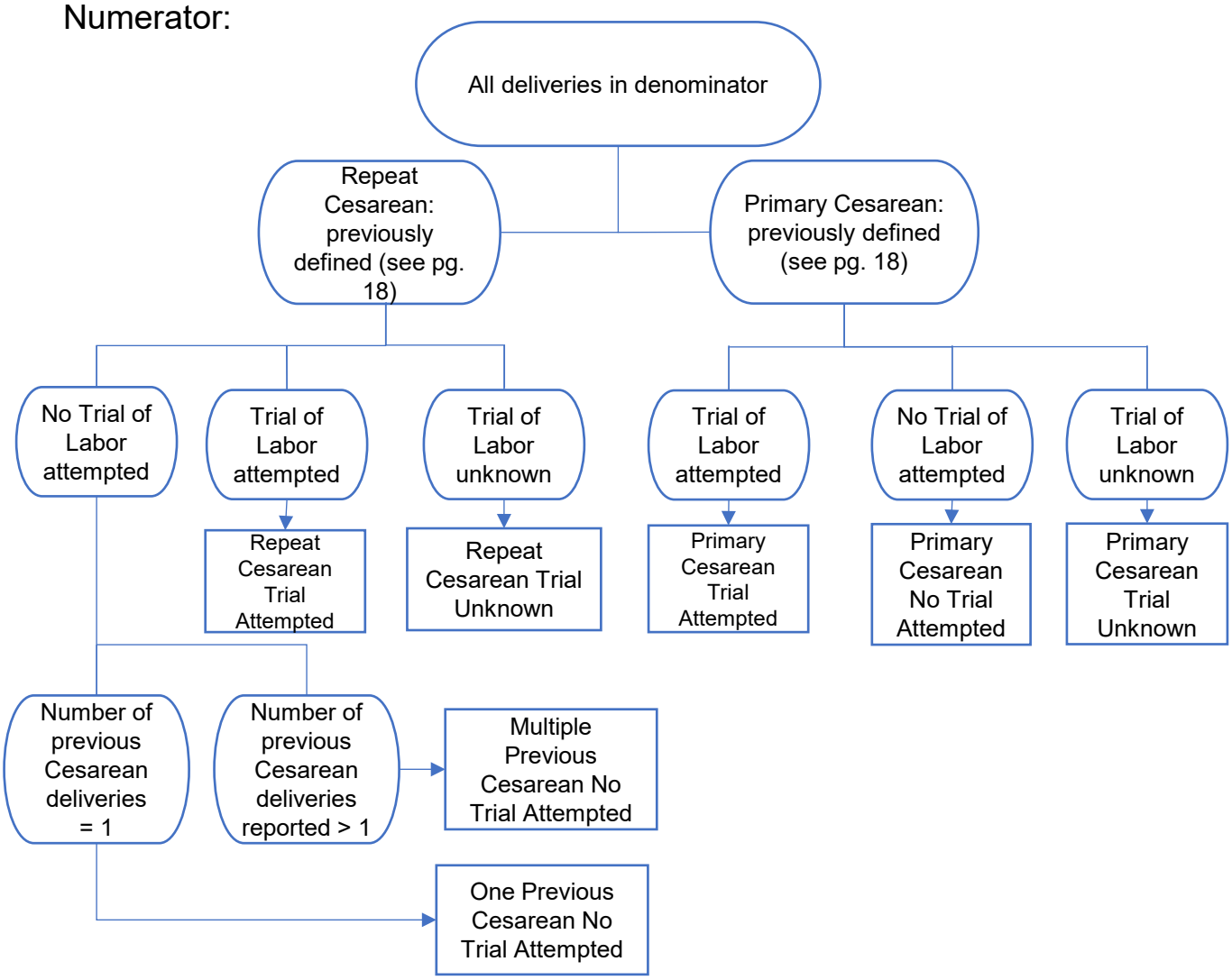
Trial of Labor

Description: An attempt was made to deliver vaginally.

Denominator:



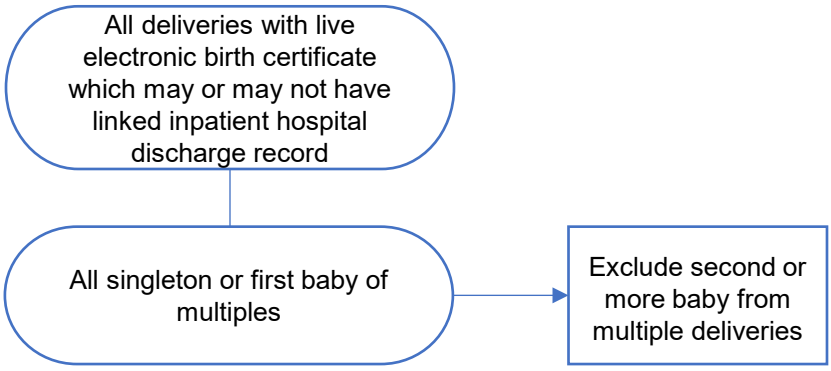
Numerator:



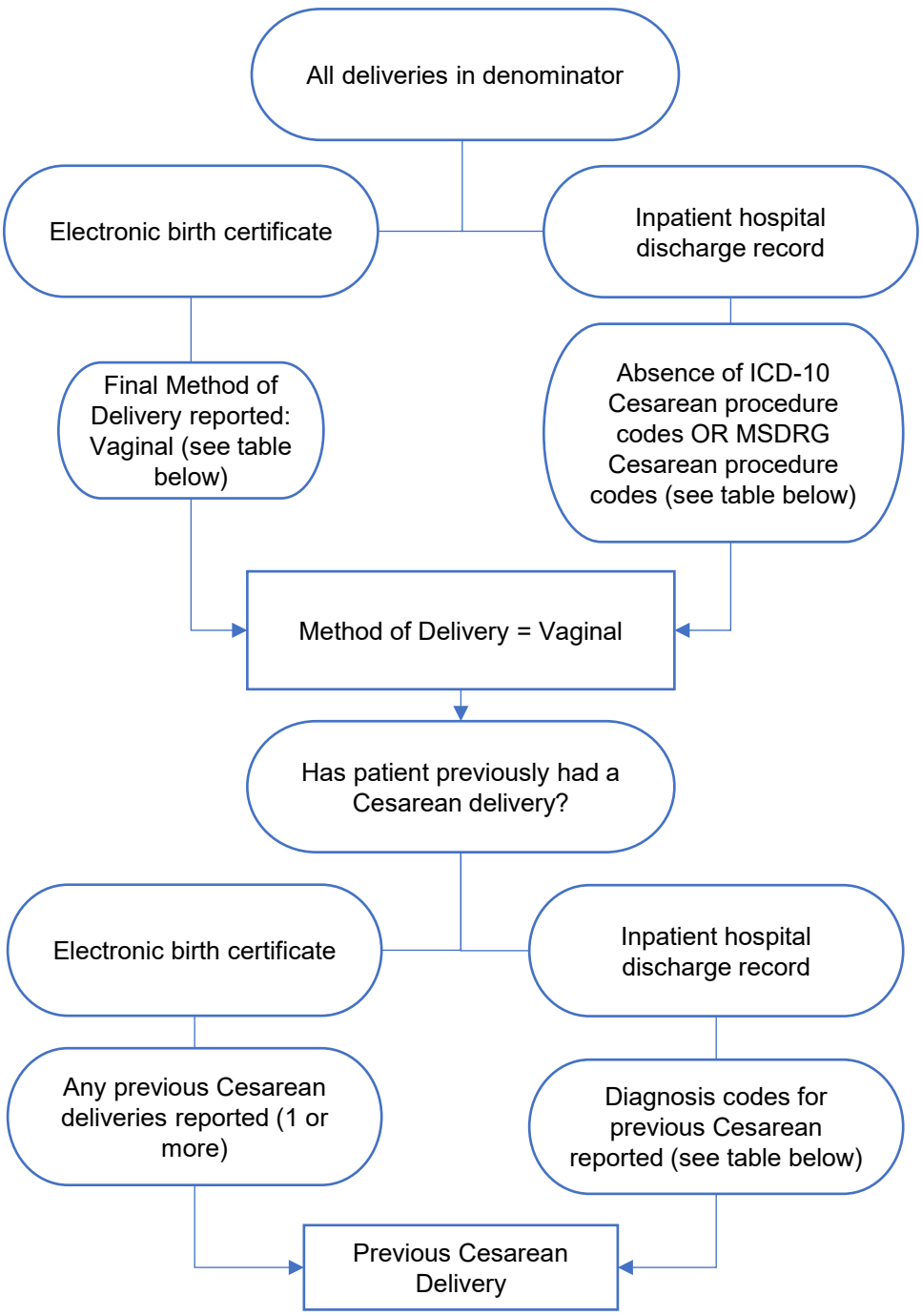
Vaginal Birth After Cesarean (VBAC)

Description: Vaginal delivery of a baby after a previous pregnancy was delivered by cesarean delivery.

Denominator:



Numerator:



Vaginal Birth After Cesarean (VBAC)

Category	Criteria
Electronic birth certificate: VERI **Primary Section:** Labor and Delivery **Subsection:** Method of Delivery & Details **Field:** Final Method of Delivery: AND **Primary Section:** Prenatal Care **Subsection:** Pregnancy History **Field:** Is this Mother's first pregnancy? AND **Primary Section:** Prenatal Care **Subsection:** Pregnancy History **Field:** Number of Previous Cesareans:	Vaginal/Spontaneous OR Vaginal/Forceps OR Vaginal/Vacuum No 1 or more
Electronic birth certificate: VIP **Primary Section:** Labor & Delivery I **Subsection:** Method of Delivery **Field:** Final route & method of delivery? AND **Primary Section:** Prenatal I **Subsection:** **Field:** Is this mother's first pregnancy? AND **Primary Section:** Prenatal II **Subsection:** Maternal Risk Factors NCHS **Field:** Mother had a previous cesarean delivery, if yes, how many	Vaginal No Yes, >0, or not Missing
ICD-10 Procedure codes for Cesarean delivery	10D00Z0,10D00Z1,10D00Z2
MS-DRG Cesarean delivery codes	783-788
Diagnosis codes for Previous Cesarean delivery	O34.21, O34.211, O34.212, O34.219, O66.41

References

[1]Nuance. (July 1, 2017). New Jersey Discharge Data Collection System (NJDDCS) Version 2 Data Dictionary and Data Extract File Layout Version 17.3. https://www.nj.gov/health/healthcarequality/documents/njddcs_v17-3.pdf

[2]Public Consulting Group. (November 7, 2022). NJ HealthCAP Data Dictionary and Extract File Layout Release 3.0. https://www.nj.gov/health/healthcarequality/documents/Appendix%20C%20-%20NJ%20HealthCAP%20Data%20Dictionary%20and%20Extract%20File%20Layout_v3.0.pdf

[3]Agency for Healthcare Research and Quality. U.S. Department of Health and Human Services. (2022). Inpatient Quality Indicator 21 (IQI 21) Cesarean Delivery Rate, Uncomplicated. https://qualityindicators.ahrq.gov/Downloads/Modules/IQI/V2022/TechSpecs/IQI_21_Cesarean_Delivery_Rate_Uncomplicated.pdf

[4]Agency for Healthcare Research and Quality. U.S. Department of Health and Human Services. (2018). Patient Safety Indicators 18 (PSI 18) Obstetric Trauma Rate – Vaginal Delivery with Instrument. https://qualityindicators.ahrq.gov/Downloads/Modules/PSI/V2018/TechSpecs/PSI_18_Obstetric_Trauma_Rate-Vaginal_Delivery_With_Instrument.pdf

[5]California Maternal Quality Care Collaborative. Obstetric Comorbidity Scoring System. https://www.cmqcc.org/es/research/severe-maternal-morbidity/obstetric-comorbidity-scoring-system

[6]U.S. Centers for Disease Control and Prevention. (2024). Identifying Severe Maternal Morbidity (SMM). https://www.cdc.gov/maternal-infant-health/php/severe-maternal-morbidity/icd.html?CDC_AAref_Val=https://www.cdc.gov/reproductivehealth/maternalinfanthealth/smm/severe-morbidity-ICD.htm

[7]Leonard, S. A., Main, E. K., Lyell, D. J., Carmichael, S. L., Kennedy, C. J., Johnson, C., & Mujahid, M.S. (2022). Obstetric comorbidity scores and disparities in severe maternal morbidity across marginalized groups. *Am J Obstet Gynecol MFM*, *4*(2),100530. doi: 10.1016/j.ajogmf.2021.100530.