Is That Baby Eligible?

What eligibility means for NICU, HRIF, CPeTS and VON

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Introduction

Many babies are born at or transported to your medical center. Which ones must be entered into CPQCC's NICU Database?

The NICU Database tracks Small Babies (very low birth weight or very premature), and Big Babies with particular conditions or undergoing certain procedures ("severe acuity" or "high acuity"), during the period of their NICU admission, or "episode of care," as long as that episode started during the **perinatal period**, or the first 28 days of life.

The Vermont Oxford Network (VON) tracks Small Babies too, but their criteria are slightly different. To distinguish this population from CPQCC Small Babies, we refer to them as VON Small Babies. Your NICU data are automatically uploaded to VON on a regular basis. Some NICU dataset babies may not be eligible for the VON database, but CPQCC takes care of VON eligibility on the back end of the database. The VON criteria are included below for your information.

The High Risk Infant Follow-Up (HRIF) Database tracks infants from discharge to home to 3 years of age, who meet the California Children's Services (CCS) HRIF medical eligibility criteria. All CCS-approved NICUs are responsible for identifying and referring eligible high-risk infants to a CCS HRIF clinic for follow-up care. The HRIF Program Coordinator is responsible for the coordination of services and follow-up core visits.

NOTE: Not all NICU Database eligible babies are HRIF-eligible, also not all HRIF-eligible babies are NICU Database eligible.

NICU Database Eligibility

The NICU Database contains detailed information on two distinct populations of **live-born infants – Small Babies** and **Big Babies.** Stillborn babies are not eligible for entry into the database.

Live-born babies that die within 12 hours of birth, before admission into the NICU, are entered into the NICU Database as a delivery room death.

Babies may be inborn, or outborn and transported-in within the first 28 days of life.

Small Babies

An infant is considered a "Small Baby" if they:

- Had a birth weight ≤ 1,500 grams **or**
- Were born ≤ 31 weeks, 6 days gestation

Small Babies, therefore, may qualify by their **birth weight** (and be born **before, during, or after** the qualifying gestational age period), or by their **gestational age** (and have a birth weight **above, within, or below** the qualifying range).

ALL Small Babies are eligible for entry into the NICU Database, regardless of where they are cared for (in the NICU or elsewhere), as long as the episode of care begins within the perinatal period.

NOTE: If outborn and transported in, this transport does not need to qualify as an acute transport.

Big Babies

An infant is considered a "Big Baby" if they:

- Had a birth weight greater than 1500 grams **and**

In addition, they must have been admitted into the NICU within the first 28 days of life, and meet at least one of the following criteria (click the links for more complete definitions):

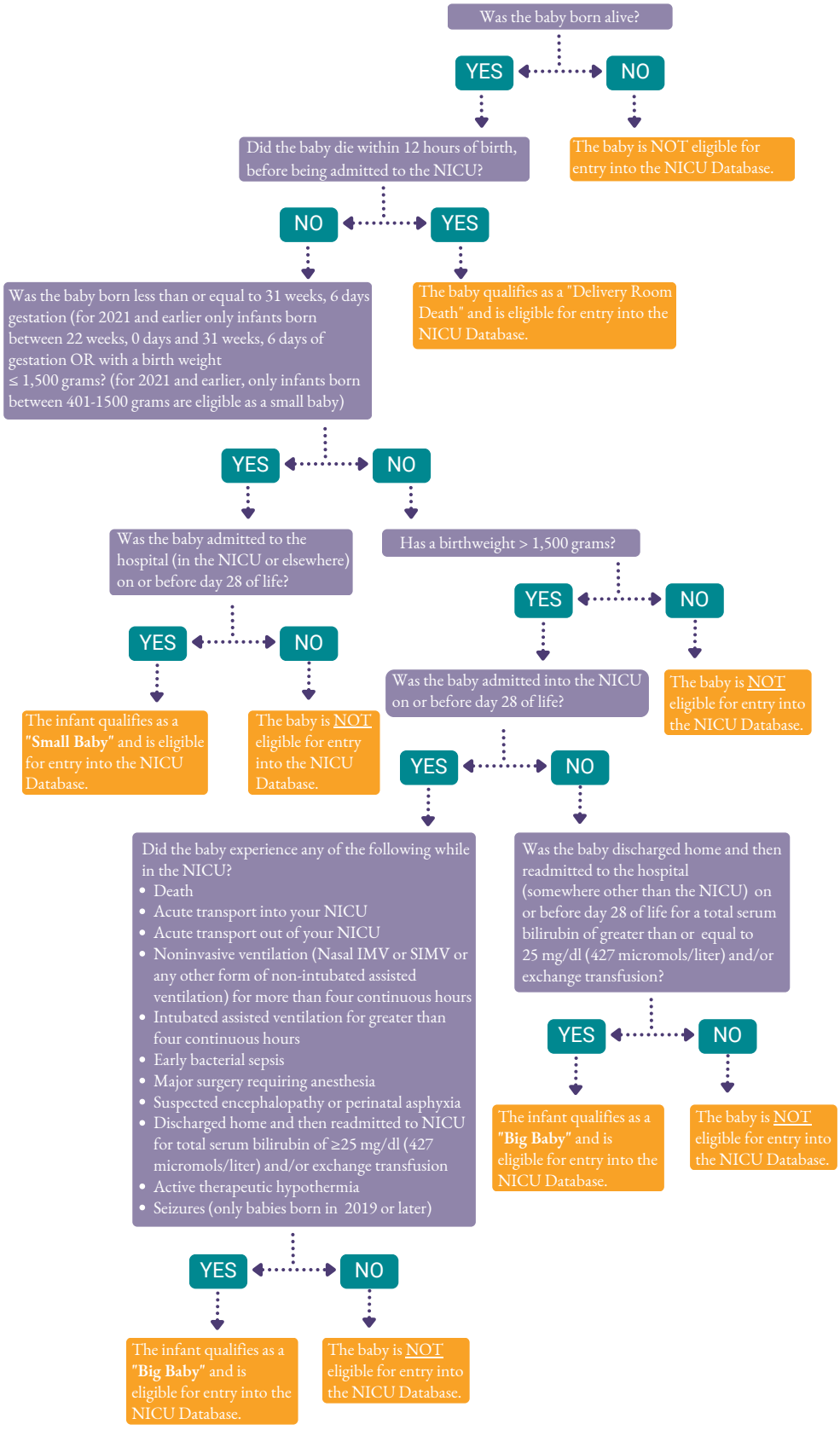
1. Death
2. Acute transport into your NICU
3. Acute transport out of your NICU
4. Noninvasive ventilation (Nasal IMV or SIMV or any other form of non-intubated assisted ventilation) for more than four continuous hours
5. Intubated for more than four continuous hours
6. Early bacterial sepsis
7. Major surgery requiring anesthesia
8. Previously discharged home and then readmitted for a total serum bilirubin of greater than or equal to 25 mg/dl (427 micromoles/liter) and/or exchange transfusion. **Babies**

readmitted for hyperbilirubinemia are eligible, whether they are readmitted directly to the NICU or elsewhere in the hospital.

9. Suspected encephalopathy or perinatal asphyxia
10. Active therapeutic hypothermia
11. Seizures

Confused? Check out the handy flow-chart on the next page to determine if a baby is eligible.

IS THAT BABY ELIGIBLE?



HRIF Program Eligibility

Data should be collected on infants/children under three years of age who meet CCS HRIF Program medical eligibility criteria and who:

- Met CCS medical eligibility criteria for Neonatal Intensive Care Unit (NICU) care **or**
- Had a CCS-eligible medical condition at some time during their stay in a CCS-approved NICU, even if they were never a CCS client, regardless of their length of stay.

NOTE: Medical eligibility includes neonates who require direct admission to a CCS Program-approved PICU, who are never admitted to a CCS Program-approved NICU, but who otherwise meet all medical eligibility criteria for HRIF services.

Infants are medically eligible for the HRIF Program when the infant meets one of the above criteria, and also one of the two following criteria.

HRIF Small Babies

HRIF Small Babies are:

- Very low birth weight (≤ 1500g) **or**
- Very premature (born ≤ 31 weeks, 6 days gestation)

HRIF Big Babies (and additional criteria)

HRIF Big Babies are born at over 1500g birth weight and at 32 weeks or later (this is the same as the NICU Big Babies criteria).

However, an infant falling into the HRIF Big Baby cohort must also meet at least **one** of the following criteria during the NICU stay, and these criteria **differ** from the NICU Big Baby criteria:

1. pH less than 7.0 on an umbilical blood sample or a blood gas obtained within one hour of life, **or** an Apgar score of less than or equal to 3 at 5 minutes, **or** an Apgar score less than 5 at 10 minutes.
2. An unstable infant manifested by hypoxia, acidemia, hypoglycemia, and/or hypotension requiring pressor support.
3. Persistent apnea, which required caffeine or other stimulant medication for the treatment of apnea at discharge.
4. Oxygen requirement for more than 28 days of hospital stay and radiographic findings consistent with chronic lung disease (CLD).
5. Placed on extracorporeal membrane oxygenation (ECMO).
6. Received inhaled nitric oxide greater than four hours, and/or treatment during hospitalization with sildenafil or other pulmonary vasodilatory medications for pulmonary hypertension.

7. Congenital heart disease (CHD) requiring surgery or minimally invasive intervention.
8. History of observed clinical or electroencephalographic (EEG) seizure activity or receiving antiepileptic medication(s) at the time of discharge.
9. Evidence of intracranial pathology, including but not limited to, intracranial hemorrhage (grade II or worse), white matter injury, including periventricular leukomalacia (PVL), cerebral thrombosis, cerebral infarction or stroke, congenital structural central nervous system (CNS) abnormality, or other CNS problems associated with adverse neurologic outcome.
10. Clinical history and/or physical exam findings consistent with neonatal encephalopathy.
11. Other documented problems that could result in neurologic abnormality, such as:
    - CNS infection
    - Documented sepsis
    - Bilirubin at excessive levels is concerning for brain injury as determined by NICU medical staff
    - History of cardiovascular instability as determined by NICU medical staff due to:
        - Sepsis
        - Congenital heart disease
        - Patent ductus arteriosus (PDA), necrotizing enterocolitis
        - Other documented condition

NOTE: Reference the HRIF Program Letter: 01-1016 for policy and guidance for the HRIF Program's medical eligibility, diagnostic services, provider responsibilities, reporting requirements, and procedures for billing authorized services provided to HRIF-eligible neonates, infants, and children.

VON Database Eligibility

The Vermont Oxford Network (VON) collects data on infants in two databases – the **VLBW Database** and the **Expanded Database.**

Your CPQCC membership includes membership in VON and automatic uploads to the VLBW Database. Participation in the Expanded Database is not necessarily included; if you wish to join VON's Expanded Database, please submit a Help Desk ticket.

VON VLBW Eligibility Criteria

Eligibility for the VLBW Database is more limited than the NICU Small Baby criteria. The upper limit for gestational age is 29 weeks 6 days instead of 31 weeks 6 days. Otherwise, the criteria are the same:

- Have a birth weight ≤1,500 grams **or**
- Born ≤ 29 weeks, 6 days of gestation

The infant must have been born in, admitted to, or died in any location in your center within the first 28 days of life.

VON Expanded Database Eligibility Criteria

The Expanded Database includes all VLBW infants, as well as infants with birth weight over 1500 grams, who:

- Are admitted to your NICU within 28 days of life **or**
- Die in any location in your center within 28 days of life.

If you would like to participate in the Expanded Database, please submit a Help Desk ticket.

Other VON Criteria:

Before 2018, VON did not collect data on infants who had been discharged home and re-admitted. In 2018, that restriction was removed.

Definitions for NICU Database Eligibility

Live Born Infant

CPQCC uses the standard terminology of the Committee on the Fetus and Newborn of the American Academy of Pediatrics:

> "A live-born infant is one who breathes or has any evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, regardless of whether the umbilical cord has been cut or the placenta is attached. Heartbeats are to be distinguished from transient cardiac contractions; respirations are to be distinguished from fleeting respiratory efforts or gasps."

Delivery Room Death

A delivery room death is defined as any **inborn** infant who meets all of these criteria:

- Dies in the delivery room or any other location in your hospital
- Within 12 hours after birth
- Prior to admission to your NICU.

Other locations may include the mother's room or resuscitation rooms, or any location other than the NICU in your hospital.

Not classified as delivery room deaths:

- Outborn infants
- Infants admitted to the NICU
- Infants cared for by the neonatology service in a unit outside the delivery room or NICU.

Delivery room deaths must be captured on the Delivery Room Death (DRD) form on the NICU Database.

Day 28 of Life

The day of birth is "day one," regardless of the time of birth, even if the infant is born at one minute before midnight. The perinatal period encompasses the first 28 days of life; to be eligible for the NICU Database, an infant's episode of care must start within this period.

EXAMPLE: For an infant born on September 1 at 11:59 PM, "day one of life" is September 1 and "day 28 of life" is September 28. If this infant were transported to your NICU at 12:01 am on September 29 (day 29 of life), the infant would not satisfy the criterion that they must be transported in on or before day 28 of life.

Episode of Care

Each record in the NICU Database describes one infant's **episode of care** in the hospital, and is identified by a NICU Record ID.

An episode of care is defined as the entire period of care before an infant is discharged home. This can include multiple stays in one NICU, if the infant is transferred from the NICU to another service within the hospital and subsequently readmitted to the NICU, or multiple stays across different NICUs, if the infant is transferred from one hospital's NICU to another, as long as the infant is not discharged home at any point. Readmission after discharge home starts another episode of care (and thus a new record for the infant).

To be recorded in the NICU Database, the episode of care must begin during the first 28 days of life (the "perinatal period"). However, an episode of care may continue after the perinatal period ends.

What ends an episode of care?

- Death
- Discharge to home

Transport to another hospital **may** end the episode of care. If the infant is discharged to home from the other hospital, the episode of care has **ended**. However, if the infant is readmitted to your hospital directly from the other hospital, the episode of care **continues** (and you will use the same Record ID for the infant in the NICU Database).

Transfers within the same hospital **do not** end the episode of care. For example, if the infant is moved from your NICU to another unit within your center (Step-Down Unit, Well Baby Nursery, Pediatrics Ward, Intermediate Care Nursery, PICU, etc.), the episode of care continues.

Location of Birth

Inborn

An **inborn infant** is an infant delivered anywhere within your center **during this** episode of care. This includes infants born in the labor and delivery unit, antepartum unit, or emergency room, for example.

Outborn

An **outborn infant** is:

- Born in another facility or co-located hospital (including satellite or embedded NICUs) **or**
- Was at any location outside your center **or**
- Discharged home at any time after birth **or**
- Required ambulance transfer.

Satellite NICU

A **satellite or embedded NICU** is owned/managed by one organization (main NICU) but located within a delivery facility owned and managed by another hospital (co-located hospital).

This includes any location within the co-located hospital, including the labor and delivery unit, antepartum unit, and emergency room.

For satellite NICUs, infants who are delivered at the main NICU and then transferred to the satellite NICU are considered **outborn**. Infants delivered at the satellite NICU and transferred to the main NICU would also be **outborn.**

NICU Patient

To qualify as a **NICU patient** – a criterion used generally for Big Babies – the infant must be:

- Admitted to your NICU **or**
- Elsewhere in your center, under the care of a neonatologist or NICU nurse.

For example, a baby might be in the intermediate nursery, but being cared for by the neonatology service; that baby would fulfill the "NICU Patient" criterion.

Death

This only applies to infants who have died in your center. Infants who died in transport, for example, or after being transported to another center, do not fall under this criterion.

For infants who die in the NICU after being admitted there, fill out an Admission/Discharge (AD) form on the NICU Data site.

For infants who die in the delivery room, resuscitation room, mother's room, or any location in your center other than the NICU, fill out a Delivery Room Death (DRD) form on the NICU Data site.

Acute Transport In and Acute Transport Out

An **acute transport** is moving an infant from one center to another, with the transport fulfilling **all** the following criteria:

1. Being transported into a NICU or other inpatient setting where care is provided by the NICU medical team, or being admitted under the NICU service
2. Attended by a transport team or care provider (e.g., neonatologist, nurse practitioner) from the sending or the receiving hospital NICU, PICU, or contract transport service

NOTE: Unattended basic life support (BLS) transport, or transport by private car, family, etc., does not qualify.

3. Transported to a higher or equal level of care for medical or surgical care

   NOTE: Back transport or convalescent care does not qualify.

The following **do not** qualify as acute transports:

- Transported solely for feeding and growing (convalescent), palliative, or hospice care
- Transferred within a facility, for example, from the emergency room to the NICU in the same building, or between a Satellite NICU and a Main NICU.
- Readmission to the NICU directly from home or medical office/clinic
- Transport initiated solely at the request of the parents for reasons of convenience
- Not attended by a transport team
- Transported to a lower level of care
- Not admitted to the NICU service
- Transported-in after 28 days of life
- Transport for bed availability, staffing/census, or insurance reasons for infants who aren't eligible for the NICU Database.

Infants transferred from one unit to another in the same center do not qualify as **transported** or **discharged**. Infants admitted to the NICU from another unit may be eligible for the NICU Database; see NICU Database Eligibility.

Noninvasive Ventilation

Big Babies who receive noninvasive ventilation for more than four continuous hours, **at any location** within your center, are eligible for the NICU Database.

- CPAP alone **does not qualify**
- CPAP with a backup rate, administered through the nose, face mask, or otherwise, triggered as a backup rate or intermittently, **does qualify.**

CPAP with backup rate qualifies as **non-intubated** assisted ventilation (CPAP alone does not).

On the Admission/Discharge form, Respiratory tab, Item 25 is "Respiratory Support after Initial Resuscitation," with the following options:

a. Supplemental Oxygen
b. Intubated Conventional Ventilation
c. Intubated HIFI Ventilation
d. High Flow Nasal Cannula
e. Noninvasive Ventilation (Nasal IMV or SIMV or any other form of non-intubated assisted ventilation)

Time on noninvasive ventilation (including any type of CPAP) should not be included as Intubated Conventional Ventilation (25b).

Intubated Assisted Ventilation

CPQCC defines this as using a cycled or triggered mechanical ventilator, via an endotracheal tube or other interface (such as nasal prongs or a secured face mask), for greater than four continuous hours (including duration of ventilation during transport or surgery). For NICU eligibility, Intubated Assisted Ventilation can be delivered **at any location in your center.**

As with noninvasive ventilation, CPAP alone via endotracheal tube or any other delivery system **does not qualify**, regardless of oxygen concentration.

For the Admission/Discharge form, Respiratory tab, Item 27, Use of Intubated Assisted Ventilation, for infants who have been treated for more than four continuous hours with intubated conventional or intubated HIFI ventilation, there are three different cases to consider:

1. Infants with the above treatment during the initial hospital stay for any reason (including surgery or imaging studies requiring controlled sedation)
2. Infants with the above treatment who are transported to another center, then readmitted while still ventilated
3. Infants with the above treatment who are transported out and never readmitted.

- **For #1,** note the length of time of ventilation.
- **For #2,** include days and hours at the transported-to hospital as well as days and hours at your center.
- **For #3**, include days and hours at your center only.

Do not include any time on non-intubated assisted ventilation, including nasal IMV/SIMV or CPAP alone.

Conventional Ventilation

Conventional Ventilation is defined as intermittent positive pressure ventilation through an endotracheal tube with a conventional ventilator (IMV rate <240/minute).

Conventional Ventilation **does not include**:

- Intermittent positive pressure ventilation (IPPV) via nasal prongs
- Synchronized intermittent positive pressure ventilation (SIMV) via nasal prongs.

To be clear, cycled breaths (Conventional Ventilation) via endotracheal tube or tracheostomy tube (or Intubated Conventional Ventilation) are defined as Intubated Assisted Ventilation.

High Frequency Ventilation

High Frequency Ventilation (HIFI Vent) is defined as ventilation with IMV rate >=240/minute. High Frequency Ventilation via nasal prongs **does not qualify** as high frequency ventilation.

To clarify, High Frequency Ventilation via endotracheal tube or tracheostomy tube (or Intubated High Frequency Ventilation) should be counted as Intubated Assisted Ventilation.

Early Bacterial Sepsis

An infant is considered to have early bacterial sepsis if they had a positive blood or cerebrospinal fluid culture, obtained on day one, two, or three of life, which grew out a bacterial pathogen.

If an infant who was transported into your center is being treated for early bacterial sepsis because of a positive culture drawn at the referring hospital, this infant **qualifies for the NICU Database**.

- If the above is true, but a repeat culture drawn at your center is negative, the infant **qualifies**.
- If the infant was diagnosed with early sepsis at the referring hospital but is **no longer** septic due to treatment at the referring hospital, this infant **does not qualify**.

Major Surgery Requiring Anesthesia

This category includes major invasive surgeries, requiring general anesthesia or anesthesia techniques considered by your neonatologist to be equivalent to general anesthesia, during the infant's current admission to the NICU.

The following surgeries do not qualify the infant for NICU Database eligibility:

- Pyloromyotomy
- Unilateral or bilateral inguinal hernia repair
- Central line placement
- Circumcision

Only conditions that require general anesthesia or anesthesia techniques felt by your neonatologist to be equivalent to general anesthesia qualify. Most of these procedures involve opening a cavity (head, chest, abdomen, etc.).

Hyperbilirubinemia

To qualify in this category, the infant must have been previously discharged home and readmitted to any location in your center, on or before day 28 of life, for Total Serum Bilirubin ≥ 25 mg/dL (427 micromole/liter) and/or exchange transfusion.

Please note that this is the only Big Baby selection criterion where an infant does **not** have to be in the NICU or under the care of a neonatologist or the NICU service.

Suspected Encephalopathy or Suspected Perinatal Asphyxia

To qualify in this category, the infant must have cardiorespiratory depression at birth, signified by one or more of the following:

1. pH < 7.0 on an umbilical blood sample or a blood gas obtained within one hour of life
2. 5-minute Apgar score ≤ 3
3. 10-minute Apgar score of ≤ 4.

This definition of suspected encephalopathy or suspected perinatal asphyxia is different from the criteria for hypoxic ischemic encephalopathy (HIE), defined later in Item 51. This means that not all patients meeting eligibility criteria under suspected encephalopathy or suspected perinatal asphyxia will have HIE according to the HIE definition.

If an infant has ever been diagnosed with suspected encephalopathy or suspected perinatal asphyxia or hypoxic ischemic encephalopathy (HIE) and transferred in within 28 days of life, this infant is eligible for CPQCC.

Active Therapeutic Hypothermia

An infant qualifies under this criterion if they were actively cooled (received hypothermia therapy), including selective head cooling or whole-body cooling, during admission to your NICU.

Passive exposure to environmental temperature or intentionally withholding standard temperature maintenance **does not qualify** as active cooling.

Seizures

Starting in 2019, NICU-qualifying seizures are defined as compelling clinical evidence of seizures, or of focal or multifocal clonic or tonic seizures, or EEG evidence of seizures, regardless of clinical status.