Vermont Oxford Network

2024 Manual of Operations: Part 2
Data Definitions & Infant Data Booklets

Release 28.0

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Vermont Oxford NETWORK

Database Eligibility

Very Low Birth Weight (VLBW) Eligibility

- Any live born[1] infant whose birth weight is less than or equal to 1500 grams OR whose gestational age is less than or equal to 29 weeks 6 days who is admitted to or dies in any location in your center within 28 days of birth.

Expanded Eligibility

- Any infant who meets the VLBW eligibility, plus:
- Any live born infant whose birth weight is greater than 1500 grams[2] and who:
  - Is admitted to a NICU[3] in your center within 28 days of birth; OR
  - Dies in any location in your center within 28 days of birth.

Examples

Infant Characteristics	Meets VLBW Eligibility?	Meets Expanded Eligibility?
≤ 1500 g or ≤ to 29 weeks 6 days	Yes	Yes
>1500 g or, if birth weight is unknown, >29 weeks 6 days	No	Yes if admitted to NICU or dies

These examples assume that the infant was born in your center or was admitted to your center within 28 days of birth.

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1 Definition of Live Born: 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 muscle, 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. Please refer to: Barfield WD; Committee on Fetus and Newborn. Standard terminology for fetal, infant, and perinatal deaths. Pediatrics. 2016; 137(5):e20160551.

2 If the birth weight is unknown but the gestational age is greater than 29 weeks 6 days and the infant meets the other Expanded Database criteria, the infant is eligible.

3 Definition of Neonatal Intensive Care Unit (NICU): A NICU is any location within the hospital in which newborn infants receive continuous positive airway pressure (CPAP) or intermittent mandatory ventilation (IMV). When applying this definition, do not include those areas in which these modalities of respiratory support are used only for brief periods of stabilization prior to transfer to another location. The intent is that units designated as a NICU routinely provide these services for ongoing care beyond an initial period of stabilization.

Revisions for 2024

New Data Items: There are no new data items for 2024.

Modified Data Items:

- Chorioamnionitis
- Laryngeal Mask Airway during Initial Resuscitation has been renamed Supraglottic Airway Device during Initial Resuscitation.
- Respiratory Distress Syndrome
- Meconium Aspiration Syndrome

Discontinued Data Items: There are no discontinued data items for 2024.

Contents

CHAPTER 1

Introduction

This manual is Part 2 of the Vermont Oxford Network Manual of Operations. It includes the data definitions and data collection booklet pages for infants born in 2024. It is intended to be used along with the Vermont Oxford Network (VON) Manual of Operations, Part 1: Guidelines for Database Participation. Part 1 of the Manual of Operations describes database eligibility requirements, rules for collecting data, and how to complete data collection.

The VON Manuals, as well as data collection booklets, submission timelines, and other useful documents, are available at www.vtoxford.org/downloads.

Data Definitions

Each Data Item has its own *data definition*, a precise explanation of the information required for the Data Item. As you enter data, use the data definitions presented in this manual as a reference. Please read the explanations carefully so that you understand the details for each Data Item.

To ensure data integrity and accuracy of reports to your hospital, it is very important that the definitions provided in this manual be followed as closely as possible.

Definitions and data collection booklets may change from one year to another as changes are approved by the Vermont Oxford Network Database Advisory Committee. Use the data collection booklet pages in this manual for infants born in 2024.

If you need to submit data for infants born prior to 2024, use the data collection booklets and definitions included in the Manual of Operations for the infant's birth year. Manuals can be accessed at www.vtoxford.org/downloads.

NOTES:

- Please note that some definitions are followed by a Notes Box, which contains notes that may be useful to you in determining how to best respond to the question.

Data Booklets and Logs

Patient Logs, Patient Data Booklets, and Delivery Room Death Booklets are included in Appendix A of this manual. You may make copies of these booklets and logs, or you can download booklets and logs at www.vtoxford.org/downloads.

Confidentiality and Patient Privacy

Vermont Oxford Network strictly maintains the confidentiality of the data in its databases. Although data at Network or group levels are summarized for comparative purposes, individual center data are reported only to the submitting center.

Vermont Oxford Network does not generally accept protected health care information from member centers. Vermont Oxford Network does accept protected health care information, as defined in the Health Insurance Portability and Accountability Act of 1996 (HIPAA), from members who have both voluntarily elected to send this information in addition to the standard Vermont Oxford Network dataset and who have signed an appropriate Business Associate Agreement.

Your hospital must take appropriate measures to ensure that patient data stored at your hospital are protected and secure from unauthorized access.

Getting Help

Your center has been assigned an Account Manager to assist you with data submission. Your Account Manager will answer any questions you may have about collecting, recording, or submitting data, as well as questions you may have about the data definitions in this manual.

If you have questions, don't hesitate to contact your Account Manager. If your Account Manager is unavailable, you can speak to any of the Account Managers listed in Table 1.1, below.

Vermont Oxford Network Phone Number: (802) 865-4814		
Account Manager	**Extension**	**Email**
Ciera Audette	244	CAudette@vtoxford.org
Amy Briody	252	ABriody@vtoxford.org
Denise Schomody	260	DSchomody@vtoxford.org
Erika Smith	280	ESmith@vtoxford.org
Sophie Ullman	212	SUllman@vtoxford.org

Table 1.1: Account Manager Contact Information

CHAPTER 2

Eligibility Criteria

To ensure that data from your center are useful for quality improvement and comparisons of your center's performance, your center must submit data for all the infants at your center who meet the VON eligibility criteria. To determine which infants are eligible, you must first determine whether your hospital participates in VLBW data submission or Expanded data submission.

Very Low Birth Weight (VLBW) Eligibility

Any live born[1] infant whose birth weight is less than or equal to 1500 grams OR whose gestational age is less than or equal to 29 weeks 6 days who is admitted to or dies in any location of your center within 28 days of birth.

Expanded Eligibility

- Any infant who meets the VLBW eligibility, plus:
- Any live born infant whose birth weight is greater than 1500 grams[2] and who:
    - Is admitted to a NICU[3] in your center within 28 days of birth; OR
      Dies in any location in your center within 28 days of birth.

NOTES:

1. **Definition of Live Born:** 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 muscle, 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. Please refer to: Barfield WD; Committee on Fetus and Newborn. Standard terminology for fetal, infant, and perinatal deaths. *Pediatrics.* 2016; 137(5):e20160551.
2. If the birth weight is unknown but the gestational age is greater than 29 weeks 6 days and the infant meets the other Expanded Database criteria, the infant is eligible.
3. **Definition of Neonatal Intensive Care Unit (NICU):** A NICU is any location within the hospital in which newborn infants receive continuous positive airway pressure (CPAP) or intermittent mandatory ventilation (IMV). When applying this definition, do not include those areas in which these modalities of respiratory support are used only for brief periods of stabilization prior to transfer to another location. The intent is that units designated as a NICU routinely provide these services for ongoing care beyond an initial period of stabilization.

Applying the Eligibility Criteria

Meaning of "Your Hospital"/"Your Center:" Eligibility is determined based on all infants delivered or cared for at "your hospital" or "your center." "Hospital" or "Center" refers to a building or group of buildings on the same campus among which infants can be moved without the routine need for ambulance transfer.

Infants Born at Home or in Transit to Your Center: Infants born at home or in transit are eligible if they arrive at your center alive and meet all the other criteria.

Infants Admitted to Your NICU and Discharged to Home by Your Center: Infants who were **admitted to your NICU**, discharged to home by your center, and return to your center within 28 days of birth are eligible at the initial hospitalization only. Infants are only eligible once. The infant is not eligible again at the second hospitalization. Tracking for this infant ends when the infant is discharged home. The record does not need to be updated upon readmission.

All infants who have been discharged home from your center **without being admitted to your NICU** and who come back to your center and are subsequently admitted to your NICU within 28 days of birth **are eligible** if they meet the eligibility criteria of your center's database participation.

Infants Discharged to Home by Another Hospital: Infants who were discharged home by another hospital and are **admitted to your NICU** within 28 days of birth are eligible if they meet the eligibility criteria of your center's database participation.

Stillborn Infants: Stillborn infants are not eligible for the Network database. Only live born infants that meet the other eligibility criteria are eligible.

Planned Terminations that Result in Live Births: Data for all eligible live born infants should be submitted regardless of the circumstances of birth.

Infants Who Die: You should monitor delivery room logs and death reports to verify that all eligible infants are reported.

If your center participates in VLBW data submission, the following infants who die should be reported:

- All live born infants who are born in your center and who die at any location in your center are eligible if their birth weights are less than or equal to 1500 grams or if their gestational ages are less than or equal to 29 weeks 6 days. This definition includes inborn infants who die in the delivery room (see Delivery Room Death Criteria below), which are defined as "Delivery Room Deaths" and require completion of the Delivery Room Death Data Items.
- All outborn infants with birth weights less than or equal to 1500 grams or gestational ages less than or equal to 29 weeks 6 days who die at any location in your center are eligible if they are admitted to your

center within 28 days of birth. Outborn infants and infants who are admitted to the NICU should not be classified as Delivery Room Deaths.

If your center participates in Expanded data submission the following infants who die should be reported:

- Any eligible VLBW infant who dies, as described above for the VLBW data submission.
- All infants with birth weights over 1500 grams who die at any location in your center within 28 days of birth are eligible. This includes full-term infants, infants who are not in the very low birth weight category, and infants who are never admitted to a NICU.

Delivery Room Deaths: Data should be collected on all infants who meet the Delivery Room Death Criteria.

Delivery Room Death Criteria

- Any eligible inborn infant who was born in your center, was never admitted to the NICU, and died in the delivery room or at any other location in your hospital within 12 hours after birth. These locations may include the mother's room, resuscitation rooms, or any location other than the NICU in your hospital.
- Outborn infants and infants who are admitted to the NICU should *not* be classified as Delivery Room Deaths.

Please see the VON Manual of Operations, Part 1: Guidelines for Database Participation for additional information on database certification and identifying eligible infants.

CHAPTER 3

Definitions of Data Items for Infants Born in 2024

Birth Weight

Record the birth weight in grams. Since many weights may be obtained on an infant shortly after birth, enter the weight from the Labor and Delivery record if available and judged to be accurate. If unavailable or judged to be inaccurate, use the weight on admission to the neonatal unit or lastly, the weight obtained on autopsy (if the infant expired within 24 hours of birth).

Gestational Age-Weeks & Gestational Age-Days

Record the best estimate of gestational age in weeks and days using the following hierarchy:

- Obstetrical measures based on last menstrual period, obstetrical parameters, and prenatal ultrasound as recorded in the maternal chart.
- Neonatologist's estimate based on physical criteria, neurologic examination, combined physical and gestational age exam (Ballard or Dubowitz), or examination of the lens.

The best estimate should be recorded in weeks and days. In instances when the best estimate of gestational age is an exact number of weeks, enter the number of weeks in the space provided for weeks and enter "0" in the space provided for days. Do not leave the number of days blank.

Died in Delivery Room

Answer **"Yes"** if the infant was born in your center, was never admitted to the NICU, and died in the delivery room or at any other location in your hospital within 12 hours after birth. These locations may include the mother's room, resuscitation rooms, or any location other than the NICU in your hospital.

Answer **"No"** if the infant did not die in the delivery room or at any other location in your hospital within 12 hours after birth and prior to admission to the NICU.

Answer **"No"** for all outborn infants.

NOTES:

- If answered **"Yes**,**"** please complete the Delivery Room Death Data Items.
- If answered **"No**,**"** please continue to complete the standard Data Items.

Location of Birth

Answer “Inborn” if the infant was delivered at your center.

Answer “Outborn” if the infant was delivered outside your center. Any infant requiring ambulance transfer will be considered outborn.

NOTES:

- If an infant was transferred to your center directly from another hospital, use all available information from the hospital that transferred the infant to your center, as well as information from your center, to complete the record.
- If an infant was never admitted to your NICU, discharged to home by your center, readmitted to your center, and admitted to your NICU within 28 days of birth, and meets eligibility criteria of your center’s database participation, the infant is considered **“Inborn.”** Use all available information from your center, including from the original hospitalization, to complete the record. Please review page 4 of this Manual for specific guidance on infants admitted to your NICU after being discharged to home by your center.
- If an infant was discharged to home by another hospital, admitted to your center within 28 days of birth, and meets eligibility criteria of your center’s database participation, the infant is considered “**Outborn**.**”** Do not collect information from previous hospitalizations because the infant was not transferred directly to your center from another hospital. Use only information from your center to complete the record.

Day of Admission to Your NICU

If Location of Birth is **"Outborn"** or Previously Discharged Home is answered **"Yes**,**"** Day of Admission is the day of life on which the infant is admitted to your NICU. The Date of Birth is day 1. For example, if an infant is born on June 1st and admitted to your NICU on June 1st, the Day of Admission would be 1. If that same infant were admitted on June 3rd, the Day of Admission would be 3.

To determine the Day of Admission you must know the Date of Birth and the Date of Admission. The time of birth does not matter. If the infant is born at 11:30 PM and admitted to your NICU at 11:59 PM on the same day, the Day of Admission is 1, since the infant was admitted on the Date of Birth.

NOTES:

- This Data Item applies only to outborn infants and to infants who were admitted to your NICU after being previously discharged to home.
- Please review page 4 of this Manual for specific guidance on infants who were discharged to home.
- The acceptable range for Day of Admission is from 1 (for infants admitted on their Date of Birth) to 28 (since infants admitted more than 28 days after birth are not eligible for the database).
- For infants who die before admission to your NICU, Day of Admission to Your NICU is equal to the day of admission to your hospital.
- For VLBW infants who are not admitted to your NICU, Day of Admission to Your NICU is equal to the day of admission to your hospital.

Reason for Transfer In

If Location of Birth is **"Outborn**,**"** enter only one response indicating the primary reason for transfer in.

Answer **"Growth/Discharge Planning"** if the infant is transferred to your hospital for continuing care in preparation for eventual discharge home. This category will include "back transfers" to a hospital closer to the parents' home.

- The answer to this question will be **"Growth/Discharge Planning"** as long as the purpose of the transfer is not for the provision of medical, surgical, or diagnostic services, or long-term chronic care which were unavailable at the referring hospital.

Answer **"Medical/Diagnostic Services"** if the infant is transferred to your hospital to receive medical care or diagnostic tests that were not available at the referring hospital.

- If an infant is transferred to have a diagnostic work up and the work up results in surgery, the reason for transfer is still "Medical/Diagnostic Services."

Answer **"Surgery"** if the infant is transferred to your hospital specifically to have surgery even if surgery is not actually performed after the transfer.

Answer **"ECMO"** if the infant is transferred to your hospital for extracorporeal membrane oxygenation even if ECMO is not actually performed after the transfer.

Answer **"Hypothermic Therapy"** if the infant is transferred to your hospital for hypothermic therapy even if hypothermic therapy is not actually performed after the transfer.

Answer **"Chronic Care"** if the infant is transferred to your hospital for long term chronic care.

Answer **"Other"** if the reason for transfer does not meet any of the above criteria.

Transfer Code of Center from which Infant Transferred

If Location of Birth is **"Outborn**," enter the Transfer Code of the center from which the infant transferred. This Data Item is not applicable if the infant is inborn.

The Transfer Code for hospitals is a special code assigned by the Network. It is not the Network assigned center number. Please refer to the current Transfer Code List when answering this question.

NOTES:

- The Transfer Code List may be accessed at: https://public.vtoxford.org/transfer-codes/
- Your center's transfer code should not be entered.

Head Circumference at Birth

Enter the head circumference to the nearest tenth of a centimeter as recorded in the chart or clinical flow sheets on the day of birth. If the head circumference is not recorded on the day of birth, record the first head circumference measurement on the following day. If the head circumference is not measured on the day of birth or on the following day, record as unknown.

Ethnicity of Mother

The response to this Data Item should be obtained by personal interview with the mother or review of the birth certificate or medical record, in that order of preference.

Answer **"Hispanic"** if the biological mother is a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.

Answer **"Not Hispanic"** if the biological mother's ethnicity is not of Hispanic or Latino origin as defined above.

Race of Mother

The response to this Data Item should be obtained by personal interview with the mother or review of the birth certificate or medical record, in that order of preference. Choose only one response.

Answer **"Black or African American"** if the biological mother is a person having origins in any of the black racial groups of Africa.

Answer **"White"** if the biological mother is a person having origins in any of the original peoples of Europe, the Middle East, or North Africa.

Answer **"Asian"** if the biological mother is a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.

Answer **"American Indian or Alaska Native"** if the biological mother is a person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment.

Answer **"Native Hawaiian or Other Pacific Islander"** if the biological mother is a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

Answer **"Other"** if none of the race categories above applies to the biological mother.

Prenatal Care

Answer **"Yes"** if the mother received any prenatal obstetrical care prior to the admission during which birth occurred.

Answer **"No"** if the mother did not receive any prenatal obstetrical care.

Antenatal Steroids

Answer **"Yes"** if corticosteroids were administered IM or IV to the mother during pregnancy at any time prior to delivery. Corticosteroids include betamethasone, dexamethasone, and hydrocortisone.

Answer **"No"** if no corticosteroids were administered IM or IV to the mother during pregnancy at any time prior to delivery.

Antenatal Magnesium Sulfate

Answer **"Yes"** if Magnesium Sulfate was administered intravenously to the mother during pregnancy at any time prior to delivery.

Answer **"No"** if Magnesium Sulfate was not administered intravenously to the mother during pregnancy at any time prior to delivery.

Chorioamnionitis

Answer **"Yes"** if a diagnosis of chorioamnionitis was recorded in the maternal or infant medical record.

Answer **"No"** if a diagnosis of chorioamnionitis was not recorded in the maternal or infant medical record.

NOTES:

- The diagnosis of chorioamnionitis can be made clinically, from amnionic fluid testing, or histopathologic analysis of the placenta or umbilical cord.

Maternal Hypertension, Chronic or Pregnancy-Induced

Answer **"Yes"** if maternal hypertension, chronic or pregnancy-induced, with or without edema and proteinuria, was recorded in the maternal or infant medical record, or if a maternal blood pressure above 140 systolic or 90 diastolic was recorded prior to or during the present pregnancy.

Answer **"No"** if maternal hypertension, chronic or pregnancy induced, with or without edema and proteinuria, was not recorded in the maternal or infant medical record, and if a maternal blood pressure above 140 systolic or 90 diastolic was not recorded prior to or during the present pregnancy.

NOTES:

- Eclampsia and pre-eclampsia should be considered forms of pregnancy-induced hypertension.

Maternal Diabetes

Answer **"Yes"** if maternal diabetes of any type or severity was recorded in the maternal or infant medical record.

Answer **"No"** if maternal diabetes of any type or severity was not recorded in the maternal or infant medical record.

NOTES:

- Maternal diabetes can refer to Type 1, Type 2, or gestational diabetes.

Mode of Delivery

Answer **"Vaginal"** for any vaginal delivery (spontaneous or induced).

Answer **"Cesarean Section"** for any cesarean delivery (elective or emergent).

Sex of Infant

Answer **"Male"** or **"Female."**

Answer **"Unknown"** if sex cannot be determined.

Multiple Gestation

Answer **"Yes"** if two or more live fetuses were documented at any time during the pregnancy which resulted in the birth of the infant.

Otherwise answer **"No."**

Number of Infants Delivered

If Multiple Gestation is answered **"Yes,"** enter the number of infants actually delivered (count both live born and stillborn infants). For example, if twins were delivered, enter "2"; if triplets were delivered, enter "3." Do not count fetuses which have been reabsorbed in utero and are not delivered.

This Data Item is not applicable if Multiple Gestation is answered **"No."**

Congenital Infection

Answer **"Yes"** if the infant was diagnosed with an infection on the Congenital Infection List acquired in utero or during birth.

Answer **"No"** if the infant was not diagnosed with an infection on the Congenital Infection list acquired in utero or during birth.

NOTES:

- Congenital Infections are listed in Appendix E of the Manual of Operations, Part 2.

Congenital Infection, Organism(s)

If Congenital Infection is answered **"Yes**,**"** enter up to three organism codes from the Congenital Infections List. This Data Item is not applicable if Congenital Infection is answered **"No**."

NOTES:

- Congenital Infections are listed in Appendix E of the Manual of Operations, Part 2.

APGAR Score at one minute & APGAR Score at five minutes

Enter the APGAR score at one minute and at five minutes as noted in the Labor and Delivery record.

Notes on Initial Resuscitation Data Items

Initial Resuscitation refers to interventions performed in the delivery room or in an initial resuscitation area immediately following birth and prior to admission to the NICU.

There are situations in which infants receive their initial neonatal resuscitation in locations other than a "delivery room." These include cases in which birth occurs outside of a "delivery room" (home, automobile, ambulance, hospital room, emergency room, etc.) and cases in which resuscitation is provided in locations adjacent to or close by the delivery room. In such situations, the responses to the Initial Resuscitation Data Items should be based on the initial resuscitation provided immediately after birth, regardless of where the resuscitation took place.

Oxygen during Initial Resuscitation

Answer **"Yes"** if the infant received any supplemental oxygen in the delivery room or during the initial resuscitation performed immediately after birth.

Answer **"No"** if the infant did not receive supplemental oxygen in the delivery room or during the initial resuscitation performed immediately after birth.

NOTES:

- 21% oxygen is room air. This is not considered supplemental oxygen, no matter how administered.

Face Mask Ventilation during Initial Resuscitation

Answer **"Yes"** if the infant received any positive pressure breaths via a face mask in the delivery room or during the initial resuscitation performed immediately after birth. Positive pressure may be administered using an anesthesia bag, a self-inflating bag, or other device that generates intermittent positive pressure.

Answer **"No"** if the infant did not receive any positive pressure breaths via a face mask in the delivery room or during the initial resuscitation performed immediately after birth.

Answer **"No"** if a face mask was only used to administer CPAP (continuous positive airway pressure) and no positive pressure breaths were given.

Supraglottic Airway Device during Initial Resuscitation

Answer **"Yes"** if the infant received any intermittent positive pressure breaths via a supraglottic airway device in the delivery room or during the initial resuscitation performed immediately after birth. Intermittent positive pressure breaths may be administered using an anesthesia bag, self-inflating bag, or other device that generates intermittent positive pressure.

Answer **"No"** if the infant did not receive any intermittent positive pressure breaths via a supraglottic airway device in the delivery room or during the initial resuscitation performed immediately after birth.

Answer **"No"** if a supraglottic airway device was only used to administer continuous positive airway pressure and no intermittent positive pressure breaths were given.

NOTES:

- There are many types of supraglottic airway devices, including laryngeal mask airway (LMA) devices.
- A face mask is not considered a supraglottic airway device for the purposes of this definition.

Endotracheal Tube Ventilation during Initial Resuscitation

Answer **"Yes"** if the infant received ventilation through an endotracheal tube in the delivery room or during the initial resuscitation performed immediately after birth.

Answer **"No"** if the infant did not receive ventilation through an endotracheal tube in the delivery room or during the initial resuscitation performed immediately after birth.

Answer **"No"** if an endotracheal tube was placed only for suctioning and assisted ventilation was not given through the tube.

Epinephrine during Initial Resuscitation

Answer **"Yes"** if epinephrine was given in the delivery room or during the initial resuscitation performed immediately after birth via intravenous, intracardiac, or intratracheal (through an endotracheal tube) routes.

Answer **"No"** if epinephrine was not given in the delivery room or during the initial resuscitation performed immediately after birth via intravenous, intracardiac, or intratracheal routes.

Cardiac Compression during Initial Resuscitation

Answer **"Yes"** if external cardiac massage was given in the delivery room or during the initial resuscitation performed immediately after birth.

Answer **"No"** if external cardiac massage was not given in the delivery room or during the initial resuscitation performed immediately after birth.

Nasal Ventilation during Initial Resuscitation

Answer **"Yes"** if the infant received noninvasive positive pressure ventilation via nasal prongs or other nasal device in the delivery room or during the initial resuscitation performed immediately after birth.

Answer **"No"** if the infant did not receive noninvasive positive pressure ventilation via nasal prongs or other nasal device in the delivery room or during the initial resuscitation performed immediately after birth.

NOTES:

- Nasal Ventilation during Initial Resuscitation should be coded **"Yes"** if the infant receives any of the following types of noninvasive positive pressure ventilation via nasal prongs or other nasal device:
  - Two or more levels of positive pressure such as "BiPAP" or "SiPAP"
  - Synchronized or unsynchronized intermittent mandatory ventilation
  - Noninvasive high-frequency oscillation
- If a nasal cannula is used to provide noninvasive positive pressure ventilation using one of the three types listed above, the answer to Nasal Ventilation during Initial Resuscitation is **"Yes."** If a nasal cannula is used only to provide continuous positive airway pressure (CPAP), the answer to Nasal Ventilation during Initial Resuscitation is **"No."**

Nasal CPAP during Initial Resuscitation

Answer **"Yes"** if the infant was given continuous positive airway pressure applied through the nose during the initial resuscitation performed immediately after birth.

Answer **"No"** if the infant was not given continuous positive airway pressure applied through the nose during the initial resuscitation performed immediately after birth.

NOTES:

- CPAP administered through a face mask covering the nose *without the administration of intermittent breaths* is considered nasal CPAP for the purpose of this definition.
- If a nasal cannula is used to provide nasal CPAP, the answer to Nasal CPAP during Initial Resuscitation is **"Yes**."

Temperature Measured within the First Hour after Admission to Your NICU

Answer **"Yes"** if the infant's core body temperature was measured and recorded within the first hour after admission to your NICU. Core body temperature may be measured by taking a rectal, esophageal, tympanic, or axillary temperature.

Answer **"No"** if the infant's core body temperature was not measured and recorded within the first hour after admission to your NICU.

Answer **"N/A"** if the infant is eligible but was never admitted to your NICU.

NOTES:

- This Data Item applies to the temperature of the infant during the first hour after admission to your NICU. Do not record temperature measurements taken at the transferring center for outborn infants.
- If an attempt is made to measure the temperature during the first hour after admission to your NICU, and the temperature of the infant is lower or higher than the thermometer can measure, answer this Data Item **"Yes"** and record the lowest or highest temperature on the thermometer in Temperature within the First Hour after Admission to Your NICU.
- If the infant's core body temperature is not measured within the first hour after admission to the NICU, Temperature within the First Hour after Admission to Your NICU is not applicable.

Temperature within the First Hour after Admission to Your NICU

If the infant's core body temperature was measured and recorded within the first hour after admission to your NICU, enter the infant's temperature in degrees centigrade to the nearest tenth of a degree.

If the infant's temperature is measured multiple times within the first hour after admission to your NICU, enter the value of the first temperature measurement.

NOTES:

- For centers that measure temperature in degrees Fahrenheit, please use a Fahrenheit to centigrade conversion table. A conversion table is available at www.vtoxford.org/downloads.
- Use a rectal temperature, or if not available, esophageal temperature, tympanic temperature, or axillary temperature, in that order.

Died Within 12 Hours of Admission to Your NICU

Answer **"Yes"** if the infant is admitted to your NICU and dies 12 hours or less from the time of admission to your NICU. If the infant is outborn and is never admitted to your NICU, answer **"Yes"** if the infant dies 12 hours or less from the time of admission to your hospital.

Answer **"No"** if the infant is admitted to your NICU and does not die 12 hours or less from the time of admission to your NICU. If an eligible infant is never admitted to your NICU, answer **"No"** if the infant does not die within 12 hours of admission to your hospital.

NOTES:

- If the infant is inborn and dies within 12 hours of birth without being admitted to your NICU, the infant should be considered a delivery room death and this Data Item is not applicable. Complete the Delivery Room Death Data Items when this is the case.

Bacterial Sepsis and/or Meningitis on or before Day 3

Answer **"Yes"** if a bacterial pathogen from the Bacterial Pathogens List was recovered from a blood and/or cerebrospinal fluid culture obtained on day 1, 2, or 3 of life.

Answer **"No"** if a bacterial pathogen from the Bacterial Pathogens List was not recovered from a blood culture or cerebrospinal fluid culture obtained on day 1, 2, or 3 of life, or if no blood or cerebrospinal fluid cultures were obtained on day 1, 2, or 3 of life.

NOTES:

- The date of birth counts as day 1 regardless of the time of birth. For an infant born at 11:59 PM on September 1st, day 3 will be September 3rd.
- Bacterial Pathogens are listed in Appendix B of the Manual of Operations, Part 2.

Bacterial Sepsis and/or Meningitis on or before Day 3, Pathogen(s)

If Bacterial Sepsis and/or Meningitis on or before Day 3 is answered **"Yes**," enter up to three pathogen codes from the Bacterial Pathogens List that were recovered from a blood and/or cerebrospinal fluid culture. This Data Item is not applicable if Bacterial Sepsis and/or Meningitis on or before Day 3 is answered **"No**."

NOTES:

- The date of birth counts as Day 1 regardless of the time of birth. For an infant born at 11:59 PM on September 1st, Day 3 will be September 3rd.
- Bacterial Pathogens are listed in Appendix B of the Manual of Operations, Part 2.

Oxygen on Day 28

Answer **"Yes"** if the Data Item is applicable and the infant received any supplemental oxygen on the date of Day 28.

Answer **"No"** if the Data Item is applicable and the infant did not receive supplemental oxygen on the date of Day 28.

Answer **"N/A"** if the Data Item is not applicable based on the criteria below.

NOTES:

- To calculate the Date of Day 28, add 28 days to the birth date and subtract one day. The date of birth counts as Day 1 regardless of the time of birth. For an infant born at 11:59 PM on September 1st, Day 28 is September 28th.
- A chart showing the Date of Day 28 may be downloaded from www.vtoxford.org/downloads.
- This Data Item is not applicable if:
  - The infant is discharged home or dies prior to the Date of Day 28.
  - The infant is transferred from your center to another hospital prior to the Date of Day 28 and either,
    - Is not readmitted to your center following initial transfer and before discharge home, death, or first birthday, or
    - Is transferred a second time before the Date of Day 28.
  - Otherwise, the Data Item is applicable.
- Infants who are moved from one unit to another unit within your hospital are not considered to have been transferred.
- 21% oxygen is room air. This is not considered supplemental oxygen, no matter how administered.

Cranial Imaging on or before Day 28

Answer **"Yes"** if at least one cranial ultrasound, cranial CT, or cranial MRI was performed on or before Day 28.

Answer **"No"** if no cranial ultrasound, CT, or MRI was performed on or before Day 28.

NOTES:

- A chart showing the Date of Day 28 for infants born in 2024 may be downloaded from www.vtoxford.org/downloads.

Periventricular-Intraventricular Hemorrhage (PIH), Worst Grade

If a cranial ultrasound, CT, or MRI was performed on or before Day 28, enter the worst grade of PIH based on any study using the criteria below. If multiple ultrasounds, CT scans, or MRIs were done on or before Day 28, record the most severe grade. This Data Item is not applicable if the answer to Cranial Imaging on or before Day 28 is **"No."**

Grade 0: No subependymal or intraventricular hemorrhage

Grade 1: Subependymal germinal matrix hemorrhage only

Grade 2: Intraventricular blood, no ventricular dilation

Grade 3: Intraventricular blood, ventricular dilation

Grade 4: Intraparenchymal hemorrhage

PIH, Where First Occurred

If Periventricular-Intraventricular Hemorrhage (PIH) is answered **"Yes**,**"** indicate where a PIH first occurred. This Data Item is not applicable if no ultrasound, CT, or MRI was done on or before Day 28 or if no PIH occurred.

Answer **"Your Hospital"** if a PIH was first diagnosed:

- at your hospital prior to Initial Disposition, or
- at your hospital four (4) or more hours following readmission after initial transfer.

Answer **"Other Hospital"** if a PIH was first diagnosed within four (4) hours of admission to your hospital and the infant was:

- at another hospital before being admitted to your hospital, or
- if the infant was initially transferred, at the hospital where the infant was transferred, if the infant was readmitted to your hospital after initial transfer.

NOTES:

- This Data Item does not ask where the worst grade occurred but rather where any PIH (grades 1 to 4) first occurred.

Oxygen after Initial Resuscitation

Answer **"Yes"** if the infant was given supplemental oxygen at any time after leaving the delivery room/initial resuscitation area.

Answer **"No"** if the infant was never given supplemental oxygen after leaving the delivery room/initial resuscitation area.

NOTES:

- 21% oxygen is room air. This is not considered supplemental oxygen, no matter how administered.

Conventional Ventilation after Initial Resuscitation

Answer **"Yes"** if the infant was given intermittent positive pressure ventilation through an endotracheal tube or tracheostomy with a conventional ventilator (IMV rate <240/minute) at any time after leaving the delivery room/initial resuscitation area.

Answer **"No"** if the infant was never given intermittent positive pressure ventilation through an endotracheal tube or tracheostomy with a conventional ventilator (IMV rate <240/minute) after leaving the delivery room/initial resuscitation area.

NOTES:

- Intermittent positive pressure ventilation (Nasal IMV) via nasal prongs is not considered conventional ventilation.
- Synchronized intermittent positive pressure ventilation (SIMV) via nasal prongs is not considered conventional ventilation.

High Frequency Ventilation after Initial Resuscitation

Answer **"Yes"** if the infant received high frequency ventilation (IMV rate ≥ 240/minute) through an endotracheal tube or tracheostomy at any time after leaving the delivery room/initial resuscitation area.

Answer **"No"** if the infant never received high frequency ventilation (IMV rate ≥ 240/minute) through an endotracheal tube or tracheostomy after leaving the delivery room/initial resuscitation area.

NOTES:

- High frequency ventilation via nasal prongs is not considered high frequency ventilation.

Nasal Cannula Flow after Initial Resuscitation

Answer **"Yes"** if the infant received air or oxygen (any FiO2) via nasal cannula at any flow rate at any time after leaving the delivery room/initial resuscitation area.

Answer **"No"** if the infant did not receive air or oxygen (any FiO2) via nasal cannula at any time after leaving the delivery room/initial resuscitation area.

NOTES:

- If a nasal cannula is used to provide nasal CPAP, the answer to Nasal Cannula Flow after Initial Resuscitation is **"No**."

Flow Rate of Nasal Cannula Greater than Two Liters per Minute after Initial Resuscitation

If Nasal Cannula Flow after Initial Resuscitation is **"Yes"**:

Answer **"Yes"** if the infant received air or oxygen (any FiO2) via nasal cannula at a flow rate of more than two liters per minute (>2 L/min) at any time after leaving the delivery room/initial resuscitation area.

Answer **"No"** if the infant did not receive air or oxygen (any FiO2) via nasal cannula at a flow rate of more than two liters per minute (>2 L/min) at any time after leaving the delivery room/initial resuscitation area.

Nasal Ventilation after Initial Resuscitation

Answer **"Yes"** if the infant received noninvasive positive pressure ventilation via nasal prongs or other nasal device at any time after leaving the delivery room/initial resuscitation area.

Answer **"No"** if the infant did not receive noninvasive positive pressure ventilation via nasal prongs or other nasal device at any time after leaving the delivery room/initial resuscitation area.

NOTES:

- Nasal Ventilation should be coded **"Yes"** if the infant received any of the following types of noninvasive positive pressure ventilation via nasal prongs or other nasal device:
  - Two or more levels of positive pressure such as "BiPAP" or "SiPAP"
  - Synchronized or unsynchronized intermittent mandatory ventilation
  - Noninvasive high-frequency oscillation
- If a nasal cannula is used to provide noninvasive positive pressure ventilation using one of the three types listed above, the answer to Nasal Ventilation during Initial Resuscitation is **"Yes**.**"** If a nasal cannula is used only to provide continuous positive airway pressure (CPAP), the answer to Nasal Ventilation during Initial Resuscitation is **"No**.**"**

Nasal CPAP after Initial Resuscitation

Answer **"Yes"** if the infant was given continuous positive airway pressure applied through the nose at any time after leaving the delivery room/initial resuscitation area.

Answer **"No"** if the infant was never given continuous positive airway pressure applied through the nose after leaving the delivery room/initial resuscitation area.

NOTES:

- CPAP administered through a face mask covering the nose *without the administration of intermittent breaths* is considered nasal CPAP for the purpose of this definition.
- If a nasal cannula is used to provide nasal CPAP, the answer to Nasal CPAP after Initial Resuscitation is **"Yes**.**"**

Surfactant during Initial Resuscitation

Answer **"Yes"** if surfactant was administered to the infant in the initial resuscitation area or as part of the stabilization immediately after birth, even if that occurred in a location other than the delivery room.

Answer **"No"** if surfactant was not administered when the infant was in the initial resuscitation area or as part of the stabilization immediately after birth.

NOTES:

- The initial resuscitation and stabilization of infants immediately after birth may occur in locations other than a delivery room. These may include a designated resuscitation area, hospital room, emergency room, operating room, ambulance, etc.
- If surfactant is administered during stabilization and resuscitation immediately following birth, the answer to this question is **"Yes"** regardless of location.
- If the stabilization immediately after birth occurs in a delivery room, resuscitation room or other location and the infant is then transferred to the NICU for further stabilization during which surfactant is administered, answer **"No**."

Surfactant at Any Time

Answer **"Yes"** if the infant received an exogenous surfactant at any time. If the answer to Surfactant during Initial Resuscitation is **"Yes**," Surfactant at Any Time must also be answered **"Yes**."

Answer **"No"** if the infant never received an exogenous surfactant.

Age at First Dose of Surfactant

If surfactant was given at any time, enter the infant's postnatal age in hours and minutes at the time when the first dose of surfactant was administered. For inborn infants, the first dose may have occurred prior to or after NICU admission. For outborn infants, the first dose may have occurred before transfer, during transport, or at your hospital. Do not answer this Data Item if the answer to Surfactant at Any Time is **"No."**

The postnatal age at first dose is the interval in hours and minutes, to the nearest minute, between the date and time of birth and the date and time at which the first dose was given.

If the postnatal age at the time of the first dose was exact in hours, a "0" should be entered in the "minutes" portion of this Data Item. Do not leave hours or minutes blank. If the precise age at first dose is unknown, but an estimated age at first dose can be reliably determined to the nearest 15 minutes, please record this estimate. If the best estimate of age at first dose to the nearest 15 minutes cannot be determined, this Data Item should be recorded as unknown.

EXAMPLE 1: An infant is born at 15:30 hours on October 1st in your hospital. The first dose of surfactant is given at 15:45 hours on October 1st in the delivery room. The postnatal age at first dose is 0 hours and 15 minutes.

EXAMPLE 2: An infant is born at 15:30 hours on October 1st in an outlying hospital. The first dose of surfactant is given at 15:45 hours on October 1st in the delivery room at that hospital. The infant is subsequently transferred to your hospital. The postnatal age at first dose is 0 hours and 15 minutes.

EXAMPLE 3: An infant is born at 15:30 hours on October 1st. The first dose of surfactant is given at 15:00 hours on October 4th. The age at first dose is 71 hours and 30 minutes.

EXAMPLE 4: An infant is born at 15:30 hours on October 1st. The first dose of surfactant is given at 16:30 hours on October 1st. The age at first dose is 1 hour and 0 minutes. (Please record as 1 hour and 0 minutes, rather than 0 hours and 60 minutes.)

Inhaled Nitric Oxide

Answer **"Yes"** if the infant received inhaled nitric oxide.

Answer **"No"** if the infant did not receive inhaled nitric oxide.

Inhaled Nitric Oxide, Where Given

If the infant received Inhaled Nitric Oxide (iNO), indicate where given. This Data Item is not applicable if iNO was not given.

Answer **"Your Hospital"** if iNO was given:

- at your hospital prior to Initial Disposition, and/or
- at your hospital following readmission after initial transfer.

Answer **"Other Hospital"** if iNO was given:

- at another hospital before being admitted to your hospital, or
- at the hospital where the infant was initially transferred, if the infant was readmitted to your hospital after initial transfer.

Answer **"Both"** if iNO was given both at "Your Hospital" and "Other Hospital" as defined above.

Eligibility Criteria for Respiratory Support at 36 Weeks

To answer Data Items for Respiratory Support at 36 Weeks, calculate the Date of Week 36 for the infant and determine whether the Data Items are applicable.

The Date of Week 36 is equal to 36 Weeks, 0 days postmenstrual age. If the infant is born during Week 36, the Date of Week 36 is equal to the date of birth.

Respiratory Support at 36 Weeks Data Items are applicable if the infant's gestational age at birth is less than or equal to 36 weeks, 6 days and:

- the infant is not discharged home prior to the Date of Week 36
- the infant does not die prior to the Date of Week 36

However, if the infant is transferred from your center to another center prior to the Date of Week 36, Respiratory Support at 36 Weeks Data Items are applicable only if the infant is readmitted to your center before discharge home, death, or first birthday and is not discharged or transferred a second time before the Date of Week 36.

Please note that infants who are moved from one unit to another within your center are not considered to have been transferred.

Answer **"Yes"** or **"No"** to each Data Item based on the Data Item definitions if the Data Item is applicable.
Answer **"N/A"** to each of the Data Items if the Data Item is not applicable.

NOTES:

To find the Date of Week 36, add the number of days needed to reach 36 Weeks to the infant's gestational age at birth. Though this Data Item is not submitted to VON, the calculated date is used to answer the Respiratory Support at 36 Weeks Data Items. A calculator is available at https://public.vtoxford.org/week-36-calculator/.

To calculate the Date of Week 36:

- Identify the infant's gestational age at birth in weeks (GA, weeks) and days (GA, days) from the Gestational Age-Weeks and Gestational Age-Days Data Items.
- If the infant's gestational age at birth is greater than or equal to 37 weeks, 0 days, the Date of Week 36 is not applicable.
- If the infant's gestational age at birth is from 36 weeks, 0 days to 36 weeks, 6 days, the Date of Week 36 is the infant's date of birth.
- If the infant's gestational age at birth is 35 weeks, 6 days or less:

1. Subtract the infant's gestational age at birth in weeks from 36 to calculate the number of weeks to Week 36.
2. Multiply the number of weeks by 7 and subtract the infant's gestational age at birth in days to calculate the number of days to Week 36.
3. Add that number of days to the infant's birth date.

Example: An infant is born on 1/1/2024 at 32 weeks, 5 days.

1. 36 - 32 = 4
2. (4 x 7) - 5 = 23
3. 1/1/2024 + 23 days = 1/24/2024, the Date of Week 36

Oxygen at 36 Weeks

Answer **"Yes"** if the Data Item is applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks, and the infant received any supplemental oxygen at any time after leaving the delivery room/initial resuscitation area on the Date of Week 36.

Answer **"No"** if the Data Item is applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks, and the infant did not receive supplemental oxygen at any time after leaving the delivery room/initial resuscitation area on the Date of Week 36.

Answer **"N/A"** if the Data Item is not applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks.

NOTES:

- 21% oxygen is room air. This is not considered supplemental oxygen, no matter how administered.

Conventional Ventilation at 36 Weeks

Answer **"Yes"** if the Data Item is applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks, and the infant was given intermittent positive pressure ventilation through an endotracheal tube or tracheostomy with a conventional ventilator (IMV rate <240/minute) at any time after leaving the delivery room/initial resuscitation area on the Date of Week 36.

Answer **"No"** if the Data Item is applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks, and the infant was not given intermittent positive pressure ventilation through an endotracheal tube or tracheostomy with a conventional ventilator (IMV rate <240/minute) at any time after leaving the delivery room/initial resuscitation area on the Date of Week 36.

Answer **"N/A"** if the Data Item is not applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks.

NOTES:

- Intermittent positive pressure ventilation (Nasal IMV) via nasal prongs is not considered conventional ventilation.
- Synchronized intermittent positive pressure ventilation (SIMV) via nasal prongs is not considered conventional ventilation.

High Frequency Ventilation at 36 Weeks

Answer **"Yes"** if the Data Item is applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks, and the infant received high frequency ventilation (IMV rate ≥ 240/minute) through an endotracheal tube or tracheostomy at any time after leaving the delivery room/initial resuscitation area on the Date of Week 36.

Answer **"No"** if the Data Item is applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks, and the infant did not receive high frequency ventilation (IMV rate ≥ 240/minute) through an endotracheal tube or tracheostomy at any time after leaving the delivery room/initial resuscitation area on the Date of Week 36.

Answer **"N/A"** if the Data Item is not applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks.

NOTES:

- High frequency ventilation via nasal prongs is not considered high frequency ventilation.

Nasal Cannula Flow at 36 Weeks

Answer **"Yes"** if data item is applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks, and the infant received air or oxygen (any FiO2) via nasal cannula at any flow rate at any time on the Date of Week 36.

Answer **"No"** if the Data Item is applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks, and infant did not receive air or oxygen (any FiO2) via nasal cannula at any time on the Date of Week 36.

Answer **"N/A"** if the Data Item is not applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks.

NOTES:

- If a nasal cannula is used to provide nasal CPAP, the answer to Nasal Cannula Flow at 36 Weeks is **"No."**

Flow Rate of Nasal Cannula Greater than Two Liters per Minute at 36 Weeks

If Nasal Cannula Flow at 36 Weeks is **"Yes"**:

Answer **"Yes"** if the infant received air or oxygen (any FiO2) via nasal cannula at a flow rate of more than two liters per minute (>2 L/min) at any time on the Date of Week 36.

Answer **"No"** if the infant received air or oxygen (any FiO2) via nasal cannula at a flow rate of less than or equal to two liters per minute (≤2 L/min) at any time on the Date of Week 36.

Nasal Ventilation at 36 Weeks

Answer **"Yes"** if the Data Item is applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks, and the infant received noninvasive positive pressure ventilation via nasal prongs or other nasal device at any time after leaving the delivery room/initial resuscitation area on the Date of Week 36.

Answer **"No"** if the Data Item is applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks, and the infant did not receive noninvasive positive pressure ventilation via nasal prongs or other nasal device at any time after leaving the delivery room/initial resuscitation area on the Date of Week 36.

Answer **"N/A"** if the Data Item is not applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks.

NOTES:

- Nasal Ventilation should be answered **"Yes"** if the infant receives any of the following types of noninvasive positive pressure ventilation via nasal prongs or other nasal device:
  - Two or more levels of positive pressure such as "BiPAP" or "SiPAP"
  - Synchronized or unsynchronized intermittent mandatory ventilation
  - Noninvasive high-frequency oscillation
- If a nasal cannula is used to provide noninvasive positive pressure ventilation using one of the three types listed above, the answer to Nasal Ventilation at 36 Weeks is **"Yes."** If a nasal cannula is used only to provide continuous positive airway pressure (CPAP), the answer to Nasal Ventilation at 36 Weeks is **"No."**

Nasal CPAP at 36 Weeks

Answer **"Yes"** if the Data Item is applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks, and the infant was given continuous positive airway pressure applied through the nose at any time after leaving the delivery room/initial resuscitation area on the Date of Week 36.

Answer **"No"** if the Data Item is applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks, and the infant was never given continuous positive airway pressure applied through the nose after leaving the delivery room/initial resuscitation area on the Date of Week 36.

Answer **"N/A"** if the Data Item is not applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks.

NOTES:

- CPAP administered through a face mask covering the nose *without the administration of intermittent breaths* is considered nasal CPAP for the purpose of this definition.
- If a nasal cannula is used to provide nasal CPAP, the answer to Nasal CPAP at 36 Weeks is **"Yes**."

Steroids for CLD

Answer **"Yes"** if systemic corticosteroids were used after birth to treat or prevent bronchopulmonary dysplasia or chronic lung disease.

Answer **"No"** if systemic corticosteroids were not used after birth to treat or prevent bronchopulmonary dysplasia or chronic lung disease.

NOTES:

- Inhaled corticosteroids are not considered systemic corticosteroids. Thus, if an infant received inhaled corticosteroids but did not receive systemic corticosteroids after birth to treat or prevent bronchopulmonary dysplasia or chronic lung disease, then the answer to Steroids for CLD is **"No**."

Steroids for CLD, Where Given

If Steroids for CLD is answered **"Yes**,**"** indicate where steroids for CLD were given. This Data Item is not applicable if the infant did not receive steroids for CLD.

Answer **"Your Hospital"** if Steroids for CLD were given:

- at your hospital prior to Initial Disposition, and/or
- at your hospital following readmission after initial transfer.

Answer **"Other Hospital"** if Steroids for CLD were given:

- at another hospital before being admitted to your hospital, or
- at the hospital where the infant was initially transferred, if the infant was readmitted after initial transfer.

Answer **"Both"** if Steroids for CLD were given both at "Your Hospital" and at "Other Hospital" as defined above.

Indomethacin for Any Reason

Answer **"Yes"** if Indomethacin was administered after birth for any reason. The answer to this question may be **"Yes"** even if an infant did not meet the definition of the Patent Ductus Arteriosus Data Item.

Answer **"No"** if Indomethacin was not administered after birth.

NOTES:

- Ibuprofen should not be counted as Indomethacin.

Ibuprofen for PDA

Answer **"Yes"** if Ibuprofen was administered at any time after birth for the prevention or treatment of PDA. The answer to this question may be **"Yes"** even if an infant did not meet the definition of the Patent Ductus Arteriosus Data Item.

Answer **"No"** if Ibuprofen was not administered after birth for the prevention or treatment of PDA.

NOTES:

- Ibuprofen use other than for the prevention or treatment of PDA should be coded as **"No"** for this Data Item.

Acetaminophen (Paracetamol) for PDA

Answer **"Yes"** if acetaminophen (paracetamol) was administered at any time after birth for the prevention or treatment of PDA. The answer to this question may be **"Yes"** even if an infant did not meet the definition of the Patent Ductus Arteriosus Data Item.

Answer **"No"** if acetaminophen (paracetamol) was not administered at any time after birth for the prevention or treatment of PDA.

NOTES:

- Acetaminophen (paracetamol) use other than for the prevention or treatment of PDA should be coded as **"No"** for this Data Item.

Probiotics

Answer **"Yes"** if and only if the infant received probiotics containing live bacteria. This may include formulas containing probiotics or probiotic supplements added to formula or breast milk feeds. Yogurt is not considered a probiotic supplement.

Answer **"No"** if the infant did not receive any probiotics.

NOTES:

- Probiotics must contain live microorganisms administered enterally with feedings or as feeding supplements.
- Probiotics are to be distinguished from prebiotics, which are non-digestible carbohydrates meant to encourage proliferation of desirable gut flora.
- Yogurt should not be considered a probiotic for this question.

Treatment of ROP with Anti-VEGF Drug

Answer **"Yes"** if the infant received bevacizumab (Avastin) or other anti-vascular endothelial growth factor (Anti-VEGF) drugs in one or both eyes for the treatment of retinopathy of prematurity (ROP).

Answer **"No"** if the infant did not receive bevacizumab (Avastin) or other anti-vascular endothelial growth factor (Anti-VEGF) drugs in one or both eyes for the treatment of retinopathy of prematurity (ROP).

Caffeine for Any Reason

Answer **"Yes"** if caffeine was administered at any time after birth for any reason.

Answer **"No"** if caffeine was not administered at any time after birth for any reason.

Intramuscular Vitamin A for Any Reason

Answer **"Yes"** if intramuscular vitamin A was administered at any time after birth for any reason.

Answer **"No"** if intramuscular vitamin A was not administered at any time after birth for any reason.

NOTES:

- Do not answer **"Yes"** if Vitamin A was only given as a component of parenteral nutrition or an oral multivitamin.

ROP Surgery

Answer **"Yes"** if retinal cryosurgery and/or laser surgery were performed for ROP.

Answer **"No"** if retinal cryosurgery and/or laser surgery were not performed for ROP.

ROP Surgery, Where Done

If ROP Surgery is answered **"Yes**,**"** indicate where ROP surgery was done. This Data Item is not applicable if ROP surgery was not done.

Answer **"Your Hospital"** if ROP Surgery was done:

- at your hospital prior to Initial Disposition, and/or
- at your hospital following readmission after initial transfer.

Answer **"Other Hospital"** if ROP Surgery was done:

- at another hospital before being admitted to your hospital, or
- at the hospital where the infant was initially transferred, if the infant was readmitted after initial transfer.

Answer **"Both"** if ROP Surgery is done both at "Your Hospital" and "Other Hospital" as defined above.

Surgery or Interventional Catheterization for Closure of PDA

Answer **"Yes"** if closure of the ductus arteriosus was attempted with surgery or by interventional catheterization. This Data Item can be answered **"Yes"** even if an infant did not meet the definition of the Patent Ductus Arteriosus Data Item.

Answer **"No"** if closure of the ductus arteriosus was not attempted with surgery or by interventional catheterization.

Answer **"N/A"** if the infant had surgery for patent ductus arteriosus in conjunction with Repair or Palliation of Congenital Heart Disease (S504).

NOTES:

- If Surgery or Interventional Catheterization for Closure of PDA is answered **"Yes**,**"** enter the appropriate surgery code in the Surgery Codes Data Item:

  S515 Open thoracotomy or sternotomy for patent ductus arteriosus closure

  S516 Thoracoscopic surgery for patent ductus arteriosus closure

  S605 Interventional catheterization for patent ductus arteriosus closure

Surgery for NEC, Suspected NEC, or Bowel Perforation

Answer **"Yes"** if one or more of the following procedures: laparotomy, laparoscopy, bowel resection, or intraperitoneal drain placement was performed for necrotizing enterocolitis, suspected necrotizing enterocolitis, or bowel perforation.

Answer **"No"** if none of the following procedures: laparotomy, laparoscopy, bowel resection, or intraperitoneal drain placement was performed for necrotizing enterocolitis, suspected necrotizing enterocolitis, or bowel perforation.

NOTES:

- If Surgery for NEC, Suspected NEC, or Bowel Perforation is answered **"Yes**,**"** at least one of the following surgery codes must be entered in the Surgery Codes Data Item:

  S302 Laparoscopy (diagnostic, with/without biopsy)

  S303 Laparotomy (diagnostic or exploratory, with/without biopsy)

  S307 Jejunostomy, ileostomy, enterostomy, or colostomy for intestinal diversion (with or without bowel resection, with or without fistula creation)

  S308 Small bowel resection with or without primary anastomosis

  S309 Large bowel resection

  S333 Primary peritoneal drainage for NEC, suspected NEC, or intestinal perforation. (If infant subsequently has other applicable surgical procedures, code those also.)

- Surgery Codes are listed in Appendix D of the Manual of Operations, Part 2.

Other Surgery

Answer **"Yes"** if a surgical procedure other than ROP Surgery, Surgery or Interventional Catheterization for Closure of PDA, and Surgery for NEC, Suspected NEC, or Bowel Perforation was performed and either:

- the surgical procedure is included on the Surgery Codes list, or
- the specific surgical procedure is not specifically identified on the Surgery Codes list and the procedure was performed under general or spinal anesthesia, or
- other interventional cardiac catheterization procedures are performed (code S600), whether or not the procedure is performed under general or spinal anesthesia.

Answer **"No"** if the infant does not have other surgery as defined above. If the infant had only ROP Surgery, Surgery or Interventional Catheterization for Closure of PDA, or Surgery for NEC, Suspected NEC, or Bowel Perforation, answer **"No."**

NOTES:

- If Other Surgery is answered **"Yes**,**"** one or more valid surgery codes must be entered in the Surgery Codes Data Item.
- If Surgery for NEC, Suspected NEC, or Bowel Perforation and Other Surgery are both answered **"Yes**,**"** one or more surgery codes in the Surgery Codes List other than S333 must be entered in the Surgery Codes Data Item.
- If Surgery or Interventional Catheterization for Closure of PDA and Other Surgery are both answered **"Yes**,**"** one or more surgery codes in the Surgery Codes List other than S515, S516, or S605 must be entered in the Surgery Codes Data Item.
- The following are <u>not</u> considered "Other Surgery":
    - Central lines: Broviac catheters, percutaneous venous catheters, central venous catheters, PICC lines, umbilical artery lines, umbilical venous lines, or any other intravascular catheter. We recognize that some of these lines may be placed while the infant is under anesthesia for other procedures. Do not code any lines as surgery even if they are placed under general or spinal anesthesia.
    - ECMO, ECMO cannulation, and ECMO decannulation. Do not code ECMO, ECMO cannulation, or decannulation as surgery even if the procedures are performed under anesthesia.
    - Chest tube placement.
    - Peritoneal dialysis and placement or removal of peritoneal dialysis catheters.
- Surgery Codes are listed in Appendix D of the Manual of Operations, Part 2.

Surgery Codes

If Surgery or Interventional Catheterization for Closure of PDA, Surgery for NEC, Suspected NEC, or Bowel Perforation, or Other Surgery is answered **"Yes"**:

Enter up to ten Surgery Code numbers from the Surgery Codes List in Appendix D of the Manual of Operations, Part 2.

- If the specific surgical procedure is not listed on the Surgery Codes List and the procedure was performed under general or spinal anesthesia, use the code for other surgery in that category (for example, S100, S200, etc.). Surgery Codes S100, S200, S300, S400, S500, S600, S700, S800, S900, S1000, and S1001 require a description in the text field.

NOTES:

- If Surgery for NEC, Suspected NEC, or Bowel Perforation is answered **"Yes**,**"** at least one of the NEC surgery codes must be entered in this Data Item (S302, S303, S307, S308, S309, S333).
- If Surgery for NEC, Suspected NEC, or Bowel Perforation and Other Surgery are both answered **"Yes**,**"** one or more surgery codes in the Surgery Codes List other than S333 must be entered in this Data Item.
- If Surgery or Interventional Catheterization for Closure of PDA is answered **"Yes**,**"** enter at least one of the PDA surgery codes in this Data Item (S515, S516, S605).
- Codes for "other" procedures (i.e. S100, S200, S300, S400, S500, S700, S800, S900) should be used only to identify procedures for which there are no specific codes and are performed under general or spinal anesthesia.
- Do not use "other" codes to further describe surgical procedures that are on the list or to indicate why procedures are performed. For example, do not use S500 to add a description for the S504 procedure or to explain why heart surgery was performed. Cardiac surgery for the repair or palliation of congenital heart disease is coded as S504. Do not use code S500 to further describe the details of that surgery.

Surgical Code Description

If Surgery Code S100, S200, S300, S400, S500, S600, S700, S800, S900, S1000, and/or S1001 were entered, a description must be entered in this Data Item. Please be specific and do not use general descriptions.

Code	
S100	Other head and neck surgery requiring general or spinal anesthesia
S200	Other thoracic surgery requiring general or spinal anesthesia
S300	Other abdominal surgery requiring general or spinal anesthesia
S400	Other genito-urinary surgery requiring general or spinal anesthesia
S500	Other open heart or vascular surgery requiring general or spinal anesthesia
S600	Other interventional cardiac catheterization ▪ Record procedures for other cardiac catheterization (S600) whether or not the infant received general or spinal anesthesia.
S700	Skin or soft tissue surgery requiring general or spinal anesthesia
S800	Other musculoskeletal surgery requiring general or spinal anesthesia
S900	Other central nervous system surgery requiring general or spinal anesthesia
S1000	Fetal surgery at your hospital
S1001	Fetal surgery at another hospital

Location of Surgery

Indicate where the procedure was done for each surgery code entered:

Answer **"Your Hospital"** if the surgical procedure was performed:

- at your hospital prior to Initial Disposition, and/or
- at your hospital following readmission after initial transfer.

Answer **"Other Hospital"** if the surgical procedure was performed:

- at another hospital before being admitted to your hospital, or
- at the hospital where the infant was initially transferred, if the infant was readmitted after initial transfer.

Answer **"Both"** if the surgical procedure is performed both at "Your Hospital" and "Other Hospital" as defined above.

Surgical Site Infection following Surgery at Your Hospital

Answer **"Yes"** if, any time prior to discharge, the infant had a surgical site infection of this surgical procedure resulting from a surgery at Your Hospital.

Answer **"No"** if, any time prior to discharge, the infant did not have a surgical site infection of this surgical procedure resulting from a surgery at Your Hospital.

NOTES:

- Surgical site infections include superficial, deep incisional, or organ space. Please refer to the Centers for Disease Control website for descriptions of these infections: http://www.cdc.gov/nhsn/acute-care-hospital/ssi/.
- If the infant had multiple surgical procedures at the same episode of surgery, please code only one surgical code that resulted in the surgical site infection.

Respiratory Distress Syndrome (RDS)

Answer **"Yes"** if the infant had respiratory distress syndrome (RDS), defined as:

- A chest radiograph consistent with RDS (reticulogranular appearance to lung fields with or without low lung volumes and air bronchograms) within the first 24 hours of life.

And

- Central cyanosis in room air, or a requirement for continuous positive airway pressure (CPAP), positive end expiratory pressure (PEEP) and/or supplemental oxygen to maintain a pulse oximeter saturation over 88% within the first 24 hours of life.

Answer **"No"** if the infant did not satisfy both of the above criteria.

Pneumothorax

Answer **"Yes"** if the infant had extrapleural air diagnosed by chest radiograph or needle aspiration (thoracentesis).

- For infants who had thoracic surgery and then later developed extrapleural air diagnosed by CXR or needle thoracentesis, answer **"Yes**."

Answer **"No"** if the infant did not have extrapleural air as defined above.

- For infants who had thoracic surgery and a chest tube was placed at the time of surgery OR if free air was only present on a CXR taken immediately after thoracic surgery and was not treated with a chest tube, answer **"No**."

Pneumothorax, Where Occurred

If Pneumothorax is answered **"Yes**,**"** indicate where the pneumothorax occurred. This Data Item is not applicable if a pneumothorax did not occur.

Answer **"Your Hospital"** if a pneumothorax occurred:

- at your hospital prior to Initial Disposition, and/or
- at your hospital four (4) or more hours following readmission after initial transfer.

Answer **"Other Hospital"** if a pneumothorax occurred within four (4) hours of admission to your hospital and the infant was:

- at another hospital before being admitted to your hospital, or
- if initially transferred, at the hospital where the infant was transferred, if the infant was readmitted after initial transfer.

Answer **"Both"** if the pneumothorax is diagnosed both at "Your Hospital" and "Other Hospital" as defined above.

NOTES:

- If the pneumothorax that occurred at another hospital was initially drained without insertion of a chest tube, and recurred or reaccumulated at your hospital on the same side within 24 hours of admission, it will be considered to have occurred at the other hospital.
- If a chest tube was inserted at another hospital, and the pneumothorax recurred or reaccumulated at your hospital on the same side within 24 hours of removing the chest tube placed at initial diagnosis, it will be considered to have occurred at the other hospital.

Patent Ductus Arteriosus

Answer **"Yes"** for Patent Ductus Arteriosus if:

At least one of the following findings is present:

- Left to Right or bidirectional ductal shunt on Doppler echo
- Systolic or continuous murmur

And

At least two of the following findings are present:

- Hyperdynamic precordium
- Bounding pulses
- Wide pulse pressure
- Pulmonary vascular congestion, cardiomegaly, or both

Answer **"No"** if the infant does not satisfy the above conditions.

Answer **"N/A"** if the infant received prostaglandin medication to maintain ductal patency.

Necrotizing Enterocolitis

Answer **"Yes"** if the infant had Necrotizing Enterocolitis (NEC) diagnosed at surgery, at postmortem examination, or with clinical and diagnostic imaging using the following criteria:

At least one of the following clinical signs present:

- Bilious gastric aspirate or emesis
- Abdominal distension or discoloration
- Occult or gross blood in stool (no fissure)

And

At least one of the following diagnostic imaging findings present:

- Pneumatosis intestinalis
- Hepato-biliary gas
- Pneumoperitoneum

Answer **"No"** if the infant did not satisfy the above definition of NEC.

NOTES:

- Infants who satisfy the definition of Necrotizing Enterocolitis above but are found at surgery or post-mortem examination for that episode to have a focal intestinal perforation should be coded as having Surgically Confirmed or Clinically Diagnosed Focal Intestinal Perforation, not as having NEC.

NEC, Where Occurred

If Necrotizing Enterocolitis (NEC) is answered **"Yes**,**"** indicate where occurred. This Data Item is not applicable if NEC did not occur.

Answer **"Your Hospital"** if NEC was diagnosed:

- at your hospital prior to Initial Disposition, and/or
- at your hospital four (4) or more hours following readmission after initial transfer.

Answer **"Other Hospital"** if NEC was diagnosed within four (4) hours of admission to your hospital and the infant was:

- at another hospital before being admitted to your hospital, or
- if initially transferred, at the hospital where the infant was transferred, if the infant was readmitted after initial transfer.

Answer **"Both"** if NEC is diagnosed both at "Your Hospital" and "Other Hospital" as defined above.

NOTES:

- Recurrence or recrudescence of NEC that had previously occurred at another hospital will not be considered to be NEC that occurred at your hospital unless the original case of NEC had resolved and the infant had been on full feedings for one week or more.

Surgically Confirmed or Clinically Diagnosed Focal Intestinal Perforation

Enter only one response.

Answer **"Surgically Confirmed"** if the infant has a Focal Intestinal Perforation separate from Necrotizing Enterocolitis. This diagnosis will be based on visual inspection of the bowel at the time of surgery or post-mortem examination that demonstrates a single focal perforation with the remainder of the bowel appearing normal.

Answer **"Clinically Diagnosed"** if:

- the answer to the Necrotizing Enterocolitis item is **"No"**; and
- the bowel was not visualized, at surgery or post-mortem exam; and
- a diagnosis of Focal Intestinal Perforation was recorded in the infant's record.

Answer **"No"** if the infant did not have a Focal Intestinal Perforation as defined above.

NOTES:

- Infants who satisfy the definition of Necrotizing Enterocolitis for that episode should be coded as having NEC, not Surgically Confirmed or Clinically Diagnosed Focal Intestinal Perforation.
- Focal intestinal perforation may also be called spontaneous intestinal perforation (SIP).

Late Infection Applicability Criteria

Each of the late infection Data Items is based on whether the infant had the infection *after* Day 3 of life. In determining the date of Day 3, the date of birth counts as Day 1 regardless of the time of birth. For an infant born at 11:59 PM on September 1st, Day 3 is September 3rd. Use the criteria below when answering each of the late infection questions.

The three late infection Data Items are not applicable if:

- The infant is discharged home or dies on or before Day 3, or
- The infant is transferred from your center to another hospital on or before Day 3 and either,
    - is not readmitted to your center before discharge home, death, or first birthday, or
    - is transferred a second time on or before Day 3.

Otherwise, the late infection Data Items are applicable.

Bacterial Sepsis and/or Meningitis after Day 3

Answer **"Yes"** if the Data Item is applicable based on the Late Infection Applicability Criteria and a bacterial pathogen from the Bacterial Pathogens List is recovered from a blood and/or cerebrospinal fluid culture obtained after Day 3 of life.

Answer **"No"** if the Data Item is applicable based on the Late Infection Applicability Criteria and a bacterial pathogen from the Bacterial Pathogens List is not recovered from a blood and/or cerebrospinal fluid culture obtained after Day 3 of life or if no blood or cerebrospinal fluid cultures were obtained after Day 3.

Answer **"N/A"** if the Data Item is not applicable based on the Late Infection Applicability Criteria.

NOTES:

- If a bacterial pathogen and a coagulase negative staph are recovered during the same sepsis workup performed after Day 3, answer **"Yes"** to only "Bacterial Sepsis and/or Meningitis" for that episode.
- If a bacterial pathogen is recovered during one episode of sepsis after Day 3, and coagulase negative staphylococcus is recovered during another episode of sepsis after Day 3 (associated with the three clinical criteria for coagulase negative staph), answer **"Yes"** to both "Bacterial Sepsis and/or Meningitis" and "Coagulase Negative Staph."
- Bacterial Pathogens are listed in Appendix B of the Manual of Operations, Part 2.

Bacterial Sepsis and/or Meningitis after Day 3, Where Occurred

If Bacterial Sepsis and/or Meningitis after Day 3 is answered **"Yes,"** indicate where occurred. This item is not applicable if late bacterial sepsis and/or meningitis did not occur.

Answer **"Your Hospital"** if Bacterial Sepsis and/or Meningitis after Day 3 was diagnosed:

- at your hospital prior to Initial Disposition, or
- at your hospital four (4) or more hours following readmission after initial transfer.

Answer **"Outside of Your Hospital"** if Bacterial Sepsis and/or Meningitis after Day 3 was diagnosed within four (4) hours of admission to your hospital.

Answer **"Both"** if Bacterial Sepsis and/or Meningitis after Day 3 was diagnosed both at "Your Hospital" and "Outside of Your Hospital" as defined above.

NOTES:

- Recurrence or recrudescence of a late bacterial pathogen with the same organism that had previously occurred at another hospital will not be considered to be a late bacterial pathogen that occurred at your hospital unless the original case of late bacterial pathogen had resolved and the infant had been off of antibiotics for one week or more.

Bacterial Sepsis and/or Meningitis after Day 3, Pathogen(s)

If Bacterial Sepsis and/or Meningitis after Day 3 is answered **"Yes**,**"** enter up to three pathogen codes from the Bacterial Pathogens List that were recovered from a blood and/or cerebrospinal fluid culture. This Data Item is not applicable if Bacterial Sepsis and/or Meningitis after Day 3 is answered **"No**."

NOTES:

- Bacterial Pathogens are listed in Appendix B of the Manual of Operations, Part 2.

Coagulase Negative Staphylococcal Infection after Day 3

Answer **"Yes"** if the Data Item is applicable based on the Late Infection Applicability Criteria and the infant has *all three* (3) of the following after Day 3 of life:

- Coagulase negative staphylococcus is recovered from a blood culture obtained from either a central line, or peripheral blood sample, and/or is recovered from cerebrospinal fluid obtained by lumbar puncture, ventricular tap, or ventricular drain.

And

- One or more signs of generalized infection (such as apnea, temperature instability, feeding intolerance, worsening respiratory distress, or hemodynamic instability).

And

- Treatment with five or more days of intravenous antibiotics after the above cultures were obtained. If the infant died, was discharged, or transferred prior to the completion of five days of intravenous antibiotics, this condition would still be met if the intention were to treat for five or more days.

Answer **"No"** if the Data Item is applicable based on the Late Infection Applicability Criteria and any or all of the above are not true or if no blood or cerebrospinal fluid cultures were obtained after Day 3.

Answer **"N/A"** if the Data Item is not applicable based on the Late Infection Applicability Criteria.

NOTES:

- If a bacterial pathogen and a coagulase negative staphylococcus are recovered during the same sepsis workup performed after Day 3, answer **"Yes"** to only "Bacterial Sepsis and/or Meningitis" for that episode.
- If a bacterial pathogen is recovered during one episode of sepsis after Day 3, and coagulase negative staphylococcus is recovered during another episode of sepsis after Day 3 (associated with the three clinical criteria for coagulase negative staphylococcal infection), answer **"Yes"** to both "Bacterial Sepsis and/or Meningitis" and "Coagulase Negative Staphylococcal Infection."

Coagulase Negative Staphylococcal Infection after Day 3, Where Occurred

If Coagulase Negative Staphylococcal Infection after Day 3 is answered **"Yes**,**"** indicate where occurred. This Data Item is not applicable if coagulase negative staphylococcal infection did not occur.

Answer **"Your Hospital"** if Coagulase Negative Staphylococcal Infection after Day 3 was diagnosed:

- at your hospital prior to Initial Disposition, or
- at your hospital four (4) or more hours following readmission after initial transfer.

Answer **"Outside of Your Hospital"** if Coagulase Negative Staphylococcal Infection after Day 3 was diagnosed within four (4) hours of admission to your hospital.

Answer **"Both"** if Coagulase Negative Staphylococcal Infection after Day 3 is diagnosed both at "Your Hospital" and "Outside of Your Hospital" as defined above.

NOTES:

- Recurrence or recrudescence of a coagulase negative staphylococcal infection that had previously occurred at another hospital will not be considered to be a coagulase negative staphylococcal infection that occurred at your hospital unless the original case of coagulase negative staphylococcal infection had resolved and the infant had been off of antibiotics for one week or more.

Fungal Infection after Day 3

Answer **"Yes"** if the Data Item is applicable based on the Late Infection Applicability Criteria and a fungus was recovered from a blood culture obtained from either a central line or peripheral blood sample after Day 3 of life.

Answer **"No"** if the Data Item is applicable based on the Late Infection Applicability Criteria and a fungus was not recovered from a blood culture obtained from either a central line or peripheral blood sample after Day 3 of life or if no blood cultures were obtained after Day 3.

Answer **"N/A"** if the Data Item is not applicable based on the Late Infection Applicability Criteria.

Fungal Infection after Day 3, Where Occurred

If Fungal Infection after Day 3 is answered **"Yes**,**"** indicate where occurred. This Data Item is not applicable if fungal infection did not occur.

Answer **"Your Hospital"** if Fungal Infection after Day 3 was diagnosed:

- at your hospital prior to Initial Disposition, or
- at your hospital four (4) or more hours following readmission after initial transfer.

Answer **"Outside of Your Hospital"** if Fungal Infection after Day 3 was diagnosed within four (4) hours of admission to your hospital.

Answer **"Both"** if Fungal Infection after Day 3 was diagnosed both at "Your Hospital" and "Outside of Your Hospital" as defined above.

NOTES:

- Recurrence or recrudescence of a fungal infection with the same organism that had previously occurred at another hospital will not be considered to be a fungal infection that occurred at your hospital unless the original case of fungal infection had resolved and the infant had been off of antifungal agents for one week or more.

Cystic Periventricular Leukomalacia

Answer **"Yes"** if the infant has evidence of cystic periventricular leukomalacia on a cranial ultrasound, CT, or MRI scan obtained at any time.

Answer **"No"** if there was no evidence of cystic periventricular leukomalacia on any cranial ultrasound, CT, or MRI and at least one cranial imaging study (ultrasound, CT, or MRI) was done.

Answer **"N/A"** if no cranial imaging study (Ultrasound, CT, or MRI) was ever done.

NOTES:

- To be considered cystic periventricular leukomalacia there must be multiple small periventricular cysts identified.
- Periventricular echogenicity on ultrasound without cysts should not be coded as cystic periventricular leukomalacia.
- A porencephalic cyst in the area of previously identified intraparenchymal hemorrhage should not be coded as cystic periventricular leukomalacia.
- Periventricular abnormalities on CT or MRI should not be coded as cystic periventricular leukomalacia unless multiple small periventricular cysts are identified.

ROP, Retinal Examination

Answer **"Yes"** if an indirect ophthalmologic examination for retinopathy of prematurity (ROP) was performed at any time.

Answer **"No"** if an indirect ophthalmologic examination for ROP was not performed.

ROP Stage

If a retinal examination was performed, enter the worst stage documented on any exam in the eye with the most advanced stage[1]. Please select from the following stages:

Stage 0: No evidence of ROP

Stage 1: Presence of demarcation line (+/- abnormal vascularization)

Stage 2: Presence of intraretinal ridge

Stage 3: Presence of a ridge with extraretinal fibrovascular proliferation

Stage 4: Partial retinal detachment

Stage 5: Total retinal detachment

This Data Item is not applicable if no retinal examination was done.

[1] An International Committee for the Classification of Retinopathy of Prematurity: The International Classification of Retinopathy of Prematurity Revisited. *Arch Ophthalmol* 2005; 123:991-999.

Congenital Anomaly

Answer **"Yes"** if the infant had one or more of the congenital anomalies included in the Congenital Anomalies List in Appendix C of the Manual of Operations, Part 2. Enter applicable codes in the spaces provided.

- For the following three codes, enter a description in the space provided. Please be specific and do not use general descriptions.

  Code

  504 Other Chromosomal Anomaly

  601 Skeletal Dysplasia

  605 Inborn Error of Metabolism

- For the following six codes, enter a description in the space provided. Please be specific and do not use general descriptions such as "multiple congenital anomalies" or "complex congenital heart disease." To be considered lethal or life threatening, the anomaly must either: (1) be the primary cause of death, or (2) be treated prior to discharge with specific surgical or medical therapy to correct a major anatomic anomaly or a life threatening physiologic dysfunction.

  Code

  901 Other Lethal or Life Threatening Central Nervous System Anomaly

  902 Other Lethal or Life Threatening Congenital Heart Anomaly

  903 Other Lethal or Life Threatening Gastro-Intestinal Anomaly

  904 Other Lethal or Life Threatening Genito-Urinary Anomaly

  907 Other Lethal or Life Threatening Pulmonary Anomaly

  100 Other Lethal or Life Threatening Anomaly not listed in Appendix C

Answer **"No"** if an infant was not diagnosed as having one or more of the congenital anomalies included in Appendix C and did not have an unlisted anomaly which was lethal or life threatening.

The following conditions should not be coded as Congenital Anomalies:

- Cleft Lip without Cleft Palate
- Club Feet
- Congenital Dislocation of the Hips
- Congenital CMV
- Cystic Fibrosis
- Extreme Prematurity
- Fetal Alcohol Syndrome
- Hypospadias
- Hypothyroidism
- Intrauterine Growth Retardation

- Intrauterine Infection
- Limb Abnormalities
- Patent Ductus Arteriosus
- Persistent Pulmonary Hypertension (PPHN)
- Polydactyly
- Pulmonary Hypoplasia (use code 401 for bilateral renal agenesis, or 604 for oligohydramnios sequence, if applicable)
- Small Size for Gestational Age
- Syndactyly

NOTES:

- Congenital anomaly codes are listed in Appendix C of the Manual of Operations, Part 2.
- You may enter up to five codes.
- If an anomaly is included in Appendix C, answer "**Yes**" regardless of whether it was considered lethal or life threatening.
- If an anomaly is not included in Appendix C, answer "**Yes**" only if the anomaly was considered lethal or life threatening, as defined above. Please select the appropriate "other" code and enter a detailed description.
- Each applicable code should be entered only once.

Enteral Feeding at Discharge

Complete this Data Item based on enteral feedings received during the 24 hour period prior to discharge, transfer, or death.

Answer **"None"** if the infant was:

- not receiving any enteral feedings with either formula milk or human milk at discharge, or
- discharged on IV TPN alone since the infant was not receiving any enteral feedings, or
- discharged only on sterile water or glucose water since the infant was not receiving either formula milk or human milk.

Answer **"Human Milk Only"** if the infant was discharged receiving human milk as the only enteral feeding, either by being breast fed and/or by receiving pumped human milk.

Answer **"Formula Only"** if the infant was discharged receiving formula milk as the only enteral feeding.

Answer **"Human Milk in Combination with Either Fortifier or Formula"** if the infant was discharged receiving human milk, plus human milk fortifier and/or formula milk.

NOTES:

- When completing this Data Item, "Discharge" refers to initial disposition in most cases.
- If an infant is transferred from your center to another hospital and readmitted to your center following transfer, update this Data Item based on the infant's enteral feeding status on the date of Disposition after Readmission.
- For infants who remained in your center on their first birthday, complete the Data Item Enteral Feeding at Discharge based on enteral feedings received on that day.
- Enteral feedings may be given by any method including breast, bottle, gavage tube, gastrostomy tube, feeding cup, etc.
- Human milk includes mother's own milk or donor milk.
- Formula milk includes all standard newborn formulas, premature formulas, special formulas, and formulas made from human milk.
- Please answer this question based only on the enteral feedings at discharge. Do not consider parenteral feedings when answering this Data Item. For example, if an infant was discharged on IV TPN as well as human milk, the correct response would be **"Human Milk Only"** since human milk was the only enteral feeding.

Notes on Oxygen, Respiratory Support, and Monitor at Discharge Data Items

When completing these Data Items, “Discharge” refers to initial disposition in most cases. If an infant is transferred from your center to another hospital and readmitted to your center following transfer, please update these Data Items based on status at the time of discharge after readmission.

Oxygen at Discharge

Answer **“Yes”** if the infant went home or was transferred on supplemental oxygen.

Answer **“No”** if the infant was not discharged on supplemental oxygen.

For an infant who remained in your hospital on his/her first birthday, answer **“Yes”** if the infant was on supplemental oxygen on the date of the infant’s first birthday. Answer **“No”** if the infant was not on supplemental oxygen on his/her first birthday.

For an infant who died prior to discharge, answer **“Yes”** if the infant received supplemental oxygen at any time on the day of death. Answer **“No”** if the infant did not receive supplemental oxygen at any time on the day of death.

NOTES:

- 21% oxygen is room air. This is not considered supplemental oxygen, no matter how administered.

Conventional Ventilation at Discharge

Answer **"Yes"** if the infant went home or was transferred on intermittent positive pressure ventilation through an endotracheal tube or tracheostomy with a conventional ventilator (IMV rate <240/minute).

Answer **"No"** if the infant was not discharged on intermittent positive pressure ventilation through an endotracheal tube or tracheostomy with a conventional ventilator (IMV rate <240/minute).

For an infant who died prior to discharge, answer **"Yes"** if the infant received conventional ventilation through an endotracheal tube or tracheostomy at any time on the day of death. Answer **"No"** if the infant did not receive conventional ventilation through an endotracheal tube or tracheostomy at any time on the day of death.

NOTES:

- Intermittent positive pressure ventilation (Nasal IMV) via nasal prongs is not considered conventional ventilation.
- Synchronized intermittent positive pressure ventilation (SIMV) via nasal prongs is not considered conventional ventilation.

High Frequency Ventilation at Discharge

Answer **"Yes"** if the infant went home or was transferred on high frequency ventilation (IMV rate ≥ 240/minute) delivered through an endotracheal tube or tracheostomy.

Answer **"No"** if infant was not discharged on high frequency ventilation (IMV rate ≥ 240/minute) delivered through an endotracheal tube or tracheostomy.

For an infant who died prior to discharge, answer **"Yes"** if the infant received high frequency ventilation delivered through an endotracheal tube or tracheostomy at any time on the day of death. Answer **"No"** if the infant did not receive high frequency ventilation delivered through an endotracheal tube or tracheostomy at any time on the day of death.

NOTES:

- High frequency ventilation via nasal prongs is not considered high frequency ventilation.

Nasal Cannula Flow at Discharge

Answer **"Yes"** if the infant went home or was transferred on air or oxygen (any FiO2) via nasal cannula at any flow rate.

Answer **"No"** if the infant was not discharged on air or oxygen (any FiO2) via nasal cannula at any flow rate.

For an infant who died prior to discharge, answer **"Yes"** if the infant received air or oxygen (any FiO2) via nasal cannula at any flow rate at any time on the day of death. Answer **"No"** if the infant did not receive air or oxygen (any FiO2) via nasal cannula at any flow rate at any time on the day of death.

NOTES:

- If a nasal cannula is used to provide nasal CPAP, the answer to Nasal Cannula Flow at Discharge is **"No**."

Flow Rate of Nasal Cannula Greater than Two Liters per Minute at Discharge

If Nasal Cannula Flow at Discharge is **"Yes"**:

Answer **"Yes"** if the infant went home or was transferred on air or oxygen (any FiO2) via nasal cannula at a flow rate of more than two liters per minute (>2 L/min). For an infant who died prior to discharge, answer **"Yes"** if the infant received air or oxygen (any FiO2) via nasal cannula at a flow rate of more than two liters per minute (>2 L/min) at any time on the day of death.

Answer **"No"** if the infant went home or was transferred on air or oxygen (any FiO2) via nasal cannula at a flow rate of less than or equal to two liters per minute (≤2 L/min). For an infant who died prior to discharge, answer **"No"** if the infant did not receive air or oxygen (any FiO2) via nasal cannula at any flow rate at a flow rate of more than two liters per minute (>2 L/min) at any time on the day of death.

Nasal Ventilation at Discharge

Answer **"Yes"** if the infant went home or was transferred on noninvasive positive pressure ventilation via nasal prongs or other nasal device.

Answer **"No"** if the infant was not discharged on noninvasive positive pressure ventilation via nasal prongs or other nasal device.

For an infant who died prior to discharge, answer **"Yes"** if the infant received noninvasive positive pressure ventilation via nasal prongs or other nasal device at any time on the day of death. Answer **"No"** if the infant did not receive noninvasive positive pressure ventilation via nasal prongs or other nasal device at any time on the day of death.

NOTES:

- Nasal Ventilation at Discharge should be coded **"Yes"** if the infant receives any of the following types of noninvasive positive pressure ventilation via nasal prongs or other nasal device:
  - Two or more levels of positive pressure such as "BiPAP" or "SiPAP"
  - Synchronized or unsynchronized intermittent mandatory ventilation
  - Noninvasive high-frequency oscillation
- If a nasal cannula is used to provide noninvasive positive pressure ventilation using one of the three types listed above, the answer to Nasal Ventilation at Discharge is **"Yes."** If a nasal cannula is used only to provide continuous positive airway pressure (CPAP), the answer to Nasal Ventilation at Discharge is **"No."**

Nasal CPAP at Discharge

Answer **"Yes"** if the infant went home or was transferred on continuous positive airway pressure applied through the nose.

Answer **"No"** if the infant was not discharged on continuous positive airway pressure applied through the nose.

For an infant who died prior to discharge, answer **"Yes"** if the infant received continuous positive airway pressure applied through the nose at any time on the day of death. Answer **"No"** if the infant did not receive continuous positive airway pressure applied through the nose at any time on the day of death.

NOTES:

- CPAP administered through a face mask covering the nose without the administration of intermittent breaths is considered nasal CPAP for the purpose of this definition.
- If a nasal cannula is used to provide nasal CPAP, the answer to Nasal CPAP at Discharge is **"Yes**."

Monitor at Discharge

Answer **"Yes"** if the infant went home or was transferred on an Apnea Monitor or Cardio-Respiratory Monitor.

Answer **"Yes"** if the infant remained in your hospital on his/her first birthday and was on an Apnea Monitor or Cardio-Respiratory Monitor on the date of the infant's first birthday.

Answer **"No"** if the infant was not discharged on an Apnea or Cardio-Respiratory Monitor.

Answer **"No"** if the infant was not on an Apnea or Cardio-Respiratory Monitor at any time on the day of death.

For an infant who died prior to discharge, answer **"Yes"** if the infant was on an Apnea Monitor or Cardio-Respiratory Monitor at any time on the day of death. Answer **"No"** if the infant was not on an Apnea or Cardio-Respiratory Monitor at any time on the day of death.

NOTES:

- A pulse oximeter is considered a cardio-respiratory monitor.

Initial Disposition

Initial Disposition refers to the first time that the infant was discharged or transferred from your hospital. Do not change this Data Item based on later dispositions following transfer or readmission.

Answer **"Home"** if the infant was discharged home on or before his/her first birthday from your hospital without ever transferring to another hospital. Complete any unanswered Discharge Data Items. Do not complete the Transfer or Readmission Data Items.

Answer **"Died"** if the infant died on or before his/her first birthday at your hospital prior to being discharged home or transferred. Complete any unanswered Discharge Data Items. Do not complete the Transfer or Readmission Data Items.

Answer **"Transferred to another Hospital"** if the infant was transferred to another hospital or chronic care facility on or before his/her first birthday and before going home. Complete any unanswered Discharge Data Items. Complete the Transfer and Readmission Data Items.

Answer **"Still Hospitalized as of First Birthday"** if the infant was still at your center on the date of the infant's first birthday. Complete any unanswered Discharge Data Items. Do not complete the Transfer or Readmission Data Items.

NOTES:

- Infants transferred from one unit to another within your hospital are not considered to have been transferred or discharged.

Weight at Initial Disposition

Enter the weight in grams as recorded in the chart or clinical flow sheets on the date of Initial Disposition.

- If the infant's weight was not recorded on the date of Initial Disposition and was recorded on the previous day, enter the weight in grams as recorded in the chart or clinical flow sheets from the previous day.

If the infant's weight was not recorded on the date of Initial Disposition or on the previous day, this Data Item should be recorded as unknown.

NOTES:

- This Data Item refers to the Initial Disposition (first discharge or transfer) from your hospital. Do not change this Data Item based on later dispositions following transfer or readmission.
- If the answer to Initial Disposition from Your Hospital is **"Still Hospitalized as of First Birthday,"** the date of Initial Disposition is the date of the infant's first birthday.

Head Circumference at Initial Disposition

Enter the head circumference in centimeters (cm) to the nearest tenth of a cm as recorded in the chart or clinical flow sheets on the date of Initial Disposition.

- If the infant's head circumference was not recorded on the date of Initial Disposition and was recorded on the previous day, enter the head circumference in cm to the nearest tenth of a cm as recorded in the chart or clinical flow sheets from the previous day.
- If the infant's head circumference was not recorded on the date of Initial Disposition or on the previous day, this Data Item should be recorded as unknown.

NOTES:

- This Data Item refers to the Initial Disposition (first discharge or transfer) from your hospital. Do not change this Data Item based on later dispositions following transfer or readmission.
- If the answer to Initial Disposition is **"Still Hospitalized as of First Birthday**," the date of Initial Disposition is the date of the infant's first birthday.

Initial Length of Stay

Initial Length of Stay is the number of days from the date the infant was admitted to your hospital until the Date of Initial Discharge, Transfer, or Death.

Calculate the Initial Length of Stay as ([Date of Initial Discharge, Transfer, or Death] minus [Date of Admission] plus one).

- Infants who die on the day of birth, including those who meet the delivery room death criteria, will have an Initial Length of Stay of one day.
- The maximum value of Initial Length of Stay is 366 (or 367 if leap day must be added) because tracking ends on the infant's first birthday.

Part A of the Length of Stay Calculation Worksheet may be used for calculating Initial Length of Stay. The Worksheet is included in the Patient Data Booklet, included in Appendix A of the Manual of Operations, Part 2.

NOTES:

- This Data Item refers to the first discharge or transfer from your hospital. Do not change this Data Item based on later dispositions following transfer or readmission.
- For inborn infants, the Date of Admission is the Date of Birth.
- For outborn infants, the Date of Admission is the date the infant was admitted to your center.
- If the date of Initial Disposition is **"Unknown**," Initial Length of Stay will also be **"Unknown**."
- If an infant is still in your hospital on his or her first birthday, and has not transferred or been home, use the date of the infant's first birthday as the date of Initial Disposition.

End of General Data Item Data Definitions

Transfer and Readmission Data Item Data Definitions

Transfer and Readmission Data Items apply only to infants who transfer from your center to another hospital.

Infants transferred from one unit to another within your hospital are not considered to have been transferred or discharged. Complete the Transfer and Readmission Data Items only for infants who transfer from your center to another hospital.

NOTES:

- The federal HIPAA Privacy Rule allows an exchange of patient identifiable information between a Vermont Oxford Network member and a receiving hospital. Specifically, a Covered Entity may disclose protected health information to another Covered Entity without patient authorization for the purposes of treatment, payment, and health care operations, which includes quality assessment and improvement activities related to treatment if each entity has or had a relationship with the patient. Covered Entities must limit disclosures made to another Covered Entity for health care operations to the "minimum necessary." See 45 C.F.R. §164.506©, 164.502(b) and 164.514(d).

Transfer and Readmission Data Items, All Transferred Infants

Data Items in this section to be completed for **ALL** transferred infants.

Reason for Transfer Out

Enter only one response indicating the primary reason for transfer.

Answer **"Growth/Discharge Planning"** if an infant is transferred to another hospital for continuing care in preparation for eventual discharge home. This category will include "back transfers" to a hospital closer to the parents' home.

- If the facility to which the infant is transferred is a tertiary care facility, the answer to this question will be **"Growth/Discharge Planning"** as long as the purpose of the transfer is not for the provision of surgical, medical, or diagnostic services, or long term chronic care which were unavailable at your hospital.

Answer **"Medical/Diagnostic Services"** if the infant is transferred to another hospital to receive medical care or diagnostic tests which are not available at your hospital.

- If an infant is transferred to have a diagnostic work-up and the work-up results in surgery, the reason for transfer is still **"Medical/Diagnostic Services."**

Answer **"Surgery"** if an infant is transferred to another hospital specifically to have surgery even if surgery is not actually performed after the transfer.

Answer **"ECMO"** if the infant is transferred to another hospital for extracorporeal membrane oxygenation.

Answer **"Hypothermic Therapy"** if the infant is transferred to another hospital for hypothermic therapy even if hypothermic therapy is not actually performed after the transfer.

Answer **"Chronic Care"** if the infant is transferred to an institution for long term chronic care.

Answer **"Other"** if the reason for transfer does not meet any of the above criteria.

NOTES:

- This Data Item is applicable to all infants who transfer from your center to another hospital on or before their first birthday and prior to being discharged to home.

Transfer Code of Center to Which Infant Transferred

The Transfer Code for hospitals is a special code assigned by the Network. It is not the Network assigned center number. Please refer to the current Transfer Code List when answering this question.

NOTES:

- This Data Item is applicable to all infants who transfer from your center to another hospital on or before their first birthday and prior to being discharged to home.
- The Transfer Code List may be accessed at https://public.vtoxford.org/transfer-codes/
- Your center's Transfer Code should not be entered.

Post Transfer Disposition

Answer **"Home"** if the infant was discharged to home on or before his/her first birthday from the hospital to which he/she was transferred.

Answer **"Transferred Again to another Hospital"** if the infant was transferred again on or before his/her first birthday to another hospital or to a chronic care facility from the hospital to which he/she was originally transferred.

Answer **"Died"** if the infant died on or before his/her first birthday at the hospital to which he/she was initially transferred.

Answer **"Readmitted to Any Location in Your Hospital"** if an infant is readmitted on or before his/her first birthday (before ever having gone home) to any location in your hospital such as the neonatal intensive care unit, a step-down unit, newborn nursery, intermediate care, pediatric intensive care unit, pediatric ward, etc.

Answer **"Still Hospitalized as of First Birthday"** if the infant was still in the "Transferred To" hospital on his/her first birthday.

NOTES:

- This Data Item is applicable to all infants who transfer from your center to another hospital on or before their first birthday and prior to being discharged to home.

Transfer and Readmission Data Items, Readmitted Infants

Data Items in this section to be completed **ONLY** for readmitted infants.

If an infant is readmitted to your center after transferring once to another hospital without having been home, you should continue to update Data Items *Bacterial Sepsis and/or Meningitis on or before Day 3* through *PIH, Where First Occurred* and *Oxygen after Initial Resuscitation* through *Monitor at Discharge* based on all events at both hospitals until the date of Disposition after Readmission. If your hospital participates in the Expanded Database and definition criteria are met, you should also update Supplemental Data Items: *ECMO at your Hospital; Hypothermic Therapy at Your Hospital; Cooling Method; Level of Consciousness Before Hypothermic Therapy; Hypoxic-Ischemic Encephalopathy; Seizures; Neonatal Abstinence Syndrome; Pharmacological Treatment for Neonatal Abstinence Syndrome;* and *Pharmacological Treatment for Neonatal Abstinence Syndrome, Where Given*

Disposition after Readmission

Answer **"Home"** if the infant was discharged to home on or before his/her first birthday from any location in your hospital after readmission.

Answer **"Died"** if the infant died on or before his/her first birthday at any location in your hospital after readmission.

Answer **"Transferred Again to another Hospital"** if the infant was transferred again to another hospital or to a chronic care facility on or before his/her first birthday after readmission.

Answer **"Still Hospitalized as of First Birthday"** if the infant was still in your hospital as of his/her first birthday after readmission.

NOTES:

- This Data Item is applicable only if the infant is readmitted to your center following transfer to another hospital, was less than or equal to a year old when readmitted to your center, and had never been discharged home prior to readmission.

Weight at Disposition after Readmission

Enter the weight in grams as recorded in the chart or clinical flow sheets on the date of Disposition after Readmission. If the infant's weight was not recorded on the date of Disposition after Readmission and was recorded on the previous day, enter the weight in grams as recorded in the chart or clinical flow sheets from the previous day. If the infant's weight was not recorded on the date of Disposition after Readmission or on the previous day, this Data Item should be recorded as unknown.

NOTES:

- This Data Item is applicable if the infant is readmitted to your center following transfer to another hospital, was less than or equal to a year old when readmitted to your center, and had never been discharged home prior to readmission.
- This Data Item refers to the Disposition after Readmission to your hospital following first transfer to another hospital.
- If the infant is transferred again following readmission, do not change this Data Item based on subsequent dispositions.
- If the answer to Disposition after Readmission is **"Still Hospitalized as of First Birthday,"** the date of Disposition after Readmission is the date of the infant's first birthday.

Transfer and Readmission Data Items, Infants Transferred More than Once

Data Items in this section to be completed **ONLY** for infants who transferred more than once.

Ultimate Disposition

Answer **"Home"** if the infant went home on or before his/her first birthday after transferring more than once.

Answer **"Died"** if the infant died on or before his/her first birthday before being discharged home after transferring more than once.

If the infant transferred more than once, answer **"Still Hospitalized as of First Birthday"** if the infant was still hospitalized on his/her first birthday, without ever having gone home.

NOTES:

- This Data Item is only applicable if the infant transfers more than once on or before his/her first birthday and before discharge to home. This includes infants who: (1) transfer from your center to another hospital and subsequently transfer to a third hospital, and (2) infants who are readmitted to your center following transfer to another hospital and then transfer again after readmission.

Transfer and Readmission Data Items, All Transferred Infants

Data Items in this section to be completed for **ALL** transferred infants.

Total Length of Stay

The Total Length of Stay is the number of days from the date the infant was first admitted to your hospital until the date of Final Discharge or Death.

Calculate the Total Length of Stay as ([Date of Final Discharge or Death] minus [Date of Admission] plus one).

- The maximum value of Total Length of Stay is 366 (or 367 if leap day must be added), because tracking ends on the infant's first birthday.

The Length of Stay Calculation Worksheet Part B may be used for calculating Total Length of Stay. The Worksheet is included in the Patient Data Booklet, in Appendix A of the Manual of Operations, Part 2.

NOTES:

- This Data Item is applicable to all infants who transfer from your center to another hospital on or before their first birthday and prior to being discharged to home.
- For inborn infants, the Date of Admission is the Date of Birth.
- For outborn infants, the Date of Admission is the date the infant was admitted to your center.
- If the date of Final Discharge or Death is **"Unknown,"** Total Length of Stay will also be **"Unknown."**
- If an infant is still hospitalized on his/her first birthday, and has not been home, use the date of the infant's first birthday as the date of Final Discharge or Death.

End of Transfer and Readmission Data Item Definitions

Supplemental Data Item Data Definitions

Supplemental Data Items are completed by centers participating in Expanded data submission.

Please note that the delivery room death criteria are on Page 5.

Previously Discharged Home

Answer **"Yes"** if the infant was previously discharged to home from any hospital after birth.

Answer **"No"** if the infant was not previously discharged to home from any hospital after birth.

NOTES:

- A home birth that was admitted to your NICU should be coded as **"No"** unless the infant was admitted to a hospital after the home birth, then discharged, then admitted to your NICU.
- If the answer to Previously Discharged Home is **"Yes**,**"** please provide a value for Day of Admission to Your NICU.
- Infants who were previously discharged home from your NICU are not eligible again if they are readmitted. Please review Applying the Eligibility Criteria on page 4 of this manual.

Duration of Assisted Ventilation

Answer **"None"** if the infant did not receive assisted ventilation after admission to a NICU in your hospital during initial hospital stay.

Answer **"None"** if the infant received assisted ventilation after initial resuscitation, but was never admitted to a NICU in your hospital during initial hospital stay.

Answer **"<4 hours"** if the infant received assisted ventilation for <4 hours after admission to a NICU in your hospital during initial hospital stay.

Answer **"4-24 hours"** if the infant received assisted ventilation for 4-24 hours after admission to a NICU in your hospital during initial hospital stay.

Answer **">24 hours"** if the infant received assisted ventilation for more than 24 hours after admission to a NICU in your hospital during initial hospital stay.

Answer **"N/A"** if the infant meets the delivery room death criteria.

NOTES:

- Consider only conventional ventilation or high frequency ventilation through an endotracheal tube when answering the questions on Duration of Assisted Ventilation.
- Include only the Duration of Assisted Ventilation which occurs during the initial stay in your hospital. Do not include duration of ventilation at other hospitals or duration following readmission for infants who are transferred from your center to another hospital.

Days of Assisted Ventilation

If the infant's Duration of Assisted Ventilation after admission to a NICU in your hospital during initial hospital stay was more than 24 hours, enter the total number of days of assisted ventilation after admission to your NICU. The number of days should include any complete or partial day during which the infant received assisted ventilation.

This Data Item is not applicable if the infant was not ventilated more than 24 hours or if the infant meets the delivery room death criteria.

ECMO at your Hospital

Answer **"Yes"** if the infant was treated with ECMO at your hospital.

Answer **"No"** if the infant was not treated with ECMO at your hospital.

Answer **"N/A"** if the infant meets the delivery room death criteria.

Hypothermic Therapy at Your Hospital

Answer **"Yes"** if either selective head or whole body cooling was provided at your hospital. This Data Item is answered **"Yes"** only if the infant received active cooling at your hospital. This may include cooling at your hospital prior to initial disposition or following readmission to your center if the infant is transferred.

Answer **"No"** if neither selective head nor whole body cooling was provided at your hospital. If the infant did not receive active cooling at your hospital, answer **"No."**

Answer **"N/A"** if the infant meets the delivery room death criteria.

NOTES:

- Infants may be treated with hypothermia during surgery. If hypothermic therapy is only performed during and immediately around the time of cardiac surgery or other surgery, Hypothermic Therapy at Your Hospital should be answered **"No."**

Level of Consciousness Before Hypothermic Therapy

If Hypothermic Therapy at Your Hospital is **"Yes"**:

Provide the worst level of consciousness recorded in the infant's medical record before active hypothermic therapy based on the infant's level of consciousness and response to arousal maneuvers, such as persistent gentle shaking, pinching, shining a light, or ringing a bell:

Answer **"Mild"** if normal or hyperalert. Infants in this category are alert or hyperalert with either a normal or exaggerated response to arousal.

Answer **"Moderate"** if lethargic or mild stupor. Infants in this category are arousable but have a diminished response to arousal maneuvers.

Answer **"Severe"** if deep stupor or coma. Infants in this category are not arousable in response to arousal maneuvers.

NOTES:

- For a transferred infant, the worst level of consciousness may be documented in the medical record at the referring hospital, in transport, or at your hospital.

Cooling Method

If the infant received hypothermic therapy at your hospital, choose the method of cooling received there. This Data Item is not applicable if the infant did not receive hypothermic therapy at your hospital.

Selective Head Cooling means active cooling restricted to the head and brain. This is an intervention to reduce the temperature of the head and brain by exposing the head to lower than environmental temperature. Specially designed head cooling devices, other cooling devices, and ice packs applied to the head would be considered active cooling. Passive exposure to environmental temperature and cooling of the face for treatment of supraventricular tachycardia are not considered active cooling of the head and brain.

Whole Body Cooling means active cooling of the body not restricted to the head and brain. This is an intervention to reduce the core body temperature and temperature of the brain by exposing the body to lower than environmental temperature. Cooling blankets, other cooling devices, and ice packs applied to the body would be considered active cooling. Passive exposure to environmental temperature would not be considered active cooling. Whole body cooling may include cooling of the head in addition to the rest of the body.

Answer **"Selective Head"** if the infant received selective head cooling at your hospital and did not receive whole body cooling at your hospital.

Answer **"Whole Body"** if the infant received whole body cooling at your hospital and did not receive selective head cooling at your hospital.

Answer **"Both"** if the infant received both selective head cooling at your hospital and whole body cooling at your hospital.

Hypoxic-Ischemic Encephalopathy

Answer **"Yes"** if the infant was diagnosed with Hypoxic-Ischemic Encephalopathy (HIE) as defined below. The diagnosis of HIE requires the presence of all three of the following criteria:

1. The presence of a clinically recognized encephalopathy within 72 hours of birth. Encephalopathy is defined as the presence of three or more of the following findings within the first 72 hours after birth:
   - Abnormal level of consciousness: hyperalertness, lethargy, stupor, or coma.
   - Abnormal muscle tone: hypertonia, hypotonia, or flaccidity.
   - Abnormal deep tendon reflexes: increased, depressed, or absent.
   - Seizures: subtle, multifocal, or focal clonic.
   - Abnormal Moro reflex: exaggerated, incomplete, or absent.
   - Abnormal suck: weak or absent.
   - Abnormal respiratory pattern: periodic, ataxic, or apneic.
   - Oculomotor or pupillary abnormalities: skew deviation, absent or reduced Doll's eyes, or fixed unreactive pupils.

And

2. Three or more supporting findings from the following list:
   - Arterial cord pH<7.00.
   - APGAR score at five minutes of ≤ 5.
   - Evidence of multiorgan system dysfunction (see below).
   - Evidence of fetal distress on antepartum monitoring: persistent late decelerations, reversal of end-diastolic flow on Doppler flow studies of the umbilical artery, or a biophysical profile of ≤ 2.
   - Evidence on CT, MRI, technetium, or ultrasound brain scan performed within seven days of birth of diffuse or multifocal ischemia or of cerebral edema.
   - Abnormal EEG: low amplitude and frequency, periodic, paroxysmal, or isoelectric.

And

3. The absence of an infectious cause, a congenital malformation of the brain or an inborn error of metabolism, which could explain the encephalopathy.

Answer **"No"** if the infant was not diagnosed with hypoxic-ischemic encephalopathy as defined above.

Answer **"N/A"** if the infant meets the delivery room death criteria.

NOTES:

- Multiorgan system dysfunction (from criteria two, above) requires evidence of dysfunction of one or more of the following systems within 72 hours of birth:
  - Renal: oliguria or acute renal failure.
  - GI: Necrotizing enterocolitis, hepatic dysfunction.
  - Hematologic: thrombocytopenia, disseminated intravascular coagulopathy.
  - Endocrine: hypoglycemia, hyperglycemia, hypercalcemia, syndrome of inappropriate ADH secretion (SIADH).
  - Pulmonary: persistent pulmonary hypertension.
  - Cardiac: myocardial dysfunction, tricuspid insufficiency.

Meconium Aspiration Syndrome

This Data Item is applicable to all eligible infants, including infants who meet the delivery room death criteria.

Answer **"Yes"** if ALL THREE (3) of the following criteria are satisfied:

1. Presence of meconium-stained amniotic fluid at birth.

And

2. Respiratory distress with onset within one hour of birth. Respiratory distress will be defined as the presence of one of the following signs: tachypnea (respiratory rate > 60 breaths/minute), grunting, nasal flaring, or intercostal retractions.

And

3. Absence of pneumonia or culture-proven early onset bacterial sepsis. The diagnosis of culture-proven early onset bacterial sepsis requires a positive blood culture obtained within 72 hours of birth.

Answer **"No"** if all three of the criteria for Meconium Aspiration Syndrome are not satisfied.

NOTES:

If chest x-ray is available and completed, it should also be compatible with the diagnosis of meconium aspiration. Findings may include coarse irregular or nodular pulmonary densities, areas of diminished aeration or consolidation alternating with areas of hyperinflation, and generalized hyperinflation.

If a blood gas is available and completed, consistent parameters with meconium aspiration syndrome include a PaO2<50 mmHg in room air, central cyanosis in room air, or a requirement for supplemental oxygen to maintain PaO2>50 mmHg.

Tracheal Suctioning for Meconium Attempted during Initial Resuscitation

This Data Item is applicable to all infants diagnosed with Meconium Aspiration Syndrome, including infants who meet the delivery room death criteria.

If Meconium Aspiration Syndrome was diagnosed, answer **"Yes"** if tracheal suctioning through an endotracheal tube or suction catheter in the trachea was performed in the delivery room or initial resuscitation area in an attempt to remove meconium. If suctioning was performed, the answer is **"Yes"** even if no meconium was recovered.

Answer **"No"** if Meconium Aspiration Syndrome was diagnosed and tracheal suctioning was not attempted during initial resuscitation.

Answer **"N/A"** if Meconium Aspiration Syndrome was not diagnosed.

Seizures

Answer **"Yes"** if there is clinical evidence of subtle seizures or of focal or multifocal clonic or tonic seizures within the first three days after birth.

Answer **"No"** if there was no evidence of seizures.

Answer **"N/A"** if the infant meets the delivery room death criteria.

Neonatal Abstinence Syndrome

If the infant's gestational age is 34 weeks, 0 days or greater at birth:

Answer **"Yes"** if a diagnosis of neonatal abstinence syndrome (NAS), including but not limited to neonatal opioid withdrawal syndrome (NOWS), made on or before Day 7 from birth was recorded in the infant medical record.

Answer **"No"** if a diagnosis of neonatal abstinence syndrome (NAS) made on or before Day 7 from birth was not recorded in the infant medical record.

Answer **"N/A"** if the infant's gestational age is not 34 weeks, 0 days or greater at birth.

NOTES:

- Infants may or may not have a known history of in utero substance exposure and may or may not have positive screening for substance exposure.

Pharmacological Treatment for Neonatal Abstinence Syndrome

If Neonatal Abstinence Syndrome is **"Yes"**:

Answer **"Yes"** if the infant received pharmacologic treatment for signs of neonatal abstinence syndrome (NAS), including but not limited to neonatal opioid withdrawal syndrome (NOWS), on or before Day 7 from birth.

Answer **"No"** if the infant did not receive pharmacologic treatment for signs of neonatal abstinence syndrome (NAS) on or before Day 7 from birth.

NOTES:

- Pharmacologic treatment includes use of any of the following agents for signs of NAS: morphine sulfate, methadone, buprenorphine, clonidine, phenobarbital, paregoric, or deodorized diluted tincture of opium (DDTO).
- Infants may or may not have a known history of in utero substance exposure and may or may not have positive screening for substance exposure.
- Infants must have received treatment at an age of 7 days or less.

Pharmacological Treatment for Neonatal Abstinence Syndrome, Where Given

If Pharmacological Treatment for Neonatal Abstinence Syndrome is **"Yes"**:

Indicate where pharmacological treatment was given.

Answer **"Your Hospital"** if pharmacological treatment was given:

- at your hospital prior to Initial Disposition, and/or
- at your hospital following readmission after initial transfer.

Answer **"Other Hospital"** if pharmacological treatment was given:

- at another hospital before being admitted to your hospital, or
- at the hospital where the infant was initially transferred, if the infant was readmitted to your hospital after initial transfer.

Answer **"Both"** if pharmacological treatment was given both at "Your Hospital" and "Other Hospital" as defined above.

End of Supplemental Data Item Definitions

Delivery Room Death Data Item Data Definitions

The Delivery Room Death Data Items use the same definitions as the General Data Items. Please refer to previous sections of this chapter for information on how to complete the Delivery Room Death Data Items.

End of Delivery Room Death Data Item Definitions

APPENDICES

APPENDIX A

Logs, Length of Stay Calculation Worksheet, Patient Data Booklets, and Delivery Room Death Booklets

Center Number: _____
Birth Year: _____

VERMONT OXFORD NETWORK
PATIENT LOG

PATIENT LOGS INCLUDE PROTECTED HEALTH CARE INFORMATION FOR YOUR INTERNAL USE ONLY
DO NOT SUBMIT THIS PATIENT LOG TO VERMONT OXFORD NETWORK

Network ID Number	**Patient Name**	**Medical Record Number**	**Birth Date**	**DR Death?**	**Birth Location** (Inborn/ Outborn)	**If Outborn, Date of Admission**	**If Outborn, Name of Center from Which Infant Transferred**	**If Outborn, Transfer Code of Center from which Infant Transferred**	**Initial Disposition** (Home, Transferred, Died, Still Hospitalized at First Birthday)	**Date of Initial Disposition**

Center Number: _____
Birth Year: _____

VERMONT OXFORD NETWORK
TRANSFER LOG

TRANSFER LOGS INCLUDE PROTECTED HEALTH CARE INFORMATION FOR YOUR INTERNAL USE ONLY
DO NOT SUBMIT TO VERMONT OXFORD NETWORK

Network ID Number	**Patient Name**	**Medical Record Number**	**Birth Date**	**Transfer Center Name**	**Transfer Center Code**	**Post-Transfer Disposition** (Home, Transferred, Died, Still Hospitalized at First Birthday)	**If Readmitted to Your Center after Initial Transfer, Disposition after Readmission** (Home, Transferred Again, Died, Still Hospitalized in Your Center as of First Birthday)	**If Transferred More than Once, Ultimate Disposition** (Home, Transferred Again, Died, Still Hospitalized in Your Center as of First Birthday)	**Date Infant Discharged Home, Died, or First Birthday** (whichever is first)

Center Number:_____ **Network ID Number:** ☐☐☐☐☐

LENGTH OF STAY CALCULATION WORKSHEET FOR INFANTS BORN IN 2024

Protected Health Care Information. *DO NOT SUBMIT this Worksheet to Vermont Oxford Network.*
Use items *Date of Admission*, *Date of Initial Disposition*, and *Date of Transfer/Discharge Home/Death/First Birthday* from the Patient Identification Worksheet when completing this form.
Find day numbers corresponding to dates using the Day Number Chart for 2024-25 (www.vtoxford.org/downloads).

Part A. Initial Length Of Stay

Enter Date of Initial Discharge, Transfer, or Death (Date of Initial Disposition): ____/____/____ ☐☐☐ Day #

Subtract Date of Admission to Your Hospital (Date of Admission): ____/____/____ − ☐☐☐ Day #

For inborn infants, the date of admission is the Date of Birth.
For outborn infants, the date of admission is the date the infant was admitted to your hospital. ☐☐☐

Add 1: + 1

INITIAL LENGTH OF STAY = ☐☐☐ **Days**

Note: the maximum value of Initial Length of Stay is 366 (or 367 if leap day must be added), because tracking ends on the infant's first birthday.

Part B. Total Length Of Stay

Only For Infants Transferred From Your Hospital to Another Hospital.

Enter Date of Final Discharge or Death (Transferred/Home/Died/1st Birthday): ____/____/____ ☐☐☐ Day #

Subtract Date of Admission (Date of Admission): ____/____/____ − ☐☐☐ Day #

For inborn infants, the date of admission is the Date of Birth.
For outborn infants, the date of admission is the date the infant was admitted to your hospital. ☐☐☐

Add 1: + 1

TOTAL LENGTH OF STAY = ☐☐☐ **Days**

Note: the maximum value of Total Length of Stay is 366 (or 367 if leap day must be added), because tracking ends on the infant's first birthday.

SAMPLE CALCULATION OF INITIAL LENGTH OF STAY

Enter Date of Initial Discharge, Transfer, or Death: **02 / 26 / 2024** ☐57 Day #

Subtract Date of Admission: **01 / 13 / 2024** − ☐13 Day #

☐44

Add 1: + 1

INITIAL LENGTH OF STAY = ☐45 **Days**

Explanation: Date of 02/26/2024 is Day Number 57. Date of 01/13/2024 is Day Number 13. The day numbers for each date are found in the 2024-2025 Day Number Chart on the Network web site, **www.vtoxford.org/downloads**.

PLEASE DO NOT SUBMIT THIS WORKSHEET
Protected Health Care Information

Vermont Oxford NETWORK

Rel 28.0

Patient Data Booklet – VLBW Centers

Center Number: _____ **Patient ID Number:** ☐☐☐☐☐ **MRN:** _____

VERMONT OXFORD NETWORK
eNICQ PATIENT DATA BOOKLET FOR INFANTS BORN IN 2024

This booklet contains protected health care information and must NOT be submitted to Vermont Oxford Network (VON). VON only accepts protected health care information in cases where members have both voluntarily elected to send this information to VON and have signed an appropriate Business Associate Agreement with VON.

This booklet is designed for you to use to collect data that will later be entered by your center into eNICQ, the VON data submission tool.

Contents:

PATIENT IDENTIFICATION WORKSHEET

Patient's Name: _____

Mother's Name: _____

Date of Birth: ____/____/____ (MM DD YYYY)

Date of Admission: ____/____/____ (MM DD YYYY)

- For inborn infants, the date of admission is the Date of Birth
- For outborn infants, the date of admission is the date the infant was admitted to your hospital

Date of Day 28: ____/____/____ (MM DD YYYY)

Date of Week 36: ____/____/____ (MM DD YYYY)

For Date of Day 28 use the *Day 28 Calculation Charts*:
https://vtoxford.zendesk.com/hc/en-us/articles/20900117577363
For Date of Week 36 use the *Week 36 Calculator*:
https://public.vtoxford.org/week-36-calculator/

PLEASE DO NOT SUBMIT THIS WORKSHEET
Protected Health Care Information

General Data Items - *For Infants Born in 2024 at VLBW Centers*

Vermont Oxford Network

Center Number: _____ **Patient ID Number:** ☐☐☐☐☐ **MRN:** _____

Patient ID number: _____ (this is the VON Network ID – it is auto-generated by eNICQ)

Medical Record Number: _____ **Date of Birth:** ____/____/____ MM DD YYYY

Died in Delivery Room: ☐ Yes ☐ No (If *Yes*, complete Delivery Room Death data booklet, not this booklet)

Location of Birth: ☐ Inborn ☐ Outborn (If *Outborn*, complete *Date of Admission* below)

Patient's First Name: _____ **Mother's First Name:** _____

Patient's Last Name: _____ **Mother's Last Name:** _____

For *Outborn* infants:

Date of Admission: ____/____/____ MM DD YYYY

Reason for Transfer In: ☐ ECMO ☐ Growth/Discharge Planning ☐ Medical/Diagnostic Services ☐ Surgery ☐ Chronic Care ☐ Other ☐ Hypothermic Therapy

Birth Weight: _____ **grams**

Gestational Age, Weeks: _____ **Gestational Age, Days (0-6):** _____

If Location of Birth is Outborn, Transfer Code of Center from which Infant Transferred: _____
(List available at https://public.vtoxford.org/transfer-codes/)

Head Circumference at Birth (in cm to nearest 10th): ☐☐.☐

Maternal Ethnicity/Race (Answer both Ethnicity and Race):

Ethnicity of Mother: ☐ Hispanic ☐ Not Hispanic

Race of Mother: ☐ Black or African American ☐ White ☐ Asian ☐ American Indian or Alaska Native ☐ Native Hawaiian or Other Pacific Islander ☐ Other

Prenatal Care: ☐ Yes ☐ No

Antenatal Steroids: ☐ Yes ☐ No

Antenatal Magnesium Sulfate: ☐ Yes ☐ No

Chorioamnionitis: ☐ Yes ☐ No

Maternal Hypertension, Chronic or Pregnancy-Induced: ☐ Yes ☐ No

Maternal Diabetes ☐ Yes ☐ No

Mode of Delivery: ☐ Vaginal ☐ Cesarean Section

Sex of Infant: ☐ Male ☐ Female ☐ Unknown

Multiple Gestation: ☐ Yes ☐ No **If *Yes*, Number of Infants Delivered:** ____

Congenital Infection: ☐ Yes ☐ No

Congenital Infection, Organism(s): _____ _____ _____
(If *Congenital Infection* is *Yes*, enter up to 3 Congenital Infection descriptions from Manual of Operations, Part 2 – Appendix E)

PLEASE DO NOT SUBMIT THIS BOOKLET - Protected Health Care Information

General Data Items - *For Infants Born in 2024 at VLBW Centers*

Vermont Oxford Network

Center Number: _____ **Patient ID Number:** ☐☐☐☐☐ **MRN:** _____

APGAR Scores:	**1 minute** _____	**5 minutes** _____	
Initial Resuscitation:	**Oxygen:**	☐ Yes	☐ No
	Face Mask Vent:	☐ Yes	☐ No
	Supraglottic Airway Device:	☐ Yes	☐ No
	Endotracheal Tube Vent:	☐ Yes	☐ No
	Epinephrine:	☐ Yes	☐ No
	Cardiac Compression:	☐ Yes	☐ No
	Nasal Vent:	☐ Yes	☐ No
	Nasal CPAP:	☐ Yes	☐ No

Temperature Measured within the First Hour after Admission to Your NICU: ☐ Yes ☐ No ☐ N/A

If *Yes*, Temperature Within the First Hour after Admission to Your NICU: ☐☐.☐
(In degrees *centigrade* to nearest 10th)

Died within 12 Hours of Admission to Your NICU: ☐ Yes ☐ No

Bacterial Sepsis and/or Meningitis on or before Day 3: ☐ Yes ☐ No

Bacterial Sepsis and/or Meningitis on or before Day 3, Pathogen(s): _____ _____ _____
(If *Bacterial Sepsis and/or Meningitis* is *Yes*, enter up to 3 Bacterial Pathogen descriptions from Manual of Operations, Part 2 – Appendix B)

Oxygen on Day 28: ☐ Yes ☐ No

Periventricular-Intraventricular Hemorrhage (PIH):

Cranial Imaging (US/CT/MRI) on or before Day 28: ☐ Yes ☐ No

If *Yes*, Worst Grade of PIH (0-4): _____

If PIH Grade 1-4, Where PIH First Occurred: ☐ Your Hospital ☐ Other Hospital

Respiratory Support (at any time after leaving the delivery room/initial resuscitation area):

Oxygen (after Initial Resuscitation):	☐ Yes	☐ No
Conventional Ventilation (after Initial Resuscitation):	☐ Yes	☐ No
High Frequency Ventilation (after Initial Resuscitation):	☐ Yes	☐ No
Nasal Cannula Flow (after Initial Resuscitation):	☐ Yes	☐ No
If *Yes*, Flow Rate of Nasal Cannula Greater than Two Liters per Minute (after Initial Resuscitation):	☐ Yes	☐ No
Nasal Ventilation (after Initial Resuscitation):	☐ Yes	☐ No
Nasal CPAP (after Initial Resuscitation):	☐ Yes	☐ No

Surfactant during Initial Resuscitation: ☐ Yes ☐ No

Surfactant at Any Time: ☐ Yes ☐ No (*Surfactant at Any Time* must be *Yes* if *Surfactant During Initial Resuscitation* is *Yes*)

If *Yes*, Age at First Dose of Surfactant: Hours _____ Minutes (0-59) _____

Inhaled Nitric Oxide: ☐ Yes ☐ No

If *Yes*, Inhaled Nitric Oxide, Where Given: ☐ Your Hospital ☐ Other Hospital ☐ Both

PLEASE DO NOT SUBMIT THIS BOOKLET - Protected Health Care Information

General Data Items - *For Infants Born in 2024 at VLBW Centers*

Vermont Oxford Network

Center Number: _____ **Patient ID Number:** ☐☐☐☐☐ **MRN:** _____

Respiratory Support at 36 Weeks (See Manual of Operations, Part 2 for N/A criteria):

Oxygen (at 36 Weeks):	☐ Yes	☐ No	☐ N/A
Conventional Ventilation (at 36 Weeks):	☐ Yes	☐ No	☐ N/A
High Frequency Ventilation (at 36 Weeks):	☐ Yes	☐ No	☐ N/A
Nasal Cannula Flow (at 36 Weeks):	☐ Yes	☐ No	☐ N/A
If *Yes*, Flow Rate of Nasal Cannula Greater than Two Liters per Minute (at 36 Weeks):	☐ Yes	☐ No	
Nasal Ventilation (at 36 Weeks):	☐ Yes	☐ No	☐ N/A
Nasal CPAP (at 36 Weeks):	☐ Yes	☐ No	☐ N/A

Steroids for CLD:	☐ Yes	☐ No	
If *Yes*, Steroids for CLD, Where Given:	☐ Your Hospital	☐ Other Hospital	☐ Both
Indomethacin for Any Reason:	☐ Yes	☐ No	
Ibuprofen for PDA:	☐ Yes	☐ No	
Acetaminophen (Paracetamol) for PDA:	☐ Yes	☐ No	
Probiotics:	☐ Yes	☐ No	
Treatment of ROP with Anti-VEGF Drug:	☐ Yes	☐ No	
Caffeine for Any Reason:	☐ Yes	☐ No	
Intramuscular Vitamin A for Any Reason:	☐ Yes	☐ No	
ROP Surgery:	☐ Yes	☐ No	
If *Yes*, ROP Surgery, Where Done:	☐ Your Hospital	☐ Other Hospital	☐ Both

Surgery or Interventional Catheterization for Closure of PDA: ☐ Yes ☐ No
(*If Yes*, a Surgery Code, Location of Surgery, and an answer to Surgical Site Infection are required below)

Surgery for NEC, Suspected NEC, or Bowel Perforation: ☐ Yes ☐ No
(*If Yes*, a Surgery Code, Location of Surgery, and an answer to Surgical Site Infection are required below)

Other Surgery: ☐ Yes ☐ No
(*If Yes*, a Surgery Code, Location of Surgery, and an answer to Surgical Site Infection are required below)

If *Yes* to *Surgery for Closure of PDA, Surgery for NEC*, or *Other Surgery*, enter up to 10 Surgery Codes, Locations of Surgery, and check Yes or No for Surgical Site Infection following Surgery at Your Hospital:
See Manual of Operations, Part 2 – Appendix D for Surgery Codes.
If *Surgery for NEC* is *Yes*, one or more of the following codes is required: S302, S303, S307, S308, S309, S333. Indicate *Location of Surgery* for each surgery code. If a surgical site infection is present, indicate "Yes" for the one surgical code that resulted in the surgical site infection.

Surgery Code 1: _____	☐ Your Hospital	☐ Other Hospital	☐ Both	Surgical Site Infection:	☐ Yes ☐ No
Surgery Code 2: _____	☐ Your Hospital	☐ Other Hospital	☐ Both	Surgical Site Infection:	☐ Yes ☐ No
Surgery Code 3: _____	☐ Your Hospital	☐ Other Hospital	☐ Both	Surgical Site Infection:	☐ Yes ☐ No
Surgery Code 4: _____	☐ Your Hospital	☐ Other Hospital	☐ Both	Surgical Site Infection:	☐ Yes ☐ No
Surgery Code 5: _____	☐ Your Hospital	☐ Other Hospital	☐ Both	Surgical Site Infection:	☐ Yes ☐ No
Surgery Code 6: _____	☐ Your Hospital	☐ Other Hospital	☐ Both	Surgical Site Infection:	☐ Yes ☐ No
Surgery Code 7: _____	☐ Your Hospital	☐ Other Hospital	☐ Both	Surgical Site Infection:	☐ Yes ☐ No
Surgery Code 8: _____	☐ Your Hospital	☐ Other Hospital	☐ Both	Surgical Site Infection:	☐ Yes ☐ No
Surgery Code 9: _____	☐ Your Hospital	☐ Other Hospital	☐ Both	Surgical Site Infection:	☐ Yes ☐ No
Surgery Code 10: _____	☐ Your Hospital	☐ Other Hospital	☐ Both	Surgical Site Infection:	☐ Yes ☐ No

Include description for Surgery Codes S100,S200,S300,S400,S500,S600,S700,S800,S900,S1000, and S1001:

_____

_____

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General Data Items - *For Infants Born in 2024 at VLBW Centers*

VON Vermont Oxford NETWORK

Center Number: _____ **Patient ID Number:** ☐☐☐☐☐ **MRN:** _____

Respiratory Distress Syndrome: ☐ Yes ☐ No

Pneumothorax: ☐ Yes ☐ No

If *Yes*, Pneumothorax, Where Occurred: ☐ Your Hospital ☐ Other Hospital ☐ Both

Patent Ductus Arteriosus: ☐ Yes ☐ No ☐ N/A

Necrotizing Enterocolitis: ☐ Yes ☐ No

If *Yes*, NEC, Where Occurred: ☐ Your Hospital ☐ Other Hospital ☐ Both

Surgically Confirmed or Clinically Diagnosed Focal Intestinal Perforation:
☐ Surgically Confirmed ☐ Clinically Diagnosed ☐ No

Sepsis and/or Meningitis, Late (after day 3 of life):

Bacterial Sepsis and/or Meningitis after Day 3: ☐ Yes ☐ No

If *Yes*, Bacterial Sepsis and/or Meningitis after Day 3, Where Occurred:
☐ Your Hospital ☐ Outside Your Hospital ☐ Both

Bacterial Sepsis and/or Meningitis after Day 3, Pathogen(s): _____ _____ _____
(If *Bacterial Sepsis and/or Meningitis* is *Yes*, enter up to 3 Bacterial Pathogen descriptions from Manual of Operations, Part 2, Appendix B)

Coagulase Negative Staph Infection after Day 3: ☐ Yes ☐ No

If *Yes*, Coagulase Negative Staphylococcal Infection after Day 3, Where Occurred:
☐ Your Hospital ☐ Outside Your Hospital ☐ Both

Fungal Infection after Day 3: ☐ Yes ☐ No

If *Yes*, Fungal Infection after Day 3, Where Occurred: ☐ Your Hospital ☐ Outside Your Hospital ☐ Both

Cystic Periventricular Leukomalacia: ☐ Yes ☐ No ☐ N/A (See Manual of Operations, Part 2 for N/A criteria)

ROP, Retinal Examination ☐ Yes ☐ No

If *Yes*, Worst Stage of ROP (0-5): _____

Congenital Anomaly: ☐ Yes ☐ No

If *Yes*, enter up to 5 Congenital Anomaly Codes: _____ _____ _____ _____ _____
See Manual of Operations, Part 2 – Appendix C for Congenital Anomaly Codes.

If *Yes*, as needed, include description(s) for Codes 100, 504, 601, 605, 901, 902, 903, 904, & 907:

_____

_____

_____

_____

Is this infant still hospitalized at your center? ☐ Yes ☐ No

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General Data Items - *For Infants Born in 2024 at VLBW Centers*

Vermont Oxford Network

Center Number: _____ **Patient ID Number:** ☐☐☐☐☐ **MRN:** _____

Enteral Feeding at Discharge:
- ☐ None
- ☐ Human Milk Only
- ☐ Formula Only
- ☐ Human milk in combination with either fortifier or formula

Oxygen, Respiratory Support, and Monitor at Discharge:

Oxygen (at Discharge):	☐ Yes	☐ No
Conventional Ventilation (at Discharge):	☐ Yes	☐ No
High Frequency Ventilation (at Discharge):	☐ Yes	☐ No
Nasal Cannula Flow (at Discharge):	☐ Yes	☐ No
If *Yes*, Flow Rate of Nasal Cannula Greater than Two Liters per Minute (at Discharge):	☐ Yes	☐ No
Nasal Ventilation (at Discharge):	☐ Yes	☐ No
Nasal CPAP (at Discharge):	☐ Yes	☐ No
Monitor (at Discharge):	☐ Yes	☐ No

Initial Disposition (check only one):
- ☐ **Home**
- ☐ **Died**
- ☐ **Transferred to another Hospital**
  (When *Transferred* is chosen, also complete Transfer/Readmission data below & on page 7)
- ☐ **Still Hospitalized as of First Birthday**

Date of Initial Disposition: ____/____/____ (Not required when Initial Disposition is *Still Hospitalized as of First Birthday*)
MM DD YYYY

Weight at Initial Disposition: _____ grams

Head Circumference at Initial Disposition (in cm to nearest 10th): ☐☐.☐ **(For infants which have not transferred, infant record is now complete)**

If an infant is transferred to another hospital, complete Data Items *Reason for Transfer, Transfer Code of Center to which Infant Transferred, Post Transfer Disposition, and the Data Items that follow your Post Transfer Disposition choice*). *Post Transfer Disposition* refers to the infant's disposition upon leaving the "transferred to" hospital.

If Transferred, Reason for Transfer Out:
- ☐ ECMO
- ☐ Growth/Discharge Planning
- ☐ Medical/Diagnostic Services
- ☐ Surgery
- ☐ Chronic Care
- ☐ Other
- ☐ Hypothermic Therapy

Transfer Code of Center to which Infant Transferred: _____
(List available at https://public.vtoxford.org/transfer-codes/)

Is This Infant Still Hospitalized at Another Center? ☐ **Yes** ☐ **No**

PLEASE DO NOT SUBMIT THIS BOOKLET - Protected Health Care Information

General Data Items - *For Infants Born in 2024 at VLBW Centers*

VON Vermont Oxford NETWORK

Center Number: _____ **Patient ID Number:** ☐☐☐☐☐ **MRN:** _____

Choose one of the five Post Transfer Disposition options below and complete the Data Item(s) that follow your choice:

Post Transfer Disposition:

1. ☐ **Home**
   Date of Final Discharge: ____/_____/____ (MM DD YYYY) **(infant record is now complete)**
2. ☐ **Died**
   Date of Final Discharge: ____/_____/____ (MM DD YYYY) **(infant record is now complete)**
3. ☐ **Transferred Again to Another Hospital (2nd Transfer)**
   Ultimate Disposition:
   - ☐ **Home**
     Date of Final Discharge: ____/_____/____ (MM DD YYYY) **(infant record is now complete)**
   - ☐ **Died**
     Date of Final Discharge: ____/_____/____ (MM DD YYYY) **(infant record is now complete)**
   - ☐ **Still Hospitalized as of First Birthday** **(infant record is now complete)**
4. ☐ **Readmitted to Any Location in Your Hospital**
   When infants are readmitted to your center, continue to update Data Items *Bacterial Sepsis and/or Meningitis on or before Day 3* through *Monitor at Discharge* based on all events at both hospitals until the date of Disposition after Readmission.
   Disposition after Readmission:
   - ☐ **Home**
     Weight at Disposition after Readmission: ____ grams
     Date of Final Discharge: ____/_____/____ (MM DD YYYY) **(infant record is now complete)**
   - ☐ **Died**
     Weight at Disposition after Readmission: ____ grams
     Date of Final Discharge: ____/_____/____ (MM DD YYYY) **(infant record is now complete)**
   - ☐ **Still Hospitalized as of First Birthday**
     Weight at Disposition after Readmission: ____ grams **(infant record is now complete)**
   - ☐ **Transferred Again to Another Hospital**
     Weight at Disposition after Readmission: ____ grams
     Ultimate Disposition:
     - ☐ **Still Hospitalized as of First Birthday** **(infant record is now complete)**
     - ☐ **Home**
       Date of Final Discharge: ____/_____/____ (MM DD YYYY) **(infant record is now complete)**
     - ☐ **Died**
       Date of Final Discharge: ____/_____/____ (MM DD YYYY) **(infant record is now complete)**
5. ☐ **Still Hospitalized as of First Birthday** **(infant record is now complete)**

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Patient Data Booklet – Expanded Centers

Center Number: _____ **Patient ID Number:** ☐☐☐☐☐ **MRN:** _____

VERMONT OXFORD NETWORK
eNICQ PATIENT DATA BOOKLET FOR INFANTS BORN IN 2024

This booklet contains protected health care information and must NOT be submitted to Vermont Oxford Network (VON). VON only accepts protected health care information in cases where members have both voluntarily elected to send this information to VON and have signed an appropriate Business Associate Agreement with VON.

This booklet is designed for you to use to collect data that will later be entered by your center into eNICQ, the VON data submission tool.

Contents:

PATIENT IDENTIFICATION WORKSHEET

Patient's Name: _____

Mother's Name: _____

Date of Birth: ____/____/____ (MM DD YYYY)

Date of Admission: ____/____/____ (MM DD YYYY)

- For inborn infants, the date of admission is the Date of Birth
- For outborn infants, the date of admission is the date the infant was admitted to your hospital

Date of Day 28: ____/____/____ (MM DD YYYY)

Date of Week 36: ____/____/____ (MM DD YYYY)

For Date of Day 28 use the *Day 28 Calculation Charts*:
https://vtoxford.zendesk.com/hc/en-us/articles/20900117577363
For Date of Week 36 use the *Week 36 Calculator*:
https://public.vtoxford.org/week-36-calculator/

PLEASE DO NOT SUBMIT THIS WORKSHEET
Protected Health Care Information

General Data Items - *For Infants Born in 2024 at Expanded Centers*

Center Number: _____ **Patient ID Number:** ☐☐☐☐☐ **MRN:** _____

Patient ID number: _____ (this is the VON Network ID – it is auto-generated by eNICQ)

Medical Record Number: _____ **Date of Birth:** ____/____/____ MM DD YYYY

Died in Delivery Room: ☐ Yes ☐ No (If *Yes*, complete Delivery Room Death data booklet, not this booklet)

Location of Birth: ☐ Inborn ☐ Outborn (If *Outborn*, complete *Date of Admission* below)

Patient's First Name: _____ **Mother's First Name:** _____

Patient's Last Name: _____ **Mother's Last Name:** _____

Previously Discharged Home: ☐ Yes ☐ No (If *Yes*, complete *Date of Admission* and *Reason for Transfer In* below)

For *Outborn* infants, or for *Inborn* infants where *Previously Discharged Home* is *Yes*

Date of Admission: ____/____/____ MM DD YYYY

Reason for Transfer In: ☐ ECMO ☐ Growth/Discharge Planning ☐ Medical/Diagnostic Services ☐ Surgery ☐ Chronic Care ☐ Other ☐ Hypothermic Therapy

Birth Weight: _____ **grams**

Gestational Age, Weeks: _____ **Gestational Age, Days (0-6):** _____

If Location of Birth is Outborn, Transfer Code of Center from which Infant Transferred: _____
(List available at https://public.vtoxford.org/transfer-codes/)

Head Circumference at Birth (in cm to nearest 10th): ☐☐.☐

Maternal Ethnicity/Race (Answer both Ethnicity and Race):

Ethnicity of Mother: ☐ Hispanic ☐ Not Hispanic

Race of Mother: ☐ Black or African American ☐ White ☐ Asian ☐ American Indian or Alaska Native ☐ Native Hawaiian or Other Pacific Islander ☐ Other

Prenatal Care: ☐ Yes ☐ No

Antenatal Steroids: ☐ Yes ☐ No

Antenatal Magnesium Sulfate: ☐ Yes ☐ No

Chorioamnionitis: ☐ Yes ☐ No

Maternal Hypertension, Chronic or Pregnancy-Induced: ☐ Yes ☐ No

Maternal Diabetes ☐ Yes ☐ No

Mode of Delivery: ☐ Vaginal ☐ Cesarean Section

Sex of Infant: ☐ Male ☐ Female ☐ Unknown

Multiple Gestation: ☐ Yes ☐ No **If *Yes*, Number of Infants Delivered:** ____

Congenital Infection: ☐ Yes ☐ No

Congenital Infection, Organism(s): _____ _____ _____
(If *Congenital Infection* is *Yes*, enter up to 3 Congenital Infection descriptions from Manual of Operations, Part 2 – Appendix E)

PLEASE DO NOT SUBMIT THIS BOOKLET - Protected Health Care Information

General Data Items - *For Infants Born in 2024 at Expanded Centers*

Vermont Oxford Network

Center Number: _____ **Patient ID Number:** ☐☐☐☐☐ **MRN:** _____

APGAR Scores:	**1 minute** _____	**5 minutes** _____	
Initial Resuscitation:	**Oxygen:**	☐ Yes	☐ No
	Face Mask Vent:	☐ Yes	☐ No
	Supraglottic Airway Device:	☐ Yes	☐ No
	Endotracheal Tube Vent:	☐ Yes	☐ No
	Epinephrine:	☐ Yes	☐ No
	Cardiac Compression:	☐ Yes	☐ No
	Nasal Vent:	☐ Yes	☐ No
	Nasal CPAP:	☐ Yes	☐ No

Temperature Measured within the First Hour after Admission to Your NICU: ☐ Yes ☐ No ☐ N/A

If *Yes*, Temperature Within the First Hour after Admission to Your NICU: ☐☐.☐
(In degrees *centigrade* to nearest 10th)

Died within 12 Hours of Admission to Your NICU: ☐ Yes ☐ No

Bacterial Sepsis and/or Meningitis on or before Day 3: ☐ Yes ☐ No

Bacterial Sepsis and/or Meningitis on or before Day 3, Pathogen(s): _____ _____ _____
(If *Bacterial Sepsis and/or Meningitis* is *Yes*, enter up to 3 Bacterial Pathogen descriptions from Manual of Operations, Part 2 – Appendix B)

Oxygen on Day 28: ☐ Yes ☐ No

Periventricular-Intraventricular Hemorrhage (PIH):

Cranial Imaging (US/CT/MRI) on or before Day 28: ☐ Yes ☐ No

If *Yes*, Worst Grade of PIH (0-4): _____

If PIH Grade 1-4, Where PIH First Occurred: ☐ Your Hospital ☐ Other Hospital

Respiratory Support (at any time after leaving the delivery room/initial resuscitation area):

Oxygen (after Initial Resuscitation):	☐ Yes	☐ No
Conventional Ventilation (after Initial Resuscitation):	☐ Yes	☐ No
High Frequency Ventilation (after Initial Resuscitation):	☐ Yes	☐ No
Nasal Cannula Flow (after Initial Resuscitation):	☐ Yes	☐ No
If *Yes*, Flow Rate of Nasal Cannula Greater than Two Liters per Minute (after Initial Resuscitation):	☐ Yes	☐ No
Nasal Ventilation (after Initial Resuscitation):	☐ Yes	☐ No
Nasal CPAP (after Initial Resuscitation):	☐ Yes	☐ No

Surfactant during Initial Resuscitation: ☐ Yes ☐ No

Surfactant at Any Time: ☐ Yes ☐ No (*Surfactant at Any Time* must be *Yes* if *Surfactant During Initial Resuscitation* is *Yes*)

If *Yes*, Age at First Dose of Surfactant: Hours _____ Minutes (0-59) _____

Inhaled Nitric Oxide: ☐ Yes ☐ No

If *Yes*, Inhaled Nitric Oxide, Where Given: ☐ Your Hospital ☐ Other Hospital ☐ Both

General Data Items - *For Infants Born in 2024 at Expanded Centers*

Vermont Oxford Network

Center Number: _____ **Patient ID Number:** ☐☐☐☐☐ **MRN:** _____

Respiratory Support at 36 Weeks (See Manual of Operations, Part 2 for N/A criteria):

Oxygen (at 36 Weeks):	☐ Yes	☐ No	☐ N/A
Conventional Ventilation (at 36 Weeks):	☐ Yes	☐ No	☐ N/A
High Frequency Ventilation (at 36 Weeks):	☐ Yes	☐ No	☐ N/A
Nasal Cannula Flow (at 36 Weeks):	☐ Yes	☐ No	☐ N/A
If *Yes*, Flow Rate of Nasal Cannula Greater than Two Liters per Minute (at 36 Weeks):	☐ Yes	☐ No	
Nasal Ventilation (at 36 Weeks):	☐ Yes	☐ No	☐ N/A
Nasal CPAP (at 36 Weeks):	☐ Yes	☐ No	☐ N/A

Steroids for CLD:	☐ Yes	☐ No	
If *Yes*, Steroids for CLD, Where Given:	☐ Your Hospital	☐ Other Hospital	☐ Both
Indomethacin for Any Reason:	☐ Yes	☐ No	
Ibuprofen for PDA:	☐ Yes	☐ No	
Acetaminophen (Paracetamol) for PDA:	☐ Yes	☐ No	
Probiotics:	☐ Yes	☐ No	
Treatment of ROP with Anti-VEGF Drug:	☐ Yes	☐ No	
Caffeine for Any Reason:	☐ Yes	☐ No	
Intramuscular Vitamin A for Any Reason:	☐ Yes	☐ No	
ROP Surgery:	☐ Yes	☐ No	
If *Yes*, ROP Surgery, Where Done:	☐ Your Hospital	☐ Other Hospital	☐ Both

Surgery or Interventional Catheterization for Closure of PDA: ☐ Yes ☐ No
(*If Yes*, a Surgery Code, Location of Surgery, and an answer to Surgical Site Infection are required below)

Surgery for NEC, Suspected NEC, or Bowel Perforation: ☐ Yes ☐ No
(*If Yes*, a Surgery Code, Location of Surgery, and an answer to Surgical Site Infection are required below)

Other Surgery: ☐ Yes ☐ No
(*If Yes*, a Surgery Code, Location of Surgery, and an answer to Surgical Site Infection are required below)

If *Yes* to *Surgery for Closure of PDA, Surgery for NEC*, or *Other Surgery*, enter up to 10 Surgery Codes, Locations of Surgery, and check Yes or No for Surgical Site Infection following Surgery at Your Hospital:
See Manual of Operations, Part 2 – Appendix D for Surgery Codes.
If *Surgery for NEC* is *Yes*, one or more of the following codes is required: S302, S303, S307, S308, S309, S333. Indicate *Location of Surgery* for each surgery code. If a surgical site infection is present, indicate "Yes" for the one surgical code that resulted in the surgical site infection.

Surgery Code 1: _____	☐ Your Hospital	☐ Other Hospital	☐ Both	Surgical Site Infection:	☐ Yes ☐ No
Surgery Code 2: _____	☐ Your Hospital	☐ Other Hospital	☐ Both	Surgical Site Infection:	☐ Yes ☐ No
Surgery Code 3: _____	☐ Your Hospital	☐ Other Hospital	☐ Both	Surgical Site Infection:	☐ Yes ☐ No
Surgery Code 4: _____	☐ Your Hospital	☐ Other Hospital	☐ Both	Surgical Site Infection:	☐ Yes ☐ No
Surgery Code 5: _____	☐ Your Hospital	☐ Other Hospital	☐ Both	Surgical Site Infection:	☐ Yes ☐ No
Surgery Code 6: _____	☐ Your Hospital	☐ Other Hospital	☐ Both	Surgical Site Infection:	☐ Yes ☐ No
Surgery Code 7: _____	☐ Your Hospital	☐ Other Hospital	☐ Both	Surgical Site Infection:	☐ Yes ☐ No
Surgery Code 8: _____	☐ Your Hospital	☐ Other Hospital	☐ Both	Surgical Site Infection:	☐ Yes ☐ No
Surgery Code 9: _____	☐ Your Hospital	☐ Other Hospital	☐ Both	Surgical Site Infection:	☐ Yes ☐ No
Surgery Code 10: _____	☐ Your Hospital	☐ Other Hospital	☐ Both	Surgical Site Infection:	☐ Yes ☐ No

Include description for Surgery Codes S100,S200,S300,S400,S500,S600,S700,S800,S900,S1000, and S1001:

_____

_____

PLEASE DO NOT SUBMIT THIS BOOKLET - Protected Health Care Information

General Data Items - *For Infants Born in 2024 at Expanded Centers*

Center Number: _____ **Patient ID Number:** ☐☐☐☐☐ **MRN:** _____

Respiratory Distress Syndrome: ☐ Yes ☐ No

Pneumothorax: ☐ Yes ☐ No

If *Yes*, Pneumothorax, Where Occurred: ☐ Your Hospital ☐ Other Hospital ☐ Both

Patent Ductus Arteriosus: ☐ Yes ☐ No ☐ N/A

Necrotizing Enterocolitis: ☐ Yes ☐ No

If *Yes*, NEC, Where Occurred: ☐ Your Hospital ☐ Other Hospital ☐ Both

Surgically Confirmed or Clinically Diagnosed Focal Intestinal Perforation:
☐ Surgically Confirmed ☐ Clinically Diagnosed ☐ No

Sepsis and/or Meningitis, Late (after day 3 of life):

Bacterial Sepsis and/or Meningitis after Day 3: ☐ Yes ☐ No

If *Yes*, Bacterial Sepsis and/or Meningitis after Day 3, Where Occurred:
☐ Your Hospital ☐ Outside Your Hospital ☐ Both

Bacterial Sepsis and/or Meningitis after Day 3, Pathogen(s): _____ _____ _____
(If *Bacterial Sepsis and/or Meningitis* is *Yes*, enter up to 3 Bacterial Pathogen descriptions from Manual of Operations, Part 2, Appendix B)

Coagulase Negative Staph Infection after Day 3: ☐ Yes ☐ No

If *Yes*, Coagulase Negative Staphylococcal Infection after Day 3, Where Occurred:
☐ Your Hospital ☐ Outside Your Hospital ☐ Both

Fungal Infection after Day 3: ☐ Yes ☐ No

If *Yes*, Fungal Infection after Day 3, Where Occurred: ☐ Your Hospital ☐ Outside Your Hospital ☐ Both

Cystic Periventricular Leukomalacia: ☐ Yes ☐ No ☐ N/A (See Manual of Operations, Part 2 for N/A criteria)

ROP, Retinal Examination ☐ Yes ☐ No

If *Yes*, Worst Stage of ROP (0-5): _____

Congenital Anomaly: ☐ Yes ☐ No

If *Yes*, enter up to 5 Congenital Anomaly Codes: _____ _____ _____ _____ _____
See Manual of Operations, Part 2 – Appendix C for Congenital Anomaly Codes.

If *Yes*, as needed, include description(s) for Codes 100, 504, 601, 605, 901, 902, 903, 904, & 907:

_____

_____

ECMO at your Hospital: ☐ Yes ☐ No

Was Hypothermic Therapy Performed at Your Hospital: ☐ Yes ☐ No

If *Yes*, Level of Consciousness Before Hypothermic Therapy: ☐ Mild ☐ Moderate ☐ Severe

If *Yes*, Hypothermic Therapy Cooling Method: ☐ Selective Head ☐ Whole Body ☐ Both

Hypoxic-Ischemic Encephalopathy: ☐ Yes ☐ No

General Data Items - *For Infants Born in 2024 at Expanded Centers*

Center Number: _____ **Patient ID Number:** ☐☐☐☐☐ **MRN:** _____

Meconium Aspiration Syndrome: ☐ Yes ☐ No

If *Yes*, Tracheal Suction for Meconium Attempted during Initial Resuscitation: ☐ Yes ☐ No

Seizures: ☐ Yes ☐ No

Neonatal Abstinence Syndrome: ☐ Yes ☐ No ☐ N/A (N/A when *Gestational Age, Weeks* is less than or equal to 33)

If *Yes*, Pharmacological Treatment for Neonatal Abstinence Syndrome: ☐ Yes ☐ No

If *Yes*, Pharmacological Treatment for Neonatal Abstinence Syndrome, Where Given:

☐ Your Hospital ☐ Other Hospital ☐ Both

Is this infant still hospitalized at your center? ☐ Yes ☐ No

Enteral Feeding at Discharge: ☐ None ☐ Human Milk Only ☐ Formula Only ☐ Human milk in combination with either fortifier or formula

Oxygen, Respiratory Support, and Monitor at Discharge:

Oxygen (at Discharge): ☐ Yes ☐ No

Conventional Ventilation (at Discharge): ☐ Yes ☐ No

High Frequency Ventilation (at Discharge): ☐ Yes ☐ No

Nasal Cannula Flow (at Discharge): ☐ Yes ☐ No

If *Yes*, Flow Rate of Nasal Cannula Greater than Two Liters per Minute (at Discharge): ☐ Yes ☐ No

Nasal Ventilation (at Discharge): ☐ Yes ☐ No

Nasal CPAP (at Discharge): ☐ Yes ☐ No

Monitor (at Discharge): ☐ Yes ☐ No

Duration of Assisted Ventilation (initial hospital stay): ☐ None ☐ <4 hours ☐ 4-24 hours ☐ > 24 hours

If > 24 hours, Total Days of Assisted Ventilation (initial hospital stay): _____

Initial Disposition (check only one): (When *Transferred* is chosen, also complete Transfer/Readmission data below & on page 7)

☐ **Home** ☐ **Died** ☐ **Transferred to another Hospital** ☐ **Still Hospitalized as of First Birthday**

Date of Initial Disposition: ____/____/____ (Not required when Initial Disposition is *Still Hospitalized as of First Birthday*)
MM DD YYYY

Weight at Initial Disposition: _____ grams

Head Circumference at Initial Disposition (in cm to nearest 10th): ☐☐.☐ **(For infants which have not transferred, infant record is now complete)**

If an infant is transferred to another hospital, complete Data Items *Reason for Transfer, Transfer Code of Center to which Infant Transferred, Post Transfer Disposition, and the Data Items that follow your Post Transfer Disposition choice*). *Post Transfer Disposition* refers to the infant's disposition upon leaving the "transferred to" hospital.

If Transferred, Reason for Transfer Out: ☐ ECMO ☐ Growth/Discharge Planning ☐ Medical/Diagnostic Services ☐ Surgery ☐ Chronic Care ☐ Other ☐ Hypothermic Therapy

Transfer Code of Center to which Infant Transferred: _____
(List available at https://public.vtoxford.org/transfer-codes/)

PLEASE DO NOT SUBMIT THIS BOOKLET - Protected Health Care Information

General Data Items - *For Infants Born in 2024 at Expanded Centers*

Vermont Oxford Network

Center Number: _____ **Patient ID Number:** ☐☐☐☐☐ **MRN:** _____

Is This Infant Still Hospitalized at Another Center? ☐ Yes ☐ No

Choose one of the five Post Transfer Disposition options below and complete the Data Item(s) that follow your choice:

Post Transfer Disposition:

1. ☐ **Home**
   Date of Final Discharge: ____/_____/____ (MM DD YYYY) (infant record is now complete)

2. ☐ **Died**
   Date of Final Discharge: ____/_____/____ (MM DD YYYY) (infant record is now complete)

3. ☐ **Transferred Again to Another Hospital (2nd Transfer)**
   Ultimate Disposition:
   - ☐ **Home**
     Date of Final Discharge: ____/_____/____ (MM DD YYYY) (infant record is now complete)
   - ☐ **Died**
     Date of Final Discharge: ____/_____/____ (MM DD YYYY) (infant record is now complete)
   - ☐ **Still Hospitalized as of First Birthday** (infant record is now complete)

4. ☐ **Readmitted to Any Location in Your Hospital**
   When infants are readmitted to your center, continue to update Data Items *Bacterial Sepsis and/or Meningitis on or before Day 3* through *Monitor at Discharge* based on all events at both hospitals until the date of Disposition after Readmission.
   Also continue to update Data Items *ECMO at your Hospital*, *Hypothermic Therapy at Your Hospital*, *Cooling Method*, *Hypoxic-Ischemic Encephalopathy*, *HIE Severity*, *Seizures*, *Neonatal Abstinence Syndrome*, *Pharmacological Treatment for Neonatal Abstinence Syndrome*, and *Pharmacological Treatment for Neonatal Abstinence Syndrome, Where Given* based on events that occur following transfer and readmission.
   Disposition after Readmission:
   - ☐ **Home**
     Weight at Disposition after Readmission: ____ grams
     Date of Final Discharge: ____/_____/____ (MM DD YYYY) (infant record is now complete)
   - ☐ **Died**
     Weight at Disposition after Readmission: ____ grams
     Date of Final Discharge: ____/_____/____ (MM DD YYYY) (infant record is now complete)
   - ☐ **Still Hospitalized as of First Birthday**
     Weight at Disposition after Readmission: ____ grams (infant record is now complete)
   - ☐ **Transferred Again to Another Hospital**
     Weight at Disposition after Readmission: ____ grams
     Ultimate Disposition:
     - ☐ **Still Hospitalized as of First Birthday** (infant record is now complete)
     - ☐ **Home**
       Date of Final Discharge: ____/_____/____ (MM DD YYYY) (infant record is now complete)
     - ☐ **Died**
       Date of Final Discharge: ____/_____/____ (MM DD YYYY) (infant record is now complete)

5. ☐ **Still Hospitalized as of First Birthday** (infant record is now complete)

PLEASE DO NOT SUBMIT THIS BOOKLET - Protected Health Care Information

Delivery Room Death Booklet – VLBW Centers

Center Number: _____ **Patient ID Number:** ☐☐☐☐☐ **MRN:** _____

VERMONT OXFORD NETWORK

eNICQ DELIVERY ROOM DEATH BOOKLET FOR INFANTS BORN IN 2024

Use the Delivery Room Death Booklet for eligible inborn infants who die in the delivery room or at any other location in your hospital within 12 hours of birth and prior to admission to the NICU.

This booklet contains protected health care information and must NOT be submitted to Vermont Oxford Network (VON). VON only accepts protected health care information in cases where members have both voluntarily elected to send this information to VON and have signed an appropriate Business Associate Agreement with VON.

This booklet is designed for you to use to collect data that will later be entered by your center into eNICQ, the VON data submission tool.

Contents:

DELIVERY ROOM DEATH
PATIENT IDENTIFICATION WORKSHEET

Patient's Name: _____

Mother's Name: _____

Patient's Medical Record Number: _____

Date of Birth: ____/____/____
MM DD YYYY

PLEASE DO NOT SUBMIT THIS WORKSHEET
Protected Health Care Information

DRD Data Items - *For Infants Born in 2024 at VLBW Centers*

Vermont Oxford Network

Center Number: _____ **Patient ID Number:** ☐☐☐☐☐ **MRN:** _____

Patient ID number: _____ (this is the VON Network ID – it is auto-generated by eNICQ)

Medical Record Number: _____

Date of Birth: ____/____/____
MM DD YYYY

Died in Delivery Room: ☐ Yes ☐ No (If *No*, complete General Data Items booklet, not this booklet)

Patient's First Name: _____

Patient's Last Name: _____

Mother's First Name: _____

Mother's Last Name: _____

Birth Weight: _____ **grams**

Gestational Age, Weeks: _____ **Gestational Age, Days (0-6):** _____

Head Circumference at Birth (in cm to nearest 10th): ☐☐.☐

Maternal Ethnicity/Race (Answer both Ethnicity and Race):

Ethnicity of Mother: ☐ Hispanic ☐ Not Hispanic

Race of Mother: ☐ Black or African American ☐ White ☐ Asian
☐ American Indian or Alaska Native ☐ Native Hawaiian or Other Pacific Islander ☐ Other

Prenatal Care: ☐ Yes ☐ No

Antenatal Steroids: ☐ Yes ☐ No

Antenatal Magnesium Sulfate: ☐ Yes ☐ No

Chorioamnionitis: ☐ Yes ☐ No

Maternal Hypertension, Chronic or Pregnancy-Induced: ☐ Yes ☐ No

Maternal Diabetes ☐ Yes ☐ No

Mode of Delivery: ☐ Vaginal ☐ Cesarean Section

Sex of Infant: ☐ Male ☐ Female ☐ Unknown

Multiple Gestation: ☐ Yes ☐ No **If *Yes*, Number of Infants Delivered:** ____

Congenital Infection: ☐ Yes ☐ No

Congenital Infection, Organism(s): _____ _____ _____
(If *Congenital Infection* is *Yes*, enter up to 3 Congenital Infection descriptions from Manual of Operations, Part 2 – Appendix E)

APGAR Scores: **1 minute** _____ **5 minutes** _____

PLEASE DO NOT SUBMIT THIS BOOKLET - Protected Health Care Information

DRD Data Items - *For Infants Born in 2024 at VLBW Centers*

Center Number: _____ **Patient ID Number:** ☐☐☐☐☐ **MRN:** _____

Initial Resuscitation:	**Oxygen:**	☐ Yes	☐ No
	Face Mask Vent:	☐ Yes	☐ No
	Supraglottic Airway Device:	☐ Yes	☐ No
	Endotracheal Tube Vent:	☐ Yes	☐ No
	Epinephrine:	☐ Yes	☐ No
	Cardiac Compression:	☐ Yes	☐ No
	Nasal Vent:	☐ Yes	☐ No
	Nasal CPAP:	☐ Yes	☐ No

Surfactant during Initial Resuscitation: ☐ Yes ☐ No

Surfactant at Any Time: ☐ Yes ☐ No (*Surfactant at Any Time* must be *Yes* if *Surfactant During Initial Resuscitation* is *Yes*)

If *Yes*, Age at First Dose of Surfactant: Hours _____ Minutes (0-59) _____

Congenital Anomaly: ☐ Yes ☐ No **(For infants where Congenital Anomaly is *No*, infant record is now complete)**

If *Yes*, enter up to 5 Congenital Anomaly Codes: _____ _____ _____ _____ _____
See Manual of Operations, Part 2 – Appendix C for Congenital Anomaly Codes.

If *Yes*, as needed, include description(s) for Codes 100, 504, 601, 605, 901, 902, 903, 904, & 907:

_____

_____

(infant record is now complete)

Delivery Room Death Booklet – Expanded Centers

Center Number: _____ **Patient ID Number:** ☐☐☐☐☐ **MRN:** _____

VERMONT OXFORD NETWORK

eNICQ DELIVERY ROOM DEATH BOOKLET FOR INFANTS BORN IN 2024

Use the Delivery Room Death Booklet for eligible inborn infants who die in the delivery room or at any other location in your hospital within 12 hours of birth and prior to admission to the NICU.

This booklet contains protected health care information and must NOT be submitted to Vermont Oxford Network (VON). VON only accepts protected health care information in cases where members have both voluntarily elected to send this information to VON and have signed an appropriate Business Associate Agreement with VON.

This booklet is designed for you to use to collect data that will be later entered by your center into eNICQ, the VON data submission tool.

Contents:

DELIVERY ROOM DEATH
PATIENT IDENTIFICATION WORKSHEET

Patient's Name: _____

Mother's Name: _____

Patient's Medical Record Number: _____

Date of Birth: ____/____/____
MM DD YYYY

PLEASE DO NOT SUBMIT THIS WORKSHEET
Protected Health Care Information

DRD Data Items - *For Infants Born in 2024 at Expanded Centers*

Center Number: _____ **Patient ID Number:** ☐☐☐☐☐ **MRN:** _____

Patient ID number: _____ (this is the VON Network ID – it is auto-generated by eNICQ)

Medical Record Number: _____

Date of Birth: _____/_____/_____
MM DD YYYY

Died in Delivery Room: ☐ Yes ☐ No (If *No*, complete General Data Items booklet, not this booklet)

Patient's First Name: _____

Patient's Last Name: _____

Mother's First Name: _____

Mother's Last Name: _____

Birth Weight: _____ **grams**

Gestational Age, Weeks: _____ **Gestational Age, Days (0-6):** _____

Head Circumference at Birth (in cm to nearest 10th): ☐☐.☐

Maternal Ethnicity/Race (Answer both Ethnicity and Race):

Ethnicity of Mother: ☐ Hispanic ☐ Not Hispanic

Race of Mother: ☐ Black or African American ☐ White ☐ Asian
☐ American Indian or Alaska Native ☐ Native Hawaiian or Other Pacific Islander ☐ Other

Prenatal Care: ☐ Yes ☐ No

Antenatal Steroids: ☐ Yes ☐ No

Antenatal Magnesium Sulfate: ☐ Yes ☐ No

Chorioamnionitis: ☐ Yes ☐ No

Maternal Hypertension, Chronic or Pregnancy-Induced: ☐ Yes ☐ No

Maternal Diabetes ☐ Yes ☐ No

Mode of Delivery: ☐ Vaginal ☐ Cesarean Section

Sex of Infant: ☐ Male ☐ Female ☐ Unknown

Multiple Gestation: ☐ Yes ☐ No **If *Yes*, Number of Infants Delivered:** ____

Congenital Infection: ☐ Yes ☐ No

Congenital Infection, Organism(s): _____ _____ _____
(If *Congenital Infection* is *Yes*, enter up to 3 Congenital Infection descriptions from Manual of Operations, Part 2 – Appendix E)

APGAR Scores: **1 minute** _____ **5 minutes** _____

PLEASE DO NOT SUBMIT THIS BOOKLET - Protected Health Care Information

DRD Data Items - *For Infants Born in 2024 at Expanded Centers*

Vermont Oxford Network

Center Number: _____ **Patient ID Number:** ☐☐☐☐☐ **MRN:** _____

Initial Resuscitation:	**Oxygen:**	☐ Yes	☐ No
	Face Mask Vent:	☐ Yes	☐ No
	Supraglottic Airway Device:	☐ Yes	☐ No
	Endotracheal Tube Vent:	☐ Yes	☐ No
	Epinephrine:	☐ Yes	☐ No
	Cardiac Compression:	☐ Yes	☐ No
	Nasal Vent:	☐ Yes	☐ No
	Nasal CPAP:	☐ Yes	☐ No

Surfactant during Initial Resuscitation: ☐ Yes ☐ No

Surfactant at Any Time: ☐ Yes ☐ No (*Surfactant at Any Time* must be *Yes* if *Surfactant During Initial Resuscitation* is *Yes*)

If *Yes*, Age at First Dose of Surfactant: Hours _____ Minutes (0-59) _____

Congenital Anomaly: ☐ Yes ☐ No

If *Yes*, enter up to 5 Congenital Anomaly Codes: _____ _____ _____ _____ _____
See Manual of Operations, Part 2 – Appendix C for Congenital Anomaly Codes.

If *Yes*, as needed, include description(s) for Codes 100, 504, 601, 605, 901, 902, 903, 904, & 907:

_____

_____

Meconium Aspiration Syndrome: ☐ Yes ☐ No **(for infants where Meconium Aspiration Syndrome is *No*, infant record is now complete)**

If Yes, Tracheal Suction for Meconium Attempted during Initial Resuscitation: ☐ Yes ☐ No
(infant record is now complete)

PLEASE DO NOT SUBMIT THIS BOOKLET - Protected Health Care Information

APPENDIX B

Bacterial Pathogens

Code	Description
101	Achromobacter species [including A. xylosoxidans (also known as Alcaligenes xylosoxidans) and others]
102	Acinetobacter species including multidrug-resistant Acinetobacter
103	Aeromonas species
104	Alcaligenes species [A. xylosoxidans and others]
201	Bacteroides species
202	Burkholderia species [B. capecia and others]
301	Campylobacter species [C. fetus, C. jejuni and others] including drug-resistant Campylobacter
302	Chryseobacterium species
303	Citrobacter species [C. diversus, C. freundii, C. koseri and others]
304	Clostridium species
501	Enterobacter species [E. aerogenes, E. cloacae, and others] including Carbapenem-resistant Enterobacter
502	Enterococcus species [E. faecalis (also known as Streptococcus faecalis), E. faecium, and others] including Vancomycin-resistant Enterococcus
503	Escherichia coli including Carbapenem-resistant Escherichia coli
601	Flavobacterium species
801	Haemophilus species [H. influenzae and others]
1101	Klebsiella species [K. oxytoca, K. pneumoniae and others] including Carbapenem-resistant Klebsiella and Cephalosporin-resistant Klebsiella
1201	Listeria monocytogenes
1301	Moraxella species [M. catarrhalis (also known as Branhamella catarrhalis) and others]
1302	Morganella morganii
1401	Neisseria species [N. meningitidis, N. gonorrhoeae and others] including drug- resistant N. gonorrhoeae
1601	Pantoea
1602	Pasteurella species
1603	Prevotella species
1604	Proteus species [P. mirabilis, P. vulgaris and others]

Code	Description
1605	Providencia species [P. rettgeri and others]
1606	Pseudomonas species [P. aeruginosa and others] including multidrug-resistant Pseudomonas aeruginosa
1801	Ralstonia species
1901	Salmonella species including drug-resistant Salmonella serotype Typhi
1902	Serratia species [S. liquefaciens, S. marcescens and others]
1903	Staphylococcus coagulase positive [aureus] including Methicillin-resistant Staphylococcus aureus and Vancomycin-resistant Staphylococcus aureus
1904	Stenotrophomonas maltophilia
1905	Group B Streptococcus or GBS [also known as Streptococcus agalactiae]
1906	Streptococcus anginosus [formerly Streptococcus milleri]
1907	Streptococcus pneumoniae
1908	Streptococcus pyogenes [Group A Streptococcus]

APPENDIX C

Congenital Anomaly Codes

Central Nervous System Anomalies

Code	Description
101	Anencephaly
102	Meningomyelocele
103	Hydranencephaly
104	Congenital Hydrocephalus
105	Holoprosencephaly
106	Encephalocele
901	Other lethal or life threatening central nervous system anomaly not listed above (description required)

Congenital Heart Anomalies

Code	Description
201	Truncus Arteriosus
202	Transposition of the Great Vessels
203	Tetralogy of Fallot with or without Pulmonary Atresia
204	Single Ventricle
205	Double Outlet Right Ventricle
206	Complete Atrio-Ventricular Canal
207	Pulmonary Atresia with Intact Ventricular Septum
208	Tricuspid Atresia
209	Hypoplastic Left Heart Syndrome
210	Interrupted Aortic Arch
211	Total Anomalous Pulmonary Venous Return
212	Pentalogy of Cantrell (Thoraco-Abdominal Ectopia Cordis)
213	Coarctation of the Aorta requiring surgical or medical intervention
214	Atrial Septal Defect requiring surgical or medical intervention
215	Ventricular Septal Defect requiring surgical or medical intervention
216	Arrythmia requiring surgical or medical intervention
217	Ebstein's Anomaly requiring surgical or medical intervention
218	Pulmonary Valvular Stenosis requiring surgical or medical intervention
902	Other lethal or life threatening heart anomaly not listed above (description required)

Gastro-Intestinal Anomalies

Code	Description
301	Cleft Palate
302	Tracheo-Esophageal Fistula
303	Esophageal Atresia
304	Duodenal Atresia
305	Jejunal Atresia
306	Ileal Atresia
307	Atresia of Large Bowel or Rectum
308	Imperforate Anus
309	Omphalocele
310	Gastroschisis
311	Biliary Atresia
312	Malrotation
313	Hirschsprung's Disease requiring surgical or medical intervention
314	Sacrococcygeal teratoma requiring surgical or medical intervention
903	Other lethal or life threatening gastro-intestinal anomaly not listed above (description required)

Genito-Urinary Anomalies

Code	Description
401	Bilateral Renal Agenesis
402	Bilateral Polycystic, Multicystic, or Dysplastic Kidneys
403	Obstructive Uropathy with Congenital Hydronephrosis
404	Exstrophy of the Urinary Bladder
904	Other lethal or life threatening genito-urinary anomaly not listed above (description required)

Chromosomal Anomalies

Code	Description
501	Trisomy 13
502	Trisomy 18
503	Trisomy 21
504	Other chromosomal anomaly not listed above (description required)
505	Triploidy

Other Congenital Anomalies

Code	Description
601	Skeletal Dysplasia (description required)
602	Congenital Diaphragmatic Hernia
603	Hydrops Fetalis with anasarca and one or more of the following: ascites, pleural effusion, pericardial effusion
604	Oligohydramnios Sequence including all 3 of the following: (1) Oligohydramnios documented by antenatal ultrasound 5 or more days prior to delivery, (2) evidence of fetal constraint on postnatal physical exam (such as Potter's facies, contractures, or positional deformities of limbs), and (3) postnatal respiratory failure requiring endotracheal intubation and assisted ventilation.
605	Inborn Error of Metabolism (description required)
606	Myotonic Dystrophy requiring endotracheal intubation and assisted ventilation
607	Conjoined Twins
608	Tracheal Agenesis or Atresia
609	Thanatophoric Dysplasia Types 1 and 2
610	Hemoglobin Barts
611	Twin-twin transfusion syndrome

Pulmonary Anomalies

Code	Description
701	Congenital Cystic Adenomatoid Malformation of the Lung
907	Other lethal or life threatening pulmonary anomaly not listed above (description required)

Other Lethal or Life Threatening Anomalies

Code	Description
100	Other lethal or life threatening anomalies not listed above (description required)

APPENDIX D

Surgery Codes

> **NOTE:**
>
> If NEC Surgery and/or Other Surgery are checked **"Yes**,**"** record all applicable Surgery Codes in the Surgery Codes Data Item(s).

Head and Neck

Code	Description
S101	Tracheostomy/Tracheotomy
S102	Cricoid split
S103	Ophthalmologic surgery OTHER THAN laser or cryosurgery for ROP

> **NOTE:** Record ROP surgery in the ROP Surgery Data Item. Do not record ROP surgery in the Surgery Codes Data Item.

S104	Cleft lip or palate repair
S105	Branchial cleft sinus excision
S106	Thyroglossal duct excision
S107	Palliative or definitive repair of choanal atresia
S108	Mandibular (jaw) distraction
S109	Craniotomy
S100	Other head and neck surgery requiring general or spinal anesthesia (description required)

Thorax

Code	Description
S201	Tracheal Resection
S202	Aortopexy
S203	Tracheoesophageal atresia and/or fistula repair
S204	Thoracoscopy (with or without pleuridesis or pleurectomy)
S205	Thoracotomy (with or without pleural or lung biopsy)

Code	Description
S206	Thoracotomy (or thoracoscopy) with pneumonectomy, lobectomy, or partial lobectomy
S207	Resection of pulmonary sequestration (intrathoracic or extrathoracic)
S208	Resection of mediastinal mass
S209	Resection of chest wall
S210	Bronchoscopy (with or without biopsy)
S211	Esophagoscopy (with or without biopsy)
S212	Surgery for Congenital Cystic Adenomatoid Malformation of the Lung
S213	Lung transplant
S214	Sternal closure
S200	Other thoracic surgery requiring general or spinal anesthesia (description required)

Abdomen

Code	Description
S301	Rectal biopsy with or without anoscopy
S302	Laparoscopy (diagnostic, with/without biopsy)
S303	Laparotomy (diagnostic or exploratory, with/without biopsy)
S304	Fundoplication
S305	Pyloromyotomy
S306	Pyloroplasty
S307	Jejunostomy, ileostomy, enterostomy, colostomy for intestinal diversion (with or without bowel resection, with or without fistula creation)
S308	Small bowel resection with or without primary anastomosis
S309	Large bowel resection
S310	Duodenal atresia/stenosis/web repair
S311	Jejunal, ileal, or colonic atresia repair (or repair of multiple intestinal atresias)
S312	Excision of Meckel's diverticulum
S313	Drainage of intra-abdominal abscess (not as primary treatment for NEC, see code S333)

Code	Description
S314	Surgery for meconium ileus
S315	Excision of omphalomesenteric duct or duct remnant
S318	Lysis of adhesions
S319	Repair of imperforate anus (with or without vaginal, urethral, or vesicle fistula)
S320	Pull-through for Hirschsprung's disease (any technique)
S321	Pancreatectomy (partial, near total, or total)
S322	Splenectomy or splenorrhaphy (partial or complete)
S323	Resection of retroperitoneal tumor
S324	Resection of sacrococcygeal tumor
S325	Repair of diaphragmatic hernia
S326	Plication of the diaphragm
S327	Gastrostomy/jejunostomy tube
S328	Upper endoscopy (stomach or duodenum, with or without biopsy)
S329	Colonoscopy/sigmoidoscopy (with or without biopsy)
S330	Takedown of ostomy and/or reanastomosis of bowel (small or large bowel)
S331	Ladd's or other procedure for correction of malrotation
S332	Appendectomy
S333	Primary peritoneal drainage for NEC, suspected NEC, or intestinal perforation (If infant subsequently has other applicable surgical procedures, code those also.)
S334	Anoplasty
S335	Kasai procedure
S336	Liver biopsy done during laparotomy or laparoscopy (includes wedge or needle techniques)
S337	Umbilical hernia repair
S338	Primary closure for gastroschisis
S339	Staged closure for gastroschisis
S340	Primary closure for omphalocele
S341	Staged closure for omphalocele
S342	Gastrostomy tube
S343	Jejunostomy tube
S300	Other abdominal surgery requiring general or spinal anesthesia (description required)

NOTE: The code for Inguinal Hernia Repair is S410 (see Genito-Urinary section)

Genito-Urinary

Code	Description
S401	Cystoscopy (diagnostic, with or without biopsy)
S402	Adrenalectomy
S403	Nephrectomy
S404	Nephrostomy
S405	Ureterostomy
S406	Resection of urachal cyst
S407	Cystostomy
S408	Closure of bladder exstrophy
S409	Resection of posterior urethral valves
S410	Inguinal hernia repair
S411	Orchiopexy
S412	Orchiectomy
S413	Drainage, excision or removal of ovarian cyst
S414	Oopherectomy (partial or complete)
S416	Pyeloplasty
S417	Renal transplant
S400	Other genito-urinary surgery requiring general or spinal anesthesia (description required)

Open Heart or Vascular Procedures

Code	Description
S501	Vascular Ring division
S502	Repair of coarctation of the aorta
S503	Repair of major vascular injury
S504	Repair or palliation of congenital heart disease
S505	Heart transplant
S506	Implanted pacemaker (permanent – do not use code for temporary pacemakers)
S507	Norwood procedure with Sano modification
S508	Norwood procedure with aortopulmonary shunt
S509	Hybrid surgery (ductal stenting and bilateral branch pulmonary artery banding)
S510	Truncus arteriosus repair

Code	Description
S511	Arterial switch
S512	Repair of total anomalous pulmonary venous return
S513	Aorta pulmonary shunt
S514	Pulmonary artery banding
S515	Open thoracotomy or sternotomy for patent ductus arteriosus closure
S516	Thoracoscopic surgery for patent ductus arteriosus closure
S500	Other open heart or vascular surgery requiring general or spinal anesthesia (description required)

Diagnostic or Interventional Cardiac Catheterization

Code	Description
S601	Diagnostic cardiac catheterization
S602	Interventional catheterization with balloon septostomy
S603	Interventional catheterization with aortic valvuloplasty
S604	Interventional catheterization with pulmonary valvuloplasty
S605	Interventional catheterization for patent ductus arteriosus closure
S600	Other interventional catheterization whether or not anesthesia was required (description required)

Skin and Soft Tissue

Code	Description
S700	Skin or soft tissue surgery requiring general or spinal anesthesia (description required)

Musculoskeletal System

Code	Description
S800	Other musculoskeletal surgery requiring general or spinal anesthesia (description required)

Central Nervous System

Code	Description
S901	Ventriculoperitoneal or other ventricular shunt

Code	Description
S902	External ventricular drain
S903	Ventricular drain with reservoir placement or removal
S904	Meningocele or myelomeningocele repair
S905	Encephalocele repair
S906	Endoscopic third ventriculostomy with or without choroid plexus cauterization
S900	Other central nervous system surgery requiring general or spinal anesthesia (description required)

Fetal Surgery (record if fetal surgery was done at your hospital or another hospital)

Code	Description
S1000	Fetal surgery at your hospital (description required)
S1001	Fetal surgery at another hospital (description required)

Conjoined Twins

Code	Description
S1101	Separation of conjoined twins

APPENDIX E

Congenital Infections

Code	Description
101	Toxoplasmosis (Toxoplasma gondii)
102	Rubella virus
103	Syphilis (Treponema pallidum)
104	Cytomegalovirus
105	Herpes simplex
106	Parvovirus B19
107	Zika virus
108	Varicella zoster virus

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Staff

John Antram
Senior Systems Administrator

Drew Arnold
Marketing and Communications Manager

Ciera Audette
Account Manager

Paula Beales
Account Manager - Global Health

Tsveti Berthin, MA, CMP, PMP
Project Coordinator/Manager of Virtual Initiatives

Philip Bieber
Administrative Assistant

Jackson Boomhower
Applications Programming Manager

Amy Briody
Account Manager

Jeff Buzas, PhD
Senior Statistician

Joven Calimlim
DevOps Engineer

Sharla Crowley
Special Programs Manager

Sonia Darrow
Program Assistant

Tim Dartt
Developer

Erika Edwards, PhD, MPH
Chief Science Officer, Director of Data Science

Danielle Ehret, MD, MPH
Chief Medical Officer, Director of Global Health

Jeremy Farnham
Developer

Pam Ford
iNICQ Coordinator

Ryon Frink
Product Manager

Brian George
LMS Registrar

Joe Grabon
Technical Writer, Technical Support Specialist

Bethany Gray
Call Center Manager

Lucy Greenberg, MS
Statistician

Annie Harrington, MSN, CPNP
Director of Strategic Partnerships

Sam Kimball
UI/UX Developer

Ted Kreider
Business Analyst (IT)

Christopher Mattogno
Senior Systems Administrator

John McGregor, EdD
Learning Systems Manager

Dan Morris
Developer

Kate Morrow, MS
Senior Statistician

David Mortensen
Director of IT

Peter Pelaia
Director of Operations

Aaron Richards
Senior Quality Assurance Analyst

Nora Rodriguez
Quality Assurance Analyst

Denise Schomody
Account Manager

Helina Selam, MPH
Global Health Manager

Erika Smith
Account Manager

A. Lynn Stillman
AR Manager

Mike Toomey
Member Services Manager

Sophie Ullman
Account Manager

Andy Warner
Webinar Producer and Multimedia Producer

Jordan Wiener
EHR Integration Specialist

Katie Wilhite
Finance/HR Manager

Denise Zayack, RN, BA, MPH
Senior Consultant for Quality Improvement and Education

2024

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How to Contact Us

Address
Vermont Oxford Network
33 Kilburn Street, Suite 322
Burlington, Vermont 05401

Phone
802.865.4814

Fax
802.865.9613

General Email
mail@vtoxford.org

Finance Department
finance@vtoxford.org

Nightingale Support
nightingale@vtoxford.org

eNICQ Technical Support
support@vtoxford.org

Web site
www.vtoxford.org