Database Eligibility

Very Low Birth Weight (VLBW) Eligibility

- Any live born infant whose birth weight is from 401 to 1500 grams OR whose gestational age is from 22 weeks 0 days to 29 weeks 6 days and who is:
  - Inborn and admitted to any location in your center; OR
  - Inborn and dies in the delivery room or any other location in your center before admission; OR
  - Outborn and admitted to any location in your center within 28 days of birth without first having gone home.

Expanded Eligibility

- Any infant who meets the VLBW eligibility, plus:
- Any inborn or outborn infant whose birth weight is greater than 1500 grams and who:
  - Is admitted to a NICU in your center within 28 days of birth without first having gone home; OR
  - Dies at any location in your center within 28 days of birth without first having gone home.

Examples

<table>
<thead>
<tr>
<th>Infant Characteristics</th>
<th>Meets VLBW Eligibility?</th>
<th>Meets Expanded Eligibility?</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;400 g or, if birth weight is unknown, &lt;22 weeks 0 days</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>401 to 1500 g or 22 weeks 0 days to 29 weeks 6 days</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>&gt;1500 g or, if birth weight is unknown, &gt;29 weeks 6 days</td>
<td>No</td>
<td>Yes if admitted to NICU or dies</td>
</tr>
</tbody>
</table>

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

---

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. 2011; 128(1):177-181. PubMed ID: 21708807.

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 2015

**New Data Items:** There are no new data items for 2015.

**Modified Data Items:** The following data items have been revised for infants born in 2015.

**Date of Week 36**

The method for calculating the Date of Week 36, which is included in the note for Items 26a – 26f, has changed. Though this item is not submitted to VON, the calculated date is used to answer the Respiratory Support at 36 Weeks data items.

The new note is:

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. The method for calculating the Date of Week 36 has changed for 2015. Though this item is not submitted to VON, the calculated date is used to answer the Respiratory Support at 36 Weeks data items. The new calculation will be available as of January 1st, 2015 at www.vtoxford.org/downloads.

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 28 Day Form.
- 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 1/1/2015 at 32 weeks, 5 days.

1. $36 - 32 = 4$
2. $(4 \times 7) - 5 = 23$
3. $1/1/2015 + 23$ days = 1/24/2015, the Date of Week 36
Expanded Eligibility

The eligibility criteria have been clarified and a note has been added to the eligibility criteria for the Expanded Database. The new note is:

**Unknown Birth Weight:** If the birth weight is unknown but the gestational age is at least 29 weeks 6 days and the infant meets the other Expanded Database criteria, the infant is eligible.

The note is specific to the Expanded Database.

**Discontinued data items:** There are no discontinued data items for 2015.
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CHAPTER 1

Introduction


The VON Manuals, as well as data forms, 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 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 item.

To assure 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 forms may change from one year to another as changes are approved by the Network Database Advisory Committee. Use the forms in this manual for infants born in 2015. For infants born in 2014, use the forms and definitions for infants born in 2014 as described in the most current version of the 2014 Manual of Operations, which can be accessed at www.vtoxford.org/downloads.

If you need to submit data for infants born prior to 2014, use the data forms 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 Forms

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

Confidentiality and Patient Privacy

The 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.

None of the data submitted to the Network includes patient identifiers, as defined by the U.S. Health Insurance Portability and Accountability Act of 1996 (HIPAA). Vermont Oxford Network does not accept protected health care information. Your hospital must take appropriate measures to assure 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.

<table>
<thead>
<tr>
<th>Account Manager</th>
<th>Extension</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paula Beales</td>
<td>214</td>
<td><a href="mailto:Paula@vtoxford.org">Paula@vtoxford.org</a></td>
</tr>
<tr>
<td>Annie Blanchette</td>
<td>218</td>
<td><a href="mailto:ABlanchette@vtoxford.org">ABlanchette@vtoxford.org</a></td>
</tr>
<tr>
<td>Marilyn Eick</td>
<td>227</td>
<td><a href="mailto:Marilyn@vtoxford.org">Marilyn@vtoxford.org</a></td>
</tr>
<tr>
<td>Robert Issenberg</td>
<td>234</td>
<td><a href="mailto:RIssenberg@vtoxford.org">RIssenberg@vtoxford.org</a></td>
</tr>
<tr>
<td>Pat Lavalette</td>
<td>260</td>
<td><a href="mailto:Pat@vtoxford.org">Pat@vtoxford.org</a></td>
</tr>
<tr>
<td>Matthew Pettengill</td>
<td>219</td>
<td><a href="mailto:MPettengill@vtoxford.org">MPettengill@vtoxford.org</a></td>
</tr>
<tr>
<td>Joan Schillhammer</td>
<td>224</td>
<td><a href="mailto:Joan@vtoxford.org">Joan@vtoxford.org</a></td>
</tr>
<tr>
<td>Ellen Wilhite</td>
<td>216</td>
<td><a href="mailto:Ellen@vtoxford.org">Ellen@vtoxford.org</a></td>
</tr>
</tbody>
</table>

Table 1.1: Account Manager Contact Information
CHAPTER 2

Eligibility Criteria

To assure 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 from 401 to 1500 grams OR whose gestational age is from 22 weeks 0 days to 29 weeks 6 days and who is:
  - Inborn and admitted to any location of your center; OR
  - Inborn and dies in the delivery room or any other location of your center before admission; OR
  - Outborn and admitted to any location of your center within 28 days of birth without first having gone home.

Expanded Eligibility
- Any infant who meets the VLBW eligibility, plus:
- Any inborn or outborn 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 without first having gone home; OR
  - Dies at any location in your center within 28 days of birth without first having gone home.

The following table includes examples of how the eligibility criteria are applied. Each example assumes that the infant was born in your hospital or was admitted to your hospital within 28 days of birth.
<table>
<thead>
<tr>
<th>Birth Weight (grams)</th>
<th>Gestational Age (weeks/days)</th>
<th>Died in Delivery Room or Other Location?</th>
<th>Eligible for VLBW database?</th>
<th>Admitted to NICU?</th>
<th>Eligible for Expanded database?</th>
</tr>
</thead>
<tbody>
<tr>
<td>350</td>
<td>22/0</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>400</td>
<td>21/6</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>401</td>
<td>21/6</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>401</td>
<td>21/6</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>400</td>
<td>22/0</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>400</td>
<td>22/0</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>1500</td>
<td>30/0</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>1500</td>
<td>30/0</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>1501</td>
<td>30/0</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>1501</td>
<td>30/0</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>1501</td>
<td>29/6</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>1600</td>
<td>30/0</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Unknown</td>
<td>21/6</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Unknown</td>
<td>30/0</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**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*. 2011; 128(1):177-181. PubMed ID: 21708807.

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 Discharged Home Prior to Admission:** Infants who go home prior to admission to your center are not eligible. Infants discharged home from another center before being admitted to your center are not eligible.

**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 are eligible if their birth weights are from 401 to 1500 grams or if their gestational ages are from 22 weeks 0 days to 29 weeks 6 days. This definition includes inborn infants who die in the delivery room (see Delivery Room Death Criteria, below). These deaths are defined as “Delivery Room Deaths” and require completion of the Delivery Room Death form.

- All outborn infants with birth weights from 401 to 1500 grams or gestational ages from 22 weeks 0 days to 29 weeks 6 days who die are eligible if they have not been discharged home and 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 if they have not been discharged home. 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.

<table>
<thead>
<tr>
<th><strong>Delivery Room Death Criteria</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Any eligible inborn infant who dies in the delivery room or at any other location in your hospital within 12 hours after birth and prior to admission to the NICU is defined as a “Delivery Room Death.” These locations may include the mother’s room, resuscitation rooms, or any location other than the NICU in your hospital.</td>
</tr>
<tr>
<td>Outborn infants and infants who are admitted to the NICU should not be classified as Delivery Room Deaths.</td>
</tr>
</tbody>
</table>

Definitions of Data Items for Infants Born in 2015

28 Day Form Data Definitions

Use the definitions below when completing the 28 Day Form for infants born in 2015.

ITEM 1: 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).

ITEM 2a & 2b: Gestational Age

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.

ITEM 3: 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 Form.
- If answered “No,” please continue to complete the 28 Day and Discharge Forms.

ITEM 4a: 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. When completing the Network data forms for outborn infants, use all information available from the hospital that transferred the infant to your center as well as from your own hospital.

ITEM 4b: Day of Admission to Your Center

For outborn infants only, Day of Admission is the day of life on which the infant is admitted to your hospital. The Date of Birth is day 1. For example, if an outborn infant is born on June 1, and admitted to your hospital on June 1, the Day of Admission would be 1. If that same infant were admitted on June 3, the Day of Admission would be 3.

To determine the Day of Admission for outborn infants 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 hospital 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 item applies only to outborn infants.
- The acceptable range for Day of Admission is from 1 (for infants admitted on their Date of Birth) to 28 (since outborn infants admitted more than 28 days after birth are not eligible for the database).
ITEM 4c: Transfer Code of Center from which Infant Transferred

If the infant is outborn, enter the Transfer Code of the VON center or other location from which the infant transferred. This item is not applicable if the infant is inborn.

The Transfer Code for hospitals is a special code assigned by the Network for member hospitals, as well as ‘other’ codes for non-members. It is not the Network assigned center number. Please refer to the current Transfer Code List of the Vermont Oxford Network when answering this question.

NOTES:

• The Transfer Code List may be accessed at: www.vtoxford.org/transfers
• Your center’s transfer code should not be entered.

ITEM 5: 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.

ITEM 6a: Ethnicity of Mother

The response to this 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.

ITEM 6b: Race of Mother

The response to this 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.

ITEM 7: 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.

ITEM 8: 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.

ITEM 9: 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.
ITEM 10: 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.

ITEM 11: 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.

ITEM 12: Mode of Delivery

Answer “Vaginal” for any vaginal delivery (spontaneous or induced).

Answer “Cesarean Section” for any cesarean delivery (elective or emergent).

ITEM 13: Sex of Infant

Answer “Male” or “Female”.

ITEM 14a: 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”.

ITEM 14b: 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 item is not applicable if Multiple Gestation is answered “No”.

ITEM 15a & 15b: APGAR Scores

Enter the APGAR score at 1 minute and at 5 minutes as noted in the Labor and Delivery record.

ITEM 16a-16f: Initial Resuscitation

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 items should be based on the initial resuscitation provided immediately after birth, regardless of where the resuscitation took place.

ITEM 16a: 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.
ITEM 16b: 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 a resuscitation 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.

ITEM 16c: 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.

ITEM 16d: 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.

ITEM 16e: 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.
ITEM 16f: 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.
- Nasal IMV (intermittent mandatory ventilation) and nasal SIMV (synchronized intermittent mandatory ventilation) are both considered forms of nasal CPAP for the purpose of this definition.
- High flow nasal cannula oxygen is NOT considered nasal CPAP for the purpose of this definition.

ITEM 17a: 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.
ITEM 17b: 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](http://www.vtoxford.org/downloads).
- Use a rectal temperature, or if not available, esophageal temperature, tympanic temperature or axillary temperature, in that order.

ITEM 18: Bacterial Sepsis 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 1, day 3 will be September 3rd.
- Bacterial Pathogens are listed in Appendix B of the Manual of Operations, Part 2.

**ITEM 19: Oxygen on Day 28**

Answer “**Yes**” if the item is applicable and the infant received any supplemental oxygen on the date of Day 28.

Answer “**No**” if the item is applicable and the infant did not receive supplemental oxygen on the date of Day 28.

Answer “**N/A**” if the 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 1 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 1, Day 28 is September 28th.
- A chart showing the Date of Day 28 may be downloaded from www.vtoxford.org/downloads.
- This 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 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.

ITEM 20a: 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 2015 may be downloaded from www.vtoxford.org/downloads.
ITEM 20b: 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 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

ITEM 20c: PIH, Where First Occurred

If the infant had a periventricular-intraventricular hemorrhage (PIH) documented on an ultrasound, CT or MRI on or before Day 28, indicate where a PIH first occurred. Note that this item does not ask where the worst grade occurred but rather where any PIH (grades 1 to 4) first occurred. This 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 first occurred:

• only at your hospital prior to Initial Disposition, or
• at your hospital following readmission after initial transfer without being discharged home.

Answer “Other Hospital” if PIH first occurred:

• at the “Transferred From” center (outborn) before being admitted to your hospital, or
• at the “Transferred To” center only if the infant is:
  o readmitted to your center, and
  o not discharged home before being readmitted to your center.
NOTES:

• When infants transfer to your hospital or are readmitted to your hospital after initial transfer, a PIH will be considered to have occurred at another hospital in the following situations:
  o A PIH was first diagnosed on an ultrasound, CT or MRI at the other hospital either prior to admission to your hospital or prior to readmission following initial transfer, or,
  o A PIH was first diagnosed on an ultrasound, CT or MRI within 4 hours of admission to your hospital.

ITEM 21: 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 item is not applicable. Use the Delivery Room Death Form when this is the case.

End of 28 Day Form Definitions
Discharge Form Data Definitions

Use the definitions below when completing the Discharge Form for infants born in 2015.

ITEM 22a: 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.

ITEM 22b: Conventional Ventilation after Initial Resuscitation

Answer “Yes” if the infant was given intermittent positive pressure ventilation through an endotracheal tube 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 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.
ITEM 22c: High Frequency Ventilation after Initial Resuscitation

Answer “Yes” if the infant received high frequency ventilation (IMV rate ≥ 240/minute) 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) after leaving the delivery room/initial resuscitation area.

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

ITEM 22d: High Flow Nasal Cannula after Initial Resuscitation

Answer “Yes” if the infant received air or oxygen (any FiO2) at a flow rate of one liter per minute or more via nasal cannula at any time after leaving the delivery room/initial resuscitation area.

Answer “No” if the infant did not receive air or oxygen (any FiO2) at a flow rate of one liter per minute or more via nasal cannula at any time after leaving the delivery room/initial resuscitation area.

ITEM 22e. Nasal IMV or Nasal SIMV after Initial Resuscitation

Answer “Yes” if the infant received intermittent positive pressure ventilation (intermittent mandatory ventilation or synchronized intermittent mandatory 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 intermittent positive pressure ventilation via nasal prongs or other nasal device at any time after leaving the delivery room/initial resuscitation area.
NOTES:

- Nasal IMV or Nasal SIMV should be coded “Yes” if the infant receives positive pressure patterns that include two or more levels of positive pressure such as “BiPAP” or “SiPAP”.
- Nasal IMV (intermittent mandatory ventilation) and nasal SIMV (synchronized intermittent mandatory ventilation) are both considered forms of nasal CPAP.
- 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.

ITEM 23a: 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. If Nasal IMV or Nasal SIMV is answered “Yes”, Nasal CPAP should also be answered “Yes”.

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.
- Nasal IMV (intermittent mandatory ventilation) and nasal SIMV (synchronized intermittent mandatory ventilation) are both considered forms of nasal CPAP for the purpose of this definition.
- High flow nasal cannula oxygen is not considered nasal CPAP for the purpose of this definition.
ITEM 23b: Nasal CPAP before or without ever having received ETT Ventilation

Answer “Yes” if the infant was given continuous positive airway pressure applied through the nose at any time prior to first receiving intermittent positive pressure breaths through an endotracheal tube.

Answer “Yes” if the infant was given positive airway pressure applied through the nose and never received intermittent positive pressure breaths through an endotracheal tube.

Answer “No” if the infant received intermittent positive pressure breaths through an endotracheal tube before being given continuous positive airway pressure applied through the nose.

Answer “N/A” if the infant never received continuous positive airway pressure applied through the nose.
NOTES:

- “Intermittent positive pressure breaths” refers to assisted breaths given through an endotracheal tube using a mechanical ventilator or given through an endotracheal tube using a resuscitation bag.
- 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.
- When responding to Nasal CPAP before or without ever having received ETT Ventilation, the important point is whether the Nasal CPAP was given at any time before assisted positive pressure breaths through an endotracheal tube are first given. The Nasal CPAP before assisted positive pressure breaths may have been given during initial resuscitation or after initial resuscitation.
- There are two special situations that must be considered when answering this question:
  - If an infant was intubated in the initial resuscitation area solely for suctioning meconium, this does not count as prior intubation and assisted positive pressure breaths. Therefore, for infants whose only intubation prior to receiving Nasal CPAP was for suctioning of meconium, Nasal CPAP before or without ever having received ETT Ventilation should be answered “Yes”.
  - If an infant was intubated for the purpose of surfactant administration and rapidly extubated to Nasal CPAP, this does count as prior intubation and assisted positive pressure breaths. Nasal CPAP before or without ever having received ETT Ventilation should be answered “No”.

**ITEM 24a: 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”.

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**ITEM 24b: 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.

**ITEM 24c & 24d: 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 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 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 item should be recorded as unknown.
EXAMPLE 1: An infant is born at 15:30 hours on October 1 in your hospital. The first dose of surfactant is given at 15:45 hours on October 1 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 1 in an outlying hospital. The first dose of surfactant is given at 15:45 hours on October 1 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 1. The first dose of surfactant is given at 15:00 hours on October 4. The age at first dose is 71 hours and 30 minutes.

EXAMPLE 4: An infant is born at 15:30 hours on October 1. The first dose of surfactant is given at 16:30 hours on October 1. 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.)

ITEM 25a: Inhaled Nitric Oxide

Answer “Yes” if the infant received inhaled nitric oxide.

Answer “No” if the infant did not receive inhaled nitric oxide.

ITEM 25b: Inhaled Nitric Oxide, Where Given

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

Answer “Your Hospital” if iNO was given:

• only at your hospital prior to Initial Disposition, and/or
• at your hospital following readmission after initial transfer without being discharged home.

Answer “Other Hospital” if iNO was given:

• at the “Transferred From” center (outborn) before being admitted to your hospital, or
• at the “Transferred To” center only if the infant is:
  o readmitted to your center, and
  o not discharged home before being readmitted to your center.

Answer “Both” if iNO was given both at “Your Hospital” and “Other Hospital” as defined above.
ITEM 26a - 26f: Respiratory Support at 36 Weeks

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

Respiratory Support at 36 Weeks 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 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 item based on the item definitions, if the item is applicable.

Answer “N/A” to each of the items if the 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. The method for calculating the Date of Week 36 has changed for 2015. Though this item is not submitted to VON, the calculated date is used to answer the Respiratory Support at 36 Weeks data items. The new calculation will be available as of January 1st, 2015 at www.vtoxford.org/downloads.

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 28 Day Form.
- 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 (GA, 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 (GA, 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 1/1/2015 at 32 weeks, 5 days.
  1. 36 - 32 = 4
  2. (4 x 7) - 5 = 23
  3. 1/1/2015 + 23 days = 1/24/2015, the Date of Week 36

ITEM 26a: Oxygen at 36 Weeks

Answer “Yes” if the item is applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks, and the infant received any supplemental oxygen at any time on the Date of Week 36.

Answer “No” if the 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 on the Date of Week 36.
Answer “N/A” if the 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.

ITEM 26b: Conventional Ventilation at 36 Weeks

Answer “Yes” if the 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 with a conventional ventilator (IMV rate <240/minute) at any time on the Date of Week 36.

Answer “No” if the 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 with a conventional ventilator (IMV rate <240/minute) at any time on the Date of Week 36.

Answer “N/A” if the 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.

ITEM 26c: High Frequency Ventilation at 36 Weeks

Answer “Yes” if the 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) at any time on the Date of Week 36.

Answer “No” if the 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) at any time on the Date of Week 36.
Answer “N/A” if the 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.

**ITEM 26d: High Flow Nasal Cannula at 36 Weeks**

Answer “**Yes**” if the item is applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks, and the infant received air or oxygen (any FiO2) at a flow rate of one liter per minute or more via nasal cannula at any time on the Date of Week 36.

Answer “**No**” if the item is applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks, and the infant did not receive air or oxygen (any FiO2) at a flow rate of one liter per minute or more via nasal cannula at any time on the Date of Week 36.

Answer “**N/A**” if the item is not applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks.

**ITEM 26e: Nasal IMV or Nasal SIMV at 36 Weeks**

Answer “**Yes**” if the item is applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks, and the infant received intermittent positive pressure ventilation (intermittent mandatory ventilation or synchronized intermittent mandatory ventilation) via nasal prongs or other nasal device at any time on the Date of Week 36.

Answer “**No**” if the item is applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks, and the infant did not receive intermittent positive pressure ventilation via nasal prongs or other nasal device at any time on the Date of Week 36.

Answer “**N/A**” if the item is not applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks.
NOTES:

- Nasal IMV or Nasal SIMV should be answered “Yes” if the infant receives positive pressure patterns that include two or more levels of positive pressure such as “BiPAP” or “SiPAP”.
- 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.

ITEM 26f: Nasal CPAP at 36 Weeks

Answer “Yes” if the 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 on the Date of Week 36. If Nasal IMV or Nasal SIMV is answered “Yes”, Nasal CPAP should also be answered “Yes”.

Answer “No” if the 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 on the Date of Week 36.

Answer “N/A” if the item is not applicable based on the Eligibility Criteria for Respiratory Support at 36 Weeks.

NOTES:

- Nasal IMV (intermittent mandatory ventilation) and nasal SIMV (synchronized intermittent mandatory ventilation) are both considered forms of nasal CPAP for the purpose of this definition.
- 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.
- High flow nasal cannula oxygen is not considered nasal CPAP for the purpose of this definition.
**ITEM 27a: 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.

<table>
<thead>
<tr>
<th>NOTES:</th>
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<tbody>
<tr>
<td>• 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 “<strong>No</strong>”.</td>
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**ITEM 27b: Steroids for CLD, Where Given**

If Steroids for CLD is answered “**Yes**”, indicate where steroids for CLD were given. This item is not applicable if the infant did not receive steroids for CLD.

Answer “**Your Hospital**” if Steroids for CLD are given:

- only at your hospital prior to Initial Disposition, and/or
- at your hospital following readmission after initial transfer without being discharged home.

Answer “**Other Hospital**” if Steroids for CLD are given:

- at the “Transferred From” center (outborn) before being admitted to your hospital, or
- at the “Transferred To” center only if the infant is:
  - readmitted to your center, and
  - not discharged home before being readmitted to your center.

Answer “**Both**” if Steroids for CLD are given both at “**Your Hospital**” and at “**Other Hospital**” as defined above.
ITEM 28: 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 Patent Ductus Arteriosus on the Discharge Form.

Answer “No” if Indomethacin was not administered after birth.

NOTES:

• Ibuprofen should not be counted as Indomethacin.

ITEM 29: 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 Patent Ductus Arteriosus on the Discharge Form.

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 item.

ITEM 30: 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.

ITEM 31: Treatment of ROP with Anti-VEGF Drug

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

ITEM 32a: 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.

ITEM 32b: ROP Surgery, Where Done

If ROP Surgery is answered “Yes”, indicate where ROP surgery was done. This item is not applicable if ROP surgery was not done.

Answer “Your Hospital” if ROP Surgery is done:

• only at your hospital prior to Initial Disposition, and/or
• at your hospital following readmission after initial transfer without being discharged home.

Answer “Other Hospital” if ROP Surgery is done:

• at the “Transferred From” center (outborn) before being admitted to your hospital, or
• at the “Transferred To” center only if the infant is:
  o readmitted to your center, and
Answer “Both” if ROP Surgery is done both at “Your Hospital” and “Other Hospital” as defined above.

ITEM 33a: PDA Ligation

Answer “Yes” if surgical ligation of the ductus arteriosus was attempted either in the operating room or NICU. This item can be answered even if an infant did not meet the definition of Patent Ductus Arteriosus on the Discharge Form.

Answer “No” if surgical ligation of the ductus arteriosus was not attempted either in the operating room or NICU.

ITEM 33b: PDA Ligation, Where Done

If PDA Ligation is answered “Yes”, indicate where PDA ligation was done. This item is not applicable if PDA ligation was not done.

Answer “Your Hospital” if PDA ligation is done:

• only at your hospital prior to Initial Disposition, and/or
• at your hospital following readmission after initial transfer without being discharged home.

Answer “Other Hospital” if PDA ligation is done:

• at the “Transferred From” center (outborn) before being admitted to your hospital, or
• at the “Transferred To” center only if the infant is:
  o readmitted to your center, and
  o not discharged home before being readmitted to your center.

Answer “Both” if PDA Ligation is done both at your hospital and at another hospital as defined above.

ITEM 34: 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 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.

ITEM 35: Other Surgery

Answer “Yes” if a surgical procedure other than PDA Ligation, ROP Surgery 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 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 PDA Ligation, ROP Surgery 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 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 item.

- The following are not 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.

ITEM 36a: Surgery Codes and Location of Surgery

If you answered “Yes” to Surgery for NEC, Suspected NEC, or Bowel Perforation or Other Surgery:


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

Answer “Your Hospital” if the surgical procedure is performed:

• only at your hospital prior to Initial Disposition, and/or
• at your hospital following readmission after initial transfer without being discharged home.

Answer “Other Hospital” if the surgical procedure is performed:

• at the “Transferred From” center (outborn) before being admitted to your hospital, or
• at the “Transferred To” center only if the infant is:
  o readmitted to your center, and
  o not discharged home before being readmitted to your center.

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

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 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 item.

• If PDA ligation is performed as an isolated procedure for PDA, do not enter a surgery code (you should answer “Yes” to PDA Ligation and enter the location of surgery in PDA Ligation, Where Done).

• If PDA is ligated as a component of the repair or palliation of congenital heart disease, use code S504.

• 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.
ITEM 36b: 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 item.

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

ITEM 37: Respiratory Distress Syndrome

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

- PaO2 <50 mmHg in room air, central cyanosis in room air, a requirement for supplemental oxygen to maintain PaO2 >50 mmHg, or a requirement for supplemental oxygen to maintain a pulse oximeter saturation over 85% within the first 24 hours of life.

And

- 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.

Answer “No” if the infant did not satisfy both of the above criteria.
ITEM 38a: 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”.

ITEM 38b: Pneumothorax, Where Occurred

If Pneumothorax is answered “Yes”, indicate where the pneumothorax occurred.

Answer “Your Hospital” if pneumothorax is diagnosed:

- only at your hospital prior to Initial Disposition, and/or
- at your hospital following readmission after initial transfer without being discharged home.

Answer “Other Hospital” if pneumothorax is diagnosed:

- at the “Transferred From” center (outborn) before being admitted to your hospital, or
- at the “Transferred To” center only if the infant is:
  - readmitted to your center, and
  - not discharged home before being readmitted to your center, or
- within four (4) hours of admission to your center.

Answer “Both” if the pneumothorax is diagnosed both at “Your Hospital” and “Other Hospital” as defined above.
ITEM 39: 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.

ITEM 40a: Necrotizing Enterocolitis

Answer “Yes” if the infant had Necrotizing Enterocolitis (NEC) diagnosed at surgery, at postmortem examination or clinically and radiographically using the following criteria:

At least one of the following clinical signs present:

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

At least one of the following radiographic 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 “Focal Intestinal Perforation”, not as having NEC.

**ITEM 40b: NEC, Where Occurred**

If NEC is answered “Yes”, indicate where occurred. This item is not applicable if NEC did not occur.

Answer “Your Hospital” if NEC is diagnosed:

- only at your hospital prior to Initial Disposition, and/or
- at your hospital following readmission after initial transfer without being discharged home.

Answer “Other Hospital” if NEC is diagnosed:

- at the “Transferred From” center (outborn) before being admitted to your hospital, or
- at the “Transferred To” center only if the infant is:
  - readmitted to your center, and
  - not discharged home before being readmitted to your center, or
- within four (4) hours of admission to your center.

Answer “Both” if the 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 1 week or more.

ITEM 41a: Focal Intestinal Perforation

Answer “Yes” 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 “No” if the infant did not have a Focal Intestinal Perforation as defined above.

ITEM 41b: Focal Intestinal Perforation, Where Occurred

If Focal Intestinal Perforation is answered “Yes”, indicate where occurred. This item is not applicable if a Focal Intestinal Perforation did not occur.

Answer “Your Hospital” if Focal Intestinal Perforation is diagnosed:

- only at your hospital prior to Initial Disposition, and/or
- at your hospital following readmission after initial transfer without being discharged home.

Answer “Other Hospital” if Focal Intestinal Perforation is diagnosed:

- at the “Transferred From” center (outborn) before being admitted to your hospital, or
- at the “Transferred To” center only if the infant is:
  - readmitted to your center, and
  - not discharged home before being readmitted to your center, or
- within four (4) hours of admission to your center.

Answer “Both” if Focal Intestinal Perforation is diagnosed both at “Your Hospital” and “Other Hospital” as defined above.
ITEM 42 - 44: Sepsis and/or Meningitis, Late (after Day 3 of Life)

Each of the late infection 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 1, Day 3 is September 3rd. Use the criteria below when answering each of the late infection questions.

The three late infection 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,
  o Is not readmitted to your center before discharge home, death or first birthday, or
  o Is transferred a second time on or before Day 3.

Otherwise the late infection items are applicable.

ITEM 42a: Bacterial Pathogen after Day 3

Answer “Yes” if the 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 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.

Answer “N/A” if the 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 Pathogen” 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 Pathogen” and “Coagulase Negative Staph”.
• Bacterial Pathogens are listed in Appendix B of the Manual of Operations, Part 2.
ITEM 42b: Bacterial Pathogen after Day 3, Where Occurred

If late Bacterial Pathogen after Day 3 is answered “Yes”, indicate where occurred. This item is not applicable if late bacterial pathogen did not occur.

Answer “Your Hospital” if Bacterial Pathogen after Day 3 is diagnosed:

- only at your hospital prior to Initial Disposition, and/or
- at your hospital following readmission after initial transfer without being discharged home.

Answer “Other Hospital” if Bacterial Pathogen after Day 3 is diagnosed:

- at the “Transferred From” center (outborn) before being admitted to your hospital, or
- at the “Transferred To” center only if the infant is:
  - readmitted to your center, and
  - not discharged home before being readmitted to your center, or
- within four (4) hours of admission to your center.

Answer “Both” if Bacterial Pathogen after Day 3 is diagnosed both at “Your Hospital” and “Other 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 1 week or more.

ITEM 43a: Coagulase Negative Staphylococcal Infection after Day 3

Answer “Yes” if the 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 5 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 5 days of intravenous antibiotics, this condition would still be met if the intention were to treat for 5 or more days.

Answer “No” if the item is applicable based on the Late Infection Applicability Criteria and any or all of the above are not true.

Answer “N/A” if the 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 Pathogen” 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 Pathogen” and “Coagulase Negative Staphylococcal Infection”.

**ITEM 43b: Coagulase Negative Staphylococcal Infection after Day 3, Where Occurred**

If Coagulase Negative Staphylococcal Infection after Day 3 is answered “Yes”, indicate where occurred. This item is not applicable if coagulase negative staphylococcal infection did not occur.

Answer “Your Hospital” if Coagulase Negative Staphylococcal Infection after Day 3 is diagnosed:

- only at your hospital prior to Initial Disposition, and/or
- at your hospital following readmission after initial transfer without being discharged home.
Answer “Other Hospital” if Coagulase Negative Staphylococcal Infection after Day 3 is diagnosed:

- at the “Transferred From” center (outborn) before being admitted to your hospital, or
- at the “Transferred To” center only if the infant is:
  - readmitted to your center, and
  - not discharged home before being readmitted to your center, or
- within four (4) hours of admission to your center.

Answer “Both” if Coagulase Negative Staphylococcal Infection after Day 3 is diagnosed both at “Your Hospital” and “Other 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 1 week or more.

ITEM 44a: Fungal Infection after Day 3

Answer “Yes” if the 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 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.

Answer “N/A” if the item is not applicable based on the Late Infection Applicability Criteria.

ITEM 44b: Fungal Infection after Day 3, Where Occurred

If Fungal Infection after Day 3 is answered “Yes”, indicate where occurred. This item is not applicable if fungal infection did not occur.

Answer “Your Hospital” if Fungal Infection after Day 3 is diagnosed:

- only at your hospital prior to Initial Disposition, and/or
• at your hospital following readmission after initial transfer without being discharged home.

Answer “Other Hospital” if Fungal Infection after Day 3 is diagnosed:

• at the “Transferred From” center (outborn) before being admitted to your hospital, or

• at the “Transferred To” center only if the infant is:
  o readmitted to your center, and
  o not discharged home before being readmitted to your center, or

• within four (4) hours of admission to your center.

Answer “Both” if Fungal Infection after Day 3 is diagnosed both at “Your Hospital” and “Other 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 1 week or more.

**ITEM 45: 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.

ITEM 46a: 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.

ITEM 46b: ROP Stage

If a retinal examination was performed, enter the worst stage documented on any exam in the eye with the most advanced stage. 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 item is not applicable if no retinal examination was done.

ITEM 47: Major Birth Defect

Answer “Yes” if the infant had one or more of the birth defects included in the Birth Defect Codes List in Appendix C of the Manual of Operations, Part 2. Enter applicable birth defect codes in the spaces provided.

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>504</td>
<td>Other Chromosomal Anomaly</td>
</tr>
<tr>
<td>601</td>
<td>Skeletal Dysplasia</td>
</tr>
<tr>
<td>605</td>
<td>Inborn Error of Metabolism</td>
</tr>
</tbody>
</table>

- For the following six codes, enter a description of the defects 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 defect 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 defect or a life threatening physiologic dysfunction.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>901</td>
<td>Other Lethal or Life Threatening Central Nervous System Defects</td>
</tr>
<tr>
<td>902</td>
<td>Other Lethal or Life Threatening Congenital Heart Defects</td>
</tr>
<tr>
<td>903</td>
<td>Other Lethal or Life Threatening Gastro-Intestinal Defects</td>
</tr>
<tr>
<td>904</td>
<td>Other Lethal or Life Threatening Genito-Urinary Defects</td>
</tr>
<tr>
<td>907</td>
<td>Other Lethal or Life Threatening Pulmonary Malformation</td>
</tr>
<tr>
<td>100</td>
<td>Other Lethal or Life Threatening Defects not listed in Appendix C</td>
</tr>
</tbody>
</table>

Answer “No” if an infant was not diagnosed as having one or more of the birth defects included in Appendix C and did not have an unlisted birth defect which was lethal or life threatening.

The following conditions should not be coded as Major Birth Defects:

- 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:

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

ITEM 48: Enteral Feeding At Discharge

Complete this 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 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 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 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.

• Formula milk includes all standard newborn formulas, premature formulas, and special formulas.

• Please answer this question based only on the enteral feedings at discharge. Do not consider parenteral feedings when answering this 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.
ITEM 49a & 49b: Oxygen and Monitor at Discharge

When completing these 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 items. These items are based on whether the infant was on oxygen or monitor at the time of discharge after readmission.

ITEM 49a: 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.

ITEM 49b: Monitor at Discharge

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

Answer “Yes” if arrangements were made to provide Cardio-Respiratory or Apnea monitoring at home following discharge, even if the infant was not actually on the monitor at the time he/she left your hospital.

Answer “Yes” if the infant died prior to discharge and was on an Apnea Monitor or Cardio-Respiratory Monitor at any time on the day of death.

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 and arrangements were not made to provide Cardio-Respiratory or Apnea monitoring at home following discharge.

Answer “No” if the infant was not on an Apnea 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 on his/her first birthday.

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

ITEM 50: Initial Disposition

Initial Disposition refers to the first time that the infant was discharged or transferred from your hospital. Do not change this 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 items on the Discharge Form. Do not complete the Transfer and Readmission Form.

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 items on the Discharge Form. Do not complete the Transfer and Readmission Form.

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 items on the Discharge Form. Complete the Transfer and Readmission Form.

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 items on the Discharge Form. Do not complete the Transfer and Readmission Form.

NOTES:
- Infants transferred from one unit to another within your hospital are not considered to have been transferred or discharged.
ITEM 51: 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 item should be recorded as unknown.

NOTES:
- This item refers to the Initial Disposition (first discharge or transfer) from your hospital. Do not change this 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.

ITEM 52: 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 item should be recorded as unknown.

NOTES:
- This item refers to the Initial Disposition (first discharge or transfer) from your hospital. Do not change this 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.
ITEM 53: 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 1 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 item refers to the first discharge or transfer from your hospital. Do not change this 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.
Transfer and Readmission Form Data Definitions

Items on the Transfer and Readmission Form 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. Use the Transfer and Readmission Form 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 Form, Part A

Part A is to be completed for ALL transferred infants.

ITEM 54: Reason for Transfer

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 “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 item is applicable to all infants who transfer from your center to another hospital on or before first birthday and prior to being discharged to home.

**ITEM 55: Transfer Code of Center to which Infant Transferred**

The Transfer Code for hospitals is a special code assigned by the Network for member hospitals, as well as ‘other’ codes for non-members. It is not the Network assigned center number. Please refer to the current Transfer Code List of the Vermont Oxford Network when answering this question.

**NOTES:**

- This item is applicable to all infants who transfer from your center to another hospital on or before first birthday and prior to being discharged to home.
- The Transfer Code List may be accessed from the Network website address: [www.vtoxford.org/transfers](http://www.vtoxford.org/transfers).
ITEM 56: 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 infant was still in the “Transferred To” hospital on his/her first birthday.

NOTES:

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

Transfer and Readmission Form, Part B

Part B is 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 Items 18-20 on the 28 Day Form and Items 22-49 on the Discharge Form 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 Items S1.B, S1.C.1, S1.C.2, S2.A.1, S2.A.2 and S2.C on the Supplemental Data Form.

ITEM 57: 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 infant was still in your hospital as of his/her first birthday after readmission.

NOTES:
- This 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.

ITEM 58: 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 item should be recorded as unknown.

NOTES:
- This 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 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 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 Form, Part C

Part C is to be completed **ONLY** for infants who transferred more than once.

**ITEM 59: 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 item is only applicable if the infant transfers more than once on or before 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 Form, Part D

Part D is to be completed for **ALL** transferred infants.

**ITEM 60: 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 item is applicable to all infants who transfer from your center to another hospital on or before 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 Form Definitions
Supplemental Data Form Data Definitions

Items on the Supplemental Data Form apply to centers participating in Expanded data submission.

Please note that the delivery room death criteria are on Page 6.

ITEM S1.A.1: 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 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.

ITEM S1.A.2: 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 item is not applicable if the infant was not ventilated more than 24 hours or if
the infant meets the delivery room death criteria.

ITEM S1.B: 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.

ITEM S1.C.1: Hypothermic Therapy at Your Hospital
Answer “Yes” if either selective head or whole body cooling was provided at your
hospital. This 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”.

ITEM S1.C.2: Cooling Method
If the infant received hypothermic therapy at your hospital, choose the method of
cooling received there. This 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.

ITEM S2.A.1: Hypoxic-Ischemic Encephalopathy

Answer “Yes” if the infant’s gestational age is 36 weeks, 0 days or greater at birth and the infant was diagnosed with Hypoxic-Ischemic Encephalopathy (HIE) as defined below. The diagnosis of HIE requires the presence of all 3 of the following criteria:

1. The presence of a clinically recognized encephalopathy within 72 hours of birth. Encephalopathy is defined as the presence of 3 or more of the following findings within the first 72 hours after birth:
   - Abnormal level of consciousness: hyper alertness, 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 5 minutes of 5 or less.
• 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 or less.
• Evidence on CT, MRI, technetium or ultrasound brain scan performed within 7 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’s gestational age is 36 weeks, 0 days or greater at birth and the infant was not diagnosed with hypoxic-ischemic encephalopathy as defined above.

Answer “N/A” if the infant’s gestational age is less than 36 weeks, 0 days at birth or if the infant meets the delivery room death criteria.

NOTES:

• Multiorgan system dysfunction (from criteria 2, above) requires evidence of dysfunction of one or more of the following systems within 72 hours of birth:
  o Renal: oliguria or acute renal failure.
  o GI: Necrotizing enterocolitis, hepatic dysfunction.
  o Hematologic: thrombocytopenia, disseminated intravascular coagulopathy.
  o Endocrine: hypoglycemia, hyperglycemia, hypercalcemia, syndrome of inappropriate ADH secretion (SIADH).
  o Pulmonary: persistent pulmonary hypertension.
  o Cardiac: myocardial dysfunction, tricuspid insufficiency.
ITEM S2.A.2: HIE Severity

If the infant was diagnosed with hypoxic-ischemic encephalopathy, record the worst stage observed during the first 7 days following birth based on the infant’s level of consciousness and response to arousal maneuvers such as persistent gentle shaking, pinching, shining a light or ringing of 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.

Answer “N/A” if Hypoxic-Ischemic Encephalopathy is answered either “No” or “N/A”.

ITEM S2.B.1: Meconium Aspiration Syndrome

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

Answer “Yes” if ALL FIVE (5) of the following criteria are satisfied:

1. Presence of meconium stained amniotic fluid at birth.

And

2. Respiratory distress with onset within 1 hour of birth. Respiratory distress will be defined as the presence of one of the following signs: tachypnea, grunting, nasal flaring or intercostal retractions.

And

3. A PaO2<50 mmHg in room air, central cyanosis in room air or a requirement for supplemental oxygen to maintain PaO2>50 mmHg.

And

4. Abnormal chest x-ray 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.
And

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

Answer “No” if all 5 of the criteria for Meconium Aspiration Syndrome are not satisfied.

ITEM S2.B.2: Tracheal Suctioning for Meconium Attempted during Initial Resuscitation

This 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.

ITEM S2.C: Seizures

Answer “Yes” if there is clinical evidence of subtle seizures or of focal or multifocal clonic or tonic seizures within the first 3 days after birth.

Answer “No” if there was no evidence of seizures.

Answer “N/A” if the infant meets the delivery room death criteria.

End of Supplemental Data Form Definitions
Delivery Room Death Form Data Definitions

The Delivery Room Death Form Items use the same definitions used on the 28 Day Form and the Discharge Form. Please refer to those sections of this chapter for information on how to complete the items on this form. Item numbering is the same on each of the forms.

Note

- Delivery Room Death Criteria are included in Chapter 2 of this Manual.

End of Delivery Room Death Form Data Definitions
## APPENDICES

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APPENDIX A

Logs, Patient Data Booklet, and Delivery Room Death Booklet
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VERMONT OXFORD NETWORK
PATIENT DATA BOOKLET FOR INFANTS BORN IN 2015


Contents:
Page 1: Patient Identification Worksheet
Page 2: Length of Stay Calculation Worksheet
Page 3: 28 Day Form
Pages 4 & 5: Discharge Form (2 pages)
Page 6: Transfer and Readmission Form (only infants who transfer to another hospital)
Page 7: Supplemental Data Form (Expanded Database only)

PATIENT IDENTIFICATION WORKSHEET

W1. Patient’s Name: ________________________________

W2. Mother’s Name: ________________________________

W3. Patient’s Medical Record Number: ________________________________

W4. Date of Birth: _____/_____/______

W5. Date of Admission: _____/_____/______

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.

W6. Date of Day 28: _____/_____/______

Use the Calculation Charts for Date of Day 28 and Date of Week 36 for the infant’s birth year.

W7. Date of Week 36: _____/_____/______

W8. Date of Initial Disposition: _____/_____/______

W9. If Infant Transferred, Date Discharged Home, Died or First Birthday (if still hospitalized), whichever is soonest: _____/_____/______

DO NOT SUBMIT THIS WORKSHEET
Protected Health Care Information
LENGTH OF STAY CALCULATION WORKSHEET
FOR INFANTS BORN IN 2015

Protected Health Care Information. **DO NOT SUBMIT** this Worksheet to Vermont Oxford Network.

Use items W5, W8 and W9 from the Patient Identification Worksheet when completing this form.

Find the day numbers corresponding to dates using the Day Number Chart for 2015-2016 (www.vtoxford.org).

---

**Part A. Initial Length Of Stay**

Enter Date of Initial Discharge, Transfer or Death (W8): __/__/____  Day #

Subtract Date of Admission to Your Hospital (W5): __/__/____ – __/__/____ 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:

**L1. 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 (W9): __/__/____  Day #

Subtract Date of Admission (W5): __/__/____  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:

**L2. 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 / 2015**  Day #

Subtract Date of Admission: **01 / 13 / 2015**  Day #

Add 1: __________________________________________________________

**L1. INITIAL LENGTH OF STAY =** __/__/____ Days

Explanation: Date of 02/26/2015 is Day Number 57. Date of 01/13/2015 is Day Number 13. The day numbers for each date are found in the 2015-2016 Day Number Chart on the Network website, www.vtoxford.org.

---

**PLEASE DO NOT SUBMIT THIS WORKSHEET**

Protected Health Care Information

Vermont Oxford Network

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28 DAY FORM - For Infants Born in 2015

Center Number: _______  Network ID Number: _______  Year of Birth: _______

1. Birth Weight: _______ grams

2. Gestational Age:
   a) Weeks _______  b) Days (0-6) _______

3. Died in Delivery Room:  □ Yes  □ No  (If Yes, Use Delivery Room Death Form.)

4. a) Location of Birth:  □ Inborn  □ Outborn
   b) If Outborn, Day of Admission to Your Center (Range: 1 to 28. Date of Birth is Day 1): _______
   c) If Outborn, Transfer Code of Center from which Infant Transferred: _______
   (List available at http://www.vton.org/transfers)

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

6. Maternal Ethnicity/Race (Answer both a and b):
   a) Ethnicity of Mother:  □ Hispanic  □ Not Hispanic
   b) Race of Mother:  □ Black or African American  □ White  □ Asian
   □ American Indian or Alaska Native  □ Native Hawaiian or Other Pacific Islander  □ Other

7. Prenatal Care:  □ Yes  □ No
8. Antenatal Steroids:  □ Yes  □ No
9. Antenatal Magnesium Sulfate:  □ Yes  □ No
10. Chorioamnionitis:  □ Yes  □ No
11. Maternal Hypertension, Chronic or Pregnancy-Induced:  □ Yes  □ No

12. Mode of Delivery:  □ Vaginal  □ Cesarean Section

13. Sex of Infant:  □ Male  □ Female

14. a) Multiple Gestation:  □ Yes  □ No  b) If Yes, Number of Infants Delivered: _______

15. APGAR Scores:
   a) 1 minute _______  b) 5 minutes _______

16. Initial Resuscitation:
   a) Oxygen:  □ Yes  □ No
   b) Face Mask Vent:  □ Yes  □ No
   c) Endotracheal Tube Vent:  □ Yes  □ No
   d) Epinephrine:  □ Yes  □ No
   e) Cardiac Compression:  □ Yes  □ No
   f) Nasal CPAP:  □ Yes  □ No

17. a) Temperature Measured within the First Hour after Admission to Your NICU:
   □ Yes  □ No  □ N/A
   b) If Yes, Temperature Within the First Hour after Admission to Your NICU
      (in degrees centigrade to nearest 10th): _______

18. Bacterial Sepsis on or before Day 3:  □ Yes  □ No

19. Oxygen on Day 28:  □ Yes  □ No  □ N/A (See Manual for N/A criteria)

20. Periventricular-Intraventricular Hemorrhage (PIH):
   a) Cranial Imaging (US/CT/MRI) on or before Day 28:  □ Yes  □ No
   b) If Yes, Worst Grade of PIH (0-4): _______
   c) If PIH Grade 1-4, Where PIH First Occurred:  □ Your Hospital  □ Other Hospital  □ N/A

21. Died Within 12 Hours of Admission to Your NICU:  □ Yes  □ No
## Discharge Form - For Infants Born in 2015 - Page 1

<table>
<thead>
<tr>
<th>INTERVENTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>22. Respiratory Support (at any time after leaving the delivery room/initial resuscitation area):</td>
</tr>
<tr>
<td>a) Oxygen after Initial Resuscitation: □ Yes □ No</td>
</tr>
<tr>
<td>b) Conventional Ventilation after Initial Resuscitation: □ Yes □ No</td>
</tr>
<tr>
<td>c) High Frequency Ventilation after Initial Resuscitation: □ Yes □ No</td>
</tr>
<tr>
<td>d) High Flow Nasal Cannula after Initial Resuscitation: □ Yes □ No</td>
</tr>
<tr>
<td>e) Nasal IMV or Nasal SIMV after Initial Resuscitation: □ Yes □ No</td>
</tr>
<tr>
<td>23. a) Nasal CPAP after Initial Resuscitation: □ Yes □ No</td>
</tr>
<tr>
<td>b) NCPAP before or without ever having received ETT Vent: □ Yes □ No □ N/A</td>
</tr>
<tr>
<td>24. a) Surfactant during Initial Resuscitation: □ Yes □ No</td>
</tr>
<tr>
<td>b) Surfactant at Any Time: □ Yes □ No (Item 24b must be Yes if Item 24a is Yes)</td>
</tr>
<tr>
<td>If Yes, Age at First Dose: □ Hours □ Minutes (0-59)</td>
</tr>
<tr>
<td>25. a) Inhaled Nitric Oxide: □ Yes □ No</td>
</tr>
<tr>
<td>b) If Yes, where given: □ Your Hospital □ Other Hospital □ Both</td>
</tr>
<tr>
<td>26. Respiratory Support at 36 Weeks (See Manual for N/A criteria):</td>
</tr>
<tr>
<td>a) Oxygen at 36 Weeks: □ Yes □ No □ N/A</td>
</tr>
<tr>
<td>b) Conventional Ventilation at 36 Weeks: □ Yes □ No □ N/A</td>
</tr>
<tr>
<td>c) High Frequency Ventilation at 36 Weeks: □ Yes □ No □ N/A</td>
</tr>
<tr>
<td>d) High Flow Nasal Cannula at 36 Weeks: □ Yes □ No □ N/A</td>
</tr>
<tr>
<td>e) Nasal IMV or SIMV at 36 Weeks: □ Yes □ No □ N/A</td>
</tr>
<tr>
<td>f) Nasal CPAP at 36 Weeks: □ Yes □ No □ N/A</td>
</tr>
<tr>
<td>27. a) Steroids for CLD: □ Yes □ No</td>
</tr>
<tr>
<td>b) If Yes, Where Given: □ Your Hospital □ Other Hospital □ Both</td>
</tr>
<tr>
<td>28. Indomethacin for Any Reason: □ Yes □ No</td>
</tr>
<tr>
<td>29. Ibuprofen for PDA: □ Yes □ No</td>
</tr>
<tr>
<td>30. Probiotics: □ Yes □ No</td>
</tr>
<tr>
<td>31. Treatment of ROP with Anti-VEGF Drug: □ Yes □ No</td>
</tr>
<tr>
<td>32. a) ROP Surgery: □ Yes □ No</td>
</tr>
<tr>
<td>b) If Yes, Where Done: □ Your Hospital □ Other Hospital □ Both</td>
</tr>
<tr>
<td>33. a) PDA Ligation: □ Yes □ No</td>
</tr>
<tr>
<td>b) If Yes, Where Done: □ Your Hospital □ Other Hospital □ Both</td>
</tr>
<tr>
<td>34. Surgery for NEC, Suspected NEC, or Bowel Perforation: □ Yes □ No (If Yes, a Surgery Code is Required in Item 36a)</td>
</tr>
<tr>
<td>35. Other Surgery: □ Yes □ No (If Yes, a Surgery Code is Required in Item 36a)</td>
</tr>
<tr>
<td>36a. If Yes to NEC Surgery or Other Surgery, Surgical Codes (See Appendix D): If NEC Surgery, one or more of the following codes is required: S302, S303, S307, S308, S309, S333. Indicate location of surgery for each surgery code.</td>
</tr>
<tr>
<td>Surgery Code 1: □ Your Hospital □ Other Hospital □ Both</td>
</tr>
<tr>
<td>Surgery Code 2: □ Your Hospital □ Other Hospital □ Both</td>
</tr>
<tr>
<td>Surgery Code 3: □ Your Hospital □ Other Hospital □ Both</td>
</tr>
<tr>
<td>Surgery Code 4: □ Your Hospital □ Other Hospital □ Both</td>
</tr>
<tr>
<td>Surgery Code 5: □ Your Hospital □ Other Hospital □ Both</td>
</tr>
<tr>
<td>Surgery Code 6: □ Your Hospital □ Other Hospital □ Both</td>
</tr>
<tr>
<td>Surgery Code 7: □ Your Hospital □ Other Hospital □ Both</td>
</tr>
<tr>
<td>Surgery Code 8: □ Your Hospital □ Other Hospital □ Both</td>
</tr>
<tr>
<td>Surgery Code 9: □ Your Hospital □ Other Hospital □ Both</td>
</tr>
<tr>
<td>Surgery Code 10: □ Your Hospital □ Other Hospital □ Both</td>
</tr>
<tr>
<td>36b. Include description for codes S100, S200, S300, S400, S500, S600, S700, S800, S900, S1000 &amp; S1001:</td>
</tr>
</tbody>
</table>
### DISCHARGE FORM - For Infants Born in 2015 - PAGE 2

**Center Number:** ____  **Network ID Number:** ____  **Year of Birth:** ______

<table>
<thead>
<tr>
<th>37. Respiratory Distress Syndrome:</th>
<th>☐ Yes ☐ No</th>
</tr>
</thead>
<tbody>
<tr>
<td>38. a) Pneumothorax:</td>
<td>☐ Yes ☐ No</td>
</tr>
<tr>
<td>b) <strong>If Yes, Where Occurred:</strong></td>
<td>☐ Your Hospital ☐ Other Hospital ☐ Both</td>
</tr>
<tr>
<td>39. Patent Ductus Arteriosus:</td>
<td>☐ Yes ☐ No</td>
</tr>
<tr>
<td>40. a) Necrotizing Enterocolitis:</td>
<td>☐ Yes ☐ No</td>
</tr>
<tr>
<td>b) <strong>If Yes, Where Occurred:</strong></td>
<td>☐ Your Hospital ☐ Other Hospital ☐ Both</td>
</tr>
<tr>
<td>41. a) Focal Intestinal Perforation:</td>
<td>☐ Yes ☐ No</td>
</tr>
<tr>
<td>b) <strong>If Yes, Where Occurred:</strong></td>
<td>☐ Your Hospital ☐ Other Hospital ☐ Both</td>
</tr>
</tbody>
</table>

**Sepsis and/or Meningitis, Late (after day 3 of life):**  
(See Manual for N/A criteria)

| 42. a) Bacterial Pathogen:       | ☐ Yes ☐ No ☐ N/A |
| b) **If Yes, Where Occurred:**  | ☐ Your Hospital ☐ Other Hospital ☐ Both |
| 43. a) Coagulase Negative Staph:| ☐ Yes ☐ No ☐ N/A |
| b) **If Yes, Where Occurred:**  | ☐ Your Hospital ☐ Other Hospital ☐ Both |
| 44. a) Fungal Infection:        | ☐ Yes ☐ No ☐ N/A |
| b) **If Yes, Where Occurred:**  | ☐ Your Hospital ☐ Other Hospital ☐ Both |

<table>
<thead>
<tr>
<th>45. Cystic Periventricular Leukomalacia:</th>
<th>☐ Yes ☐ No ☐ N/A (see Manual for N/A criteria)</th>
</tr>
</thead>
</table>

| 46. ROP: a) Retinal Exam Done:        | ☐ Yes ☐ No |
| b) **If Yes, Worst Stage of ROP (0-5):** | ____ |

<table>
<thead>
<tr>
<th>47. Major Birth Defect:</th>
<th>☐ Yes ☐ No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If Yes, enter codes:</strong></td>
<td>______</td>
</tr>
<tr>
<td>Include description for Codes 100, 504, 501, 601, 605, 902, 903, 904 &amp; 907:</td>
<td>____________</td>
</tr>
</tbody>
</table>

### DISCHARGE

<table>
<thead>
<tr>
<th>48. Enteral Feeding at Discharge:</th>
<th>☐ None ☐ Human Milk Only ☐ Formula Only ☐ Human milk in combination with either fortifier or formula</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>49. Oxygen and Monitor at Discharge:</th>
<th>☐ Yes ☐ No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Oxygen at Discharge:</td>
<td>☐ Yes ☐ No</td>
</tr>
<tr>
<td>b) Monitor at Discharge:</td>
<td>☐ Yes ☐ No</td>
</tr>
</tbody>
</table>

| 50. Initial Disposition (check only one): | ☐ Home ☐ Died ☐ Transferred to another Hospital  
|                                         | ☐ Complete Transfer and Readmission Form |
|                                         | ☐ Still Hospitalized as of First Birthday |

<table>
<thead>
<tr>
<th>51. Weight at Initial Disposition:</th>
<th>______ grams</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>52. Head Circumference at Initial Disposition (in cm to the nearest 10th):</th>
<th>______</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>53. Initial Length of Stay: ______ day(s) (Item L1 on Length of Stay Calculation Worksheet)</th>
<th>______</th>
</tr>
</thead>
</table>

---

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TRANSFER & READMISSION FORM - *For Infants Born in 2015*

**Center Number:** _______ **Network ID Number:** _______ **Year of Birth:** _______

### Part A. Complete for ALL Transferred Infants

If an infant is transferred to another hospital, complete items 54 - 56. Post Transfer Disposition (Item 56) refers to the infant's disposition upon leaving the "transferred to" hospital.

**54. Reason for Transfer:**
- [ ] Growth/Discharge Planning
- [ ] Medical/Diagnostic Services
- [ ] Surgery
- [ ] ECMO
- [ ] Chronic Care
- [ ] Other

**55. Transfer Code of Center to which Infant Transferred:** _______ (List available at [http://www.vtonsford.org/transfers](http://www.vtonsford.org/transfers))

**56. Post Transfer Disposition (check only one):**
- [ ] Home
- [ ] Transferred Again to Another Hospital (2nd Transfer)
- [ ] Died
- [ ] Readmitted to Any Location in Your Hospital
- [ ] Still Hospitalized as of First Birthday

- **Skip Parts B and C. Complete Part D.**  
- **Skip Part B. Complete Parts C and D when data are available.**
- **Skip Parts B and C. Complete Part D.**
- **Complete Parts B and C and D if applicable when data are available.**
- **Skip Parts B and C. Complete Part D.**

### Part B. Complete ONLY for Readmitted Infants

If a patient is readmitted to your center after transferring once to another hospital without having been home, answer Items 57 - 58. When infants are readmitted to your center, continue to update Items 18 - 20 on the 28 Day Form, and Items 22 - 49 on the Discharge Form 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, update Items S1.B, S1.C, S1.C.1, S1.C.2, S2.A.1, S2.A.2 and S2.C based on events that occur following transfer and readmission.

**57. Disposition after Readmission (check only one):**
- [ ] Home
- [ ] Died
- [ ] Transferred Again to Another Hospital
- [ ] Still Hospitalized as of First Birthday

- **Skip Part C. Complete Part D.**
- **Skip Part C. Complete Part D.**
- **Complete Parts C and D when data are available.**
- **Skip Part C. Complete Part D.**

**58. Weight at Disposition after Readmission:** _______ grams

### Part C. Complete ONLY for Infants Who Transferred More Than Once

Answer Item 59 if an infant transferred from your center to another hospital and was then either (1) transferred again to another hospital, or (2) readmitted to your center and then transferred again to another hospital.

**59. Ultimate Disposition (check only one):**
- [ ] Home
- [ ] Died
- [ ] Still Hospitalized as of First Birthday

- **Complete Part D.**
- **Complete Part D.**
- **Complete Part D.**

### Part D. Complete for ALL Transferred Infants

Complete Item 60 when the infant has been discharged Home, Died or is Still Hospitalized as of First Birthday, whichever comes first.

**60. Total Length of Stay:** _______ Day(s) (Item L2 on Length of Stay Calculation Worksheet)
SUPPLEMENTAL DATA FORM - *For Infants Born in 2015*  
(For Expanded Database Centers)

Center Number: _______  Network ID Number: □□□□□□  Year of Birth: _______

### S1. Treatments:

<table>
<thead>
<tr>
<th>A. 1. Duration of Assisted Ventilation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ None □ &lt;4 hours □ 4-24 hours □ &gt; 24 hours □ N/A</td>
</tr>
</tbody>
</table>

2. If > 24 hours, Total Days of Assisted Ventilation: _______

<table>
<thead>
<tr>
<th>B. ECMO at your Hospital:</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Yes □ No □ N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C. Hypothermic Therapy at Your Hospital:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Was Hypothermic Therapy Performed at Your Hospital: □ Yes □ No</td>
</tr>
<tr>
<td>2. If Yes, Cooling Method: □ Selective Head □ Whole Body □ Both</td>
</tr>
</tbody>
</table>

### S2. Diagnoses:

<table>
<thead>
<tr>
<th>A. 1. Hypoxic-Ischemic Encephalopathy:</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Yes □ No □ N/A</td>
</tr>
</tbody>
</table>

2. HIE Severity (check one): □ Mild □ Moderate □ Severe □ N/A

<table>
<thead>
<tr>
<th>B. 1. Meconium Aspiration:</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Yes □ No</td>
</tr>
</tbody>
</table>

2. Tracheal Suction for Meconium Attempted in the DR: □ Yes □ No □ N/A

<table>
<thead>
<tr>
<th>C. Seizures:</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Yes □ No □ N/A</td>
</tr>
</tbody>
</table>
Delivery Room Death Booklet
VERMONT OXFORD NETWORK
DELIVERY ROOM DEATH BOOKLET FOR INFANTS BORN IN 2015

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.

The Delivery Room Death Patient Identification Worksheet contains personal patient identifiers and must NOT be submitted to the Vermont Oxford Network. The Vermont Oxford Network does not accept protected health care information.

**Contents:**
- Page 1: Patient Identification Worksheet
- Page 2: Delivery Room Death Form

**DELIVERY ROOM DEATH PATIENT IDENTIFICATION WORKSHEET**

W1. Patient’s Name: ________________________________

W2. Mother’s Name: ________________________________

W3. Patient’s Medical Record Number: ____________________________

W4. Date of Birth: _____/_____/_____

**PLEASE DO NOT SUBMIT THIS WORKSHEET**

Protected Health Care Information

VON Vermont Oxford Network
## DELIVERY ROOM DEATH FORM – For Infants Born in 2015

**Center Number:** ________  
**Network ID Number:** [ ] [ ] [ ] [ ]  
**Year of Birth:** ________

1. **Birth Weight:** __________ grams
2. **Gestational Age:**  
   a) Weeks _____  
   b) Days (0-6) _____
3. **Died in Delivery Room:**  
   [ ] Yes  
   [ ] No  
   *(IF NO, do not use this Form)*
4. **Location of Birth:**  
   [ ] Inborn  
   [ ] Outborn  
   *(IF OUTBORN, do not use this Form)*
   [ ] b and c: Not Applicable
5. **Head Circumference at Birth** *(in cm to the nearest 10th):*  
   [ ] [ ] [ ]
6. **Maternal Ethnicity/Race:** *(answer both a and b)*  
   a) Ethnicity of Mother:  
   [ ] Hispanic  
   [ ] Not Hispanic
   b) Race of Mother:  
   [ ] Black or African American  
   [ ] White  
   [ ] Asian  
   [ ] American Indian or Alaska Native  
   [ ] Native Hawaiian or Other Pacific Islander  
   [ ] Other
7. **Prenatal Care:**  
   [ ] Yes  
   [ ] No
8. **Antenatal Steroids:**  
   [ ] Yes  
   [ ] No
9. **Antenatal Magnesium Sulfate:**  
   [ ] Yes  
   [ ] No
10. **Chorioamnionitis:**  
    [ ] Yes  
    [ ] No
11. **Maternal Hypertension, Chronic or Pregnancy-Induced:**  
    [ ] Yes  
    [ ] No
12. **Mode of Delivery:**  
    [ ] Vaginal  
    [ ] Cesarean Section
13. **Sex of Infant:**  
    [ ] Male  
    [ ] Female
14. a) **Multiple Gestation:**  
    [ ] Yes  
    [ ] No  
    b) **If Yes, Number of Infants Delivered:** ________
15. **APGAR Scores:**  
   a) 1 minute _____  
   b) 5 minutes _____
16. **Initial Resuscitation:**  
   a) Oxygen:  
   [ ] Yes  
   [ ] No
   b) Face Mask Vent:  
   [ ] Yes  
   [ ] No
   c) Endotracheal Tube Vent:  
   [ ] Yes  
   [ ] No
   d) Epinephrine:  
   [ ] Yes  
   [ ] No
   e) Cardiac Compression:  
   [ ] Yes  
   [ ] No
   f) Nasal CPAP:  
   [ ] Yes  
   [ ] No
17 - 23: **Not Applicable**
24. **Surfactant Treatment:**  
   a) Surfactant during Initial Resuscitation:  
   [ ] Yes  
   [ ] No
   b) Surfactant at Any Time:  
   [ ] Yes  
   [ ] No  
   *(Part b must be answered "Yes" if Part a is "Yes")
   c) If Yes, Age at First Dose:  
   [ ] hours _____  
   d) minutes (0-59) _____
25 - 48: **Not Applicable**
47. **Major Birth Defect:**  
   [ ] Yes  
   [ ] No  
   *(If Yes, enter codes)*  
   [ ] [ ] [ ] [ ] [ ] [ ] [ ]
   *(Include description for Codes 100, 504, 601, 605, 901, 902, 903, 904 & 907:)*  
   [ ] [ ] [ ] [ ] [ ]

**If your center participates in the Expanded Database, answer items S2. B.1 and S2. B.2 from the Supplemental Data Form. Items S1.A. to S1.C. and Items S2.A and S2.C are not applicable.**

S2. B. 1. **Meconium Aspiration:**  
   [ ] Yes  
   [ ] No

B. 2. **Tracheal Suction for Meconium Attempted in the DR:**  
   [ ] Yes  
   [ ] No  
   [ ] N/A
APPENDIX B

Bacterial Pathogens

1. Achromobacter species [including Achromobacter xylosoxidans (also known as Alcaligenes xylosoxidans) and others]
2. Acinetobacter species
3. Aeromonas species
4. Alcaligenes species [Alcaligenes xylosoxidans and others]
5. Bacteroides species
6. Burkholderia species [Burkholderia capecia and others]
7. Campylobacter species [Campylobacter fetus, C. jejuni and others]
8. Chryseobacterium species
9. Citrobacter species [Citrobacter diversus, C. freundii, C. koseri and others]
10. Clostridium species
11. Enterobacter species [Enterobacter aerogenes, E. cloacae, and others]
12. Enterococcus species [Enterococcus faecalis (also known as Streptococcus faecalis), E. faecium, and other Enterococcus species]
13. Escherichia coli
14. Flavobacterium species
15. Haemophilus species [Haemophilus influenzae and others]
16. Klebsiella species [Klebsiella oxytoca, K. pneumoniae and others]
17. Listeria monocytogenes
18. Moraxella species [Moraxella catarrhalis (also known as Branhamella catarrhalis) and others]
19. Neisseria species [Neisseria meningitidis, N. gonorrhoeae and others]
20. Pasteurella species
21. Prevotella species
22. Proteus species [Proteus mirabilis, P. vulgaris and others]
23. Providencia species [Providencia rettgeri, and others]
24. Pseudomonas species [Pseudomonas aeruginosa and others]
25. Ralstonia species
26. Salmonella species
27. Serratia species [Serratia liquefaciens, S. marcescens and others]
28. Staphylococcus coagulase positive [aureus]
29. Stenotrophomonas maltophilia
30. Streptococcus species [including Streptococcus Group A, Streptococcus Group B, Streptococcus Group D, Streptococcus pneumoniae, Strep milleri and others]
## Birth Defect Codes

### Central Nervous System Defects

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>Anencephaly</td>
</tr>
<tr>
<td>102</td>
<td>Meningomyelocele</td>
</tr>
<tr>
<td>103</td>
<td>Hydranencephaly</td>
</tr>
<tr>
<td>104</td>
<td>Congenital Hydrocephalus</td>
</tr>
<tr>
<td>105</td>
<td>Holoprosencephaly</td>
</tr>
<tr>
<td>901</td>
<td>Other lethal or life threatening central nervous system defects not listed above (description required)</td>
</tr>
</tbody>
</table>

### Congenital Heart Defects

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>201</td>
<td>Truncus Arteriosus</td>
</tr>
<tr>
<td>202</td>
<td>Transposition of the Great Vessels</td>
</tr>
<tr>
<td>203</td>
<td>Tetralogy of Fallot with or without Pulmonary Atresia</td>
</tr>
<tr>
<td>204</td>
<td>Single Ventricle</td>
</tr>
<tr>
<td>205</td>
<td>Double Outlet Right Ventricle</td>
</tr>
<tr>
<td>206</td>
<td>Complete Atrio-Ventricular Canal</td>
</tr>
<tr>
<td>207</td>
<td>Pulmonary Atresia with intact ventricular septum</td>
</tr>
<tr>
<td>208</td>
<td>Tricuspid Atresia</td>
</tr>
<tr>
<td>209</td>
<td>Hypoplastic Left Heart Syndromes</td>
</tr>
<tr>
<td>210</td>
<td>Interrupted Aortic Arch</td>
</tr>
<tr>
<td>211</td>
<td>Total Anomalous Pulmonary Venous Return</td>
</tr>
<tr>
<td>212</td>
<td>Pentalogy of Cantrell (Thoraco-Abdominal Ectopia Cordis)</td>
</tr>
<tr>
<td>902</td>
<td>Other lethal or life threatening congenital heart defects not listed above (description required)</td>
</tr>
</tbody>
</table>
### Gastro-Intestinal Defects

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>301</td>
<td>Cleft Palate</td>
</tr>
<tr>
<td>302</td>
<td>Tracheo-Esophageal Fistula</td>
</tr>
<tr>
<td>303</td>
<td>Esophageal Atresia</td>
</tr>
<tr>
<td>304</td>
<td>Duodenal Atresia</td>
</tr>
<tr>
<td>305</td>
<td>Jejunal Atresia</td>
</tr>
<tr>
<td>306</td>
<td>Ileal Atresia</td>
</tr>
<tr>
<td>307</td>
<td>Atresia of Large Bowel or Rectum</td>
</tr>
<tr>
<td>308</td>
<td>Imperforate Anus</td>
</tr>
<tr>
<td>309</td>
<td>Omphalocele</td>
</tr>
<tr>
<td>310</td>
<td>Gastrochisis</td>
</tr>
<tr>
<td>311</td>
<td>Biliary Atresia</td>
</tr>
<tr>
<td>903</td>
<td>Other lethal or life threatening gastro-intestinal defects not listed above (description required)</td>
</tr>
</tbody>
</table>

### Genito-Urinary Defects

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>401</td>
<td>Bilateral Renal Agenesis</td>
</tr>
<tr>
<td>402</td>
<td>Bilateral Polycystic, Multicystic, or Dysplastic Kidneys</td>
</tr>
<tr>
<td>403</td>
<td>Obstructive Uropathy with Congenital Hydronephrosis</td>
</tr>
<tr>
<td>404</td>
<td>Exstrophy of the Urinary Bladder</td>
</tr>
<tr>
<td>904</td>
<td>Other lethal or life threatening Genito-Urinary defects not listed above (description required)</td>
</tr>
</tbody>
</table>

### Chromosomal Abnormalities

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>501</td>
<td>Trisomy 13</td>
</tr>
<tr>
<td>502</td>
<td>Trisomy 18</td>
</tr>
<tr>
<td>503</td>
<td>Trisomy 21</td>
</tr>
<tr>
<td>504</td>
<td>Other Chromosomal Anomaly (description required)</td>
</tr>
<tr>
<td>505</td>
<td>Triploidy</td>
</tr>
</tbody>
</table>
### Other Birth Defects

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>601</td>
<td>Skeletal Dysplasia (description required)</td>
</tr>
<tr>
<td>602</td>
<td>Congenital Diaphragmatic Hernia</td>
</tr>
<tr>
<td>603</td>
<td>Hydrops Fetalis with anasarca and one or more of the following: ascites, pleural effusion, pericardial effusion</td>
</tr>
<tr>
<td>604</td>
<td>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.</td>
</tr>
<tr>
<td>605</td>
<td>Inborn Error of Metabolism (description required)</td>
</tr>
<tr>
<td>606</td>
<td>Myotonic Dystrophy requiring endotracheal intubation and assisted ventilation</td>
</tr>
<tr>
<td>607</td>
<td>Conjoined Twins</td>
</tr>
<tr>
<td>608</td>
<td>Tracheal Agenesis or Atresia</td>
</tr>
<tr>
<td>609</td>
<td>Thanatophoric Dysplasia Types 1 and 2</td>
</tr>
<tr>
<td>610</td>
<td>Hemoglobin Barts</td>
</tr>
</tbody>
</table>

### Pulmonary Abnormalities

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>701</td>
<td>Congenital Cystic Adenomatoid Malformation of the Lung</td>
</tr>
<tr>
<td>907</td>
<td>Other lethal or life threatening pulmonary malformation (description required)</td>
</tr>
</tbody>
</table>

### Other Lethal or Life Threatening Birth Defects

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Other lethal or life threatening birth defects, which are not listed above (description required).</td>
</tr>
</tbody>
</table>
APPENDIX D

Surgery Codes

NOTE:
If NEC Surgery and/or Other Surgery on the Discharge Form are checked “Yes”, record all applicable codes in Item 36a of the Discharge Form.

Head and Neck

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S101</td>
<td>Tracheostomy/Tracheotomy</td>
</tr>
<tr>
<td>S102</td>
<td>Cricoid split</td>
</tr>
<tr>
<td>S103</td>
<td>Ophthalmologic surgery OTHER THAN laser or cryosurgery for ROP</td>
</tr>
</tbody>
</table>

NOTE: Record ROP surgery in Item 32. Do not record ROP surgery in Item 36.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S104</td>
<td>Cleft lip or palate repair</td>
</tr>
<tr>
<td>S105</td>
<td>Branchial cleft sinus excision</td>
</tr>
<tr>
<td>S106</td>
<td>Thyroglossal duct excision</td>
</tr>
<tr>
<td>S107</td>
<td>Palliative or definitive repair of choanal atresia</td>
</tr>
<tr>
<td>S108</td>
<td>Mandibular (jaw) distraction</td>
</tr>
<tr>
<td>S109</td>
<td>Craniotomy</td>
</tr>
<tr>
<td>S100</td>
<td>Other head and neck surgery requiring general or spinal anesthesia (description required)</td>
</tr>
</tbody>
</table>

Thorax

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S201</td>
<td>Tracheal Resection</td>
</tr>
<tr>
<td>S202</td>
<td>Aortopexy</td>
</tr>
<tr>
<td>S203</td>
<td>Tracheoesophageal atresia and/or fistula repair</td>
</tr>
<tr>
<td>S204</td>
<td>Thoracoscopy (with or without pleuridesis or pleurectomy)</td>
</tr>
</tbody>
</table>
S205  Thoracotomy (with or without pleural or lung biopsy)
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**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S301</td>
<td>Rectal biopsy with or without anoscopy</td>
</tr>
<tr>
<td>S302</td>
<td>Laparoscopy (diagnostic, with/without biopsy)</td>
</tr>
<tr>
<td>S303</td>
<td>Laparotomy (diagnostic or exploratory, with/without biopsy)</td>
</tr>
<tr>
<td>S304</td>
<td>Fundoplication</td>
</tr>
<tr>
<td>S305</td>
<td>Pyloromyotony</td>
</tr>
<tr>
<td>S306</td>
<td>Pyloroplasty</td>
</tr>
<tr>
<td>S307</td>
<td>Jejunostomy, ileostomy, enterostomy, colostomy for intestinal diversion (with or without bowel resection, with or without fistula creation)</td>
</tr>
<tr>
<td>S308</td>
<td>Small bowel resection with or without primary anastomosis</td>
</tr>
<tr>
<td>S309</td>
<td>Large bowel resection</td>
</tr>
<tr>
<td>S310</td>
<td>Duodenal atresia/stenosis/web repair</td>
</tr>
<tr>
<td>S311</td>
<td>Jejunal, ileal, or colonic atresia repair (or repair of multiple intestinal atresias)</td>
</tr>
<tr>
<td>S312</td>
<td>Excision of Meckel’s diverticulum</td>
</tr>
<tr>
<td>S313</td>
<td>Drainage of intra-abdominal abscess (not as primary treatment for NEC, see code S333)</td>
</tr>
</tbody>
</table>
S314 Surgery for meconium ileus
S315 Excision of omphalomesenteric duct or duct remnant
S316 Gastrochisis repair (primary or staged)
S317 Omphalocele repair (primary or staged)
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
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

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S401</td>
<td>Cystoscopy (diagnostic, with or without biopsy)</td>
</tr>
<tr>
<td>S402</td>
<td>Adrenalectomy</td>
</tr>
<tr>
<td>S403</td>
<td>Nephrectomy</td>
</tr>
<tr>
<td>S404</td>
<td>Nephrostomy</td>
</tr>
<tr>
<td>S405</td>
<td>Ureterostomy</td>
</tr>
<tr>
<td>S406</td>
<td>Resection of urachal cyst</td>
</tr>
<tr>
<td>S407</td>
<td>Cystostomy</td>
</tr>
<tr>
<td>S408</td>
<td>Closure of bladder extrophy</td>
</tr>
<tr>
<td>S409</td>
<td>Resection of posterior urethral valves</td>
</tr>
<tr>
<td>S410</td>
<td>Inguinal hernia repair</td>
</tr>
<tr>
<td>S411</td>
<td>Orchiopexy</td>
</tr>
<tr>
<td>S412</td>
<td>Orchiectomy</td>
</tr>
<tr>
<td>S413</td>
<td>Drainage, excision or removal of ovarian cyst</td>
</tr>
<tr>
<td>S414</td>
<td>Oopherectomy (partial or complete)</td>
</tr>
<tr>
<td>S416</td>
<td>Pyeloplasty</td>
</tr>
<tr>
<td>S417</td>
<td>Renal transplant</td>
</tr>
<tr>
<td>S400</td>
<td>Other genito-urinary surgery requiring general or spinal anesthesia (description required)</td>
</tr>
</tbody>
</table>

## Open Heart or Vascular Procedures

**NOTE:** PDA ligation is recorded in Item 33. Do not record PDA Ligation in Item 36.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S501</td>
<td>Vascular Ring division</td>
</tr>
<tr>
<td>S502</td>
<td>Repair of coarctation of the aorta</td>
</tr>
<tr>
<td>S503</td>
<td>Repair of major vascular injury</td>
</tr>
<tr>
<td>S504</td>
<td>Repair or palliation of congenital heart disease</td>
</tr>
<tr>
<td>S505</td>
<td>Heart transplant</td>
</tr>
</tbody>
</table>
S506 Implant pacemaker (permanent – do not use code for temporary pacemakers)
S500 Other open heart or vascular surgery requiring general or spinal anesthesia (description required)

**Diagnostic or Interventional Cardiac Catheterization**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S601</td>
<td>Diagnostic cardiac catheterization</td>
</tr>
<tr>
<td>S602</td>
<td>Interventional catheterization with balloon septostomy</td>
</tr>
<tr>
<td>S603</td>
<td>Interventional catheterization with aortic valvuloplasty</td>
</tr>
<tr>
<td>S604</td>
<td>Interventional catheterization with pulmonary valvuloplasty</td>
</tr>
<tr>
<td>S600</td>
<td>Other interventional catheterization whether or not anesthesia was required (description required)</td>
</tr>
</tbody>
</table>

**Skin and Soft Tissue**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S700</td>
<td>Skin or soft tissue surgery requiring general or spinal anesthesia (description required)</td>
</tr>
</tbody>
</table>

**Musculoskeletal System**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S800</td>
<td>Other musculoskeletal surgery requiring general or spinal anesthesia (description required)</td>
</tr>
</tbody>
</table>

**Central Nervous System**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S901</td>
<td>Ventriculoperitoneal or other ventricular shunt</td>
</tr>
<tr>
<td>S902</td>
<td>External ventricular drain</td>
</tr>
<tr>
<td>S903</td>
<td>Ventricular drain with reservoir placement or removal</td>
</tr>
<tr>
<td>S904</td>
<td>Meningocele or myelomeningocele repair</td>
</tr>
<tr>
<td>S905</td>
<td>Encephalocele repair</td>
</tr>
</tbody>
</table>
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)*

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1000</td>
<td>Fetal surgery at your hospital (description required)</td>
</tr>
<tr>
<td>S1001</td>
<td>Fetal surgery at another hospital (description required)</td>
</tr>
</tbody>
</table>

**Conjoined Twins**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1101</td>
<td>Separation of conjoined twins</td>
</tr>
</tbody>
</table>
APPENDIX E

Board of Directors & Database Advisory Committee

Board of Directors

Richard Behrman MD  William Keenan MD
William H. Edwards MD  Cedric Priebe III MD
Jeffrey D. Horbar MD  Roger F. Soll MD

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Salem Hospital
Salem, OR
Children’s Hospital Neonatal Consortium, Children’s Hospital of Philadelphia
Philadelphia, PA
Stanford University
Palo Alto, CA
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UMDNJ
New Brunswick, NJ
Morristown Memorial Hospital
Morristown, NJ
Cook Children’s Medical Center
Fort Worth, TX
John Radcliffe Hospital
Oxford, United Kingdom
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Financial Support Specialist

**Gary Badger, MS**
Statistician

**Paula Beales**
Account Manager/Web Services Coord.

**Annie Blanchette**
Account Manager

**Amy Briody**
Receptionist

**Madge E. Buus-Frank, DNP, APRN-BC, FAAN**
Director of QI & Education

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Senior Statistician

**Nancy Cloutier**
Network Meeting Coordinator

**Tim Dartt**
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**Susan Davidson**
Marketing & Communications Strategist

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**Marilyn Eick**
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