**Supplemental Digital Content 1. Definitions for individual indicators of neonatal morbidity**

Information in this table was sourced from The Guide to Completing the Facility Worksheets for the Certificate of Live Birth and Report of Fetal Death (2003 revision) published by the National Center for Health Statistics.

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| **Neonatal morbidity** | **National Vital Statistics System Definition** | **CDC keywords and abbreviations a** |
| Immediate assisted ventilation | Infant given manual breaths for any duration with bag and mask or bag and endotracheal tube within the first several minutes from birth. Excludes free-flow (blow-by) oxygen, laryngoscopy for aspiration of meconium, nasal cannula, and bulb suction | - Bag and mask ventilation  - Intubation  - Intubation and PPV (positive pressure ventilation)  - PPV bag/mask or ET (positive pressure ventilation via bag, mask, or endotracheal ventilation)  - IPPV bag (intermittent positive pressure ventilation via bag)  - IPPV ET (intermittent positive pressure ventilation via endotracheal intubation)  - O2 via ET (oxygen via endotracheal intubation)  - Oxygen |
| Assisted ventilation for > 6 hr | Infant given mechanical ventilation (breathing assistance) by any method for > 6 hr. Excludes free-flow oxygen only, laryngoscopy for aspiration of meconium, and nasal cannula | If in use for more than 6 hr: - CPAP (continuous positive airway pressure)  - IPPV (intermittent positive pressure ventilation)  - HFV (high frequency ventilation)  - IMV (intermittent mandatory volume  ventilation)  - HFOV (high frequency oscillatory ventilation)  - IPPV (intermittent positive pressure ventilation)  - PIP (peak inspiratory pressure)  - PEEP (positive end expiratory pressure)  - CMV (continuous mandatory ventilation)  - HFPPV (high frequency positive pressure ventilation)  - HFFI (high frequency flow  interruption ventilation)  - HFJV (high frequency jet ventilation)  - Inhaled nitric oxide |
| Neonatal intensive care unit admission | Admission into a facility or unit  staffed and equipped to provide  continuous mechanical ventilatory  support for a newborn. This box should only be ticked when a neonatal intensive care admission occurs at any time during the infant’s hospital stay following delivery. This does not include units that do not provide continuous mechanical ventilation. Do not include well-baby nurseries or special care nurseries (i.e., Level II nursery). Do not include if the newborn was taken to the neonatal intensive care unit for observation but is not admitted to the neonatal intensive care unit. | - ICN (intensive care nursery)  - NICU (neonatal intensive care unit)  - PICU (pediatric intensive care unit) |
| Neonatal transfer to a different facility within 24 hr of delivery | Transfer status of the infant from this facility to another within 24 hr of delivery | Disposition |
| Neonatal seizure or serious neurologic dysfunction | Seizure is any involuntary repetitive, convulsive movement or behavior.  Serious neurologic dysfunction is  severe alteration of alertness.  Excludes:  - Lethargy or hypotonia in the  absence of other neurologic findings  - Symptoms associated with CNS  congenital anomalies | - Seizures  - Tonic/Clonic/Clonus  - Twitching  - Eye rolling  - Rhythmic jerking  - Hypotonia  - Obtundation  - Stupor  - Coma  - HIE (hypoxic-ischemic encephalopathy) |

a The guidelines contain keywords and abbreviations to identify alternative, usually synonymous terms and common abbreviations and acronyms for each indicator. The guidelines state that ‘the keywords and abbreviations are not intended to be inclusive.’