



Delayed Cord Clamping (DCC) Pilot Project

Manual of Definitions for Infants Born in 2017

Version 2.0

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I. PURPOSE

We are planning this coming year at CPQCC to collect data on all CPQCC eligible infants across the state on practices surrounding delayed umbilical cord clamping.

Summary AAP/AHA: 2015 Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care of the Neonate

On October 15, 2015, the American Heart Association (AHA) and American Academy of Pediatrics released new 2015 Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care of the Neonate. The guidelines serve as foundation for the Neonatal Resuscitation Program® (NRP®) 7th edition materials that will be released in Spring 2016 and must be in use by January 1, 2017.

The guidelines are based on a rigorous, 5-year, evidence-based topic review by the International Liaison Committee on Resuscitation (ILCOR), reflected in their Consensus on Science and Treatment Recommendations (CoSTR) also released on October 15, and represent thousands of hours of preparation, review, and oftentimes spirited debate. The NRP Steering Committee has prepared the following summary that highlights the major changes. The full ILCOR CoSTR and guidelines can be viewed online at eccguidelines.heart.org.

- "The 2015 ILCOR systematic review confirms that delayed cord clamping (DCC) is associated with less IVH of any grade, higher blood pressure and blood volume, less need for transfusion after birth, and less necrotizing enterocolitis..."
- "The only negative consequence appears to be a slightly increased level of bilirubin..."
- **NRP Guidelines Update: Initial Steps of Newborn Care**
 - Current evidence suggests that cord clamping should be delayed for at least 30 to 60 seconds for most vigorous term and preterm newborns. If placental circulation is not intact, such as after a placental abruption, bleeding placenta previa, bleeding vasa previa, or cord avulsion, the cord should be clamped immediately after birth. There is insufficient evidence to recommend an approach to cord clamping for newborns who require resuscitation at birth.
- Umbilical cord milking - The 2015 ILCOR review on umbilical cord milking states: "In light of the limited information regarding the safety of rapid changes in blood volume for extremely pre-term infants, we suggest against the routine use of cord milking for infants born at less than 29 weeks of gestation outside of a research setting. Further study is warranted because cord milking may improve initial mean blood pressure and hematologic indices and reduce intracranial hemorrhage, but thus far there is no evidence for improvement in long-term outcomes." Although this practice is not currently recommended, we recognize that some centers / clinicians are performing this related therapy. Therefore, we will also collect data on this practice.

References:

Wyckoff MH, Aziz K, Escobedo MB, Kapadia VS, Kattwinkel J, Perlman JM, Simon WM, Weiner GM, Zaichkin JG. Part 13: Neonatal Resuscitation: 2015 American Heart Association Guidelines Update for Cardiopulmonary Resuscitation and Emergency Cardiovascular Resuscitation and Emergency Cardiovascular Care. *Circulation*. 2015;132(suppl 2):S543-S560.

Why initiate data collection?

- As delayed cord clamping is being recommended now by international and national guidelines, quality improvement to implement delayed cord clamping may be warranted. Hence an assessment of the variation in DCC practice is helpful.
- The different impacts of delayed cord clamping (or milking) – whether beneficial (or harmful) is not fully established.

The purpose of the pilot study is:

- to assess the feasibility of collecting this data,
- to refine the data variables prior to including it in the CPQCC dataset
- to refine the study questions, and
- to begin studying the relationship of delayed cord clamping to other practices and outcomes.

II. TECHNICAL SUPPORT

The CPQCC Data Center Staff provides technical support for data collection and for interpreting our reports. Please direct all of your questions and comments regarding data submission and reports to our staff at <https://cpqccsupport.org/>. Email us your preferred method of communication for non-urgent data issues.

All technical questions related to this study will be referred to **Henry Lee, MD**, CPQCC Director of Quality Improvement Research and **Priya Jegatheesan, MD**, CPQCC PQIP member.

III. ELIGIBILITY

We are planning this coming year at CPQCC to collect data on all CPQCC eligible infants across the state on practices surrounding delayed umbilical cord clamping. Please refer to the 2016 CPQCC Manual of Definitions for complete instructions.

IV. PROCEDURES FOR COMPLETING FORMS

On our website www.cpqcc.org, you will find updates to this Manual, a list of

participating hospitals, a list of Data Contacts with contact information, OSHPD codes, and electronic versions of the data collection forms.

2016 CPQCC Delivery Room Death Form

2016 CPQCC Admission / Discharge On-line Form

Please refer to the 2016 CPQCC Manual of Definitions for complete instructions.

V. PROCEDURES FOR SUBMITTING DATA

On our website www.cpqccdata.org, you can access a secure and comprehensive data management tool. You can download the *2016 On-line Web-based Data Entry System (OWDES) Instructions* from www.cpqcc.org/data/electronic_data_submission.

CPQCC is not creating an electronic data submission (EDS) module for the 2016 Delayed Cord Clamping (DCC) Pilot Study at this time. Thus, to complete the optional items on delayed cord clamping, **EDS submitters MUST answer the Optional Items 1-3 on-line**, and then **must submit the data on-line**.

Reminder for www.cpqccdata.org users:

Only Centers who are actively participating in the 2016 Delayed Cord Clamping Pilot Study will have access to the optional items in the **Delivery Room and First Hour after Birth (Items 19-21)** section of the DRD on-line form and the A/D on-line form. The Data Center will enable the optional items to be available only to these Centers.

The placement of items on Delivery Room tab for A/D and DRD form will be as follows:

- Optional items will only show when tab is opened if NICU is a DCC pilot study participant.
- Existing items will be re-arranged to fit in the left third of the tab.
- Optional items will appear in a box in the right side of the tab.
- Tabbing order will move to optional items after surfactant treatment (Item 21), specifically after the item on surfactant times (Item 21c. Age at first dose).

VI. DEFINITIONS OF DATA ITEMS

Delivery Room Death Form and Admission/Discharge Form

Delivery Room and First Hour after Birth (Items 19-21)

- Participating NICUs will notice the optional items in their Delivery Room Death Form and their Admission/Discharge form in the Delivery Room and First Hour after Birth section (Items 19-21). The tabbing order would be such that members who have agreed to participate would tab to the optional items

after surfactant treatment (Item 21), specifically after the item on surfactant times (Item 21c. Age at first dose).

O.1a. Was delayed umbilical cord clamping performed? [DCCDONE]

Check **Yes** if delayed umbilical cord clamping was performed.

Check **No** if delayed umbilical cord clamping was not performed.

Check **Unknown** if this information cannot be obtained.

➤ **NOTE:**

If delayed cord clamping and umbilical cord milking is performed, then the answer to this question and O.1.c. should both be “yes”.

O.1b. (If Yes to O.1a) How long was delayed umbilical cord clamping? [DCCTIME]

Check **<30 seconds** if delayed umbilical cord clamping was performed for less than 30 seconds.

Check **30 to 60 seconds** if delayed umbilical cord clamping was performed for 30 to 60 seconds.

Check **>60 seconds** if delayed umbilical cord clamping was performed for greater than 60 seconds.

If No to O.1a, then **Not Applicable** will be automatically checked off and this item will be greyed out.

Check **Unknown** if this information cannot be obtained.

O.1c. (if No to O.1a) DCC Pilot Study: If DCC was not done, reason why? [DCCNO]

If DCC was not performed, and you would like to list a reason, please list it here (optional). Examples include maternal bleeding (abruption, placental separation, cord avulsion, etc.) or neonatal causes (very depressed apneic baby requiring resuscitation, hydropic, etc.)

O.2. Was umbilical cord milking performed? [DCCCORDMILK]

Check **Yes** if delayed umbilical cord milking was performed.

Check **No** if delayed umbilical cord milking was not performed.

Check **Unknown** if this information cannot be obtained.

O.3. Did breathing begin before umbilical cord clamping? [DCCBREATH]

Check **Yes** if breathing began before umbilical cord clamping was performed. If the infant has signs of breathing, such as crying, chest wall movement, and/or grunting, mark Yes.

Check **No** if breathing did not begin before umbilical cord clamping was performed.

Check **Unknown** if this information cannot be obtained.