

Delayed cord clamping experience at UCSD

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Background

- Delayed umbilical cord clamping is widely known to have significant benefits over immediate cord clamping for both term and preterm infants and has received endorsement by multiple organizations (AAP, ACOG, ILCOR.)
- Despite this, few delivery centers have adopted routine and systematic implementation of processes to capture the real-time data on delayed umbilical cord clamping or milking.
- **While our department was reportedly performing delayed cord clamping (DCC) and umbilical cord milking (UCM) in term and preterm infants, there was no specified area in the medical record to document the data.**
- It is important to collect baseline data in order to effectively implement quality improvement projects aiming to optimize the practice and consistency of DCC and UCM.

Goal

- To design a simple, user friendly, and time-efficient way to routinely document the presence or absence of delayed cord clamping or umbilical cord milking in the electronic medical record (EMR) and its timing and related infant characteristics.
- To have 80% documentation of all deliveries on DCC or milking by Dec 2016.

Implementation of EMR data entry

The screenshot shows a web-based EMR interface. On the left is a sidebar with navigation links: Allergies, History, Problem List, Letters, Immunizations, Medications, Notes, Manage Orders, Order Review, Flowsheets (selected), Growth Chart, Intake/Output, and MAR. The main area is titled 'Flowsheets' and contains a toolbar with icons for File, Add LDA, Add Col, Insert Col, Compact, Last Filed, Details, Go to Date, Graph, Values By, Legend, and Refresh. Below the toolbar are tabs for various clinical areas: Environmental Support, Provider Notification, Calorie Assessment, RT Assess, Lactation, Hearing Screen, and Delayed Cord Clamping (selected). The 'Delayed Cord Clamping' section is expanded, showing a table with columns for 'HC 4-ISCC', '11/11/16', and '1600'. Below the table are four rows of questions with input fields: 'Was delayed umbilical cord clamping performed?', 'How long was umbilical cord clamping delayed?', 'Was umbilical cord milking performed?', and 'Did breathing begin before umbilical cord clamping?'. At the bottom of the interface is a Windows taskbar with various application icons and a system clock showing 4:00 PM on 11/11/2016.

HC 4-ISCC	11/11/16	1600
Delayed Cord Clamping		
Was delayed umbilical cord clamping performed?	<input type="text"/>	<input type="text"/>
How long was umbilical cord clamping delayed?	<input type="text"/>	<input type="text"/>
Was umbilical cord milking performed?	<input type="text"/>	<input type="text"/>
Did breathing begin before umbilical cord clamping?	<input type="text"/>	<input type="text"/>

Resident and provider responsibility:

“Do not erase the smartlink, as that will not allow us to pull information from Epic when we are doing our surveillance statistics. If you were not present at the delivery, or did not notice/don’t remember, please contact and ask the delivering OBs, Midwives, or nurse if cord clamping was delayed/milked, and how long. They’ll usually remember holding a squirming kid in their hands for 60 seconds or watching the cord pulse before they clamp.” sent 11/12/16

Results

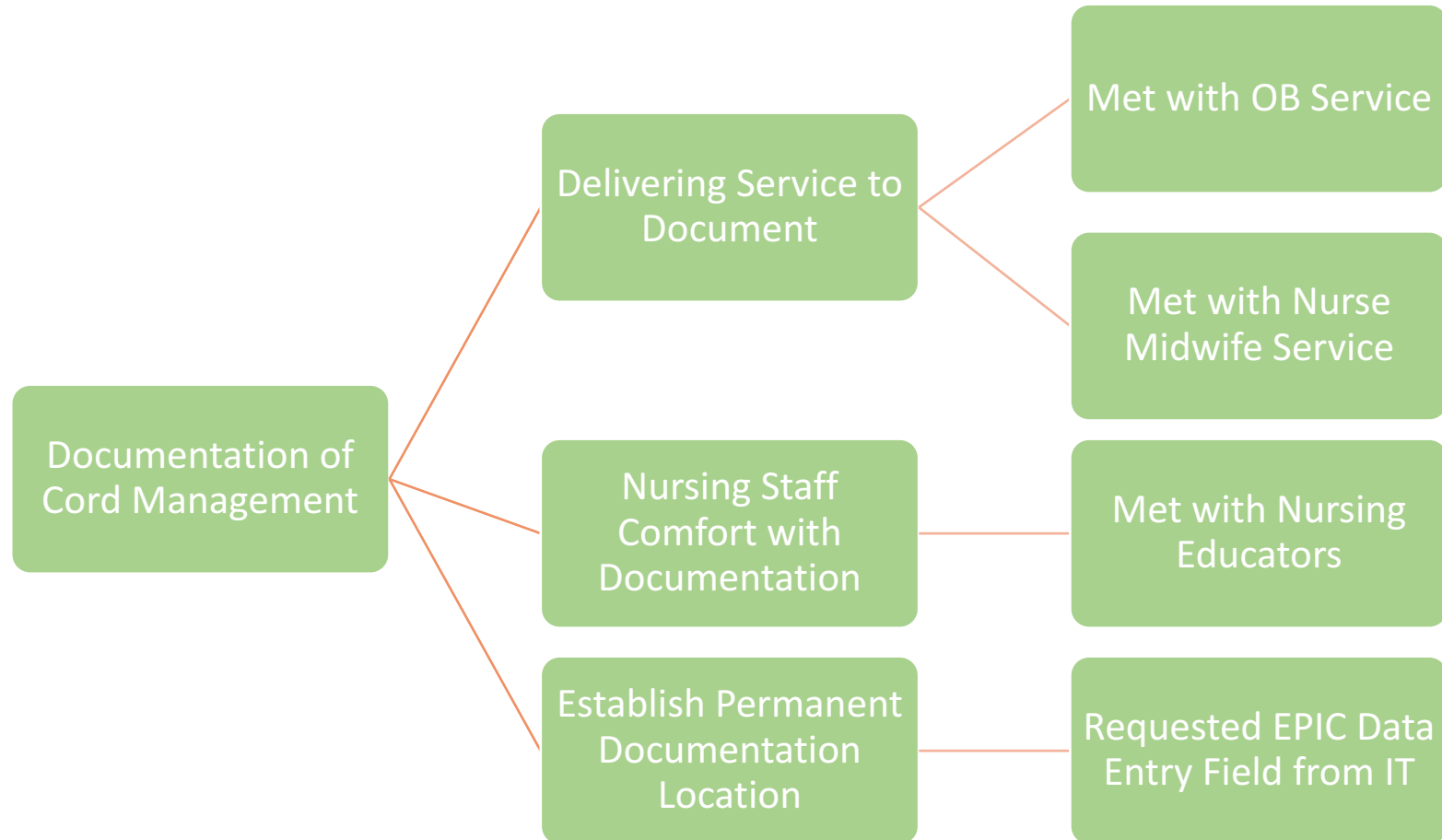
- **There was 0 documentation of DCC or UCM in consistent EMR location by December 2016**
- This flowsheet was not widely used, for reasons likely owing to poor advertisement and difficulty of the NICU providers to see cord management in the delivery room. It was also unavailable to babies not admitted to the NICU, as it was not present in the charts of term newborns not admitted to the NICU.

Let's re-think this as it is not as simple as it seems

Specific Goals

- To create collaboration on the plan for data entry and collection on of delayed cord clamping or cord milking where there is 80% documentation by Feb 2017
- To collect information on current delayed cord clamping practice in our OB and Midwife populations at UCSD using surveys of OBs and midwives starting April 2016
- To design a simple, user friendly, and time-efficient way to routinely document the presence or absence of delayed cord clamping or umbilical cord milking in the electronic medical record (EMR) and its timing and related infant characteristics.

Drivers



Meetings

- We met with the OB/Gyn department, where we presented the evidence behind DCC/UCM and requested to hear their opinions and concerns. Overall there was a favorable response to the suggestion of routine implementation of DCC/UCM.
- We met with midwife department. UCSD has a robust birthing center, staffed with certified nurse midwives (CNM). They were documenting this information in their delivery notes in the EMR. We received a positive response to the idea of standardization of this documentation.

Meetings

- Our team then contacted nursing leadership who considered the additional burden on delivery room nurses to document DCC/UCM on top of the other responsibilities in the delivery and immediate postnatal period.
- Re-grouping and time: After discussion with all involved parties, an agreement was reached in the design of an EMR field, used by the delivery room nurses, to document UCM vs DCC, length of delay of cord, and if respirations began prior to cord clamping.

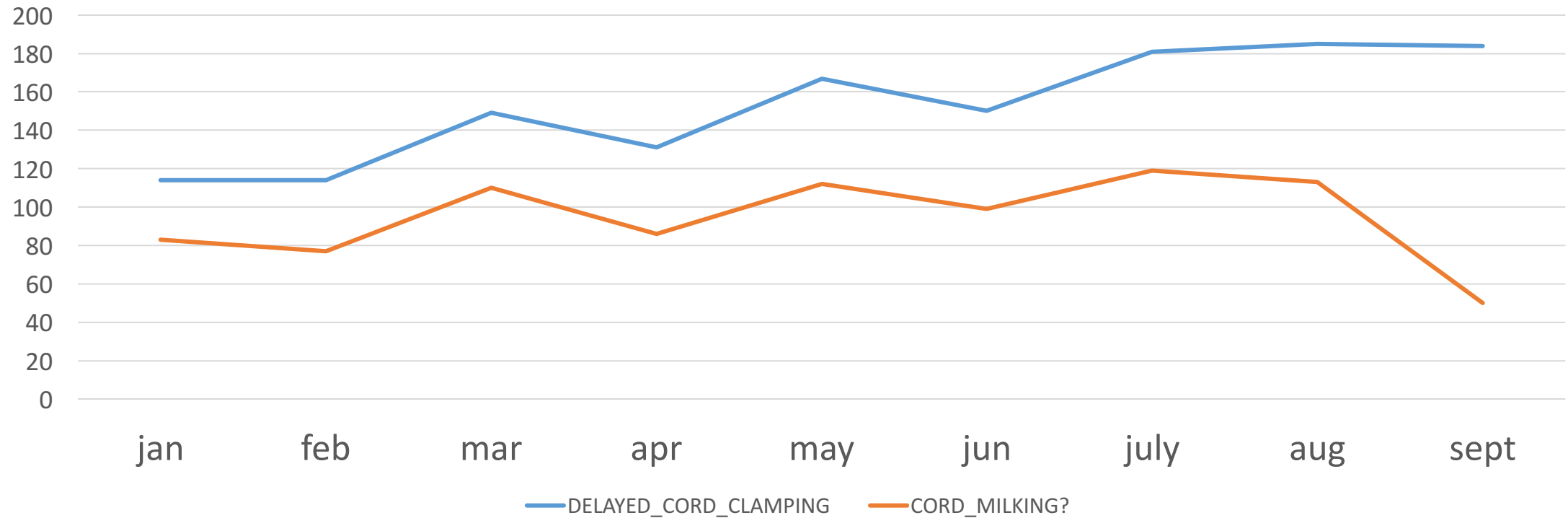
EMR; Delivery Tab Documentation

Vessels:	<input type="button" value="Unknown"/>	<input type="button" value="2 Vessels"/>	<input type="button" value="3 Vessels"/>	
Nuchal Cord:	<input type="button" value="N/A"/>	<input type="button" value="Around Neck x1, Loose"/>		
Delayed cord clamping:	<input type="button" value="Yes"/>	<input type="button" value="No"/>		
Cord milking:	<input type="button" value="Yes"/>	<input type="button" value="No"/>		
Duration of delayed cord clamping:	<input type="button" value="NA"/>	<input sec")="" type="button" value(">30=""/>	<input 60="" sec")="" type="button" value(">=""/>	<input min")="" type="button" value(">2=""/>
Cord Blood Disposition:	<input type="button" value="Lab"/>	<input type="button" value="Refrigerator"/>	<input type="button" value="Discard"/>	

information technology (IT) EMR representative was contacted and as a large multidisciplinary group, we created the place in the EMR to document this information in a quick, easy, and user-friendly way.

DCC or milking Jan –Sept 2017

DCC or milking



Next steps

- Data validation
- Surveys
- Education
 - Consistency
 - Timing
- Data reporting and cleaning
- QI practice changes?

Summary

- An open and multidisciplinary approach is necessary to implement a change in documentation of perinatal practices, and full communication with all involved parties is vital to success.

Other slides - removed

<p>We will institute practice where all preterm deliveries 35 weeks and below will have either delayed cord clamping for 30 seconds or for infants requiring resuscitation, gentle cord milking 3 times, reaching 80% documentation by Feb 2017.</p>	<p>OB service to act as the responsible documenters</p>	<p>Perinatal Practice Meeting</p>
		<p>Email from OB nursing leadership re: practice change</p>
	<p>Nursing staff comfort with documentation of cord clamping</p>	<p>Meeting from QI CC Team with Nursing for questions, importance reinforcement</p>
		<p>Powerpoint on how to use Epic entry</p>
		<p>Meetings with nursing re: Epic use</p>
	<p>OB increasing consistency of practice with DCC/CM</p>	<p>Reminder signs in DR/L&D Rooms</p>
		<p>Powerpoint on benefits of delayed cord clamping/cord milking</p>
		<p>Meetings with OB- OB M&M? Fetal Dx?</p>
	<p>Establish permanent documentation location</p>	<p>Meetings with Nursing Education-staff meetings?</p>
		<p>Epic Lani/Soojin Park</p>
		<p>Nursing education on where located</p>