

## CNN+ Database Meeting

Monday February 11, 2019

1715 - 1915 hr Eastern Time

Mountbatten Salon, Second Floor, Chelsea Hotel, Toronto

### AGENDA

Welcome

1715 - 1745 Database Screen by Screen  
Changes in v.3.3.1

1745 - 1800 New Maternal Screen  
Assessment of first year data collection

1800 - 1845 Abstraction Scenarios (Wendy Seidlitz)  
Review responses of Scenario & Survey - July 2018  
Scenario #1: Diagnosis/Procedures Screen - PDA (page 21)  
Scenario #2: Diagnosis/Procedures Screen - Seizures (page 21)  
Scenario #3: Diagnosis/Procedures Screen - RDS & TTN (page 22)  
Scenario #4: Diagnosis/Procedures Screen - TTTS (page 22)  
Scenario #5: SNAP Screen - Arterial Blood Gases (page 23)

1845 - 1900 Optimizing Resource Allocation in the NICU to Improve Outcomes of Very Preterm Infants (Marc Beltempo)

1900 - 1905 iNO Data Collection

1905 - 1915 Brain Injury Definition update

### To connect via teleconference

Vancouver 604 899 4310  
Calgary 403 269 5197  
Edmonton 780 429 6157  
Toronto 416 883 8981  
Ottawa 613 212 0153  
Montreal 514 798 1230  
Other cities 1 877 234 4610

Participant Conference Access code: 7560050#

**Abstraction Scenarios**  
Using Abstractor's Manual v.3.3.0 or v.3.3.1

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**Scenario #1**

Infant cared for in your NICU GA 26+6. Physician documentation says "bedside echo, PDA found". No radiologist or echocardiogram report was issued. Indomethacin treatment was given. Diagnostic Imaging Echocardiogram completed three days later, detailed report issued, "no PDA".

*What would you capture on the Diagnosis/Procedures screen? Pick only one.*

- a) PDA = No; Add Indomethacin to Prophylactic Interventions
- b) PDA = Yes; Score as Treated with Indomethacin and Diagnosed by Echo
- c) PDA = Yes; Score as Treated with Indomethacin and Diagnosed by Clinical
- d) PDA = Yes; Score as Treated with Indomethacin and Diagnosed by Echo & Clinical
- e) Score none of the above

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**Scenario #2**

Patient admitted for investigation of seizure-like activity. Documentation reads "hypertonia with tonic clonic /rhythmic movements". This was witnessed by the bedside nurse and the attending physician. The baby receives phenobarbital. CFM monitoring in place during one event showed no sign of seizure, documented as "normal". EEG completed showed no sign of seizures, documented as "normal". MRI completed, documented as "normal".

*What would you capture on the Diagnosis/Procedures screen? Pick only one.*

- a) Seizures = None
- b) Seizures = Suspected; Treated = No
- c) Seizures = Suspected; Treated = Yes
- d) Seizures = Definite; Treated = No
- e) Seizures = Definite; Treated = Yes

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**Scenario #3**

A patient was admitted to your hospital in need of CPAP due to respiratory distress. Patient was 36+6 gestation with a birth weight of 3300g. There was no meconium noted at delivery. Baby was known to have tachypnea while on CPAP in room air. The chest x-rays show lungs are clear and well inflated. Baby needed low level CPAP for 14 days but no supplemental oxygen. The physician documents in the discharge summary "RDS/TTN".

*What would you capture on the Diagnosis/Procedures screen? Select all that apply.*

- a) Respiratory Distress Syndrome (RDS) = Definite
- b) Respiratory Distress Syndrome (RDS) = Uncertain
- c) Respiratory Distress Syndrome (RDS) = None
- d) Respiratory Distress Syndrome (RDS) = NA/Unknown
- e) Other Diagnosis of "Respiratory distress, unspecified (not RDS)"
- f) Other Diagnosis of "Transient tachypnea of newborn"
- g) None of the above

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**Scenario #4**

A set of twins were admitted to your hospital with subtle differences in weight and size. There is documentation supporting an antenatal intervention of laser ablation being done during pregnancy at 20wks gestation for Twin-to-twin Transfusion Syndrome (TTTS). The babies delivered at 34 weeks GA. Twin A was slightly smaller with oligohydramnios in utero. Twin B was slightly larger with polyhydramnios in utero. No mention of the diagnosis of TTTS in the medical notes other than to mention the antenatal intervention of laser ablation. On the Mother/Obstetric screen, you score Antenatal Intervention = Yes for Laser Ablation.

*What would you capture on the Diagnosis/Procedures screen under Other Diagnosis? Pick only one for each twin.*

***For Twin A***

- a) Twin-to-twin Transfusion Syndrome (TTTS - donor/recipient status unknown)
- b) Twin-to-twin Transfusion Syndrome (TTTS - donor)
- c) Twin-to-twin Transfusion Syndrome (TTTS - recipient)
- d) No TTTS because it was corrected during pregnancy with the laser ablation

***For Twin B***

- a) Twin-to-twin Transfusion Syndrome (TTTS - donor/recipient status unknown)
- b) Twin-to-twin Transfusion Syndrome (TTTS - donor)
- c) Twin-to-twin Transfusion Syndrome (TTTS - recipient)
- d) No TTTS because it was corrected during pregnancy with the laser ablation

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**Scenario #5**

You are completing the SNAP screen for your patient. During the SNAP scoring period there were two arterial blood gases available as follows. No MAWP's are available because the patient was on either low flow oxygen or no respiratory support.

	Time (24hr clock)	FiO2	MAWP	pH	pO2	pCO2	Low Flow FiO2 Flow
Arterial Blood Gas A	02:00	100	n/a	7.32	35	52	100
Arterial Blood Gas B	10:00	21	n/a	7.33	63	35	n/a

*On the SNAP screen, what Arterial Blood Gas do you enter...*

*In the row "With Lowest pO2"?*

- a) Blood Gas A
- b) Blood Gas B
- c) Leave row blank

*In the row "With Highest MAWP"?*

- a) Blood Gas A
- b) Blood Gas B
- c) Leave row blank

*In the row "With Highest FiO2"?*

- a) Blood Gas A
- b) Blood Gas B
- c) Leave row blank

Arterial Blood Gases	FiO2	MAWP	pH	pCO2	pO2	If Low Flow FiO2 Flow
	With Lowest pO2	<input type="text"/>	<input type="text"/>	<input type="text" value="."/>	<input type="text"/>	<input type="text"/>
With Highest MAWP	<input type="text"/>	<input type="text"/>	<input type="text" value="."/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
With Highest FiO2	<input type="text"/>	<input type="text"/>	<input type="text" value="."/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

## **Optimizing Resource Allocation in the NICU to Improve Outcomes of Very Preterm Infants**

Marc Beltempo, Prakesh Shah, Robert Platt and Bruno Piedboeuf

**BACKGROUND:** Despite significant improvements in survival and reductions in morbidity among very preterm infants, the cost of care has continued to increase in Canada. Donabedian proposed that the quality of health care delivery can be assessed by looking at the organizational characteristics and resources of the health-delivery system (care structure), the quality of the patient-provider interactions (care processes) and the health outcomes. Recent research and quality improvement initiatives have shown improvement in outcomes of preterm infants by focusing on care processes but data on optimal care structure for preterm infants in Canada is lacking.

Important variables in the structure of care include the resources specifically devoted to each infant during hospitalization (providers present on admission and the number of nursing hours the patient received during hospitalization).

**OBJECTIVES:** The main objective is to assess the association of resource allocation and resource use with outcomes very preterm infants. To do so we propose two specific objectives.

1. To determine the association of delivery room team composition with death or major morbidity among very preterm infants.
2. To determine the association team composition in the first 7 days of admission with death or major morbidity among very preterm infants.

**METHOD:** To answer these questions, we propose collecting additional data on nursing ratios and team composition caring for infants born <33 weeks' during hospitalization.

Data will be collected by creating a separate CNN data collection form within the database that will be available to participating sites. Ten sites have participated in the grant proposal and we are now soliciting additional sites to participate. We aim to collect data on 1500 infants in the next 2 years.

**FUNDING:** This project is funded by CIHR Early Career Investigator Grant and sites will be compensated for the additional data collection.

### **TIMELINE:**

March 2019: Teleconference with participating sites to review objectives and design/review data collection form

March 2019 to October 2019: Review and validation of data collection form and amending CNN database

January 2020 to December 2020: Data collection

**SIGNIFICANCE AND IMPACT:** A better understanding of the impacts of resource allocation particularly nursing ratio on outcomes of preterm and a better understanding of resource use (ancillary tests) can lead to improvements in quality of care and increased efficiency of the delivery of care.

**CONTACT:** marc.beltempo@mcgill.ca