



Increasing Nurturing Encounters experienced by Micropremature Infants in face of a Pandemia

Sunnybrook Health Sciences Centre, Toronto

Lisa Sampson RN, Eugene Ng, MD, Asaph

Rolnitsky, MD, Michael Dunn, MD



Setting

- Sunnybrook Health Sciences Centre (SHSC) is a 48 bed Level III NICU perinatal, non-surgical care center.
- 280 VLBWs/yr
- 70-100 micropreemies admitted to the NICU annually
 - ~11% outborn.
- Family-centered care: two paid parent advisor positions with different role profiles,
- a team of parent volunteers who help with teaching, QI work as well as project design and measurement.
- Sunnybrook's NICU has over 300 interdisciplinary staff.

Rationale / Background

- Having embraced neuroprotection strategies and successfully reducing our rates of severe IVH in micropreemies, we recognized the need to maximize positive neurosensory experiences to promote optimal brain development.
- Nurturing Encounters (NE) are defined as any interaction with an infant that provides positive neurosensory experiences
 - hand hugs,
 - kangaroo care (KC),
 - modified KC,
 - talking softly, reading, singing, etc.
- In 2018, our NICU identified that micropreemies experienced an average of **6.4 hours** of documented nurturing encounters in the first 2 weeks after birth

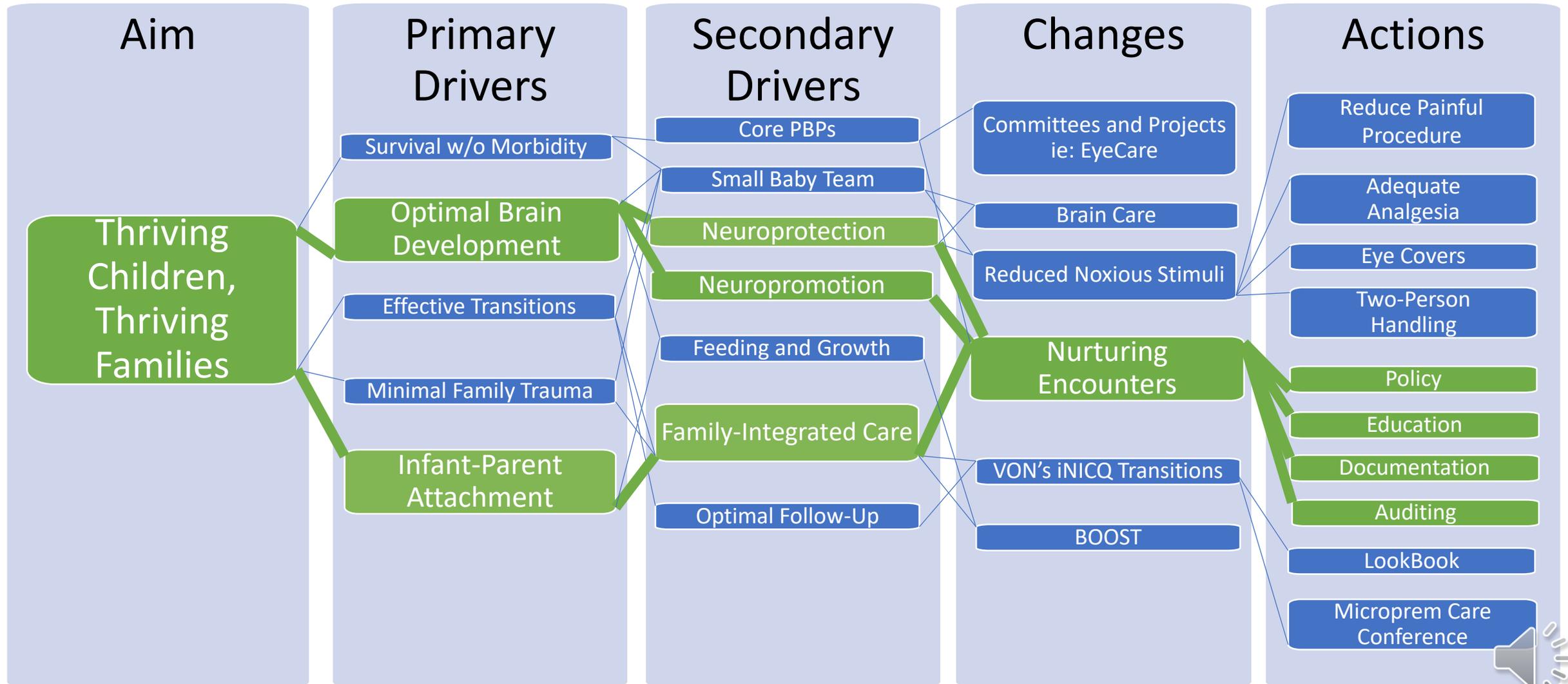


Aims

- **Global Aim (WIG):** *To ensure thriving babies and thriving families with a focus on supporting families, increasing survival without morbidity, and promoting neurodevelopment and neuroprotection of extremely premature infants.*
- **Improvement project aim:** To increase the total time spent providing nurturing encounters to micropremature infants within the first 2 weeks of life by 15% by December 2021.
- **Interim aims:** Documentation of nurturing encounters provided to micropremature infants by all staff and families will improve by 20% by July, 2020.



Driver Diagram



Tests of Change / Implementation

- **PDSA Cycle 1 - Standardize Documentation**

- Developed a neuropromotion policy and a NE tool for families and staff
- What we learned: Inconsistency in what, how, and where NE was documented
- Developed a standardized documentation tool

- **PDSA Cycle 2 - NE Documentation Tool**

- Usability testing and evaluation of compliance
- What we learned: Challenges in standardizing information; paper tool is preferred over computer documentation; parents liked being able to document their own NE
- With documentation method standardized, we were able to develop and implement education

- **PDSA Cycle 3 - Increase the total minutes of NE**

- Focus on micropremature infants in the first 2 weeks after birth
- Increase compliance and consistency of using the standardized documentation tool.
- Create an 'event' or challenge to increase the total NE minutes experienced by all babies in this NICU.
- Provide incentives tied to educational material in order to increase awareness of the importance of NE in our unit.
- Continue to audit NE minutes experienced in the NICU.



Vital Signs	Ventilation	Lines, Tubes & Drains	IV Record	Feeds	Fluid Balance
9/28/20 6:00				7:00	8:00
NICU					
Temperature					
Axilla				36.8	
Rectum					
Incubator				34.7	
Skin Probe				36.8	
Humidity set/meas				70/70	
Rate					
HR	173			183	167
RR	25			26	22
Blood Pressure					
IBP					
IBPmean					
NIBP				63/31	
NIBPmean				41	
NIBP Location				Arm left	
4-limb BP Completed					
SpO2					
Room Air					
SpO2	93			88	90
SpO2 Location					Left foot
Pre-ductal SpO2					
SpO2 (Masimo)					



Nurturing Encounters

Show sessions log New Session 09/28/2020 16:39 Refresh

Include error sessions

Details

Family Member(s) [Dropdown]

Encounter Type(s) [Dropdown]

Total Kangaroo Time

- Hand hug
- Cuddle
- Kangaroo care
- Modified kangaroo care
- Talking
- Singing
- Reading

Total Family Time (do not include kangaroo time)

Staff Member(s)

Encounter Type(s) [Dropdown]

Total Staff Time [Dropdown] min

Comments

TEST MEL Hello F 702702 DOL: 1690 Corrected_GA: 267+4 Current Weight: 8.6 kg Weight_Difference: 0.000 kg TFI: 120 mL/kg/day Dosing Weight: 1.13 kg Complex_Fluids: No

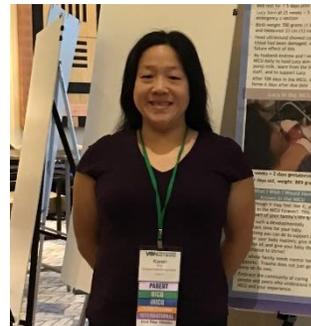
TEST MEL Hello F 702702 DOL: 1690 Corrected_GA: 257+4 Current Weight: 8.6 kg Weight_Difference: 0.000 kg TFI: 120 mL/kg/day Dosing Weight: 1.13 kg Complex_Fluids: No

Category	Encounter Type	Family	Staff	Parent-Sibling	Hand hug+Kang	Hand hug	Talking	Reading	Other
Family	Encounter - Family Me								
Family	Encounter Type - Family								
Family	Total Encounter Time						75		
Family	Shift Total - Family Nurt						75		
Family	Admission Total - Family	215	215	215	215	215	290	290	290
Staff	Encounter - Staff Member								
Staff	Encounter Type - Staff								
Staff	Total Encounter Time						5		
Staff	Shift Total - Staff Nurturi						5		
Staff	Admission Total - Staff	40	40	40	40	40	45	45	45
Comments	Nurturing Encounter Co...								Testing the com...



Families as Partners

- Including families in our units QI work is integrated in our unit's culture.
- Families participate in two-person cares, as well as other care activities.



Then Came COVID



COVID effects



- Due to the pandemic, we needed to limit the number of people in our unit which made it difficult for families to be present.
- Throughout this year of uncertainty and constant changes, our Family Support Specialists have gone above and beyond to adapt in order to provide support to families
 - Meeting face-to-face with current families at the baby's bedside and online support where possible.
 - Providing Nurturing Encounters
- We needed to halt our Volunteer Cuddler program.
- Throughout the pandemic we have seen a significant decline in parental presence in our NICU.



COVID effects

- Limited presence of parents or family members at bedside
- Frequent isolation of PUI parents or babies
- Hesitancy to resume some routine practices
- Obstacles to parents beyond hospital policies
- “Low prioritization” of non COVID issues



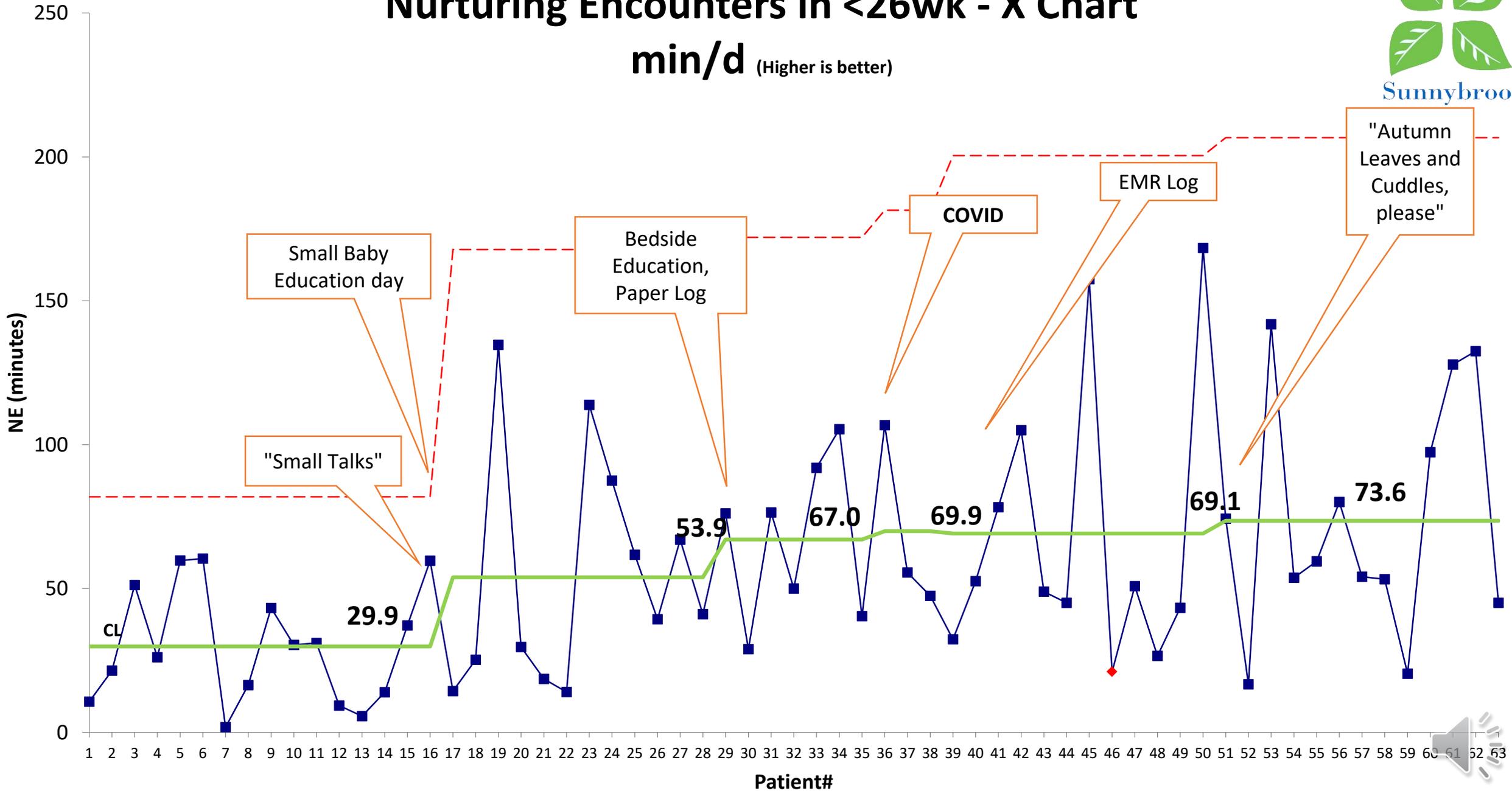
Surprises and Challenges

- Even though we were in the midst of the pandemic, once our EMR documentation process went live, and staff could document in a consistent manner
 - our documented NE minutes sky-rocketed!
- Many team members were excited to participate in a new initiative.
- We have recently launched our first ever “Autumn Leaves and Cuddles, Please” – a month long event designed to celebrate and encourage staff and families alike to give and document NE with a goal of 100,000 minutes!
- As many experienced this past year, the stress and constant changes occurring in day-to-day lives made QI even more challenging.
 - Project work became overshadowed by the challenges of constant procedural changes.



Nurturing Encounters in <26wk - X Chart

min/d (Higher is better)





Team Acknowledgements

Thanks to:

Kristin Nemes, RRT;
Gloria Bello, RRT;
Laurel Jones, RN;
Dylan Riley, RN;
Elizabeth MacMillan-York, RN;
Alicia Mio RN;
Jennifer Sidlauskas, RN;
Laura Borges, RN;
Lisa Sampson RN and VON Project Leader;
Karen Bong Parent Advisor;

Dr. Eugene Ng;
Dr. Asaph Rolnitsky;
Dr. Michael Dunn;
Marilyn Hyndman RRT and NICU Manager;
Jo Watson NP and Women's and Babies Operations Director;
NICQ Steering Committee; Sunnybrook Health Sciences NICU;
Sunnybrook NICU Parent Advisory Council;
and our NICU babies and their families



Contact Information

- asaph.rolnitsky@sunnybrook.ca
- Lisa.Sampson@sunnybrook.ca