

BORN Ontario Neonatal Intensive Care Unit (NICU) / Special Care Nursery (SCN) Dashboard

What is the NICU/SCN Dashboard and why use it?

The **new** NICU/SCN Dashboard will be available in the BORN Information System (BIS) November 22nd, 2018. This innovative ‘audit and feedback’ report has been developed to help Ontario hospitals with Level 2-SCNs and Level 3-NICUs meet the requirements set out in the legislated *Excellent Care for All Act* (2010) by helping them identify areas where they are doing well and areas where there is room for improvement.

What Key Performance Indicators (KPIs) are included?

The NICU/SCN Dashboard has been designed to measure KPIs that are clinically meaningful, feasible to measure, and actionable. Two KPIs have been prioritized for this inaugural dashboard.

NICU/SCN Key Performance Indicators		Rate (%)	Status	Benchmark rates (%)			NICU/SCN Comparator rates (%)	
				Target (green)	Warning (yellow)	Alert (red)	Other Neonatal Level 2c hospitals	Ontario
1	Rate of primary NICU/SCN admissions of inborn infants ≥35 weeks' gestation receiving "Air" as the initial gas used during resuscitation (in the first 30 minutes of life)	74.4		≥ 95	85-94	<85	83.4	87.2
2	Rate of primary NICU/SCN admissions of inborn infants where the infant has a temperature between 36.5-37.5 (inclusive)°Celsius at admission	51.7		≥85	75-84	<75	70.9	74.1

Data source: BORN Ontario, 2017-2018

How were the KPIs and benchmarks selected?

BORN Ontario worked with an expert advisory group (Maternal Newborn Outcomes Committee (MNOC) - Dashboard Subcommittee) for indicator and benchmark selection. Membership was interprofessional and included clinical, quality improvement and measurement experts from across the province representing neonatology, obstetrics, midwifery, nursing, pediatrics, and epidemiology.

The Dashboard Subcommittee first reviewed a list of potential indicators identified from a scoping review of neonatal clinical performance literature, or flagged as practice issues by clinical experts, or evident through exploration of data in the BIS. To establish face validity, and to prioritize the list of KPIs to a manageable number for hospitals, the Dashboard Subcommittee then undertook an iterative process of review, deliberation and consensus decision-making to identify the KPIs for the inaugural NICU/SCN Dashboard. Each KPI was discussed with respect to: 1) its clinical importance, 2) the evidence available to guide practice, define the indicator and inform benchmarks, 3) the availability of high quality data that could be used to create metrics for these neonatal practice issues, and 4) whether the indicator was amenable to change at the unit level.

Evidence summaries for the prioritized indicators were developed in collaboration with the *Knowledge Synthesis Group* at the Ottawa Hospital Research Institute. This group has particular expertise in rapid review methodology, critical appraisal and synthesis of literature to support evidence-informed healthcare decision

making. They assisted the Dashboard Subcommittee in determining the level of scientific evidence to support each indicator.

The Dashboard Subcommittee used various forms of evidence (e.g. peer-reviewed literature, current clinical practice within Ontario, and the clinical expertise of our committee members) to set the benchmarks for each indicator including not only the target (green light), but also the range that would generate a warning (yellow light) and an alert (red light).

How does the SCN-NICU Dashboard work?

The NICU/SCN Dashboard provides near real-time *feedback* on selected KPIs, compares performance to established *benchmarks*, other hospitals and the province, and provides *signals* to trigger action if performance is sub-optimal. KPI rates are based on a minimum of three months of acknowledged data.

Users will be able to view detailed data tables for information about cases that align with the best practice target, cases where best practice did not occur, and cases where missing data is an issue. Site specific and comparator rates (i.e., same level of care, and Ontario) are provided. Having comparator group data and the provision of 95% confidence intervals around point estimates will help to reduce misinterpretation of potentially variable estimates, and facilitate interpretation of the data and decision-making about the need for practice improvement. Authorized users will be able to drill down to obtain individual chart number(s) for cases requiring review to support site-specific practice audits. Graphs have been created to facilitate communication of the data and missing data thresholds have been established to increase the reliability of the results.

What about resources, training and ongoing support?

The NICU/SCN Dashboard will be launched November, 22 2018. Introductory training webinars are scheduled for November 20th and 29th, 2018 to orient users to this new resource. The webinar will be recorded and posted on the BORN website to be available for later viewing for staff than cannot attend the live sessions. The Knowledge-to-Action evidence summaries developed for each indicator will be available on the BORN website: <http://www.bornontario.ca/>. BORN Coordinators, Knowledge Translation Specialists, and clinical subject matter experts will provide ongoing support to facilitate use of the data for quality improvement.

In order to optimize use of the NICU/SCN Dashboard, it is recommended that each hospital/unit have a clearly defined mechanism and named individuals responsible to deal with data and practice issues as they arise. In addition, we encourage the entire neonatal team to take an active part in monitoring clinical practice with escalation to relevant leaders when indicators have a yellow or red designation.

The NICU/SCN Dashboard is an innovative, evidence-informed 'audit and feedback tool' that has been designed to assist your team to: monitor performance within your organization, identify evidence-practice gaps, and facilitate practice change to enhance quality care. We anticipate that the performance indicators and benchmarks will evolve with other KPIs being added in the future. While audit and feedback does not guarantee that practice improvement will occur, identifying and monitoring evidence-practice gaps is an important first step.

BORN Ontario has developed this resource to facilitate quality improvement at the hospital, health region, or provincial level. However, the responsibility for quality rests with the organization and is dependent on ensuring complete, valid and reliable data is entered into the system as close to real-time as possible. This is what will drive the dashboard displays, generate comparator data, and increase reliability of the data provided.

All data provision is done in accordance with our rigorous privacy and security policies and procedures approved by the Information Privacy Commissioner of Ontario in October 2011. The BORN Coordinator for your region can also see your data and may contact you if they notice there are areas where you are performing particularly well (so others can learn from your success), or if you require assistance on a particular indicator.

Additionally, no users in other hospitals will be able to see your hospital performance on the NICU/SCN Dashboard. However, BORN Ontario data, collected from hospitals, midwifery practices and labs are aggregated and shared with approved data requestors to support health system and public health planning, reporting and research.

We look forward to working with you as we roll-out this audit and feedback tool across the province. Please contact BORN Ontario (info@BORNOntario.ca) or your BORN Coordinator (<https://www.bornontario.ca/en/about-born/coordinators/>) for additional support or questions you may have.