Neonatal Critical Care Indicator and Reports Guide

User Guide for Report Format, Indicator Definitions & Details

Version 1.2

Critical Care Services Ontario
August 2022

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Neonatal Critical Care Indicator and Reports Guide	
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Abbreviations

CCIS	Critical Care Information System
CCSO	Critical Care Services Ontario
CLI	Central Line Infection
CritiCall	CritiCall Ontario
LHIN	Local Health Integration Network (Currently referred to as Sub Region)
LSI	Life Support Intervention
MERP	Medication Error Reporting and Prevention
MIS	Management Information System
MOH	Ministry of Health
NICU	Neonatal Intensive Care Unit
ONICAC	Ontario Neonatal Intensive Care Advisory Committee
OR	Operating Room
ORNGE	Ontario Air Ambulance Corporation
PCMCH	Provincial Council for Maternal and Child Health
PHRS	Provincial Hospital Resource System
PM WG	Performance Management Working Group
SCC WG	Systems Capacity and Abilities Working Group
SPS	Solutions for Patient Safety
UE	Unplanned Extubations
VAP	Ventilator Associated Pneumonia
WANNNT	Winnipeg Assessment of Neonatal Nursing Needs Tool
WHO	World Health Organization

1. Purpose & Scope of the NICU Scorecard

Critical Care Services Ontario (CCSO) provides the provincial program oversight for all Neonatal Intensive Care Units (NICUs) within Ontario, as listed in *Appendix A*. The NICU scorecard serves as one of the key CCSO tools in providing the distributed performance monitoring of Ontario NICUs at the corporate and regional levels, as well as system-level performance oversight through the Ontario Neonatal Intensive Care Advisory Council (ONICAC).

The ONICAC was established in November 2017 and reports to CCSO on the implementation and evaluation of strategies that support the neonatal critical care system in Ontario.

The ONICAC and its working groups are actively engaged in identifying potential areas for improvement in access to, and delivery of, quality care to ensure that regardless of geography neonatal patients across Ontario have access to specialty critical care services. The key to achieving this objective is the development and implementation of a performance management framework to support a culture of accountability and system management.

About this Guide

This guide is intended to provide neonatal hospitals with the standardized definitions and methodology used to produce the neonatal critical care scorecard. The guide also includes an overview of the report format to familiarize users with the layout of reports (see Section 2).

This document contains methodology information for each of the neonatal indicators (see Section 3).

Note: This guide is not a replacement for any hospital, Ontario Health (OH) Region, or Ministry reporting requirements or performance management programs.

Audience

This guide is designed for hospital administrators, clinical leaders, and decision support/data analysts in Ontario NICUs. The intent of the guide is to summarize indicator reporting processes and define indicators and data calculation methodology.

The Reporting Process

Neonatal Intensive Care scorecard will be issued quarterly.

The general timeframes for report release are outlined in the table below:

Quarter Dates	Report Release
Q1: Apr 1 - Jun 30	**August**
Q2: Jul 1 - Sept 30	**November**
Q3: Oct 1 - Dec 31	**February**
Q4: Jan 1 - Mar 31	**May**

About the Indicator Development Process

From 2017-present, the Performance Management Working Group (PM WG) of the ONICAC worked to identify meaningful and viable neonatal intensive care performance indicators to assess and monitor system level access, quality, and system integration for neonatal critical care in the province.

Performance Indicators and Data

At this time, there are 12 performance indicators available for reporting. The data for ten of the twelve indicators on the Scorecard are populated with data entered in the Critical Care Information System (CCIS) by the NICU units/hospitals. The remaining two measures are sourced from the case facilitation data from Criticall Ontario.

A summary of the indicators reported is included below:

Domain	Objective	Indicator	Data Source
Quality	Deliver Safe Care	Central Line Infection (CLI) Rate	CCIS
		Ventilator Acquired Pneumonia (VAP) Rate	CCIS
		Unplanned Extubation Rate	CCIS
Access	Provide Timely Care	Response to Consult Request for Infants Declared Life or Limb Within 10 Minutes	Case Facilitation, CritiCall Ontario
		Acceptance for Transfer of Infants Declared & Confirmed Life or Limb Within 60 Minutes	Case Facilitation, CritiCall Ontario
System Integration	Optimize Patient Flow	NICU Bed Occupancy Rate (%)	CCIS
		Percent of Beds Not Available	CCIS
		Days Waiting for Transfer (%)	CCIS
		NICU LSI Compliance – LSI entry	CCIS
		Patient Days with LSI ≤ 3 and LSI ≥ 4 (%)	CCIS
		Patient Days with Ventilation (%)	CCIS
		Transfers from & Discharges To Lower, Same & Higher Level of Care Units	CCIS

Target-Setting Methodology

Performance indicators are useful tools to highlight current state, but true performance management requires goals/targets. Desired targets are evidence-based/data-driven, agreeable to major stakeholders and can serve as the catalysts for system change and quality improvement.

The Performance Management Working Group (PM WG) of the Ontario Neonatal Advisory Committee (ONICAC) will develop the methodology for setting targets and target status as part of further development of the NICU Scorecard. Once the target-setting approach is finalized, this section of user guide will be updated.

Peer Groups

Peer groups make it possible to compare units with a similar level of care and acuity. The Performance Management Working Group (PM WG) approved the following 5 categories for NICU Peer Groups.

Peer Group	Number of Beds *	Peer Group Number
NICU Group – Small 2a/2b	≤ 8	305
NICU Group – Large 2a/2b	≥ 9	304
NICU Group – Small 2c	≤ 15	303
NICU Group – Large 2c	≥ 16	302
NICU Group – 3a/3b	Not Applicable	301

* Peer Groups are divided into small and large sub-categories based on the level of care and the median number of beds. Units with less than the median are considered small, units with more than the median are considered large.

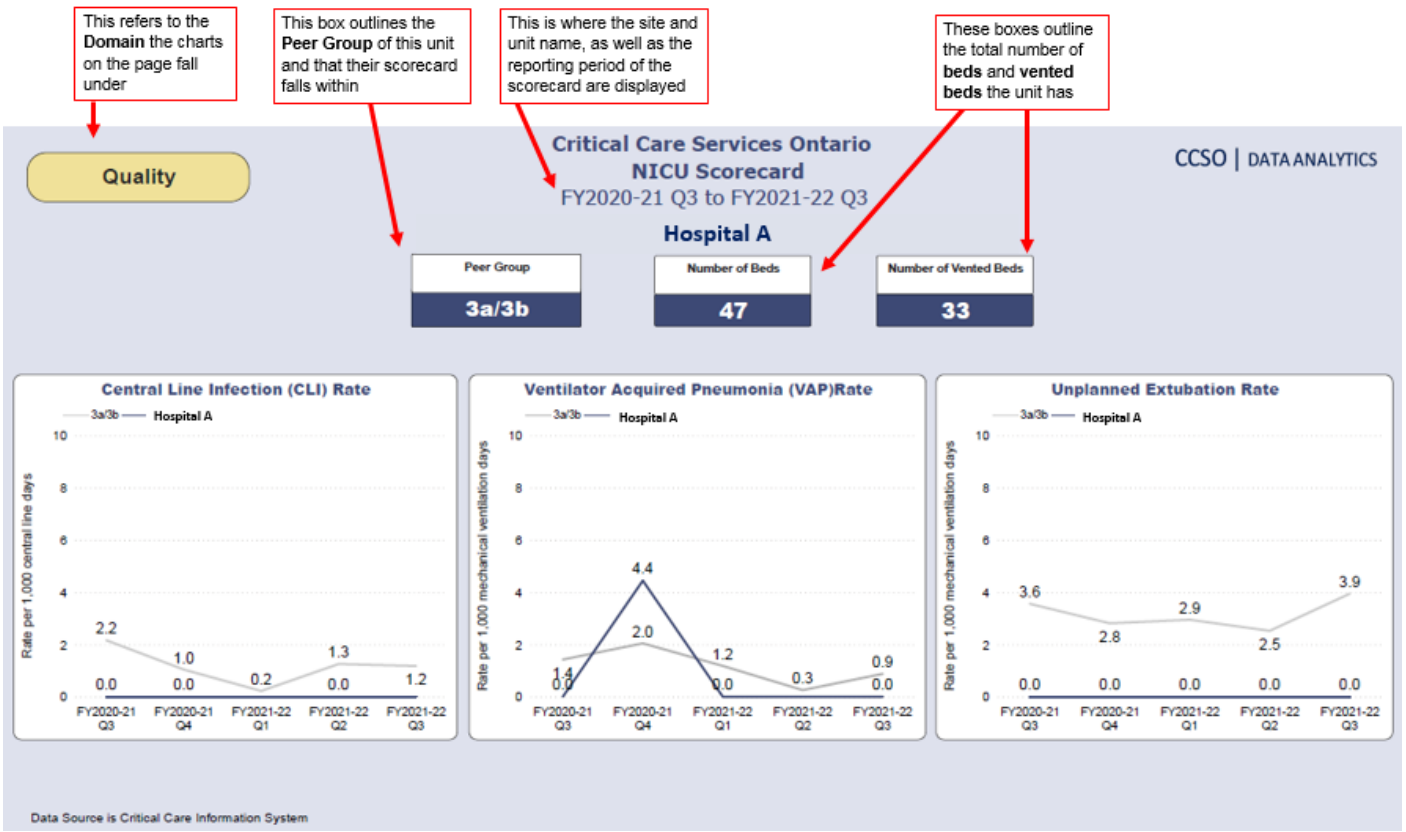
See *Appendix A* for the list of NICU units and Peer Groups.

See *Appendix B* for NICU Levels of Care Definitions.

2. Site Report Overview

An overview of the scorecard report format is provided here with information about different features of the report.

1) Page 1 of Scorecard



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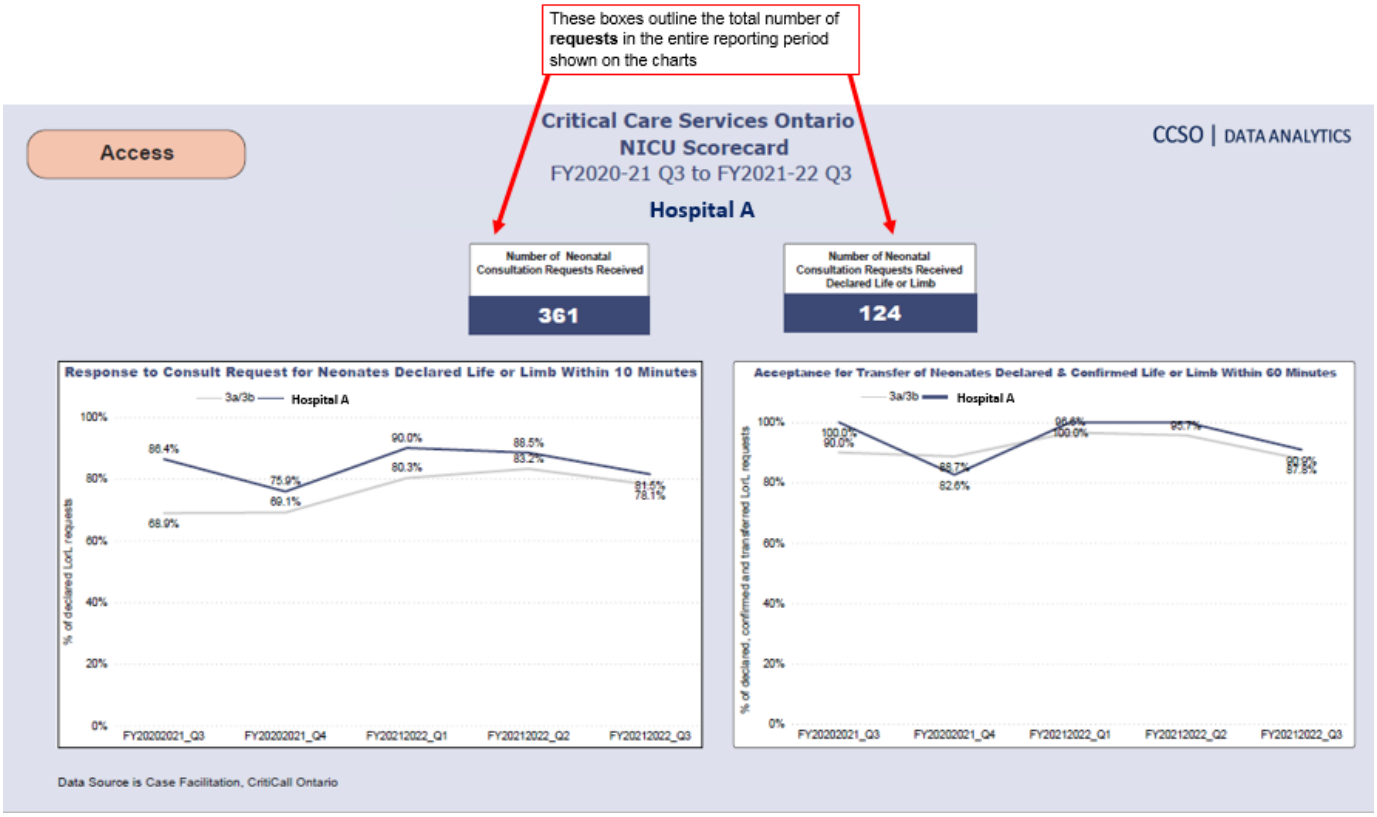

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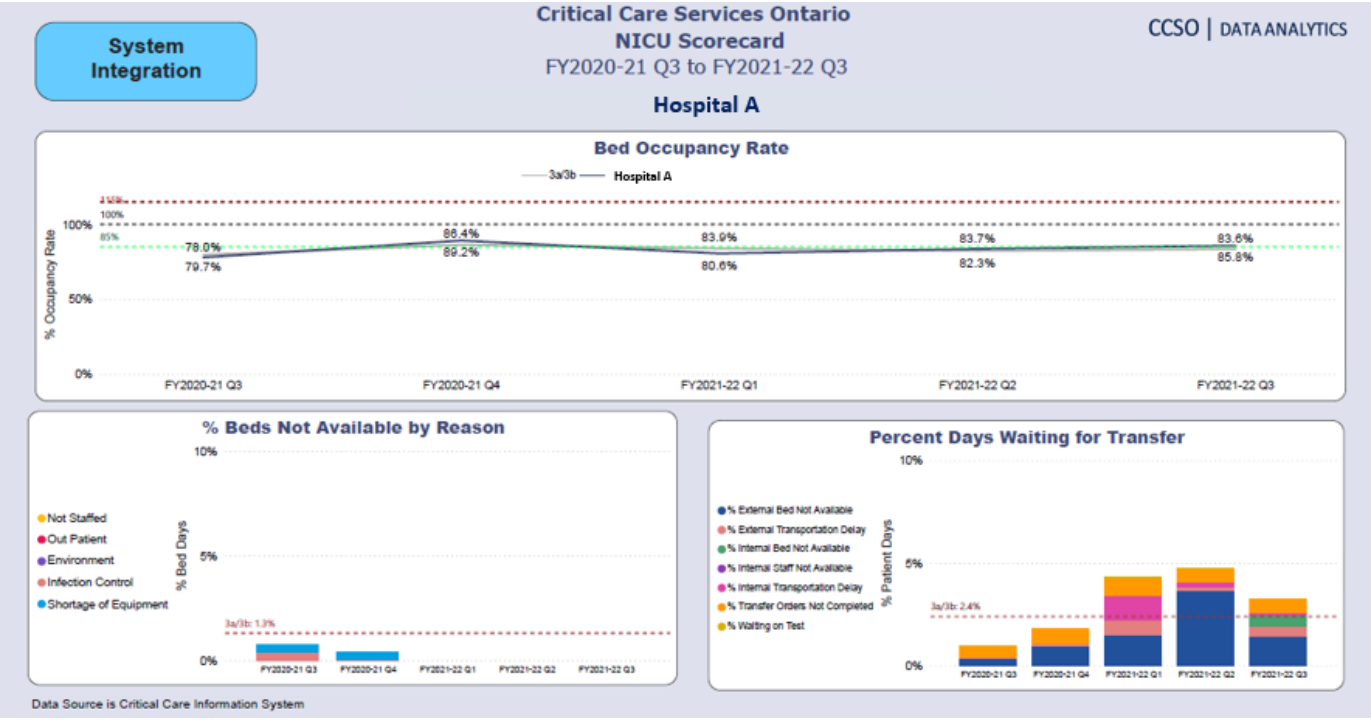

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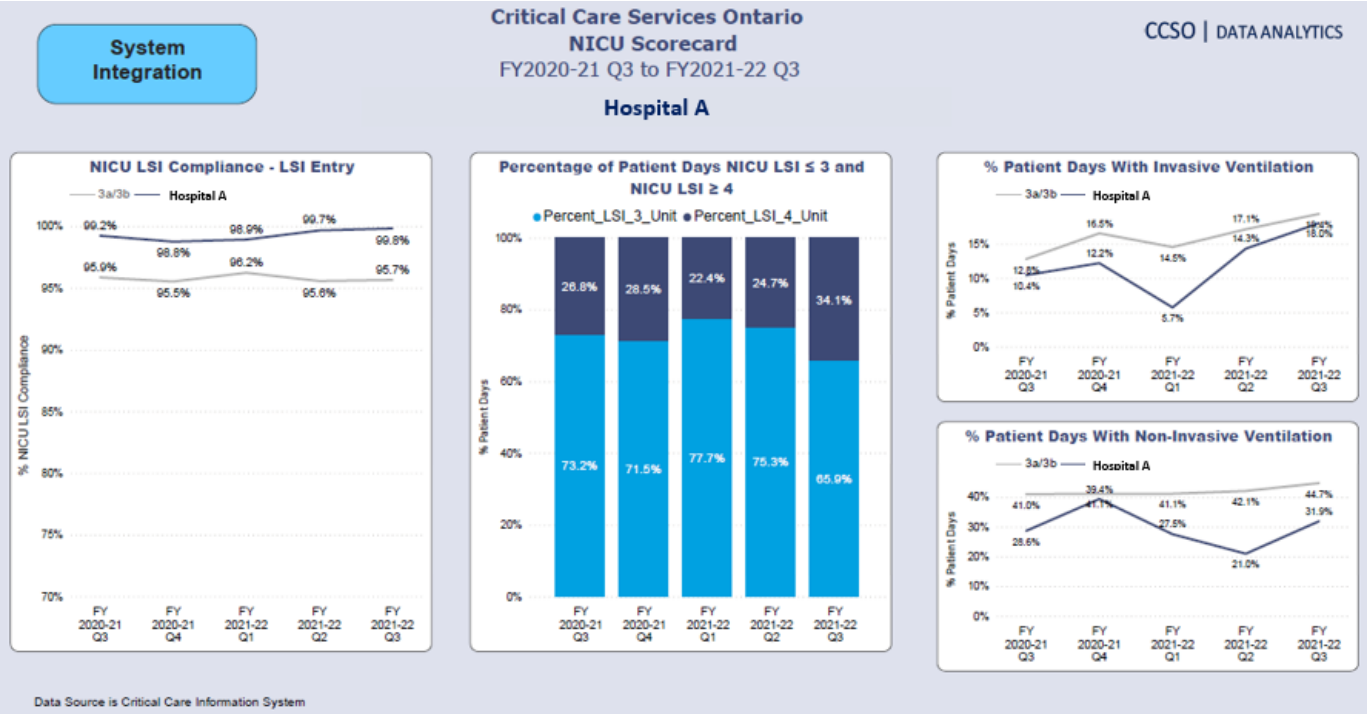

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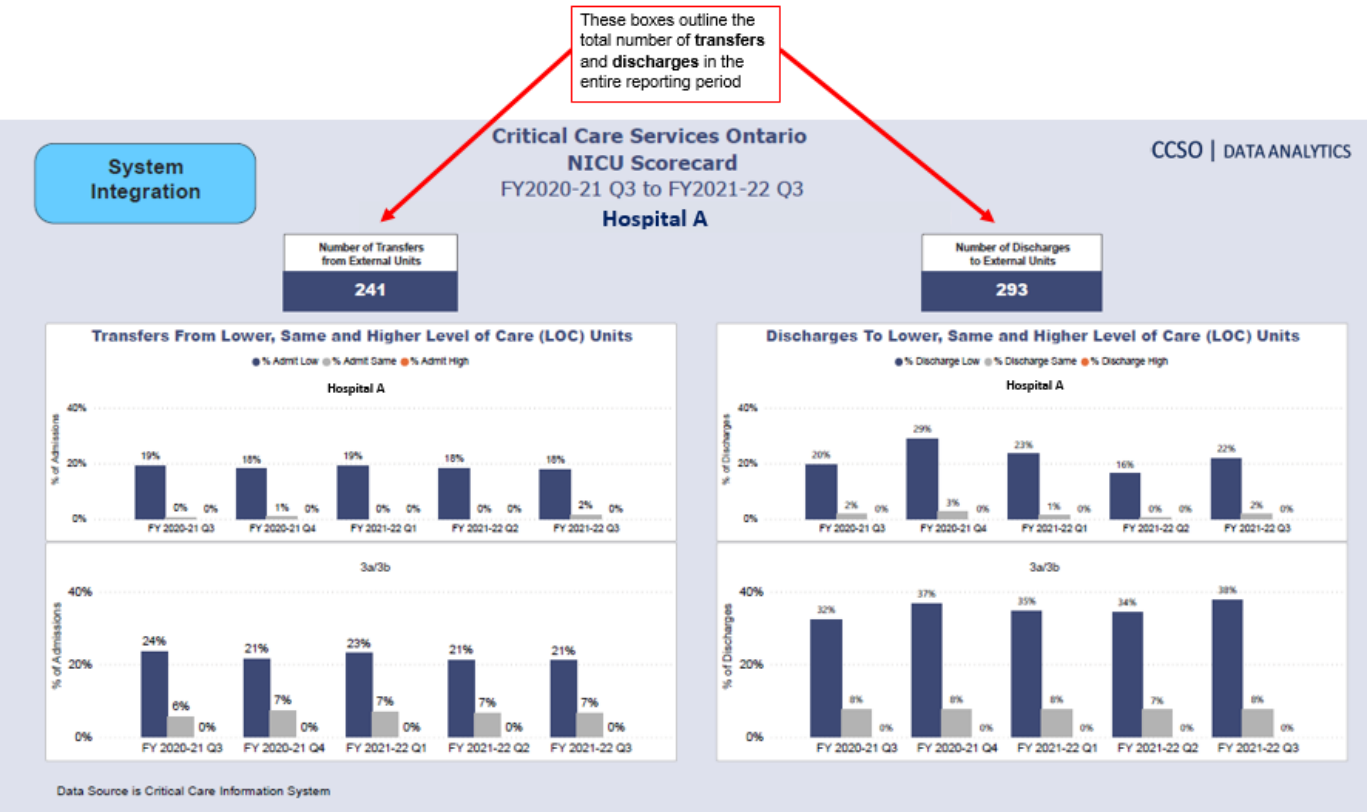

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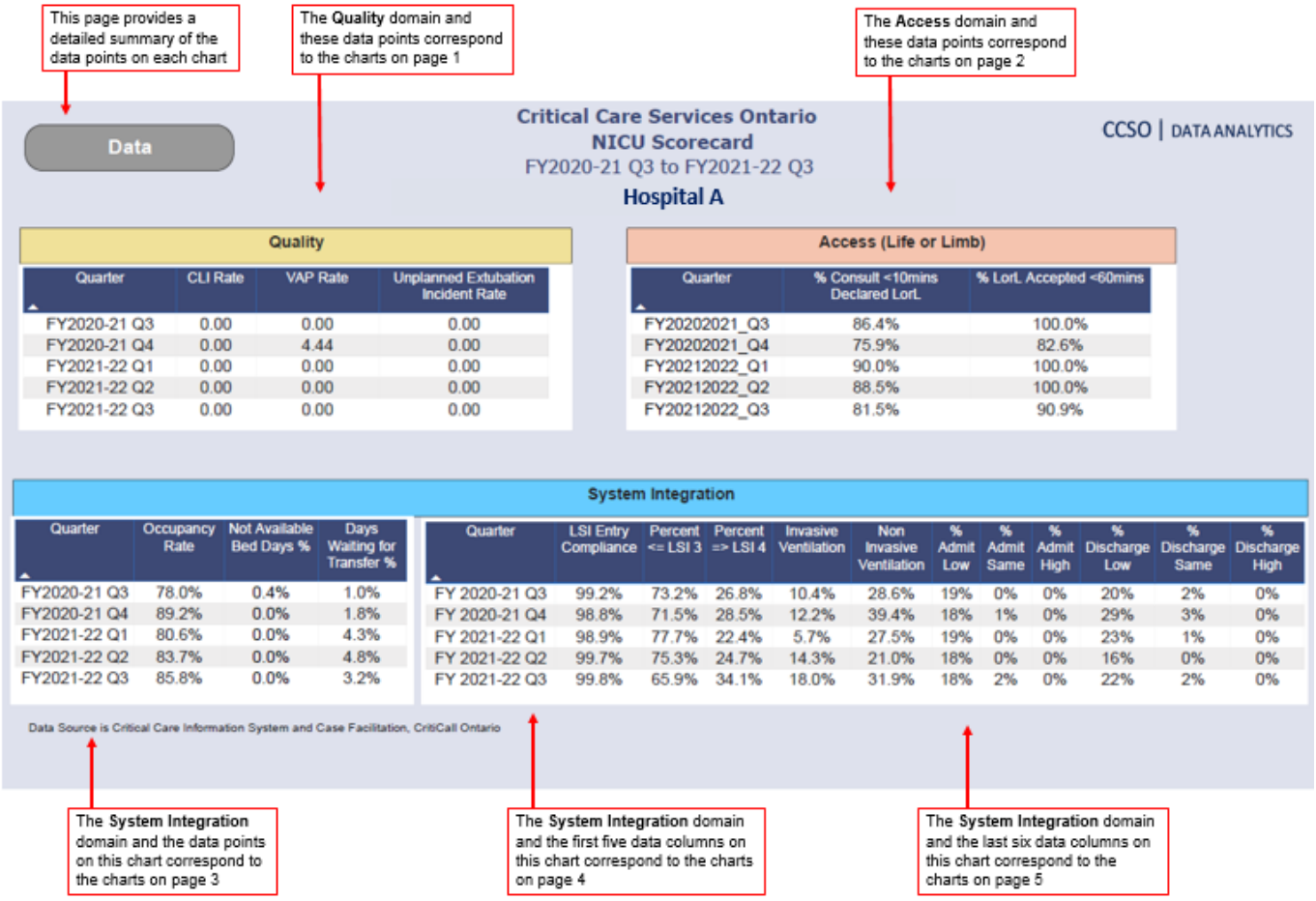


Quality

Quarter	CLI Rate	VAP Rate	Unplanned Extubation Incident Rate
FY2020-21 Q3	0.00	0.00	0.00
FY2020-21 Q4	0.00	4.44	0.00
FY2021-22 Q1	0.00	0.00	0.00
FY2021-22 Q2	0.00	0.00	0.00
FY2021-22 Q3	0.00	0.00	0.00

Access (Life or Limb)

Quarter	% Consult <10mins Declared LorL	% LorL Accepted <60mins
FY20202021_Q3	86.4%	100.0%
FY20202021_Q4	75.9%	82.6%
FY20212022_Q1	90.0%	100.0%
FY20212022_Q2	88.5%	100.0%
FY20212022_Q3	81.5%	90.9%

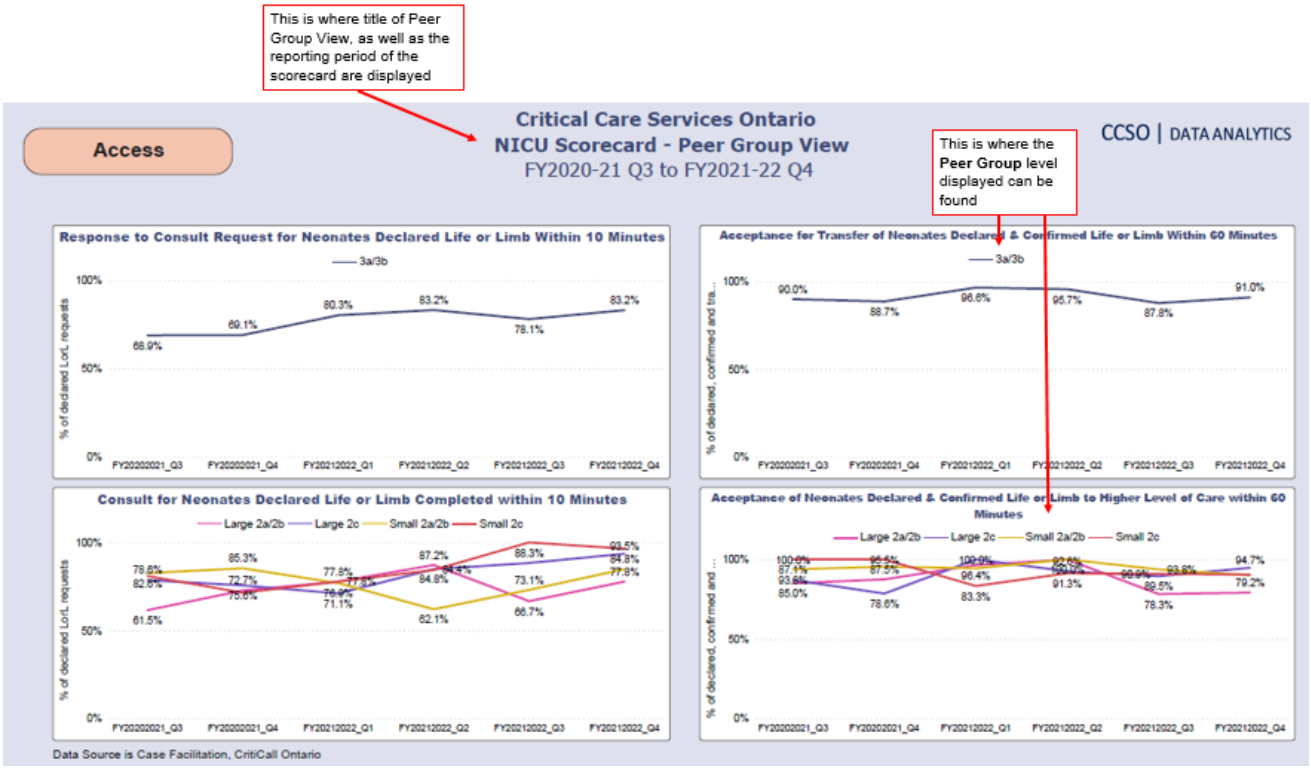
System Integration

Quarter	Occupancy Rate	Not Available Bed Days %	Days Waiting for Transfer %
FY2020-21 Q3	78.0%	0.4%	1.0%
FY2020-21 Q4	89.2%	0.0%	1.8%
FY2021-22 Q1	80.6%	0.0%	4.3%
FY2021-22 Q2	83.7%	0.0%	4.8%
FY2021-22 Q3	85.8%	0.0%	3.2%

Quarter	LSI Entry Compliance	Percent <= LSI 3	Percent => LSI 4	Invasive Ventilation	Non Invasive Ventilation	% Admit Low	% Admit Same	% Admit High	% Discharge Low	% Discharge Same	% Discharge High
FY 2020-21 Q3	99.2%	73.2%	26.8%	10.4%	28.6%	19%	0%	0%	20%	2%	0%
FY 2020-21 Q4	98.8%	71.5%	28.5%	12.2%	39.4%	18%	1%	0%	29%	3%	0%
FY 2021-22 Q1	98.9%	77.7%	22.4%	5.7%	27.5%	19%	0%	0%	23%	1%	0%
FY 2021-22 Q2	99.7%	75.3%	24.7%	14.3%	21.0%	18%	0%	0%	16%	0%	0%
FY 2021-22 Q3	99.8%	65.9%	34.1%	18.0%	31.9%	18%	2%	0%	22%	2%	0%

3. Peer Group Report Overview

1) Page 1 of Scorecard



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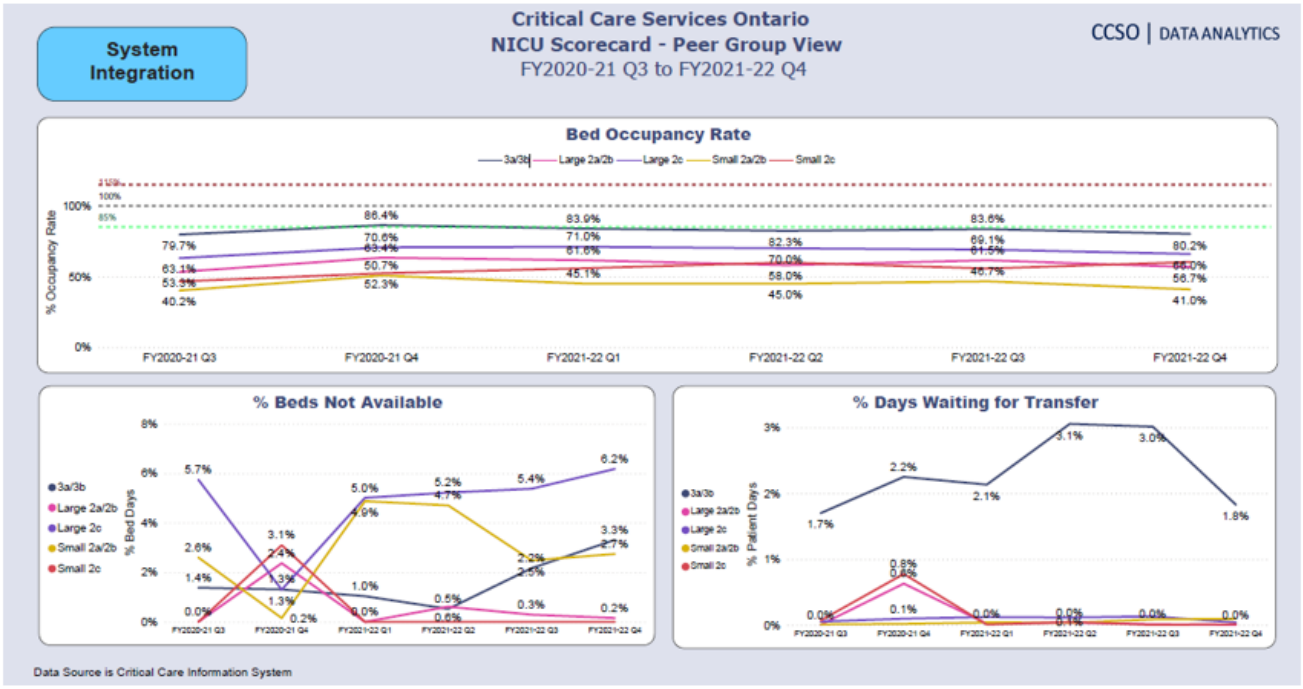

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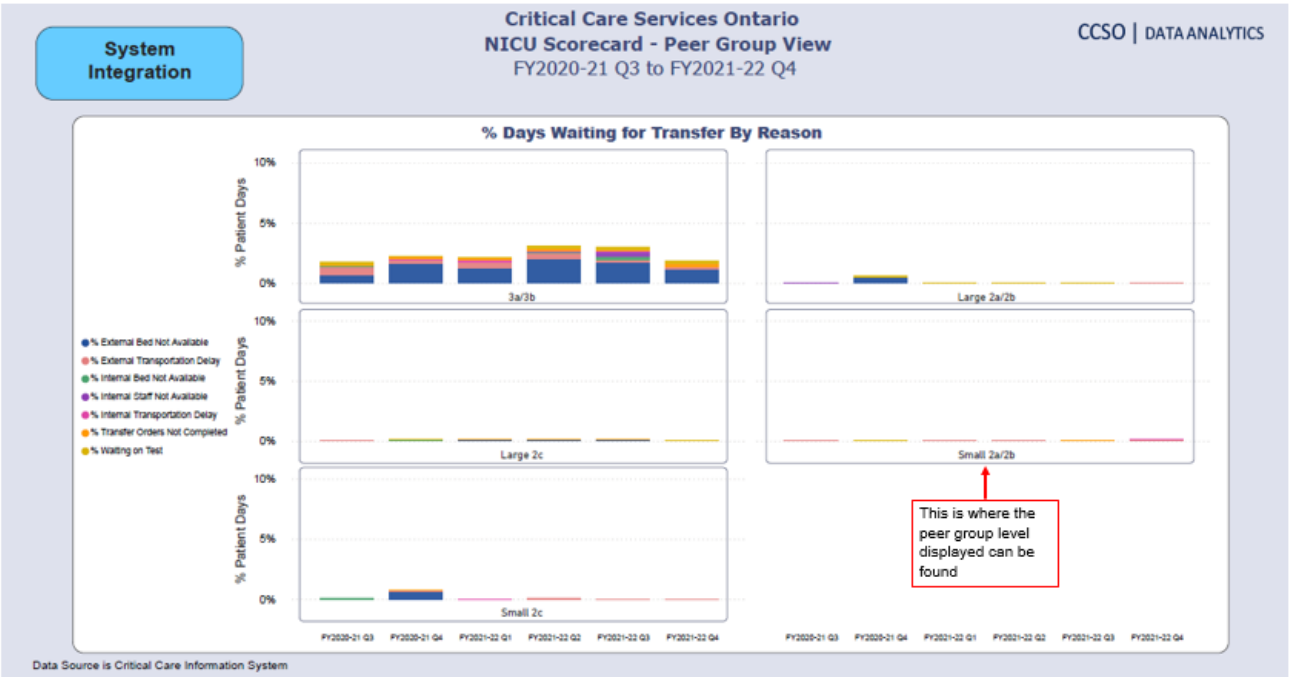

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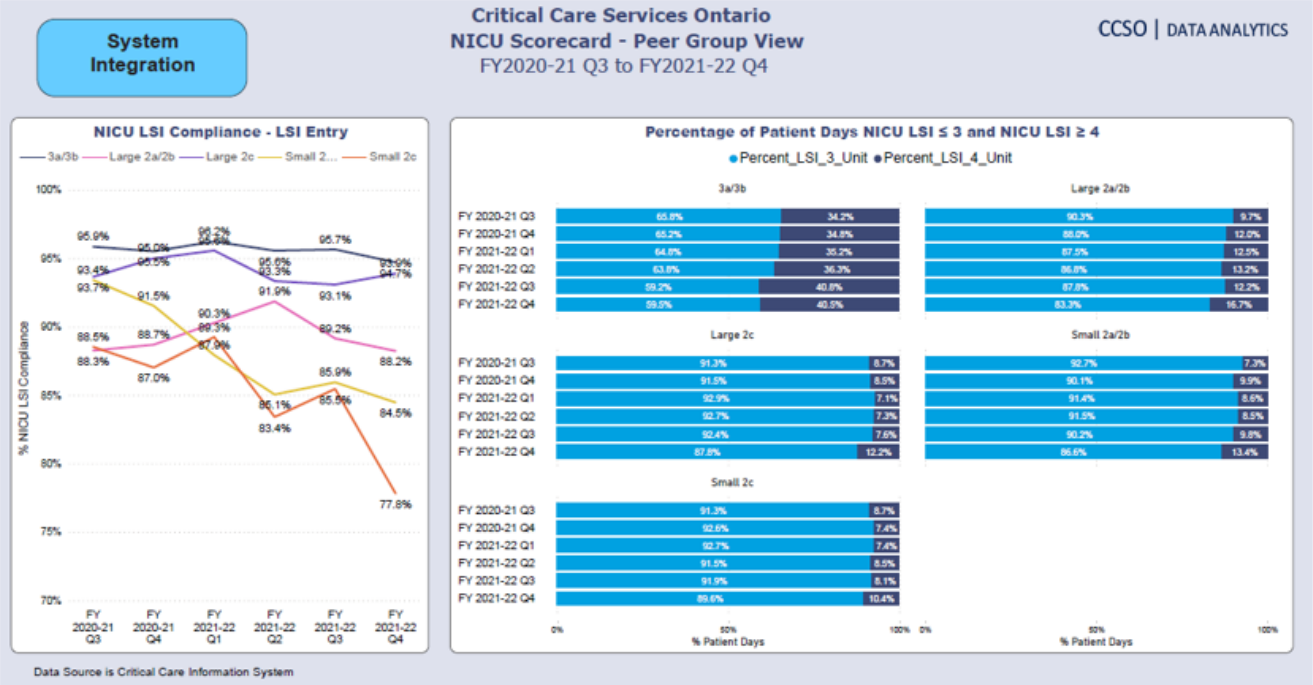

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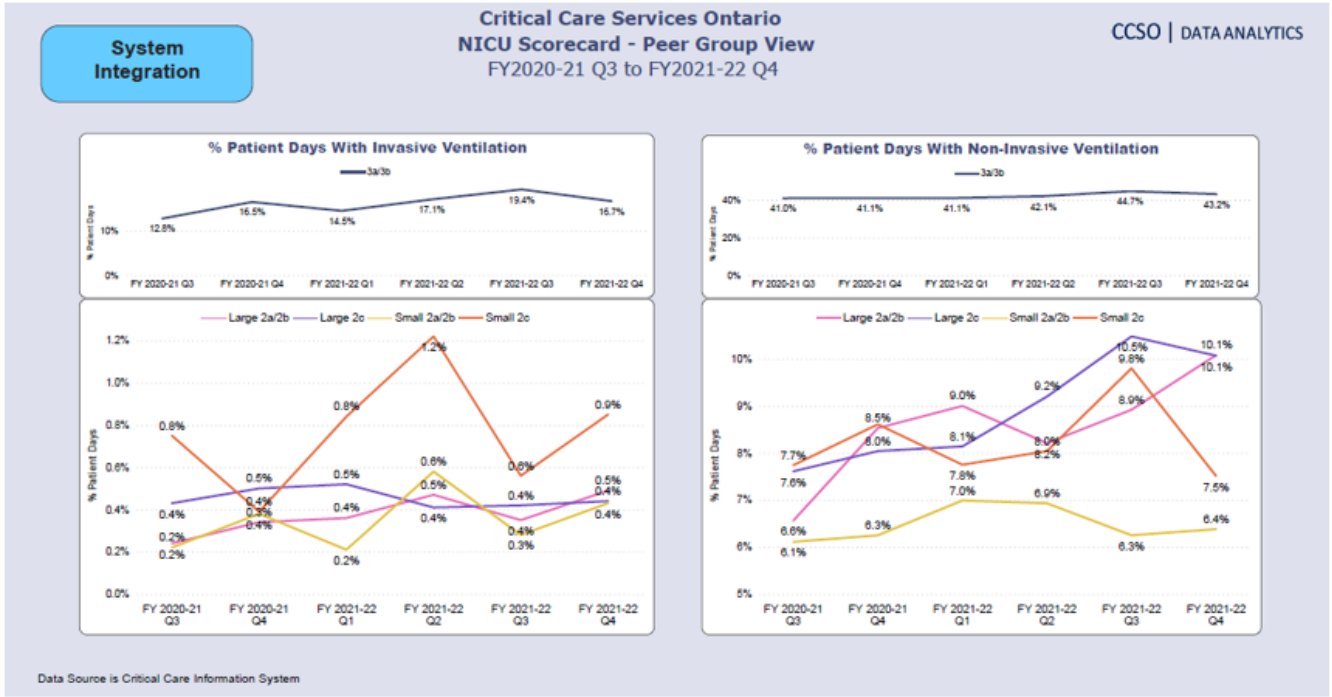

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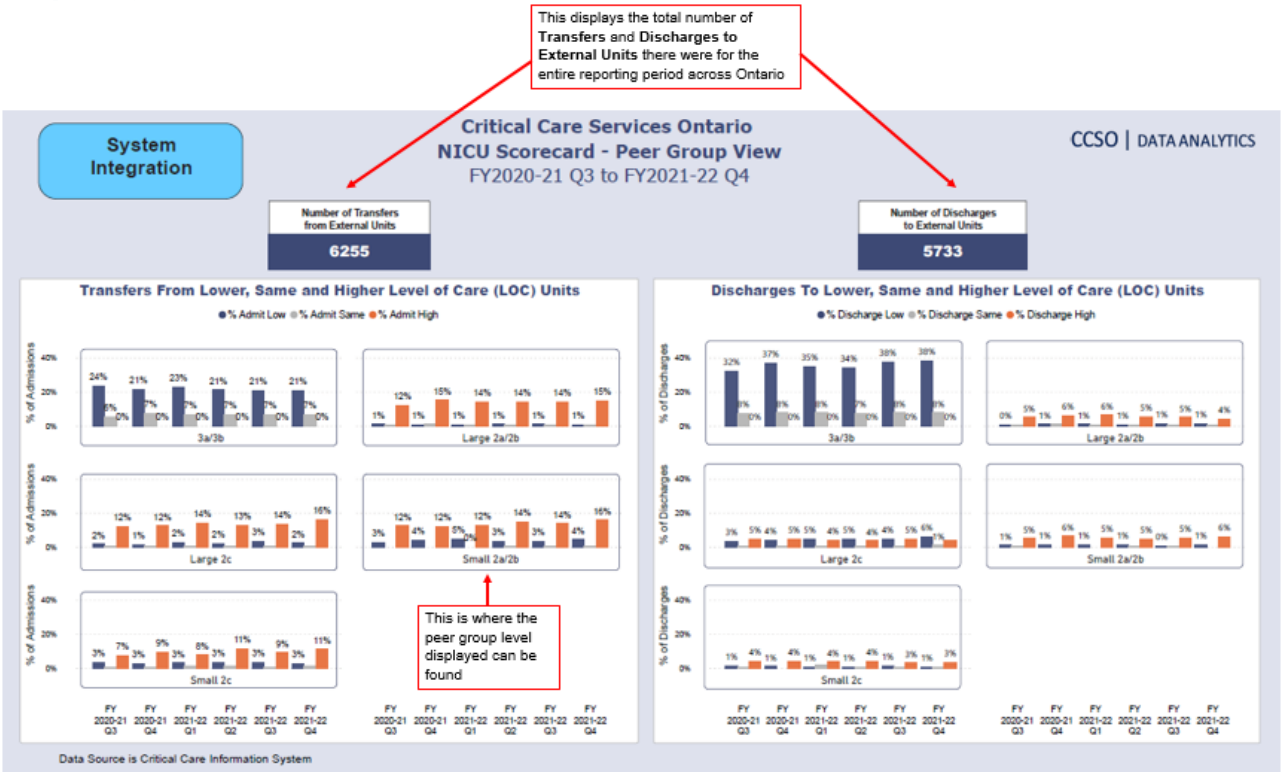

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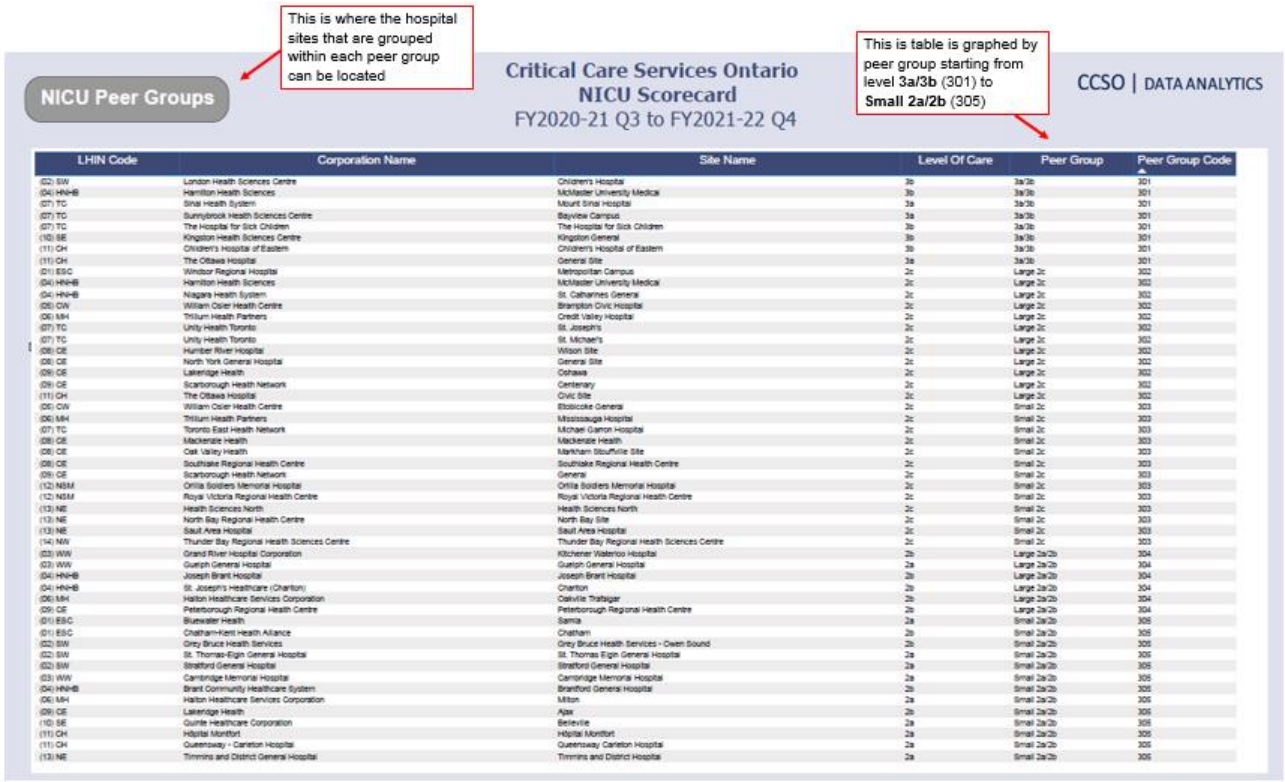

LHIN Code	Corporation Name	Site Name	Level Of Care	Peer Group	Peer Group Code
(02) SW	London Health Sciences Centre	Children's Hospital	3b	3a/3b	301
(04) HNHB	Hamilton Health Sciences	McMaster University Medical	3b	3a/3b	301
(07) TC	Sinai Health System	Mount Sinai Hospital	3a	3a/3b	301
(07) TC	Sunnybrook Health Sciences Centre	Bayview Campus	3a	3a/3b	301
(07) TC	The Hospital for Sick Children	The Hospital for Sick Children	3b	3a/3b	301
(10) SE	Kingston Health Sciences Centre	Kingston General	3b	3a/3b	301
(11) CH	Children's Hospital of Eastern	Children's Hospital of Eastern	3b	3a/3b	301
(11) CH	The Ottawa Hospital	General Site	3a	3a/3b	301
(01) ESC	Windsor Regional Hospital	Metropolitan Campus	2c	Large 2c	302
(04) HNHB	Hamilton Health Sciences	McMaster University Medical	2c	Large 2c	302
(04) HNHB	Niagara Health System	St. Catharines General	2c	Large 2c	302
(05) CW	William Osler Health Centre	Brampton Civic Hospital	2c	Large 2c	302
(06) MH	Trillium Health Partners	Credit Valley Hospital	2c	Large 2c	302
(07) TC	Unity Health Toronto	St. Joseph's	2c	Large 2c	302
(07) TC	Unity Health Toronto	St. Michael's	2c	Large 2c	302
(08) CE	Humber River Hospital	Wilson Site	2c	Large 2c	302
(08) CE	North York General Hospital	General Site	2c	Large 2c	302
(09) CE	Lakeridge Health	Oshawa	2c	Large 2c	302
(09) CE	Scarborough Health Network	Centenary	2c	Large 2c	302
(11) CH	The Ottawa Hospital	Civic Site	2c	Large 2c	302
(05) CW	William Osler Health Centre	Etobicoke General	2c	Small 2c	303
(06) MH	Trillium Health Partners	Mississauga Hospital	2c	Small 2c	303
(07) TC	Toronto East Health Network	Michael Garron Hospital	2c	Small 2c	303
(08) CE	Mackenzie Health	Mackenzie Health	2c	Small 2c	303
(08) CE	Oak Valley Health	Markham Stouffville Site	2c	Small 2c	303
(08) CE	Southlake Regional Health Centre	Southlake Regional Health Centre	2c	Small 2c	303
(09) CE	Scarborough Health Network	General	2c	Small 2c	303
(12) NSM	Orillia Soldiers Memorial Hospital	Orillia Soldiers Memorial Hospital	2c	Small 2c	303
(12) NSM	Royal Victoria Regional Health Centre	Royal Victoria Regional Health Centre	2c	Small 2c	303
(13) NE	Health Sciences North	Health Sciences North	2c	Small 2c	303
(13) NE	North Bay Regional Health Centre	North Bay Site	2c	Small 2c	303
(13) NE	Sault Area Hospital	Sault Area Hospital	2c	Small 2c	303
(14) NW	Thunder Bay Regional Health Sciences Centre	Thunder Bay Regional Health Sciences Centre	2c	Small 2c	303
(03) WW	Grand River Hospital Corporation	Kitchener Waterloo Hospital	2b	Large 2a/2b	304
(03) WW	Guelph General Hospital	Guelph General Hospital	2a	Large 2a/2b	304
(04) HNHB	Joseph Brant Hospital	Joseph Brant Hospital	2b	Large 2a/2b	304
(04) HNHB	St. Joseph's Healthcare (Charlton)	Charlton	2b	Large 2a/2b	304
(06) MH	Halton Healthcare Services Corporation	Oakville Trafalgar	2b	Large 2a/2b	304
(09) CE	Peterborough Regional Health Centre	Peterborough Regional Health Centre	2b	Large 2a/2b	304
(01) ESC	Bluewater Health	Sarnia	2a	Small 2a/2b	305
(01) ESC	Chatham-Kent Health Alliance	Chatham	2b	Small 2a/2b	305
(02) SW	Grey Bruce Health Services	Grey Bruce Health Services - Owen Sound	2b	Small 2a/2b	305
(02) SW	St. Thomas-Elgin General Hospital	St. Thomas Elgin General Hospital	2a	Small 2a/2b	305
(02) SW	Stratford General Hospital	Stratford General Hospital	2a	Small 2a/2b	305
(03) WW	Cambridge Memorial Hospital	Cambridge Memorial Hospital	2a	Small 2a/2b	305
(04) HNHB	Brant Community Healthcare System	Brantford General Hospital	2b	Small 2a/2b	305
(06) MH	Halton Healthcare Services Corporation	Milton	2a	Small 2a/2b	305
(09) CE	Lakeridge Health	Ajax	2b	Small 2a/2b	305
(10) SE	Quinte Healthcare Corporation	Belleville	2a	Small 2a/2b	305
(11) CH	Hôpital Montfort	Hôpital Montfort	2a	Small 2a/2b	305
(11) CH	Queensway - Carleton Hospital	Queensway Carleton Hospital	2a	Small 2a/2b	305
(13) NE	Timmins and District General Hospital	Timmins and District Hospital	2a	Small 2a/2b	305

4. Indicator Definitions

1) Central Line Infection Rate

Indicator Name	Central Line Infection (CLI) Rate
Indicator Domain	Quality
Indicator Objective	Deliver Safe Care
Indicator Definition	The Central Line Infection rate is defined as the ratio of central line infections per 1,000 central line days.
Indicator Data Source	CCIS

Indicator Calculation	• **Numerator:** Number of central line infections
	• **Denominator:** Number of central line days in reporting period
	• **Calculation:** [Numerator] / [Denominator] x 1000
	
	• **Inclusion:**
	  ○ All patients cared for in the NICU
	  ○ Central Line Infection incidents diagnosed after 48 hours of critical care admission

Indicator Consideration	This indicator is consistent with the current (Adult and Paediatric) CCSO Critical Care Unit Level Scorecard indicator.
Frequency of Reporting	Quarterly
Report Generator	CCSO from CCIS data

2) Ventilator Acquired Pneumonia Rate

Indicator Name	Ventilator Acquired Pneumonia (VAP) Rate
Indicator Domain	Quality
Indicator Objective	Deliver Safe Care
Indicator Definition	The Ventilator Acquired Pneumonia rate is defined as the ratio of ventilator acquired pneumonia incidents per 1,000 mechanical ventilation days.
Indicator Data Source	CCIS
Indicator Calculation	• **Numerator:** Number of ventilators acquired pneumonia incidents • **Denominator:** Number of mechanical ventilation days in the reporting period • **Calculation:** [Numerator] / [Denominator] x 1000 • **Inclusion:** ○ All patients cared for in the NICU ○ Ventilator acquired pneumonia incidents diagnosed after 48 hours of critical care admission
Indicator Consideration	This indicator is consistent with the current (Adult and Paediatric) CCSO Critical Care Unit Level Scorecard indicator.
Frequency of Reporting	Quarterly
Report Generator	CCSO from CCIS data

3) Unplanned Extubation Rate

Indicator Name	Unplanned Extubation Rate
Indicator Domain	Quality
Indicator Objective	Deliver Safe Care
Indicator Definition	The Unplanned Extubation rate is defined as the ratio of unplanned extubation incidents per 1,000 mechanical ventilation days.
Indicator Data Source	CCIS
Indicator Calculation	• **Numerator:** Number of unplanned extubation incidents • **Denominator:** Number of mechanical ventilation days in reporting period • **Calculation:** [Numerator] / [Denominator] x 1000 • **Inclusion:** ○ All patients cared for in the NICU
Indicator Consideration	This indicator is consistent with the current (Adult and Paediatric) CCSO Critical Care Unit Level Scorecard indicator.
Frequency of Reporting	Quarterly
Report Generator	CCSO from CCIS data

4) Consult for Infants Declared Life or Limb Response within 10 Minutes

Indicator Name	Consult for Infants Declared Life or Limb Response within 10 Minutes
Indicator Domain	Access
Indicator Objective	Provide Timely Care
Indicator Definition	The percent of consultations for neonates declared Life or Limb that are completed within 10 minutes
Indicator Data Source	CritiCall Ontario Case Facilitation
Indicator Calculation	• **Numerator:** Number of neonatal consultations declared Life or Limb that receive a response from a neonatologist within 10 minutes • **Denominator:** Number of neonatal consultations declared Life or Limb • **Calculation:** [Numerator] / [Denominator] x 1000 • **Inclusion:** ○ All patients cared for in the NICU
Indicator Consideration	TBD
Frequency of Reporting	Quarterly
Report Generator	CCSO from CritiCall Ontario Case Facilitation data

5) Acceptance of Infants Declared & Confirmed Life or Limb to Higher Level of Care within 60 Minutes

Indicator Name	Acceptance of Infants Declared & Confirmed Life or Limb to Higher Level of Care within 60 Minutes
Indicator Domain	Access
Indicator Objective	Provide Timely Care
Indicator Definition	The percent of consultations for infants declared & confirmed Life or Limb that are accepted for transfer to a higher level of care within 60 minutes
Indicator Data Source	CritiCall Ontario Case Facilitation
Indicator Calculation	• **Numerator:** Number of neonatal consultations declared and confirmed Life or Limb that are accepted for transfer to a higher level of care within 60 minutes • **Denominator:** Number of neonatal consultations declared and confirmed Life or Limb that are accepted for transfer to a higher level of care • **Calculation:** [Numerator] / [Denominator] x 1000 • **Inclusion:** ○ All patients cared for in the NICU
Indicator Consideration	TBD
Frequency of Reporting	Quarterly
Report Generator	CCSO from CritiCall Ontario Case Facilitation data

6) NICU Bed Occupancy Rate

Indicator Name	NICU Bed Occupancy Rate
Indicator Domain	System Integration
Indicator Objective	Optimize Patient Flow
Indicator Definition	The NICU Occupancy is defined as the rate of occupied beds. Note: Bed numbers in CCIS are changed only upon approval of written change requests signed by a hospital CEO and the sub-region's Critical Care Lead and submitted to the CCSO.
Indicator Data Source	CCIS
Indicator Calculation	• **Numerator:** Number of Patient Days • **Denominator:** Number of days in reporting period x # of beds in CCIS inventory • **Calculation:** [Numerator] / [Denominator] x 100 • **Inclusion:** All patients cared for in the NICU
Indicator Consideration	This indicator is consistent with the current (Adult and Paediatric) CCSO Critical Care Unit Level Scorecard indicator.
Frequency of Reporting	Quarterly
Report Generator	CCSO from CCIS data

7) Beds Not Available (%)

Indicator Name	Beds Not Available (%)
Indicator Domain	System Integration
Indicator Objective	Optimize Patient Flow
Indicator Definition	Percent of beds not available to provide care for the people who need them. Reasons for Beds not available include: Not Staffed: The bed does not currently have the staffing resources to assume care of a patient. Outpatients: Bed occupied by an outpatient receiving a critical care service (e.g. blood testing for jaundice monitoring, insertion of a weighted feeding tube, other as identified by the organization) in this critical care unit. Environment: Flood, fire, or internal disaster. Infection Control: The bed is not available due to infection control issues within the critical care unit. Shortage of Equipment: Bed is unavailable due to shortage of equipment that is essential to provide care to a critical care patient.
Indicator Data Source	CCIS (identified in the Bed Availability Tool of CCIS)
Indicator Calculation	• **Numerator:** Not Available Bed Days • **Denominator:** Number of days in reporting period x # of beds in CCIS inventory • **Calculation:** [Numerator] / [Denominator] x 100 • **Example of how Not Available Bed Days are calculated:** ○ Beds Not Available Date & Time = 01/04/2019, 07:00 Number of Beds Not Available = 2 Reason = Infection Control ○ Beds Not Available Date & Time = 02/04/2019, 07:00 Number of Beds Not Available = 0 ○ Total Number of Bed Not Available days = 2 days • **Inclusion:** All patients cared for in the NICU
Indicator Consideration	This indicator is consistent with the current (Adult and Paediatric) CCSO Critical Care Unit Level Scorecard indicator.
Frequency of Reporting	Quarterly
Report Generator	CCSO from CCIS data

8) Days Waiting for Transfer (%)

Indicator Name	Dyas Waiting for Transfer (%)
Indicator Domain	System Integration
Indicator Objective	Optimize Patient Flow
Indicator Definition	The amount of time that patients spend occupying a NICU bed when they no longer require the intensity of care. Wait durations above 4 hours are considered avoidable hours; therefore, avoidable days exclude the first 4 hours of a wait. The 'Awaiting Transfer Reasons' are: - Internal Bed Not Available - Internal Staff Not Available - Internal Transportation Delay - External Bed Not Available - External Transportation Delay - Transfer Orders Not Complete - Waiting on Test/Procedure Completion
Indicator Data Source	CCIS
Indicator Calculation	• **Numerator:** Total delayed transfer days ○ Total Delayed Transfer Days (Avoidable Days) = (Discharge Date & Time – Awaiting Transfer Start Date & Time) – 4 hours • **Denominator:** Number of patient days • **Calculation:** [Numerator] / [Denominator] x 100 • **Example of how Total Delayed Transfer Days are calculated:** ○ Awaiting Transfer Start Date & Time = 01/04/2019, 07:00 ○ Discharge Date & Time = 07/04/2019, 19:00 – 4 hours ○ Total Delayed Transfer days = 6.3 days • **Inclusion:** All patients cared for in the NICU
Indicator Consideration	This indicator is consistent with the current (Adult and Paediatric) CCSO Critical Care Unit Level Scorecard indicator.
Frequency of Reporting	Quarterly
Report Generator	CCSO from CCIS data

9) NICU Life Support Intervention (LSI) Compliance – LSI Entry

Indicator Name	NICU Life Support Intervention (LSI) Compliance – LSI Entry
Indicator Domain	System Integration
Indicator Objective	Optimize Patient Flow
Indicator Definition	NICU LSI Compliance – LSI Entry is defined as the rate of timely entries for NICU LSI data. Timely Entries are cases where the intervention date is submitted before 23:59 of the following day.
Indicator Data Source	CCIS

Indicator Calculation	• **Numerator:** Number of Patient Days with LSI data entered
	• **Denominator:** Number of Patient Days with LSI data expected
	• **Calculation:** [Numerator] / [Denominator] x 100
	
	• **Inclusion:**
	  ▪ All patients cared for in the NICU
	  ▪ Expected Entries are the number of calendar days patients are in the NICU during the reporting period

Indicator Consideration	This indicator is consistent with the current (Adult and Paediatric) CCSO Critical Care Unit Level Scorecard indicator.
Frequency of Reporting	Quarterly
Report Generator	CCSO from CCIS data

10) Percentage of Patient Days with Life Support Interventions (LSI) ≤ 3 and LSI ≥ 4

Indicator Name	Patient Days with Life Support Interventions (LSI) ≤ 3 and LSI ≥ 4 (%)
Indicator Domain	System Integration
Indicator Objective	Optimize Patient Flow
Indicator Definition	% of Patient Days with LSI ≤ 3: Percent of patient days with NICU LSI data entered with a score of less than or equal to 3 % of Patient Days with LSI ≥ 4: Percent of patient days with NICU LSI data entered with a score of greater than or equal to 4
Indicator Data Source	CCIS
Indicator Calculation	% of Patient Days with LSI ≤ 3: • **Numerator:** Number of patients days with NICU LSI score ≤ 3 • **Denominator:** Number of patient days with NICU LSI data entered • **Calculation:** [Numerator] / [Denominator] x 100 % of Patient Days with LSI ≥ 4: • **Numerator:** Number of Patients Days with NICU LSI score ≥ 4 • **Denominator:** Number of Patient Days with NICU LSI data entered • **Calculation:** [Numerator] / [Denominator] x 100 • **Inclusion:** ▪ All patients days in the NICU with LSI data entered
Indicator Consideration	This indicator is consistent with the current (Adult and Paediatric) CCSO Critical Care Unit Level Scorecard indicator.
Frequency of Reporting	Quarterly
Report Generator	CCSO from CCIS data

11) Percentage of Patient Days with Ventilation

Indicator Name	Patient Days with Ventilation (%)
Indicator Domain	System Integration
Indicator Objective	Optimize Patient Flow
Indicator Definition	Percent of patient days with invasive or non-invasive ventilation.
Indicator Data Source	CCIS
Indicator Calculation	<u>% of patient days with invasive ventilation:</u> • **Numerator:** Number of patients days with invasive ventilation • **Denominator:** Number of patient days • **Calculation:** [Numerator] / [Denominator] x 100 <u>% of Patient Days with Non-Invasive Ventilation:</u> • **Numerator:** Number of patients days with non-invasive ventilation • **Denominator:** Number of patient days • **Calculation:** [Numerator] / [Denominator] x 100 • **Inclusion:** ▪ All patients days in the NICU with LSI data entered
Indicator Consideration	This indicator is consistent with the current (Adult and Paediatric) CCSO Critical Care Unit Level Scorecard indicator.
Frequency of Reporting	Quarterly
Report Generator	CCSO from CCIS data

12) Transfers from & Discharges to Lower, Same & Higher Level of Care Units

Indicator Name	Transfers from & Discharges to Lower, Same & Higher Level of Care Units
Indicator Domain	System Integration
Indicator Objective	Optimize Patient Flow
Indicator Definition	Percent of admissions transferred from and discharges to lower, same & higher external level of care units using NICU Peer Groups
Indicator Data Source	CCIS
Indicator Calculation	<u>% of Admissions transferred from lower, same & higher level of care units:</u> • **Numerator:** Number of admissions transferred from lower, same & higher external level of care units • **Denominator:** Number of admissions • **Calculation:** [Numerator] / [Denominator] x 100 • **Inclusion:** ▪ All NICU admissions <u>Some Examples of Admission from the lower, same, or higher level of care:</u> • **Admission from a lower level of care:** Baby admitted to a 3a/3b unit was a transfer from a Large 2c unit • **Admission from the same level of care:** Baby admitted to a 3a/3b unit was a transfer from a 3a/3b unit • **Admission from a higher level of care:** Baby admitted to a Large 2c unit was a transfer from a 3a/3b unit <u>% of Discharges to lower, same & higher level of care units:</u> • **Numerator:** Number of discharges to lower, same & higher external level of care units • **Denominator:** Number of discharges • **Calculation:** [Numerator] / [Denominator] x 100 • **Inclusion:** ▪ All NICU discharges <u>Some Examples of Discharge to lower, same or higher level of care:</u> • **Discharge to a lower level of care:** Baby discharged from a Large 2c unit to a large 2a/2b unit • **Discharge to the same level of care:** Baby discharged from a Large 2c unit to a Large 2c unit • **Discharge to a higher level of care:** Baby discharged from a Small 2a/2b unit to a 3a/3b unit
Indicator Consideration	This indicator is consistent with the current (Adult and Paediatric) CCSO Critical Care Unit Level Scorecard indicator.
Frequency of Reporting	Quarterly
Report Generator	CCSO from CCIS data

Appendices

APPENDIX A: Inventory of NICU Units reported in CCIS (as of August, 2022), By Peer Group

LHIN Code	Corporation Name	Site Name	Level Of Care	Peer Group
(01) ESC	Bluewater Health	Sarnia	2a	Small 2a/2b
(01) ESC	Chatham-Kent Health Alliance	Chatham	2b	Small 2a/2b
(02) SW	Grey Bruce Health Services	Grey Bruce Health Services - Owen Sound	2b	Small 2a/2b
(02) SW	St. Thomas-Elgin General Hospital	St. Thomas Elgin General Hospital	2a	Small 2a/2b
(02) SW	Stratford General Hospital	Stratford General Hospital	2a	Small 2a/2b
(03) WW	Cambridge Memorial Hospital	Cambridge Memorial Hospital	2a	Small 2a/2b
(04) HNHB	Brant Community Healthcare System	Brantford General Hospital	2b	Small 2a/2b
(06) MH	Halton Healthcare Services Corporation	Milton	2a	Small 2a/2b
(09) CE	Lakeridge Health	Ajax	2b	Small 2a/2b
(10) SE	Quinte Healthcare Corporation	Belleville	2a	Small 2a/2b
(11) CH	Hôpital Montfort	Hôpital Montfort	2a	Small 2a/2b
(11) CH	Queensway - Carleton Hospital	Queensway Carleton Hospital	2a	Small 2a/2b
(13) NE	Timmins and District General Hospital	Timmins and District Hospital	2a	Small 2a/2b
(03) WW	Grand River Hospital Corporation	Kitchener Waterloo Hospital	2b	Large 2a/2b
(03) WW	Guelph General Hospital	Guelph General Hospital	2a	Large 2a/2b
(04) HNHB	Joseph Brant Hospital	Joseph Brant Hospital	2b	Large 2a/2b
(04) HNHB	St. Joseph's Healthcare (Charlton)	Charlton	2b	Large 2a/2b
(06) MH	Halton Healthcare Services Corporation	Oakville Trafalgar	2b	Large 2a/2b
(09) CE	Peterborough Regional Health Centre	Peterborough Regional Health Centre	2b	Large 2a/2b
(05) CW	William Osler Health Centre	Etobicoke General	2c	Small 2c
(06) MH	Trillium Health Partners	Mississauga Hospital	2c	Small 2c
(07) TC	Toronto East Health Network	Michael Garron Hospital	2c	Small 2c
(08) CE	Mackenzie Health	Mackenzie Health	2c	Small 2c
(08) CE	Oak Valley Health	Markham Stouffville Site	2c	Small 2c
(08) CE	Southlake Regional Health Centre	Southlake Regional Health Centre	2c	Small 2c
(09) CE	Scarborough Health Network	General	2c	Small 2c
(12) NSM	Orillia Soldiers Memorial Hospital	Orillia Soldiers Memorial Hospital	2c	Small 2c
(12) NSM	Royal Victoria Regional Health Centre	Royal Victoria Regional Health Centre	2c	Small 2c
(13) NE	Health Sciences North	Health Sciences North	2c	Small 2c
(13) NE	North Bay Regional Health Centre	North Bay Site	2c	Small 2c
(13) NE	Sault Area Hospital	Sault Area Hospital	2c	Small 2c
(14) NW	Thunder Bay Regional Health Sciences Centre	Thunder Bay Regional Health Sciences Centre	2c	Small 2c
(01) ESC	Windsor Regional Hospital	Metropolitan Campus	2c	Large 2c
(04) HNHB	Hamilton Health Sciences	McMaster University Medical	2c	Large 2c
(04) HNHB	Niagara Health System	St. Catharines General	2c	Large 2c
(05) CW	William Osler Health Centre	Brampton Civic Hospital	2c	Large 2c
(06) MH	Trillium Health Partners	Credit Valley Hospital	2c	Large 2c
(07) TC	Unity Health Toronto	St. Joseph's	2c	Large 2c
(07) TC	Unity Health Toronto	St. Michael's	2c	Large 2c
(08) CE	Humber River Hospital	Wilson Site	2c	Large 2c
(08) CE	North York General Hospital	General Site	2c	Large 2c
(09) CE	Lakeridge Health	Oshawa	2c	Large 2c
(09) CE	Scarborough Health Network	Centenary	2c	Large 2c
(11) CH	The Ottawa Hospital	Civic Site	2c	Large 2c
(02) SW	London Health Sciences Centre	Children's Hospital	3b	3a/3b
(04) HNHB	Hamilton Health Sciences	McMaster University Medical	3b	3a/3b
(07) TC	Sinai Health System	Mount Sinai Hospital	3a	3a/3b
(07) TC	Sunnybrook Health Sciences Centre	Bayview Campus	3a	3a/3b
(07) TC	The Hospital for Sick Children	The Hospital for Sick Children	3b	3a/3b
(10) SE	Kingston Health Sciences Centre	Kingston General	3b	3a/3b
(11) CH	Children's Hospital of Eastern	Children's Hospital of Eastern	3b	3a/3b
(11) CH	The Ottawa Hospital	General Site	3a	3a/3b

APPENDIX B: NICU Levels of Care Definitions

Peer Group	Definition
Level 2a	**Acute Care Criteria:** Gestational age ≥ 34 weeks and 0 days and a birth weight of > 1800 grams **Repatriation Criteria:** Stable infants with a corrected age of > 32 weeks and 0 days and a weight of > 1500 grams and not requiring ventilator support or advanced treatments or investigations.
Level 2b	**All Level 2a Standards Plus Additional Items for Level 2b NICUs** **Acute Care Criteria:** Babies born at a gestational age of ≥ 32 weeks and 0 days and a birth weight of > 1500 grams **Repatriation Criteria:** Stable infant with a corrected age > 30 weeks and 0 days and a weight > 1200 grams and not requiring any form of invasive or non-invasive ventilation, or advanced treatments or investigations.
Level 2c	**Additional for Level 2c NICU** **Acute Care Criteria:** Babies born at a gestational age of ≥ 30 weeks and 0 days and a birth weight of > 1200 grams **Repatriation Criteria:** Baby with a corrected gestational age of ≥ 28 weeks and 0 days and a weight of ≥ 1000 grams; stable on CPAP for a minimum of 48 hours and not requiring non-invasive or invasive ventilatory support
Level 3a	**Acute Care Criteria:** Babies born of any gestational age and birth weight
Level 3b	**Acute Care Criteria**: Babies born of any gestational age and birth weight plus some additional requirements for Level 3b (optional for Level 3a)

For more detailed information on the Levels of Care and criteria within each Peer Group, please refer to the ***Neonatal Intensive Care Unit (NICU) Levels of Care Guidance Document*** which can be found by following this link here: https://criticalcareontario.ca/wp-content/uploads/2021/10/NICU-Levels-of-Care-Update_Guidance-Document_FINAL-2021.pdf