KPMG

preyra solutions group

# Region-Wide Maternal Newborn Health Services Capacity Plan – Phase 1

## Facilitated by Champlain Maternal Newborn Regional Program (CMNRP)

**Final Report**

**April 2019**

# Introduction to this Document

## Background

The Champlain Maternal Newborn Regional Program (CMNRP) Network Council identified the need for the development of a plan that will help to better meet the unique needs of women, newborns and families in the Champlain region. This initiative was completed at the request of the Champlain LHIN. CMNRP, with financial support from the Champlain LHIN, engaged KPMG to lead the development of a region-wide Integrated Maternal Newborn Health Services Capacity Plan that provides recommendations on an improved service delivery model. This was done through an analysis of the population served in the region considering current resources; and delivers a medium- to long-term projection of healthcare service needs. The plan was developed using comprehensive quantitative and qualitative data, as well as integrating current leading practices in the delivery of maternal newborn care. The scope of the plan was focused on birth and NICU care; from active labour and birth up to hospital discharge, and the first 24 hours for midwifery-led, out-of-hospital births (at home and at the Ottawa Birth and Wellness Centre).

## KPMG's Role

In performing its procedures, KPMG acted as facilitators to assist CMNRP in reaching decisions about strategies for delivery of the capacity plan. In addition, KPMG's role included outlining certain matters that came to its attention during its work and to offer comments and observations for the CMNRP's Leadership and Steering Committee's consideration.

KPMG's procedures consisted solely of inquiry, observation, retrieval, comparison and analysis of data and/or CMNRP network members-provided information. KPMG relied on the completeness and accuracy of the information provided. Such work does not constitute an audit. Accordingly, KPMG expresses no opinion on the regional plan, financial results, internal controls or other information.

# Introduction to this Document (continued)

## CMNRP's Role

Through its established structure and processes, CMNRP performs the following functions:

- Evaluate reported data, comments and observations used to develop this report
- Share the report with the Steering Committee, Network Council and leadership and key stakeholders of the regional network's organizations
- Perform facilitating functions associated with the Regional Capacity Plan (including the assessment of findings and support of recommendations' implementation, as appropriate and approved by the network partners' senior leadership, considering their impact)
- Support ongoing monitoring ongoing activities, as appropriate and determined by the network.

## Terms of Engagement

This document has been prepared by KPMG LLP ("KPMG") for CMNRP ("Client") pursuant to the terms of our engagement agreement with Client dated May 22nd, 2018 (the "Engagement Agreement"). KPMG neither warrants nor represents that the information contained in document is accurate, complete, sufficient or appropriate for use by any person or entity other than Client or for any purpose other than set out in the Engagement Agreement. This document may not be relied upon by any person or entity other than Client, and KPMG hereby expressly disclaims any and all responsibility or liability to any person or entity other than Client in connection with their use of this document.

# Introduction to this Document (continued)

**The Collaborative Process**

KPMG's collaborative process included:

- Quantitative and qualitative analysis of birth and NICU/SCN services and activities from active labour and birth up to hospital discharge, or the first 24 hours for out-of-hospital midwifery-led births (at home and at the Ottawa Birth and Wellness Centre)
- Regular meetings with the Steering Committee and touch points with the CMNRP Leadership Team
- 19 stakeholder consultations with over 120 participants in total
- 2 stakeholder workshops with 69 participants in total

KPMG's scope was limited and specifically excluded:

- Services and programs outside of birth and neonatal care
- Assessment of quality of care
- Health human resource analysis and planning
- Capital planning and expenditure
- Current care cost analysis

**Acknowledgement**

KPMG would like to thank:

- Members of the Steering Committee for their open and patient-centric insights, and the over 180 participants in 20+ consultations and workshops for their time and input
- The CMNRP Leadership Team for their collaborative approach to supporting the development of the regional capacity plan

# Report Purpose and Structure

This report represents the deliverable titled *Final Report* for the CMNRP Region-Wide Maternal Newborn Health Services Capacity Plan (Phase 1) project. The objective of this report is to provide a current state overview as well as future state recommendations for maternal newborn services in the region for birthing and neonatal care, highlighting key findings from stakeholder consultations and extensive data analysis, along with potential considerations and implications for future state development.

The following sections are contained within the report:

# 1. Executive Summary

# 1.1 Executive Summary

## Introduction

The Champlain Maternal Newborn Regional Program (CMNRP) is leading the development of a plan that will help better meet the unique needs of women, newborns and families in the Champlain region. Phase 1 of the capacity plan is focused on birth and neonatal care. This includes services and activities from active labour and birth up to hospital discharge, or the first 24 hours for out-of-hospital midwifery-led births (at home and at the Ottawa Birth and Wellness Centre).

This work was led by a Steering Committee comprised of representatives from hospitals, the birthing centre, the LHIN, BORN Ontario, a family advisor and health care providers including obstetricians, family physicians, paediatricians, neonatologists, nurses, and midwives.

This report includes detailed quantitative and qualitative findings that describe the issues affecting the current delivery of services in the region, as well as recommendations for future state options.

## Current State Assessment

An understanding of the current state was gained through both quantitative analysis of provincial, regional, and site specific data (e.g. utilization, demographics). To contextualize this analysis, qualitative data was gathered through 19 stakeholder consultation sessions with over 120 participants (including patients and providers) throughout the region. Along with these consultations, workshops conducted with stakeholders, meetings with the Steering Committee and the CMNRP Leadership Team provided relevant context to understand hospital and out-of-hospital services related to birth and neonatal care, and regional and demographic data to identify the current state of maternal newborn services capacity.

Eight key findings on the current state (see next page) emerged from this analysis.

# 1.1 Executive Summary (continued)

## *Current State Findings*

| Finding | Description |
|---|---|
| **BED & PROVIDER CAPACITY** | |
| 1 Maternal Capacity | The Champlain LHIN has the physical maternal bed capacity to meet the populations' needs now and for at least the next 20 years. |
| 2 NICU Capacity | The Champlain LHIN hospitals have the physical NICU bassinet capacity to meet their populations' needs now and for the next 20 years. |
| 3 Physician Capacity | Physician capacity is an important consideration in planning future maternal and newborn services, particularly in the lower volume hospitals in rural areas. |
| 4 Midwifery Capacity | Demand for midwifery services is increasing and appears to exceed existing capacity in certain areas within the LHIN. |
| **MODELS OF CARE** | |
| 5 NICU Levels of Care | As a result of lack of clarity and inconsistent application of LOC designations among the five neonatal units, care can be inconsistent and uncoordinated. |
| 6 NICU Patient Flow | There are opportunities to improve the appropriate utilization of beds, reduce short stays and improve patient flow to optimize use of NICU resources. |
| 7 Maternal Care | Meeting the needs of the LHIN's rural populations likely requires maintaining all existing obstetric programs; however, low expected growth implies a need to explore changes in the mix of provider types over time. |
| **PATIENT AND FAMILY EXPERIENCE** | |
| 8 Patient and Family Experience | Patient experience varies depending on provider and site of care. |

### Future State Development

A set of ten recommendations (see next page) addressing the current state findings were developed through consultation and collaboration with stakeholders, the Steering Committee and the CMNRP Leadership Team.

# 1.1 Executive Summary (continued)

## Future State Recommendations

| | |
|---|---|
| **MATERNAL NEWBORN SERVICES SYSTEM CAPACITY** | |
| 1 | Continue operating all existing maternal newborn programs at all rural Champlain LHIN hospitals. |
| 2 | Additional bed capacity is not required in the Champlain LHIN's maternal newborn system. |
| **DELIVERY OF NEONATAL CARE** | |
| 3 | Define clear roles for each organization within the region and validate level of care designations and associated services for NICU and Special Care Nurseries (SCN). |
| 4 | Consider reorganizing and potentially redistributing NICU/SCN bassinets in the region to improve efficiency and patient experience while maintaining high quality care. Establish a working group comprising senior leaders and physician leaders to lead this initiative. |
| 5 | Identify and address why infants living in different parts of the LHIN have very different rates of NICU/SCN use. |
| 6 | Establish a clinically-led regional neonatology program aimed at reviewing and adopting clinical standards of practice throughout the region. |
| 7 | Improve neonatal transport team availability. |
| **LOW-RISK BIRTH SERVICES** | |
| 8 | Recognizing that obstetricians, family physicians and midwives play a critical role in providing low risk maternal newborn care, their respective roles should be considered in the context of each other's to promote appropriate access and care. This should be done by bringing stakeholders together to establish the appropriate provider mix for each community, now and in the future, while exploring innovative integrated models of care. In addition, given women in the region requested increased access to midwifery services, midwifery privileging processes at each hospital should be reviewed and opportunities to increase the number of midwifery supported births at OBWC should be explored. |
| **REGIONAL PLANNING & COORDINATION** | |
| 9 | Maintain CMNRP's role for professional development and promotion of leading practices, and strengthen its role to serve as a mechanism to continue to support and improve regional coordination and planning. |
| 10 | Improve coordinated planning across sites providing maternal and newborn services by requiring organizations to assess and confirm the implications of their plans for other providers and system stakeholders. |

# 2. Project Background

# 2.1 Project Purpose

The CMNRP Network Council identified the need for the development of a plan that will help better meet the unique needs of women, newborns and families in the Champlain region. This initiative was completed at the request of the Champlain LHIN, who also provided financial support to CMNRP.

**Purpose:** Develop a region-wide Integrated Maternal Newborn Health Services Capacity Plan that provides recommendations on an improved service delivery model done through an analysis of the population served in the region considering current resources; and delivers a medium- to long-term projection of healthcare service needs. The plan will be developed using comprehensive quantitative and qualitative data, as well as integrating current leading practices in the delivery of maternal newborn care.

This work was led by a Steering Committee comprised of representatives from hospitals, the birthing centre, the LHIN, BORN Ontario, a family advisor and health care providers including obstetricians, family physicians, paediatricians, neonatologists, nurses, and midwives. See Section 6.3. for Steering Committee members.

# 2.2 Project Scope

***Phase 1 of the capacity plan was focused on birth and neonatal care. This includes services and activities from active labour and birth up to hospital discharge, or the first 24 hours for out-of-hospital midwifery-led births (at home and at the Ottawa Birth and Wellness Centre).***

The scope, which was endorsed by the Steering Committee, was as follows:

| In Scope | Not in Scope |
|---|---|
| • **Birth** - Hospital and out-of-hospital births, as per level of care<br>• **Neonatal Care** – unique needs of newborns that require post-delivery care in Neonatal Intensive Care Units and/or Special Care Nurseries | • **Assessment of quality of care**<br>• **Health human resource analysis and planning**<br>• **Capital planning and expenditure**<br>• **Current care cost analysis** |

# 2.3 Project Approach

Below is the summary of the approach to understand the current state of maternal newborn services in the region and to develop future state recommendations.

| | KEY ACTIVITIES | OUTCOMES |
|---|---|---|
| **1. PROJECT INITIATION**<br>***Confirm objectives, scope, approach, data requirements, stakeholders and timeline*** | • Conduct project initiation meeting<br>• Kick-off meeting<br>• Identify, confirm and schedule stakeholder consultations<br>• Provide data and information request | • Updated detailed work plan<br>• Stakeholder consultation plan |
| **2. CURRENT STATE ASSESSMENT**<br>***Understand client needs and available services through stakeholder engagement and data analysis*** | • Conduct stakeholder consultation sessions<br>• Conduct data analysis<br>• Synthesize findings and develop current state report<br>• Facilitate Workshop 1: Current State Validation | • Stakeholder engagement summary<br>• Current State Report |
| **3. FUTURE STATE DEVELOPMENT**<br>***Develop a region-wide Capacity Plan that will guide planning and execution of programming and services*** | • Facilitate Workshop 2: Recommendation Development<br>• Draft future state recommendations for capacity planning<br>• Develop Final Report | • Final Report – Recommendations for Capacity Plan |

# 2.4 Data Collection and Analysis

The current state assessment findings are based on analysis of quantitative and qualitative data.

**Quantitative**

We used recent activity trends; baseline demographic forecasts; NICU capacity; variations in NICU practice; and the implications of social determinants of health for maternal morbidity risk as well as preterm deliveries; neonatal abstinence syndrome; NICU transfer patterns; market share; out-of-province and out-of-country patients delivering in the LHIN; and travel times.

**Qualitative**

We obtained the perspectives of stakeholders from across the LHIN to identify key issues related to maternal and newborn care in the region:

- Steering Committee: comprised of representatives from CMNRP partners and stakeholders (see Section 6.3).
- Stakeholder Consultations: 19 consultation sessions with providers, the LHIN, and patients and families (120+ participants) – see table below. Several attempts were made to engage with Indigenous families through outreach to representatives and email correspondence.

| Providers/LHIN (~80 Participants) | |
|---|---|
| 1. Winchester Hospital | 7. Ottawa Birth and Wellness Centre |
| 2. Hôpital Montfort | 8. Midwifery Community of Practice |
| 3. Queensway Carleton Hospital | 9. Almonte General Hospital |
| 4. Champlain LHIN | 10. Pembroke Regional Hospital |
| 5. The Ottawa Hospital | 11. Cornwall Community Hospital |
| 6. Hawkesbury and District General Hospital | 12. CHEO |

| Patients & Families (~40 Participants) | |
|---|---|
| 13. Vanier Community Service Centre – English | 17. Pembroke EarlyON Child and Family Centre |
| 14. Vanier Community Service Centre – French | 18. SCN/NICU Parents |
| 15. Mothercraft EarlyON Child and Family Centre | 19. CMNRP Family Advisory Committee |
| 16. Winchester EarlyON Child and Family Centre | |

# 3. Champlain LHIN Maternal Newborn Services Profile

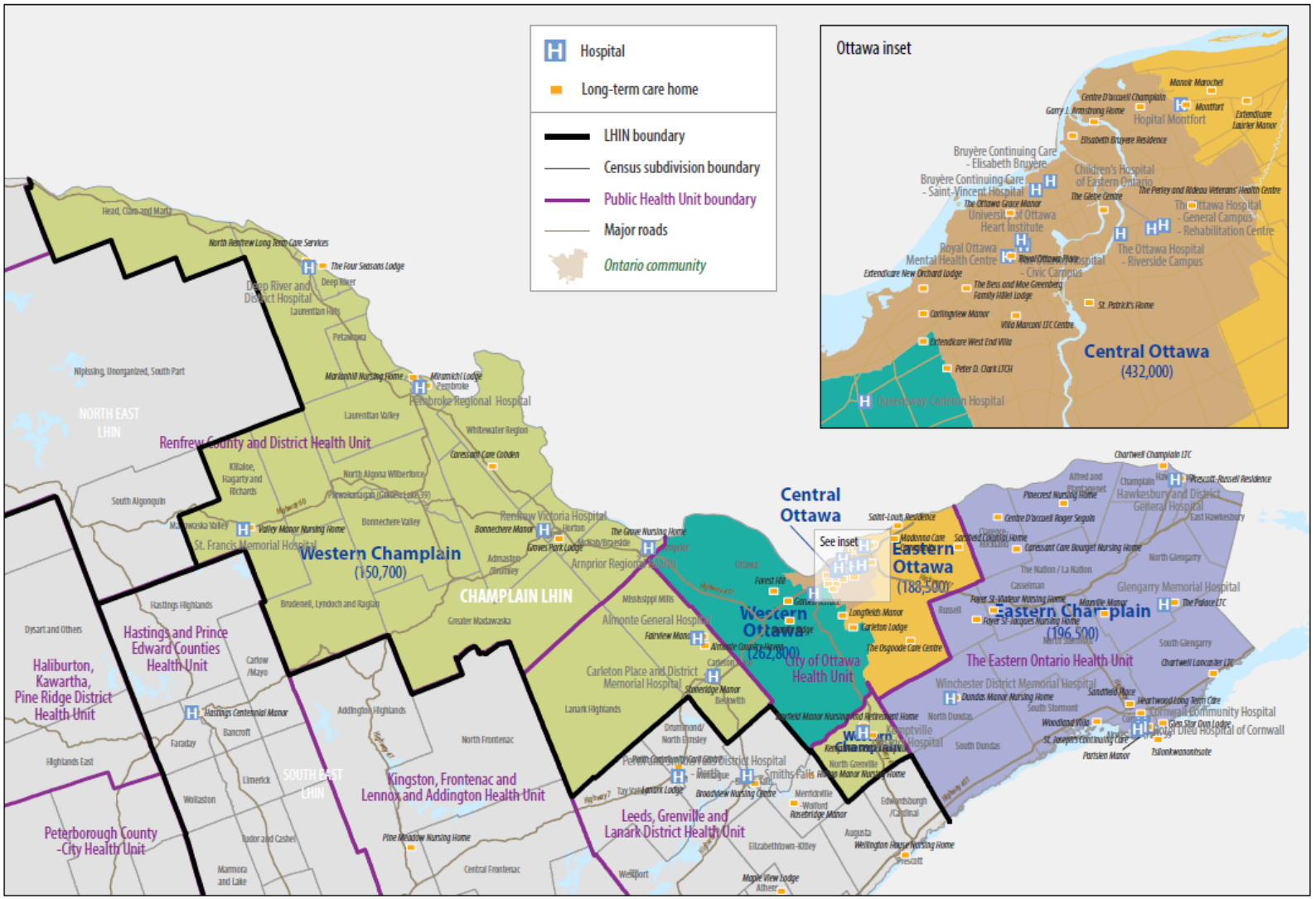
# 3.0 Introduction

**This section highlights data and findings that provide context and characterize the current state of maternal newborn services in the Champlain region. These findings informed the development of future state recommendations.**

The table below summarizes the information found in this section.

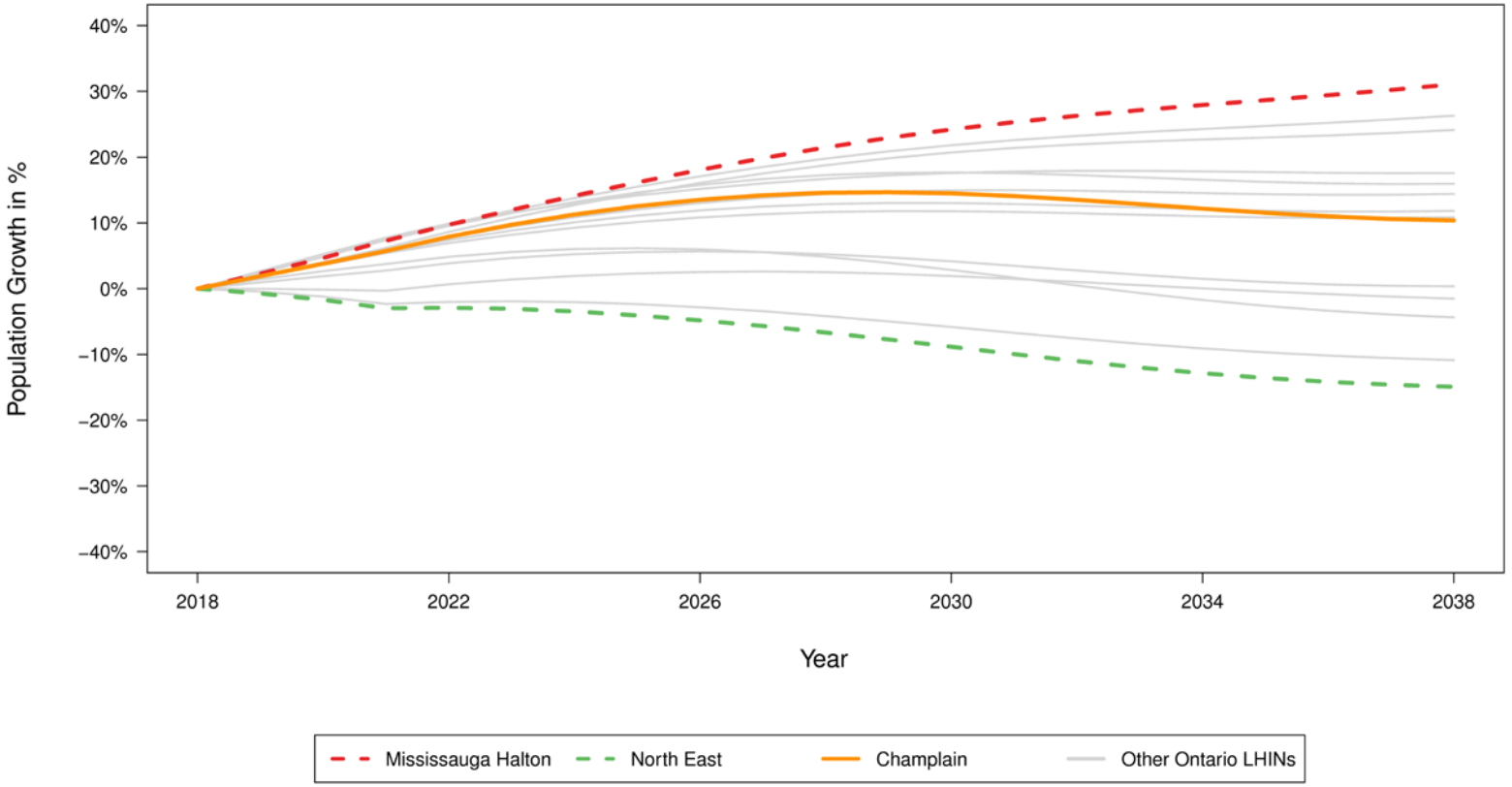
| Section | Description |
|---|---|
| 3.1 The Champlain LHIN and Subregions | Map of the Champlain LHIN geographic boundaries |
| 3.2 Population Trends 2018 – 2038 | Projected population percentage growth across all LHINs |
| 3.3 Hospital Maternal Newborn Services Attributes | Overview of hospitals providing maternal newborn services including LOC, number of staffed and physical maternal and NICU/SCN beds, and births in 2016/17 |
| 3.4 Birthing Trends | Two-year trend in births from 2014/15 to 2016/17 across all Champlain LHIN hospitals providing birthing services |
| 3.5.1 Capacity Profile: Maternal Care | Overview of physical and staffed maternal beds based on activity and occupancy in 2016/17, and projected need for 2036/37 |
| 3.5.2 Capacity Profile: Births by Healthcare Provider | Breakdown of births at each hospital by healthcare provider type in 2016/17 |
| 3.5.3 Capacity Profile: Midwifery supported births by LHIN Subregion | Proportion of midwifery-supported births by LHIN Subregion |
| 3.5.4 Capacity Profile: NICU/SCN Care | Overview of physical and staffed NICU/SCN beds based on activity and occupancy in 2016/17, and projected need for 2036/37 |

# 3.1 The Champlain LHIN and Subregions




*Source: LHIN website*

# 3.2 Population Trends 2018 - 2038




*Source: Ontario Ministry of Finance Population Projections*

- The Champlain LHIN's population aged <1 is not expected to increase substantially over the next 20 years

# 3.3 Hospital Maternal Newborn Services Attributes

| Hospital | LOC Designation | Physical neonatal bassinets | Staffed neonatal bassinets | Physical maternal beds | Staffed maternal beds | Births (2016/17) |
|---|---|---|---|---|---|---|
| Almonte General Hospital | Level 1 | 0 | 0 | 7 | 5 | 367 |
| Children's Hospital of Eastern Ontario | Level 3b | 20 | 16 | 0 | 0 | 0 |
| Cornwall Community Hospital | Level 1 | 0 | 0 | 17 | 10 | 586 |
| Hawkesbury Hospital | Level 1 | 0 | 0 | 6 | 8 | 389 |
| Hôpital Montfort | Level 2a | 8 | 4 | 34 | 27 | 2,998 |
| Pembroke Regional Hospital | Level 1 | 0 | 0 | 16 | 7 | 696 |
| Queensway Carleton Hospital | Level 2a | 7 | 4 | 38 | 24 | 2,299 |
| The Ottawa Hospital - Civic | Level 2c | 19 | 17 | 43 | 37 | 3,207 |
| The Ottawa Hospital - General | Level 3a | 24 | 24 | 43 | 38 | 2,739 |
| Winchester District Memorial Hospital | Level 1 | 0 | 0 | 13 | 12 | 772 |
| Total | | 78 | 65 | 217 | 168 | 14,053 |

*Sources: Hospital Self-Reported Data - November 2018*

# 3.4 Birthing Trends

| *Hospital* | *Champlain LHIN: Trend in Births* | | | |
|---|---|---|---|---|
| | *2014/15* | *2015/16* | *2016/17* | *2yr Growth* |
| Almonte General Hospital[1] | 309 | 392 | 367 | 19% |
| Cornwall Community Hospital | 519 | 539 | 586 | 13% |
| Hawkesbury And District General | 423 | 412 | 389 | -8% |
| Hôpital Montfort | 3,393 | 3,212 | 2,998 | -12% |
| Pembroke Regional Hospital Inc. | 750 | 743 | 696 | -7% |
| Queensway-Carleton Hospital | 2,338 | 2,384 | 2,299 | -2% |
| The Ottawa Hospital: Civic Campus | 3,140 | 3,077 | 3,207 | 2% |
| The Ottawa Hospital: General Campus | 2,927 | 2,814 | 2,739 | -6% |
| Winchester District Memorial Hospital | 757 | 744 | 772 | 2% |
| **Hospital Total** | **14,556** | **14,317** | **14,053** | **-3%** |
| Birth Centre* | 159 | 200 | 226 | 42% |
| Home* | 326 | 358 | 327 | 0% |
| **Out of Hospital Total*** | **485** | **558** | **553** | **14%** |
| **Champlain LHIN Total** | **15,041** | **14,875** | **14,606** | **-3%** |

*Sources: DAD 2014/15 - 2016/17; *BORN 2014/15 - 2016/17*

- Total births at Champlain LHIN hospitals decreased by 3 percent from 2014/15 to 2016/17
- Almonte General and Cornwall Community hospitals had substantial percentage increases
- All Ottawa area hospitals combined had a 5 percent decrease in births

*1. Almonte General Hospital had 411 births in 2017/18*

# 3.5.1 Capacity Profile: Maternal Care

| Hospital | Physical maternal beds[1,2] | Staffed maternal beds[1,2] | Births 2016/17 | Obstetric Activity 2016/17 | | | | Beds Required at 75% Occupancy | | Physical Bed Capacity Gaps | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Discharges | Days | ALOS | Occupancy Rate (staffed beds) | 2016/17 | 2036/37 | 2016/17 | 2036/37 |
| Almonte General | 7 | 5 | 367 | 389 | 857 | 2.2 | 47% | 3 | 3 | -4 | -4 |
| Cornwall Community | 17 | 10 | 586 | 667 | 1,274 | 1.9 | 35% | 5 | 4 | -5 | -6 |
| Hawkesbury And District General[3] | 6 | 6 | 389 | 415 | 824 | 2.0 | 38% | 3 | 3 | -3 | -3 |
| Hôpital Montfort | 34 | 27 | 2,998 | 3,343 | 7,204 | 2.2 | 73% | 26 | 29 | -8 | -5 |
| Pembroke Regional | 16 | 7 | 696 | 738 | 1,493 | 2.0 | 58% | 5 | 5 | -11 | -11 |
| Queensway-Carleton | 38 | 24 | 2,299 | 2,413 | 4,983 | 2.1 | 57% | 18 | 20 | -20 | -18 |
| The Ottawa Hospital: Civic | 43 | 37 | 3,207 | 3,698 | 8,448 | 2.3 | 63% | 31 | 34 | -14 | -11 |
| The Ottawa Hospital: General | 43 | 38 | 2,739 | 3,459 | 8,037 | 2.3 | 58% | 29 | 33 | -14 | -10 |
| Winchester District Memorial | 13 | 12 | 772 | 788 | 1,289 | 1.6 | 29% | 5 | 5 | -7 | -7 |
| **Champlain LHIN hospitals** | **217** | **166** | **14,053** | **15,910** | **34,409** | **2.2** | **57%** | **125** | **136** | **-86** | **-75** |

1. PCMCH LOC Survey 2018;
2. CMNRP Bed Profile Table - survey of Champlain LHIN hospitals November 2018;
3. Email from Daniel Lebreux December 19 2018

Data Source: DAD 2016/17; Ontario Ministry of Finance Population Projections
(More details on hospital capacity available in Appendix 39)

*Physical beds – number physical beds not considering physical location or physical space standards*

*Staffed beds – number of beds the hospital receives funding for, for the specific program*

- Across the Champlain LHIN, there are many physical maternal beds that are not used for maternal care
- At all hospitals, occupancy rates of staffed maternal beds are below the standard planning target of 75%
- Lower target occupancy rates could be considered for Level 1 hospitals

# 3.5.2 Capacity Profile: Births by Health Care Provider

| | *Percent of Births by Health Care Provider* | | | | |
|---|---|---|---|---|---|
| *Hospital* | *Family / General Practice Medicine* | *Maternal-Fetal Medicine* | *Midwifery* | *Obstetrics and Gynecology* | *Total Births* |
| Almonte General Hospital | 1% | | 34% | 65% | 367 |
| Cornwall Community Hospital | 0% | | 11% | 88% | 586 |
| Hawkesbury And District General | 82% | | 0% | 18% | 389 |
| Hôpital Montfort | 17% | | 10% | 73% | 2,998 |
| Pembroke Regional Hospital | 8% | | 7% | 85% | 696 |
| Queensway-Carleton Hospital | 7% | | 4% | 89% | 2,299 |
| TOH: Civic | 11% | 4% | 11% | 75% | 3,207 |
| TOH: General | 9% | 12% | 0% | 79% | 2,739 |
| Winchester District Memorial | 12% | | 17% | 71% | 772 |
| Ottawa Birth and Wellness Centre | | | 100% | | 226 |
| **Total** | **12%** | **3%** | **9%** | **75%** | **14,279** |

*Source: DAD 2016/17*

- 12% of the LHIN's total hospital births were led by family physicians; this varies from 0% to 82% by hospital
- 3% of the LHIN's total hospital births were led by maternal-fetal medicine specialists at TOH
- 9% of the LHIN's total hospital and Ottawa Birth and Wellness Centre births were midwifery supported; this varies from 0% to 34% by hospital/organization
- 75% of the LHIN's total hospital births were led by OBGYNs; this varies from 18% to 89% by hospital

# 3.5.3 Capacity Profile: Midwifery supported births by LHIN Subregion

| | *Hospital Births* | | | | | *Births in other Settings* | | |
|---|---|---|---|---|---|---|---|---|
| *Patient Sub-Region* | *Family practice / general practice medicine* | *Obstetrics and gynecology* | *Midwifery* | *Other Provider Types* | *Hospital Total* | *Home Midwifery Supported* | *OBWC Midwifery Supported* | *Percent Midwifery Supported Births* |
| Eastern Champlain | 418 | 1,321 | 207 | 37 | 1,983 | 43 | 11 | 12.8% |
| Central Ottawa | 436 | 3,114 | 353 | 162 | 4,065 | 100 | 112 | 13.2% |
| Eastern Ottawa | 179 | 1,616 | 152 | 69 | 2,016 | 37 | 55 | 11.6% |
| Western Champlain | 99 | 1,199 | 133 | 27 | 1,458 | 69 | 4 | 13.5% |
| Western Ottawa | 189 | 2,403 | 236 | 76 | 2,904 | 78 | 44 | 11.8% |
| **Champlain LHIN** | **1,321** | **9,653** | **1,081** | **371** | **12,426** | **327** | **226** | **12.6%** |

*Source: DAD 2016/17*

- 12.6% of the Champlain LHIN residents' total births are midwifery supported
- This varies from 11.6% in Eastern Ottawa to 13.5% in Western Champlain
- There is little variation in the proportion of midwifery supported births across the LHIN's subregions

# 3.5.4 Capacity Profile: NICU/SCN Care

| Hospital | Physical Bassinets | Staffed Bassinets | 2016/17 NICU Activity: Admissions | Days | NICU ALOS | Occupancy Rate (staffed beds) | Planning Occupancy Rate | Bassinets Required at Planning Occupancy: 2016/17 | 2036/37 | Physical Bassinet Capacity Gap: 2016/17 | 2036/37 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHEO | 20 | 16 | 363 | 4,562 | 12.6 | 78% | 80% | 16 | 18 | -4 | -2 |
| Hôpital Montfort | 8 | 4 | 608 | 1,604 | 2.6 | 110% | 75% | 6 | 7 | -2 | -1 |
| Queensway-Carleton | 7 | 4 | 320 | 1,047 | 3.3 | 72% | 75% | 4 | 5 | -3 | -2 |
| The Ottawa Hospital: Civic[1] | 19 | 17 | 849 | 5,255 | 6.2 | 85% | 80% | 18 | 21 | -1 | 2 |
| The Ottawa Hospital: General[1] | 24 | 24 | 698 | 6,971 | 10.0 | 80% | 80% | 24 | 27 | 0 | 3 |
| **Champlain LHIN hospitals** | **78** | **65** | **2,838** | **19,438** | **6.8** | **82%** | | **68** | **78** | **-10** | **0** |

1. PCMCH LOC Survey 2018; Data Source: DAD 2016/17; Ontario Ministry of Finance Population Projections

- Champlain LHIN hospitals reported 78 physical NICU bassinets in 2018
- The LHIN's hospitals needed 68 bassinets in 2016/17 and will need 78 in 2036/37
- Relative to the reported physical capacity and expected population growth over the next 20 years:
  - The LHIN does not have a current or future NICU bassinet capacity gap
  - Only the two TOH sites will need to increase NICU bassinets over their current reported physical capacity, assuming no change in current practice

# 4. Current State Findings

# 4.0 Introduction to the Findings

**Current State Findings are presented within three primary categories. Each finding is further supported through quantitative and/or qualitative analysis.**

| Finding | Description |
|---|---|
| **PROVIDER CAPACITY** | |
| 1 Maternal Capacity | The Champlain LHIN has the physical maternal bed capacity to meet the populations' needs now and for at least the next 20 years. |
| 2 NICU Capacity | The Champlain LHIN hospitals have the physical NICU bassinet capacity to meet their populations' needs now and for the next 20 years. |
| 3 Physician Capacity | Physician capacity is an important consideration in planning future maternal and newborn services, particularly in the lower volume hospitals in rural areas. |
| 4 Midwifery Capacity | Demand for midwifery services is increasing and appears to exceed existing capacity in certain areas within the LHIN. |
| **MODELS OF CARE** | |
| 5 NICU Levels of Care | As a result of lack of clarity and inconsistent application of LOC designations among the five neonatal units, care can be inconsistent and uncoordinated. |
| 6 NICU Patient Flow | There are opportunities to improve the appropriate utilization of beds, reduce short stays and improve patient flow to optimize use of NICU resources. |
| 7 Maternal Care | Meeting the needs of the LHIN's rural populations likely requires maintaining all existing obstetric programs; however, low expected growth implies a need to explore changes in the mix of provider types over time. |
| **PATIENT AND FAMILY EXPERIENCE** | |
| 8 Patient and Family Experience | Patient experience varies depending on provider and site of care. |

Provider Capacity

# 4.1 Maternal Capacity

*C = Consultations, D = Data (Sources can be found in Appendices)*

## Finding

**The Champlain LHIN has the physical maternal bed capacity to meet the populations' needs now and for at least the next 20 years.**

| # | Support for Finding | Relevant Appendices |
|---|---|---|
| 1 | Champlain LHIN hospitals reported 217 physical maternal beds and 166 staffed beds in 2018. | D – Appendix 7 |
| 2 | The LHIN's hospitals required 125 maternal beds in 2016/17 and are projected to require 136 in 2036/37. All LHIN hospitals operated below the standard 75% occupancy rate and the LHIN average occupancy rate, relative to staffed beds was 56%. | D – Appendix 7 |
| 3 | If there is an increase in midwifery services due to demand, LOS will consequently decrease, thereby improving capacity. | D – Appendix 7<br>C – Appendix 3 |
| 4 | The number of beds dedicated for maternal cases, as reported by hospitals, does not reflect the availability of necessary Health Human Resources or other issues such as surge, outbreaks, aging infrastructure, potential physical capacity limitations, changing infection control standards. | C – Appendix 7 |
| 5 | The Ottawa Birth and Wellness Centre appears to have significant unused capacity. | D – Appendix 12 |

Provider Capacity

# 4.1 Maternal Capacity (continued)

*C = Consultations, D = Data (Sources can be found in Appendices)*

| # | Support for Finding | Relevant Appendices |
|---|---|---|
| 6 | All existing obstetric programs play an important role in meeting the LHIN's population needs. | D – Appendix 24, 25<br>C – Appendix 2, 3 |
| 7 | 10 percent of births at Champlain hospitals are from Quebec residents. | D – Appendix 6 |

## Implications

- There appears to be excess maternal bed capacity.
- Hospitals with apparent capacity may not have a total excess bed capacity, if maternal beds are substituting for medical beds – Maternal utilization should be confirmed.
- Reorganization of the distribution of maternal beds in the region may be required.
- Low projected growth implies that individual hospital programs will only be able to grow substantially by increasing market share.
- Access implications for the LHIN's rural populations precludes considering closing any existing small volume obstetrics program.
- The appropriate role of the Champlain LHIN in supporting births for Quebec patients needs to be explored.
- Maternal physical bed capacity, as reported by hospitals, does not necessarily reflect the availability of other important resources, including health human resources or the adequacy of existing capacity to address other issues including surges, outbreaks, meeting contemporary infection control standards, and aging capital infrastructure.
- An excess capacity of physical reported obstetrics beds does not necessarily imply that a hospital has excess beds overall, as the beds may be used to address capacity constraints in other programs.

Provider Capacity

# 4.2 NICU Capacity

*C = Consultations, D = Data (Sources can be found in Appendices)*

## Finding

**The Champlain LHIN hospitals have the physical NICU bassinet capacity to meet their populations' needs now and for the next 20 years.**

| # | Support for Finding | Relevant Appendices |
|---|---|---|
| 1 | The LHIN's hospitals reported 78 physical bassinets and 65 staffed bassinets in 2018. | D – Appendix 1, 8 |
| 2 | The LHIN hospitals required 68 staffed bassinets in 2016/17 and the demographic forecast implies a need for 78 staffed bassinets in 2036/37, assuming occupancy rates of 80 percent at CHEO and TOH, and 75 percent at Montfort and Queensway-Carleton. | D – Appendix 8 |
| 3 | Across Ontario and the Champlain LHIN, the rates of NICU use vary greatly. For example, within the LHIN, NICU rates in Eastern Ottawa are roughly 50% higher than in Eastern Champlain. | D – Appendix 9 |
| 4 | Demand for NICU services may increase faster than demographic projections if the proportion of high risk births continues to increase. | D – Appendix 34, 35<br>C – Appendix 4 |
| 5 | Hôpital Montfort had a high NICU occupancy rate relative to staffed bassinets, but not relative to physical bassinets. | D – Appendix 8 |

Provider Capacity

# 4.2 NICU Capacity (continued)

*C = Consultations, D = Data (Sources can be found in Appendices)*

| # | Support for Finding | Relevant Appendices |
|---|---|---|
| 6 | Champlain LHIN has Ontario's second lowest rate of NICU days per infant. | D – Appendix 9, 10 |
| 7 | Capacity is distributed over 5 sites of different sizes, with different levels of care. Excluding CHEO, TOH provides care to 80% of patients requiring NICU care. | D – Appendix 8<br>C – Appendix 1 |
| 8 | There is no clear consensus in the literature on the right or minimum NICU size. | Literature review |

## Implications

- It does not appear the LHIN requires an increase in physical NICU bassinet capacity.
- To meet future demand, staffing and associated operational costs will need to be addressed.
- Low projected growth implies that individual hospital programs will only be able to grow substantially by increasing market share.
- Regional and hospital level variation in NICU use needs to be better understood.
- With a significant volume of activity being managed at TOH, it is difficult for the smaller sites (Montfort and Queensway Carleton) to run efficiently given their low volumes and limited capacity.
- The number of physical NICU bassinets, as reported by hospitals, does not necessarily reflect the availability of other important resources, including health human resources or the adequacy of existing capacity to address other issues including surges, outbreaks, meeting contemporary infection control standards, and aging capital infrastructure.

Provider Capacity

# 4.3 Physician Capacity

*C = Consultations, D = Data (Sources can be found in Appendices)*

| Finding |
| --- |
| **Physician capacity is an important consideration in planning future maternal and newborn services, particularly in the lower volume hospitals in rural areas.** |

| # | Support for Finding | Relevant Appendices |
| --- | --- | --- |
| 1 | It is a challenge for rural hospitals to attract and retain physicians with experience and skills to provide maternal newborn services. | C – Appendix 2, 5 |
| 2 | Impact of physician practices creates challenges in the comprehensive provision of maternal services and 24/7 coverage. | C – Appendix 4 |
| 3 | Patient experience accessing physician care is varied, particular challenges faced in rural hospitals. | C – Appendix 3, 5 |
| 4 | Champlain LHIN has Ontario's second highest ratio of obstetricians/gynecologists per woman of childbearing age, but has a lower proportion of births led by an obstetrician compared to the provincial average. At the same time, not all obstetricians/gynecologists focus their practice on obstetrics, and not all family physicians do births. | D – Appendix 13 |

Provider Capacity

# 4.3 Physician Capacity (continued)

## Implications

- Challenges for rural hospitals to provide high quality services to their community given the difficulty of attracting and retaining physicians who will live in the area.
- The right future mix of physician and midwife capacity needs to be determined.
- In rural communities, consideration must be given to physician funding if midwifery is to take on a more prominent role, given recruitment and retention is already a challenge.

Provider Capacity

# 4.4 Midwifery Capacity

*C = Consultations, D = Data (Sources can be found in Appendices)*

## Finding

**Demand for midwifery services is increasing and appears to exceed existing capacity in certain areas within the LHIN.**

| # | Support for Finding | Relevant Appendices |
|---|---|---|
| 1 | Some women living in the Champlain LHIN reported not being able to access midwifery services – 237 women reported they were not accommodated by a Midwifery Practice Group in 2016/17. | D – Appendix 11<br>C – Appendix 3 |
| 2 | Although some patients reported difficulty, access to midwifery supported birth does not vary significantly between subregions. | D – Appendix 14 |
| 3 | Midwifery privileges vary by hospital site, dependent on hospital bylaws and history. 2 of 9 maternity care hospital sites in the Champlain LHIN do not provide midwifery privileges. | D – Appendix 12<br>C – Appendix 2 |
| 4 | Midwifery is seen as a service that will grow over time given both patient demand and cost drivers. | C – Appendix 3, 4 |
| 5 | Champlain LHIN has slightly less than the provincial average proportion of total births led by midwives (excluding home births, but including births at OBWC). | D – Appendix 12, 13 |

Provider Capacity

# 4.4 Midwifery Capacity (continued)

*C = Consultations, D = Data (Sources can be found in Appendices)*

| # | Support for Finding | Relevant Appendices |
|---|---|---|
| 6 | At the Ontario 75th percentile of the proportion of midwife-supported births, Champlain LHIN would have had 414 midwifery supported births, or an increase of roughly 30 percent. | D – Appendix 13 |

## Implications

- There is a gap in midwifery capacity relative to population preferences and the gap is likely to increase over time.
- Maternal models of care that better support and integrate midwifery services should be examined to determine how best to support growth.

Models of Care

# 4.5 NICU Levels of Care

*C = Consultations, D = Data (Sources can be found in Appendices)*

## Finding

**As a result of lack of clarity and inconsistent application of LOC designations among the five neonatal units, care can be inconsistent and uncoordinated.**

| # | Support for Finding | Relevant Appendices |
|---|---|---|
| 1 | Hospitals have self-designated their LOC based on PCMCH definitions from 2011. Since then, Hôpital Montfort has acquired the academic designation and indicated its desire to change its LOC designation. PCMCH is in the process of evaluating LOC definitions and determining a more consistent process for re-designation. | C – Appendix 2, 4 |
| 2 | The process for a hospital to change its designation to a higher or lower LOC is not clear. | C – Appendix 4 |
| 3 | Patients may travel further to access services (e.g. testing) if capabilities are not available at their local hospital due to LOC designation. | C – Appendix 2, 5 |
| 4 | Regional approach agreed upon in the 2009 Blueprint has shifted, with TOH maintaining two NICU/SCNs and Montfort pursuing a higher LOC. | C – Appendix 5 |
| 5 | Maintaining required competency levels for staff is a challenge with the current spread of NICU beds (i.e., 2 NICUs and 3 SCNs in the Ottawa area) - having smaller sites with fewer beds and varied LOC presents a challenge for staffing. | C – Appendix 2, 5 |

Models of Care

# 4.5 NICU Levels of Care (continued)

## Implications

- Lack of rigour in application of LOC may place neonates in NICU/SCNs that are not the appropriate LOC, which may not provide the appropriate care matched to their needs.
- Need to clearly identify role of each site and the relationship with others to enhance care coordination.
- There is an opportunity to better define LOC designations.

Models of Care

# 4.6 NICU Patient Flow

*C = Consultations, D = Data (Sources can be found in Appendices)*

## Finding

**There are opportunities to improve the appropriate utilization of beds, reduce short stays and improve patient flow to optimize use of NICU resources.**

| # | Support for Finding | Relevant Appendices |
|---|---|---|
| 1 | Families reported frustration with inter-NICU/SCN transfers. | C – Appendix 3, 4, 5 |
| 2 | While average compared to other LHINs, Champlain LHIN infants are transferred between NICUs 2.5 times more than infants in Ontario's lowest NICU-transfer rate LHINs. | D – Appendix 19, 20, 22, 23<br>C – Appendix 5 |
| 3 | 30% of TOH General's NICU cases are transferred to another NICU/SCN, including roughly 10 percent to TOH Civic. | D – Appendix 21 |
| 4 | Champlain LHIN NICU/SCNs have among Ontario's highest rates of short stay cases, but lowest utilization of NICU beds compared to other LHINs. | D – Appendix 17, 18 |
| 5 | Through consultations, it appears transfers are often triggered by lack of availability of appropriate LOC bed. | C – Appendix 3, 5 |
| 6 | Queensway Carleton Hospital and Hôpital Montfort are the only two large-volume hospitals in Ontario with a level 2a designation. Montfort is the only teaching hospital with a level 2a Special Care Nursery. | D – Appendix 34 |

Models of Care

# 4.6 NICU Patient Flow (continued)

*C = Consultations, D = Data (Sources can be found in Appendices)*

| # | Support for Finding | Relevant Appendices |
|---|---|---|
| 6 | CHEO Neonatal Transport Team is not always available due to funding, utilization or team capacity. | C – Appendix 5 |
| 7 | CritiCall can be frustrating for providers to use – must go through CritiCall for each transfer – not all hospitals readily accept transfers. | C – Appendix 5 |

## Implications

- Opportunities to reduce the need for transfers by better coordinating the use of the LHIN's NICU/SCNs should be explored.
- The high use of the LHIN's NICU/SCN beds for short stay cases should be scrutinized.

Models of Care

# 4.7 Maternal Care

*C = Consultations, D = Data (Sources can be found in Appendices)*

## Finding

**Meeting the needs of the LHIN's rural populations likely requires maintaining all existing obstetric programs; however, low expected growth implies a need to explore changes in the mix of provider types over time.**

| # | Support for Finding | Relevant Appendices |
|---|---|---|
| 1 | Access to obstetrician led births varies across the LHIN. | D – Appendix 12 |
| 2 | Since the small volumes centres are serving shrinking populations, clinical recruitment and retention challenges are likely. | D – Appendix 29, 30, 31<br>C – Appendix 2, 4, 5 |
| 3 | Many sites would like to increase their volumes and feel demand will grow; however the data does not appear to support this (Please see Finding 1: Maternal Capacity). | C – Appendix 4 |
| 4 | Small rural hospitals provide an important access point for maternal newborn care. | D – Appendix 24, 25 |

## Implications

- Access implications for the LHIN's rural populations precludes considering closing any existing small volume obstetrics programs, but the impact on staffing mix needs to be considered.
- Smaller hospitals will need to oversee physician and other health human resources staffing and plan for potential changes over time.
- Substantial volume increases at any site will likely require capturing market share from other sites.

Patient and Family Experience

# 4.8 Patient and Family Experience

*C = Consultations, D = Data (Sources can be found in Appendices)*

## Finding

**Patient experience varies depending on provider and site of care.**

| # | Support for Finding | Relevant Appendices |
|---|---|---|
| 1 | Quality of care, practices, services provided, and advice provided for same LOC patients varied between hospital sites and was often contradictory. | C – Appendix 3 |
| 2 | Patient experience greatly impacted by lactation support (e.g., lactation consultant support, equipment, advice). | C – Appendix 3 |
| 3 | Options for mothers and families not always patient centric – time to C-section, availability of walking epidurals, distance to home. | C – Appendix 3 |
| 4 | Patients and families expressed a desire for increased access to midwives. | C – Appendix 3 |

## Implications

- There is a need for stronger standardization (and accountability) across the region.
- Providing the resources that patients and families want may cost additional money to implement (e.g. lactation consultants) – many nurses already have lactation expertise or are also lactation consultants, however they may not currently be used in that capacity. Reviewing policies and assignments may be required to ensure all women receive lactation support after birth.
- As patients become more informed, they will advocate more for their needs and choices.

# 5. Recommendations

# 5.0 Introduction to Recommendations

**This section contains the recommendations based on current-state findings and developed through extensive consultation and collaboration with the Steering Committee, regional stakeholders, and the CMNRP Leadership Team in a two-step process.**

***Step 1:*** The Current State Report and findings were shared at a large workshop (in October 2018) of 45 participants comprised of the Steering Committee as well as broader stakeholders from all maternity hospitals, the birthing centre, communities of practice and patient and family advisors. At the workshop, interdisciplinary groups discussed the findings in detail and brainstormed potential options for the future state. Outputs from the working session were used to develop a preliminary set of draft recommendations.

***Step 2:*** The preliminary draft recommendations were presented at a second stakeholder workshop of 48 participants, including the Steering Committee, in November 2018 to gather further feedback. Based on input provided and comments received from the Steering Committee in February 2019, the recommendations were further refined through consultations with the Leadership Team.

# 5.1 Recommendations

***The table below provides a summary of recommendations***

| | |
|---|---|
| **MATERNAL NEWBORN SERVICES SYSTEM CAPACITY** | |
| 1 | Continue operating all existing maternal newborn programs at all rural Champlain LHIN hospitals. |
| 2 | Additional bed capacity is not required in the Champlain LHIN's maternal newborn system. |
| **DELIVERY OF NEONATAL CARE** | |
| 3 | Define clear roles for each organization within the region and validate level of care designations and associated services for NICU and Special Care Nurseries (SCN). |
| 4 | Consider reorganizing and potentially redistributing NICU/SCN bassinets in the region to improve efficiency and patient experience while maintaining high quality care. Establish a working group comprising senior leaders and physician leaders to lead this initiative. |
| 5 | Identify and address why infants living in different parts of the LHIN have very different rates of NICU/SCN use. |
| 6 | Establish a clinically-led regional neonatology program aimed at reviewing and adopting clinical standards of practice throughout the region. |
| 7 | Improve neonatal transport team availability. |
| **LOW-RISK BIRTH SERVICES** | |
| 8 | Recognizing that obstetricians, family physicians and midwives play a critical role in providing low risk maternal newborn care, their respective roles should be considered in the context of each other's to promote appropriate access and care. This should be done by bringing stakeholders together to establish the appropriate provider mix for each community, now and in the future, while exploring innovative integrated models of care. In addition, given women in the region requested increased access to midwifery services, midwifery privileging processes at each hospital should be reviewed and opportunities to increase the number of midwifery supported births at OBWC should be explored. |
| **REGIONAL PLANNING & COORDINATION** | |
| 9 | Maintain CMNRP's role for professional development and promotion of leading practices, and strengthen its role to serve as a mechanism to continue to support and improve regional coordination and planning. |
| 10 | Improve coordinated planning across sites providing maternal and newborn services by requiring organizations to assess and confirm the implications of their plans for other providers and system stakeholders. |

# 5.2.1 Recommendation 1

| Recommendation 1 |
| --- |
| **Continue operating all existing maternal newborn programs at all rural Champlain LHIN hospitals.** |

| Rationale | Benefits |
| --- | --- |
| • All current maternal newborn sites are required in order to provide reasonable accessibility to the LHIN's populations.<br>  - Closing any of the sites outside the Ottawa region would result in increased travel times that begin to breach an average of 45 minutes.<br>  - All of the sites currently have sufficient volume (>400 births annually) to continue operating, and for the most part, have sufficient health human resource coverage.<br>• Community hospitals outside the greater Ottawa area provide an important access point for maternal newborn care. | • Enables continued access to services within a reasonable amount of travel time.<br>• Allows care to be provided closer to home, reducing the need for mothers and families to travel far for delivery.<br>• Continue to recognize and support the important role of family physicians in the provision of low-risk maternal newborn care. |

# 5.2.1 Recommendation 1 (continued)

| Recommendation 1 |
| --- |
| **Continue operating all existing maternal newborn programs at all rural Champlain LHIN hospitals.** |

| | |
| --- | --- |
| ***Implications*** | • *There is risk associated with operating smaller centres in the event that the necessary healthcare providers become unavailable and volumes decrease. If coverage is compromised in the future, the mandate of smaller centres should be re-evaluated, and partnership models of maternal newborn care should be explored.*<br>• *Since the small volume centres are serving low growth or shrinking populations, future clinical recruitment and retention challenges are likely.*<br>• *Smaller centres have opportunities for growth through repatriation, which will decrease volumes at the larger centres.*<br>• *Given health human resource challenges, innovative payment mechanisms, including for family physicians, obstetricians, paediatricians, and midwives at the smaller centres to support recruitment and retention should be explored.* |

# 5.2.2 Recommendation 2

| Recommendation 2 |
| --- |
| **Additional bed capacity is not required in the Champlain LHIN's maternal newborn system.** |

| Rationale | Benefits |
| --- | --- |
| • The Champlain LHIN has sufficient bassinets and maternal newborn beds to meet the region's needs for the next 20 years.<br>• Champlain LHIN hospitals reported 217 maternal beds, of which 166 were staffed and operated in 2018. The data demonstrates that in 2016/17, 125 were required.<br>• Based on population growth projections at 75% average occupancy, 136 beds will be needed in 2036/37, which is less than today's capacity.<br>• Champlain LHIN hospitals reported 78 NICU/SCN bassinets, of which 65 were staffed and operated in 2018. The data demonstrates that in 2016/17, 68 bassinets were required.<br>• Based on population growth projections at 75% average occupancy, 78 bassinets will be required in 2036/37, which is equal to today's capacity. | • Additional bed capacity is not required to support future growth and capacity needs in the region for both maternal beds and NICU/SCN bassinets.<br>• Given that capacity exists now and into 2036/37, focus can be directed towards implementing innovative models of care based on leading practice, changing consumer needs and relevant research. |

# 5.2.2 Recommendation 2 (continued)

| Recommendation 2 |
| --- |
| **Additional bed capacity is not required in the Champlain LHIN's maternal newborn system.** |

| | |
| --- | --- |
| ***Implications*** | • *This recommendation does not account for the health human resources capacity nor the physical space requirements to meet the needs over the next 20 years.*<br>• *It is understood that the current physical plant is substandard at some sites; renovations and upgrades to existing space will be required.*<br>• *Capital planning for the future should take this system level finding into consideration.* |

# 5.2.3 Recommendation 3

| Recommendation 3 |
| --- |
| **Define clear roles for each organization within the region and validate level of care designations and associated services for NICU and Special Care Nurseries (SCN).** |

| Rationale | Benefits |
| --- | --- |
| • There is sufficient maternal newborn bed capacity for the next 20 years; however, the capacity may not be optimally distributed.<br>• As confirmed by a recent PCMCH review, Level of Care designations are not completely clear, are inconsistently applied, and not well understood. This may result in unclear scope and lack of consistency with respect to criteria for patient transfer to a different Level of Care. This can affect both patients requiring a higher Level of Care as well as those appropriate for transfer closer to home.<br>• Confusion related to roles may result in operational and staffing challenges. Hospitals noted the shortage of experienced neonatal critical care nurses in Ottawa, and the need to essentially compete to hire experienced staff. Developing clearer roles (i.e. Level of Care and services provided) for hospitals may lead to fewer high acuity units in the region which may make it easier to staff them overall. | • Clarity of each organization's respective role in the provision of care throughout the region supports streamlined care and provides focus to each organization.<br>  - Efforts can be directed toward implementing suitable programs.<br>  - Helps promote leading practice, and development of models of care matched to the specific populations served.<br>  - Optimizes care for the region by organizing services and programs based on system need.<br>• Allows sites to be Centres of Excellence in their respective focus areas – this creates economies of scale allowing for improved competency of staff, efficiencies, reduction in duplication of services and consistency.<br>• Creates awareness of each hospital's capabilities across the region. |

# 5.2.3 Recommendation 3 (continued)

| Recommendation 3 |
| --- |
| **Define clear roles for each organization within the region and validate level of care designations and associated services for NICU and Special Care Nurseries (SCN).** |

| | |
| --- | --- |
| ***Implications*** | • *Some hospital sites may need to develop health human resource plans and policies to match their designated role.*<br>• *There are challenges associated with the recruitment and retention of highly specialized NICU nurses; therefore collaboration between sites would help to support each other's operations.* |

# 5.2.4 Recommendation 4

| Recommendation 4 |
| --- |
| **Consider reorganizing and potentially redistributing NICU/SCN bassinets in the region to improve efficiency and patient experience while maintaining high quality care. Establish a working group comprising senior leaders and physician leaders to lead this initiative.** |

| Rationale | Benefits |
| --- | --- |
| • There are localized capacity pressures for NICU/SCN in the Ottawa area, but overall system capacity exists.<br>• It appears transfers are often triggered by lack of availability of appropriate LOC bed. The number of transfers may also be influenced by a lack of surge capacity at some sites.<br>• There are significant health human resource challenges associated with appropriate staffing and coverage of five NICU/SCNs in Ottawa.<br>• There is widespread agreement that operating 4-bed NICU/SCNs is fundamentally inefficient and creates human resources challenges from a staffing ratio perspective.<br>• Ottawa is the only large urban centre in Ontario region that has 5 NICU/SCNs. Other cities in Ontario and Canada have consolidated NICU/SCN bassinets at fewer and bigger sites. | • Reorganization and redistribution will enable more efficient staffing of NICU/SCNs and reduce staffing gaps.<br>• Facilitates standardized care, pooled expertise and equipment, and promotes efficiencies.<br>• Potentially reduces the number of inter-hospital transfers, which improves quality of care and patient experience. |

# 5.2.4 Recommendation 4 (continued)

| Recommendation 4 |
| --- |
| **Consider reorganizing and potentially redistributing NICU/SCN bassinets in the region to improve efficiency and patient experience while maintaining high quality care. Establish a working group comprising senior leaders and physician leaders to lead this initiative.** |

| | |
| --- | --- |
| ***Implications*** | • *Further assessment will be required to determine the most appropriate NICU/SCN sites in the future state, and number of bassinets at each site.*<br>• *The process should include reviewing and assessing neonatal bassinet distribution and local standards of care to improve efficiency and patient experience. Guiding principles (e.g. quality of care, efficiency, patient experience, academic mission, language) should be used by NICU/SCN hospital leaders to guide this process.*<br>• *The effective engagement of CEOs, Chiefs of Staff, physicians and senior executives will be critical.*<br>• *Explore opportunities associated with cohorting the most acute, highest risk neonates in one NICU and cohorting Level 2 SCN neonates.*<br>• *Amendments may be required to capital planning submissions. Future capital development plans should incorporate strategies to address the impact of surge, keeping in mind that capacity is not required – no additional maternal newborn beds are required, based on a 75% occupancy rate.*<br>• *Depending on the option chosen, physical upgrades may be required at sites to provide the required number of bassinets.*<br>• *Political sensitivity and public concern around potential and redistribution options should be expected and addressed.*<br>• *Consideration of new government priorities (Bill 74 - The Peoples' Healthcare Act) should be understood prior to making the final recommendation of sites.* |

# 5.2.5 Recommendation 5

| Recommendation 5 |
| --- |
| **Identify and address why infants living in different parts of the LHIN have very different rates of NICU/SCN use.** |

| Rationale | Benefits |
| --- | --- |
| • There is significant variability across sites in LOS, admission and discharge criteria, clinical practices, and documentation.<br>  - Across Ontario and the Champlain LHIN, the rates of NICU/SCN use vary greatly. For example, within the LHIN, NICU/SCN admission rates for infants in Eastern Ottawa are roughly 50% higher than in Eastern Champlain.<br>  - The Champlain LHIN has among the highest rates of short stays in its NICU/SCNs.<br>  - Champlain LHIN has Ontario's second lowest rate of NICU/SCN days per infant.<br>• Admission and discharge criteria are variable, as are clinical practices, and approaches to family centered care. This leads to confusion throughout the system, and potentially increases risk, as some hospitals may attempt to keep babies who require higher levels of care and intervention.<br>• There is a lack of understanding as to the source of the variation.<br>• Findings or data from CCSO's NICU study may provide insights. CMNRP should also share the results of NICU/SCN analysis presented in this report with CCSO. | • Will help identify operational and clinical practices that drive utilization and may improve operational efficiencies.<br>• Supports the development of standard leading practices throughout the region, which may help reduce clinical risk.<br>• Improves patient/family satisfaction.<br>• May identify leading practices that can be adopted across the region.<br>• By better understanding NICU/SCN utilization, future planning efforts can be enhanced. |

# 5.2.5 Recommendation 5 (continued)

| Recommendation 5 |
| --- |
| **Identify and address why infants living in different parts of the LHIN have very different rates of NICU/SCN use.** |

| | |
| --- | --- |
| ***Implications*** | • *Practices may need to be adjusted at sites once warranted and unwarranted variation is better understood.* |

# 5.2.6 Recommendation 6

| Recommendation 6 |
| --- |
| **Establish a clinically-led regional neonatology program aimed at reviewing and adopting clinical standards of practice throughout the region.** |

| Rationale | Benefits |
| --- | --- |
| • An ongoing theme throughout the project was that standardization is necessary – differences of practice affect patient care and experience.<br>• Patients reported variation in experience and care provided between hospital sites (documentation practices, information provided, lactation support, etc.). | • Improves patient experience.<br>• Reduces duplication of work, i.e., centralized body has the ability to spread leading practices rather than each hospital developing its own.<br>• Improves quality of patient care by establishing a standard of care. |

| ***Implications*** | |
| --- | --- |
| | • *The nature and structure of the program will need to be developed.*<br>• *The university should be engaged in this development as part of an academic mandate.*<br>• *This model can follow existing regional programs with authority across multiple sites, for example the Champlain LHIN orthopaedic program.*<br>• *Additional 'knowledge to action' activities may be beneficial (e.g. in-services, skills drills) to help promote consistent implementation of clinical standards across sites.* |

# 5.2.7 Recommendation 7

| Recommendation 7 |
| --- |
| **Improve neonatal transport team availability.** |

| Rationale | Benefits |
| --- | --- |
| • The Transport Team based at CHEO is one of four provincial teams that service the province, covering a large geographical area 24/7, 365 days a year.<br>• Although patient and provider experience with the service is generally positive, there are periods of time when the transport team is not available or there are delays in responding.<br>• The CHEO transport team serves regions outside of the Champlain LHIN, which may limit their availability in the region.<br>• The team is also challenged by staff shortages. | • Improves transfer times and ability to direct mothers and babies to the organization most appropriately suited to deliver the level of care required in a timely fashion.<br>• Reduces risk in that patients receive the care needed, without having to wait.<br>• Improves patient experience.<br>• Improves provider satisfaction, as there is less concern about facilitating necessary transports, and having to wait for the service, thus placing mothers and babies at increased risk. |

| ***Implications*** | • *Additional funding will likely be required in order to improve transport team availability.* |
| --- | --- |

# 5.2.8 Recommendation 8

| Recommendation 8 |
| --- |
| **Recognizing that obstetricians, family physicians and midwives play a critical role in providing low risk maternal newborn care, their respective roles should be considered in the context of each other's to promote appropriate access and care. This should be done by bringing stakeholders together to establish the appropriate provider mix for each community, now and in the future, while exploring innovative integrated models of care. In addition, given women in the region requested increased access to midwifery services, midwifery privileging processes at each hospital should be reviewed and opportunities to increase the number of midwifery supported births at OBWC should be explored.** |

| Rationale | Benefits |
| --- | --- |
| • It is recognized that obstetricians and family physicians play a critical role, and will continue to do so as they currently conduct 90% of the region's 15,000 annual births (9% are supported by midwives).<br>• At multiple consultations across the region, women expressed a desire for better access to midwifery services.<br>• In 2017, BORN data reported that 237 women requested midwifery services but could not be accommodated.<br>• A the Ontario 75$^{th}$ percentile rate, the Champlain LHIN would have 400 additional midwifery-led births, an increase of 30% over the 1,300 current midwife-supported births.<br>• There is available capacity at the Ottawa Birth and Wellness Centre (236 births in 2016/17). | • Supports patient choice.<br>• Improves access to services.<br>• Helps promote improved outcomes for low-risk births.<br>• May lead to cost savings through shorter LOS and reducing workload for nursing staff on birthing units.<br>• Decreases reliance on acute care hospitals to be the primary provider of low risk birthing care.<br>• Increases utilization of an underutilized provider (OBWC). |

# 5.2.8 Recommendation 8 (continued)

| Recommendation 8 |
| --- |
| **Recognizing that obstetricians, family physicians and midwives play a critical role in providing low risk maternal newborn care, their respective roles should be considered in the context of each other's to promote appropriate access and care. This should be done by bringing stakeholders together to establish the appropriate provider mix for each community, now and in the future, while exploring innovative integrated models of care. In addition, given women in the region requested increased access to midwifery services, midwifery privileging processes at each hospital should be reviewed and opportunities to increase the number of midwifery supported births at OBWC should be explored.** |

| | |
| --- | --- |
| ***Implications*** | • *There is a need to develop and implement a regional integrated care delivery model that supports patient choice and helps obstetricians, family physicians and midwives provide high quality, standardized care across all sites.*<br>• *Historical policies and attitudes towards midwifery will need to be addressed. Current privileging processes was cited as a limiting factor.*<br>• *A focus on strengthening relationships between midwives and other maternal newborn healthcare providers will be required.*<br>• *Health human resource plans for all birthing sites will need to be developed to increase recruitment and education to meet current and future demand.*<br>• *Given growth projections in the region, increasing births at the OBWC would take a small amount of market share away from other birthing sites and providers.*<br>• *It has been difficult for other Canadian standalone birthing centres to increase their volumes, therefore this may also be a challenge for the OBWC.*<br>• *The Ottawa Birth and Wellness Centre may need to increase outreach and awareness efforts to attract patients to utilize existing capacity.* |

# 5.2.9 Recommendation 9

| Recommendation 9 |
| --- |
| **Maintain CMNRP's role for professional development and promotion of leading practices, and strengthen its role to serve as a mechanism to continue to support and improve regional coordination and planning.** |

| Rationale | Benefits |
| --- | --- |
| • CMNRP was consistently cited as a valuable support and resource for education, training and standards.<br>• Strengthening coordination and planning role is an existing part of CMNRP's mandate that should be continued.<br>• CMNRP will need to work closely with the proposed clinically led regional neonatology program. For example – it would play a key role in facilitating sharing of information and leading practices. | • Leverages an existing structure to strengthen regional planning.<br>• Builds on CMNRP's extensive regional understanding and ongoing effective efforts to encourage partnerships. |

| ***Implications*** | |
| --- | --- |
| | • *All organizations within the region will need to commit to the planning and decision making processes through CMNRP (note: organizations should have input in designing the decision making processes).*<br>• *Support/endorsement from the Champlain LHIN may be necessary to enable CMNRP to promote accountability in regionally focused planning.*<br>• *For highly strategic decisions regarding health care system planning, an executive group comprised of senior leaders including CEOs, Executives, Chiefs of Staff and physicians should be established. For example, this group should be assembled to address topics such as Recommendation #4 around the redistribution of bassinets and Recommendation #10 around coordinated planning.* |

# 5.2.10 Recommendation 10

| Recommendation 10 |
| --- |
| **Improve coordinated planning across sites providing maternal and newborn services by requiring organizations to assess and confirm the implications of their plans for other providers and system stakeholders.** |

| Rationale | Benefits |
| --- | --- |
| • As sites plan for growth or make adjustments to their LOC designation, as well as the overall system of maternal newborn care, the impact on other sites needs to be considered.<br>• CMNRP exists to support planning and coordination as part of their mandate.<br>• Given population projections and existing physical capacity, the focus is not on adding bed space but appropriate distribution of existing resources and how best to operate as a region.<br>• The impact of organizations' plans should be reviewed such that implications for services and capacity are considered not only from the specific organization's perspective, but also from those of other regional stakeholders and the system at large. | • Regionalized planning perspective.<br>• Better utilization and coordination of existing resources.<br>• Supports better recognition of the impact of an individual organization's plan on the broader system/region. |

# 5.2.10 Recommendation 10 (continued)

| Recommendation 10 |
| --- |
| **Improve coordinated planning across sites providing maternal and newborn services by requiring organizations to assess and confirm the implications of their plans for other providers and system stakeholders.** |

| | |
| --- | --- |
| ***Implications*** | • *Leverage existing mechanisms through CMNRP for organizations to share growth plans/assumptions.*<br>• *Advocate provincially for development of a clear process for changing LOC designation such that assumptions and impact on the region is better understood.*<br>• *The Champlain LHIN will need to provide support and accountability for data-driven planning in the region.*<br>• *It is important that additional capacity is not inadvertently created through uncoordinated planning in the region.*<br>• *If an organization is going to build a plan, they need to review it in the context of the region and must include implications on other organizations.*<br>• *The effective engagement of CEOs, Chiefs of Staff, physicians and senior executives will be critical.* |

# 6. Appendices

# 6.1 Consultation Summary

# Consultation Themes

**Stakeholder consultations were highly informative, providing qualitative insights from both providers and patients and families. The insights provided by stakeholders consulted can be categorized into the following themes:**

## ACCESS

The availability of resources and services across the Champlain LHIN

## EXPERIENCE

The quality and consistency of care provided to patients and families

## CAPACITY

The distribution of beds and LOC across the Champlain LHIN, and the impact on health equity

## COORDINATION

The management of maternal/newborn patients of varying LOCs, including transitions between place of birth, care and the home

# Access

- **Challenges in recruitment and maintaining staffing**– it is challenging for both urban and rural communities to attract and retain staff with the necessary experience and knowledge, impacting the services that are available and access for patients.
- **Variation in midwife hospital privileges** – midwifery privileges vary by site, dependent on each hospital's bylaws. As well, some sites have caps on midwifery births.
- **Level of Care (LOC) designations limit the services offered to mothers and newborns** – designation limits the types of services offered, and consequently the staffing model. Patients may have to travel further to access services and/or testing because the capabilities are not available at their local hospital.

# Experience

- **Variability in patient experience with care providers –** great variation in experience (both positive and negative) depending on provider and hospital or midwifery birth. Quality of care and medical information received was not always consistent.
- **Breastfeeding messaging and support impacts maternal experience –** inconsistent access to lactation consultants, support/advice for mothers struggling to breastfeed, mixed messaging, pressure to breastfeed.
- **Options for mothers and families may not be patient-centered –** some mothers felt rushed into a c-section, some hospitals do not offer walking epidurals. Patients want to deliver closer to home when possible.
- **Demand for midwifery services is increasing in urban and rural communities** – growing awareness and demand of midwifery services – not all mothers had access.
- **Mothers report undiagnosed/misdiagnosed tongue and lip ties that impacted their ability to breastfeed** – mothers reported tongue and lip ties impacting their ability to breastfeed that were not caught at the time of birth.
- **Access to providers and services in rural communities feels limited** – time with OB felt rushed.

# Capacity

- **Ability to cope with surge is a consistent concern across urban and rural hospitals** – there is unpredictability with surges of any LOC – this is challenging both from a staffing perspective and physical space in each hospital.
- **Funding of obstetrics programs creates budgetary constraints and staffing challenges** – OB is unique from other specialties and it can be difficult to staff and operate in the current funding structure.
- **Lack of clarity around Level of Care (LOC) designations** – as they are self-reported, confusion around process if a hospital wants to change LOC designation. There is a perception that some births/babies are not being provided care at the right level.
- **Many sites would like to increase their volumes** – they feel they have the demand and room to grow, add beds and additional staff.
- **Shorter Lengths of Stay (LOS) are enabled by care provided in the community** - Focus on reducing LOS by offering services within the community or at home (e.g., Montfort Midwife Pilot).
- **Demographic shifts are increasing demand for resources** – higher risk births (high BMI, substance use, etc.), increase in rural population, non-OHIP patients, refugees.

# Coordination

- **Alignment amongst hospital sites on a regional approach to maternal newborn care has shifted since development of the Blueprint** - TOH is moving ahead with the two-site model, and Montfort is pursuing a higher LOC designation.
- **Transitions between hospital sites can be challenging** – moving patients to different LOC hospitals not always smooth, appropriate LOC bed is not always available
- **CHEO's Neonatal Transport Team is not always operational or available –** due to funding and staffing constraints; this leads to longer wait times for patients to access care.
- **Midwives are not seamlessly included in all aspects of hospital care** – not all hospitals have integrated midwives in their model of care (TOH General, Hawkesbury), some doctors not comfortable discharging patients to midwives. Midwives are not always included in debriefs, and are not all practicing to their full scope.
- **Maintaining required competency levels for staff is a challenge with the current spread of NICU beds** - Having many smaller sites with fewer beds and varied LOC presents a challenge for staffing. There is a large percentage of experienced neonatal nurses that will be retiring within the next five years.
- **CritiCall is not used consistently to coordinate patient transfers** – mixed experiences and opinions of CritiCall. Some providers contact each other directly to coordinate. Experience for maternal newborn patients is impacted.

# 6.2 Supporting Analytics

# Births at Champlain LHIN Hospitals by Patient Province of Residence

*Births at Champlain LHIN Hospitals by Patient's Province of Residence*

| *Hospital* | *Births by Ontario Residents* | *Births by Quebec Residents* | *Total Births* | *Percent Births by Quebec Residents* |
|---|---|---|---|---|
| Almonte General Hospital | 367 | 0 | **367** | 0% |
| Cornwall Community Hospital | 542 | 43 | **586** | 7% |
| Hawkesbury And District General Hospital | 188 | 201 | **389** | 52% |
| Hôpital Montfort | 2,387 | 584 | **2,998** | 19% |
| Pembroke Regional Hospital Inc. | 667 | 29 | **696** | 4% |
| Queensway-Carleton Hospital | 2,276 | 15 | **2,299** | 1% |
| The Ottawa Hospital: Civic Campus | 3,008 | 183 | **3,207** | 6% |
| The Ottawa Hospital: General Campus | 2,342 | 318 | **2,739** | 12% |
| Winchester District Memorial Hospital | 769 | 3 | **772** | 0% |
| **All Champlain LHIN Hospitals** | **12,546** | **1,376** | **14,053** | **10%** |

*Source: DAD 2016/17*

- Champlain LHIN hospitals are an important provider of birthing care to Quebec residents
- 10 percent of total births in Champlain LHIN hospitals were for Quebec residents
- 52 percent of Hawkesbury and District General's total births were for Quebec residents
- 19 percent of Montfort's total births were for Quebec residents

# Maternal Capacity

| Hospital | Physical maternal beds[1,2] | Staffed maternal beds[1,2] | Births 2016/17 | Obstetric Activity 2016/17 | | | | Beds Required at 75% Occupancy | | Physical Bed Capacity Gaps | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Discharges | Days | ALOS | Occupancy Rate (staffed beds) | 2016/17 | 2036/37 | 2016/17 | 2036/37 |
| Almonte General | 7 | 5 | 367 | 389 | 857 | 2.2 | 47% | 3 | 3 | -4 | -4 |
| Cornwall Community | 17 | 10 | 586 | 667 | 1,274 | 1.9 | 35% | 5 | 4 | -5 | -6 |
| Hawkesbury And District General[3] | 6 | 6 | 389 | 415 | 824 | 2.0 | 38% | 3 | 3 | -3 | -3 |
| Hôpital Montfort | 34 | 27 | 2,998 | 3,343 | 7,204 | 2.2 | 73% | 26 | 29 | -8 | -5 |
| Pembroke Regional | 16 | 7 | 696 | 738 | 1,493 | 2.0 | 58% | 5 | 5 | -11 | -11 |
| Queensway-Carleton | 38 | 24 | 2,299 | 2,413 | 4,983 | 2.1 | 57% | 18 | 20 | -20 | -18 |
| The Ottawa Hospital: Civic | 43 | 37 | 3,207 | 3,698 | 8,448 | 2.3 | 63% | 31 | 34 | -14 | -11 |
| The Ottawa Hospital: General | 43 | 38 | 2,739 | 3,459 | 8,037 | 2.3 | 58% | 29 | 33 | -14 | -10 |
| Winchester District Memorial | 13 | 12 | 772 | 788 | 1,289 | 1.6 | 29% | 5 | 5 | -7 | -7 |
| **Champlain LHIN hospitals** | **217** | **166** | **14,053** | **15,910** | **34,409** | **2.2** | **57%** | **125** | **136** | **-86** | **-75** |

1. PCMCH LOC Survey 2018;
2. CMNRP Bed Profile Table - survey of Champlain LHIN hospitals November 2018;
3. Email from Daniel Lebreux December 19 2018

Data Source: DAD 2016/17; Ontario Ministry of Finance Population Projections
(More details on hospital capacity available in Appendix 39)

***Physical beds*** *– number physical beds not considering physical location or physical space standards*

***Staffed beds*** *– number of beds the hospital receives funding for, for the specific program*

- Across the Champlain LHIN, there are many physical maternal beds that are not used for maternal care
- At all hospitals, occupancy rates of staffed maternal beds are below the standard planning target of 75%
- Lower target occupancy rates could be considered for Level 1 hospitals

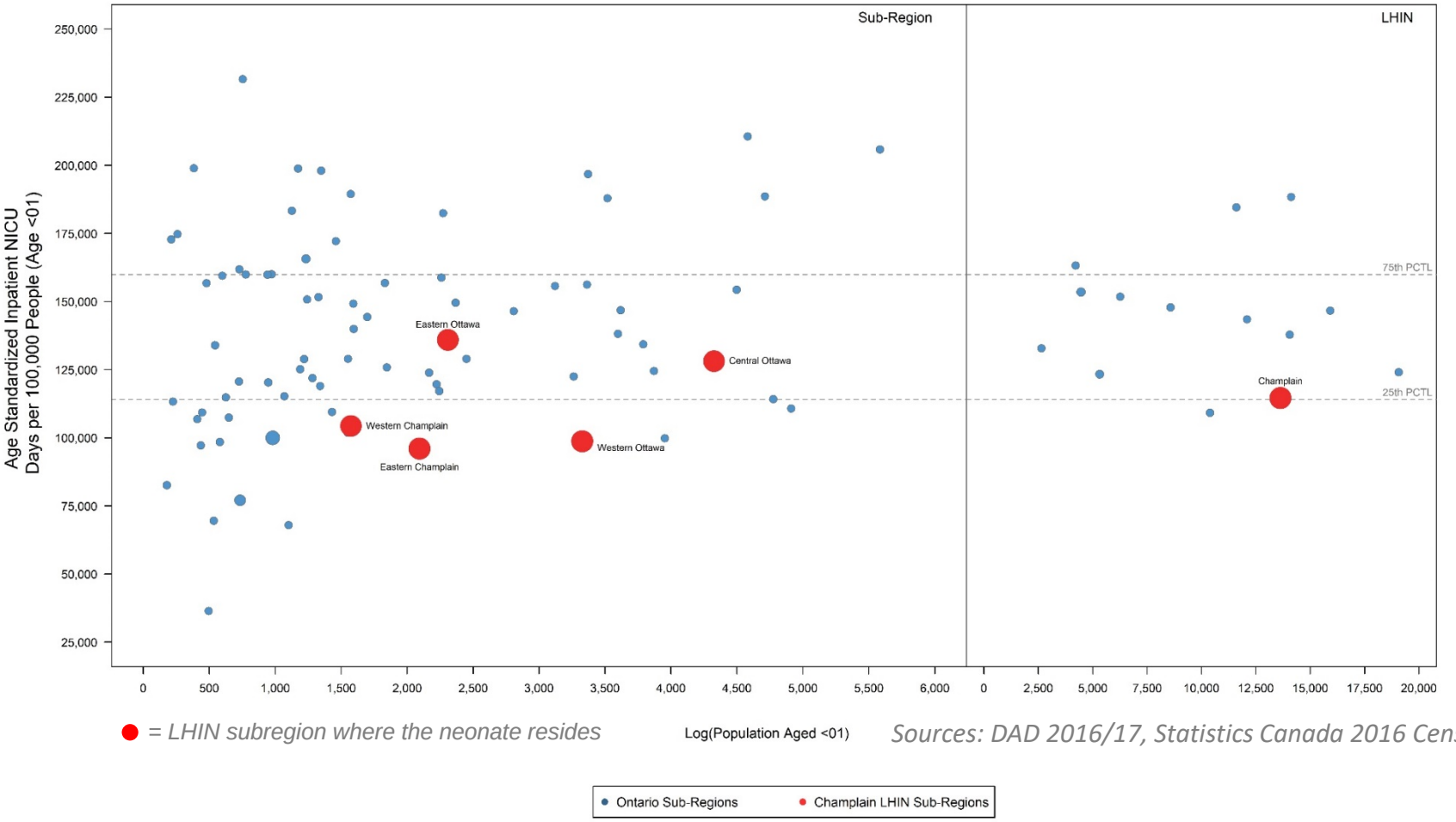
# Capacity Profile: NICU/SCN Care

| Hospital | Physical Bassinets | Staffed Bassinets | 2016/17 NICU Activity: Admissions | Days | NICU ALOS | Occupancy Rate (staffed beds) | Planning Occupancy Rate | Bassinets Required at Planning Occupancy: 2016/17 | 2036/37 | Physical Bassinet Capacity Gap: 2016/17 | 2036/37 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHEO | 20 | 16 | 363 | 4,562 | 12.6 | 78% | 80% | 16 | 18 | -4 | -2 |
| Hôpital Montfort | 8 | 4 | 608 | 1,604 | 2.6 | 110% | 75% | 6 | 7 | -2 | -1 |
| Queensway-Carleton | 7 | 4 | 320 | 1,047 | 3.3 | 72% | 75% | 4 | 5 | -3 | -2 |
| The Ottawa Hospital: Civic[1] | 19 | 17 | 849 | 5,255 | 6.2 | 85% | 80% | 18 | 21 | -1 | 2 |
| The Ottawa Hospital: General[1] | 24 | 24 | 698 | 6,971 | 10.0 | 80% | 80% | 24 | 27 | 0 | 3 |
| **Champlain LHIN hospitals** | **78** | **65** | **2,838** | **19,438** | **6.8** | **82%** | | **68** | **78** | **-10** | **0** |

1. PCMCH LOC Survey 2018; Data Source: DAD 2016/17; Ontario Ministry of Finance Population Projections

- Champlain LHIN hospitals reported 78 physical NICU bassinets in 2018
- The LHIN's hospitals needed 68 bassinets in 2016/17 and will need 78 in 2036/37
- Relative to the reported physical capacity and expected population growth over the next 20 years:
  - The LHIN does not have a current or future NICU bassinet capacity gap
  - Assuming no change in current practice, only the two TOH sites would need to increase NICU bassinets over their current reported physical capacity

# NICU/SCN Use Variation by Subregion




*Sources: DAD 2016/17, Statistics Canada 2016 Census*

- Regional variation in NICU use is extensive and needs to be better understood

# NICU/SCN Capacity in Ontario, by LHIN

| *LHIN* | *Population <1* | *NICU Days per 100,000 Pop <1* |
|---|---|---|
| Hamilton Niagara Haldimand Brant | 14,117 | 188,419 |
| Central West | 11,602 | 184,589 |
| North Simcoe Muskoka | 4,207 | 163,226 |
| South East | 4,462 | 153,503 |
| Erie St. Clair | 6,263 | 151,785 |
| Waterloo Wellington | 8,578 | 147,909 |
| Central East | 15,915 | 146,700 |
| Mississauga Halton | 12,092 | 143,527 |
| Toronto Central | 14,053 | 137,869 |
| North West | 2,640 | 132,833 |
| Central | 19,067 | 124,100 |
| North East | 5,319 | 123,305 |
| **Champlain** | **13,631** | **114,600** |
| South West | 10,392 | 109,187 |

*Sources: DAD 2016/17; Ontario Ministry of Finance Population Projections*

# Midwifery Capacity: Unaccommodated Patients

**Women residing in the Champlain LHIN who were reported as unaccommodated but ultimately received a midwifery course of care, by fiscal year**

*Champlain, April 1 2014 - March 31 2017*

| Fiscal Year | Total number of women who were initially unaccommodated by an MPG | Clients ultimately accommodated by an MPG | | Women who remained unaccommodated | |
|---|---|---|---|---|---|
| | N | n | % (row) | n | % (row) |
| 2014/15 | **612** | 170 | 27.8 | 442 | 72.2 |
| 2015/16 | **441** | 120 | 27.2 | 321 | 72.8 |
| 2016/17 | **311** | 74 | 23.8 | 237 | 76.2 |
| **Total** | **1,364** | **364** | **26.7** | **1,000** | **73.3** |

*Data Source Midwifery Invoice System, managed by BORN Ontario, 2014 - 2017*

# Midwifery Capacity: Births by Service Provider

| | *Percent of Births by Health Care Provider* | | | | |
|---|---|---|---|---|---|
| *Hospital* | *Family / General Practice Medicine* | *Maternal-Fetal Medicine* | *Midwifery* | *Obstetrics and Gynecology* | *Total Births* |
| Almonte General Hospital | 1% | | 34% | 65% | 367 |
| Cornwall Community Hospital | 0% | | 11% | 88% | 586 |
| Hawkesbury And District General | 82% | | | 18% | 389 |
| Hôpital Montfort | 17% | | 10% | 73% | 2,998 |
| Pembroke Regional Hospital | 8% | | 7% | 85% | 696 |
| Queensway-Carleton Hospital | 7% | | 4% | 89% | 2,299 |
| TOH: Civic | 11% | 4% | 11% | 75% | 3,207 |
| TOH: General | 9% | 12% | 0% | 79% | 2,739 |
| Winchester District Memorial | 12% | | 17% | 71% | 772 |
| Ottawa Birth and Wellness Centre | | | 100% | | 226 |
| **Total** | **12%** | **3%** | **9%** | **75%** | **14,279** |

*Source: DAD 2016/17*

- 9 percent of total hospital and OBWC births were supported by midwives
- This varies from 0 to 34 percent by hospital
- OBWC had 226 births, but has a physical capacity for many more

# Midwifery Capacity: Provincial LHIN Variation

| | Hospital Births | | | | | Total Births, excluding home | | | |
|---|---|---|---|---|---|---|---|---|---|
| *LHIN* | *Family practice / general practice medicine* | *Midwifery* | *Obstetrics and gynecology* | *Hospital Total* | *Birth Centre* | *% Family Practive* | *% Midwifery* | *% OB/GYN* | *Additional Midwifery Births at LHIN 75th Percentile rate* |
| North West | 979 | 371 | 992 | 2,366 | 0 | 41% | 16% | 42% | -91 |
| Waterloo Wellington | 602 | 1,176 | 6,285 | 8,071 | 0 | 7% | 15% | 78% | -222 |
| North East | 904 | 653 | 3,453 | 5,036 | 0 | 18% | 13% | 69% | -58 |
| HNHB | 770 | 1,741 | 11,150 | 13,709 | 0 | 6% | 13% | 81% | -121 |
| South West | 1,488 | 1,027 | 6,787 | 9,390 | 0 | 16% | 11% | 72% | 83 |
| North Simcoe Muskoka | 666 | 457 | 3,038 | 4,205 | 0 | 16% | 11% | 72% | 40 |
| South East | 366 | 408 | 3,362 | 4,149 | 0 | 9% | 10% | 81% | 82 |
| Toronto Central | 1,131 | 1,247 | 10,349 | 12,730 | 345 | 9% | 10% | 79% | 298 |
| **Champlain** | **1,321** | **1,081** | **9,653** | **12,426** | **226** | **10%** | **9%** | **76%** | **414** |
| Central East | 1,353 | 1,225 | 12,719 | 15,339 | 0 | 9% | 8% | 83% | 588 |
| Mississauga Halton | 466 | 853 | 10,185 | 11,513 | 0 | 4% | 7% | 88% | 508 |
| Erie St. Clair | 185 | 440 | 5,324 | 5,965 | 0 | 3% | 7% | 89% | 265 |
| Central | 800 | 1,276 | 16,283 | 18,381 | 0 | 4% | 7% | 89% | 896 |
| Central West | 589 | 517 | 10,213 | 11,341 | 0 | 5% | 5% | 90% | 823 |
| Unknown | 424 | 33 | 1,521 | 2,055 | 0 | 21% | 2% | 74% | 210 |
| **Ontario Total** | **12,044** | **12,505** | **111,314** | **136,676** | **571** | **9%** | **9%** | **81%** | **3,715** |
| **75th Percentiles** | | | | | | **16%** | **12%** | **86%** | |

*Source: DAD 2016/17*

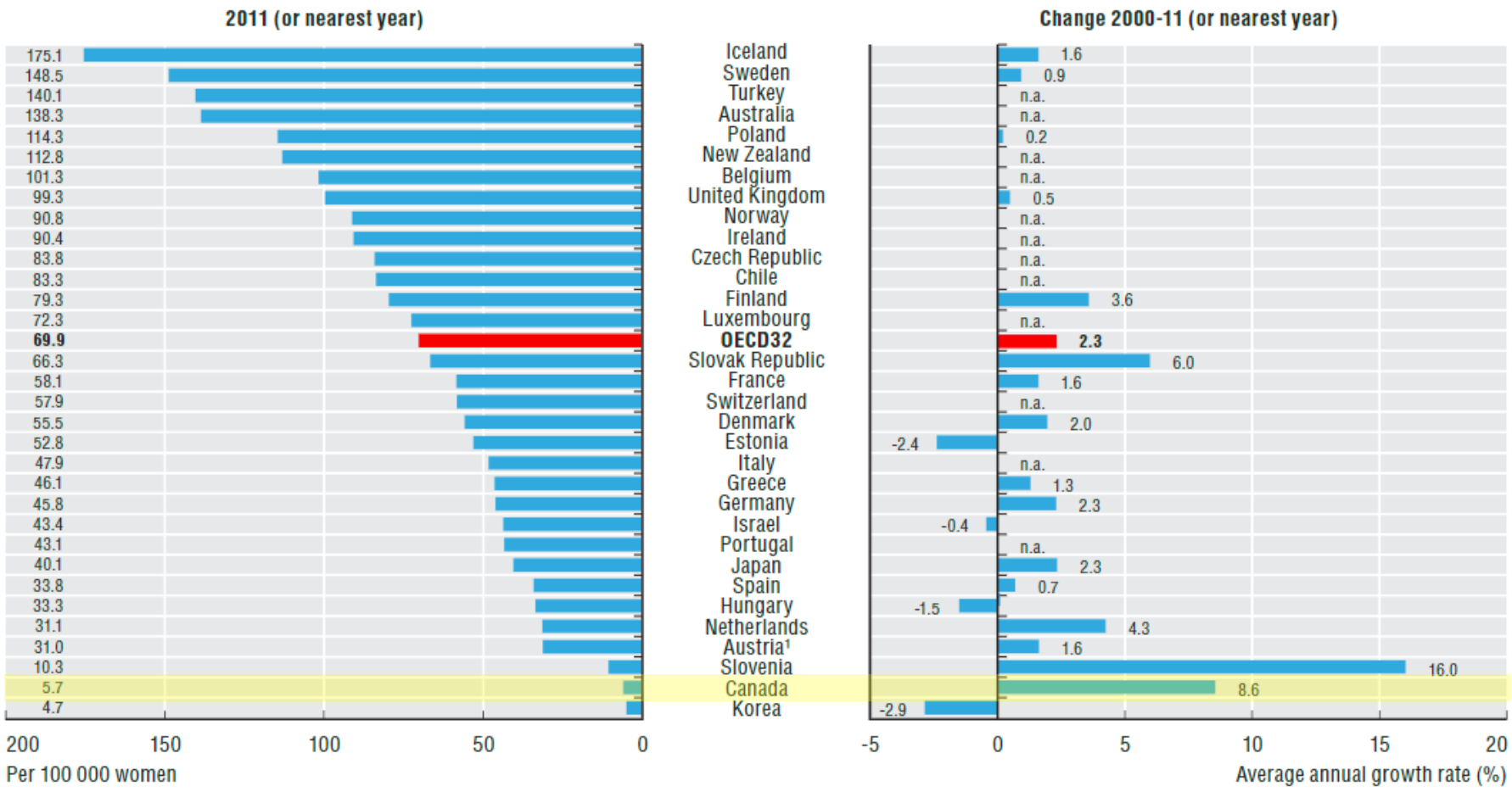
# Midwifery Capacity: Midwifery-supported Births by Subregion

| | *Hospital Births* | | | | | *Births in other Settings* | | |
|---|---|---|---|---|---|---|---|---|
| *Patient Sub-Region* | *Family practice / general practice medicine* | *Obstetrics and gynecology* | *Midwifery* | *Other Provider Types* | *Hospital Total* | *Home Midwifery Supported* | *OBWC Midwifery Supported* | *Percent Midwifery Supported Births* |
| Eastern Champlain | 418 | 1,321 | 207 | 37 | 1,983 | 43 | 11 | 12.8% |
| Central Ottawa | 436 | 3,114 | 353 | 162 | 4,065 | 100 | 112 | 13.2% |
| Eastern Ottawa | 179 | 1,616 | 152 | 69 | 2,016 | 37 | 55 | 11.6% |
| Western Champlain | 99 | 1,199 | 133 | 27 | 1,458 | 69 | 4 | 13.5% |
| Western Ottawa | 189 | 2,403 | 236 | 76 | 2,904 | 78 | 44 | 11.8% |
| **Champlain LHIN** | **1,321** | **9,653** | **1,081** | **371** | **12,426** | **327** | **226** | **12.6%** |

*Source: DAD 2016/17*

- 12.6 percent of the Champlain LHIN residents' total births are midwifery supported
- This varies from 11.6 percent in Eastern Ottawa to 13.5 percent in Western Champlain
- There is little variation in the proportion of midwifery supported births across the LHIN's sub-regions

# Midwifery Capacity: Global Comparators




1. In Austria, the number of midwives only includes those working in hospital.

*Source: OECD Health Statistics 2013, http://dx.doi.org/10.1787/health-data-en.*

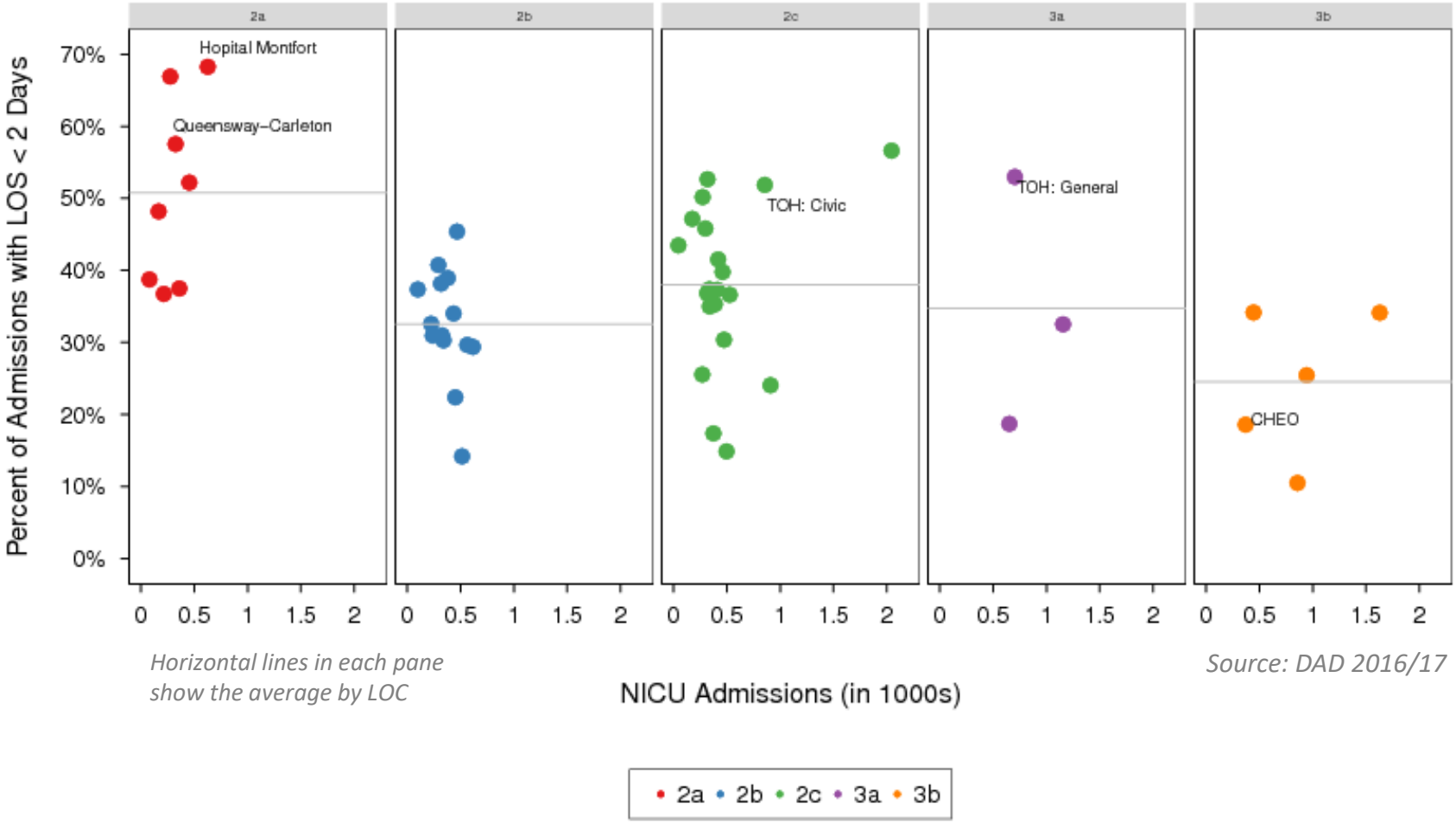
# Capacity Profile: Physician Services

| LHIN | Active Physicians: Family Medicine | Active Physicians: Obstetrics and Gynecology | Population Women Aged 20-39 | Physicians per Woman Aged 20 to 39: Family Medicine per 1,000 | Physicians per Woman Aged 20 to 39: Obstetrics and Gynecology per 10,000 | Ranks: Obstetrics and Gynecology per 10,000 | Ranks: Family Medicine per 1,000 |
|---|---|---|---|---|---|---|---|
| Erie St. Clair | 479 | 28 | 79,692 | 6.0 | 3.5 | 8 | 10 |
| South West | 911 | 60 | 130,887 | 7.0 | 4.6 | 4 | 7 |
| Waterloo Wellington | 701 | 39 | 115,706 | 6.1 | 3.4 | 11 | 9 |
| Hamilton Niagara Haldimand Brant | 1,183 | 79 | 193,581 | 6.1 | 4.1 | 6 | 8 |
| Central West | 682 | 29 | 151,607 | 4.5 | 1.9 | 14 | 14 |
| Mississauga Halton | 1,111 | 58 | 186,837 | 5.9 | 3.1 | 12 | 11 |
| Toronto Central | 1,789 | 146 | 222,682 | 8.0 | 6.6 | 1 | 5 |
| Central | 1,683 | 98 | 283,416 | 5.9 | 3.5 | 9 | 12 |
| Central East | 1,225 | 88 | 240,659 | 5.1 | 3.7 | 7 | 13 |
| South East | 544 | 31 | 59,077 | 9.2 | 5.2 | 3 | 3 |
| **Champlain** | **1,612** | **108** | **194,408** | **8.3** | **5.6** | **2** | **4** |
| North Simcoe Muskoka | 453 | 19 | 61,272 | 7.4 | 3.1 | 13 | 6 |
| North East | 605 | 28 | 65,224 | 9.3 | 4.3 | 5 | 2 |
| North West | 312 | 10 | 29,351 | 10.6 | 3.4 | 10 | 1 |
| **Ontario** | **13,290** | **821** | **2,014,399** | **6.6** | **4.1** | | |

*Sources: http://www.ophrdc.org/; https://www.ontario.ca/data/population-projections*

- Champlain LHIN has Ontario's second highest number of Obstetricians and Gynecologists per woman aged 20 to 39
- This finding does not necessarily imply higher than average access to obstetrical care by obstetricians, as many physicians in the obstetrics and gynecology category may focus their practice on gynecology
- Champlain LHIN has Ontario's fourth highest number of family physicians per 1,000 women aged 20 to 39; although it is recognized that not all family physicians do obstetrics

# NICU/SCN Short LOS in Ontario by LOC




*Horizontal lines in each pane show the average by LOC*

*Source: DAD 2016/17*

- Montfort has Ontario's highest proportion of NICU cases with a length of stay less than 2 days
- Queensway-Carleton and the two TOH sites also have very high proportions of short stay cases

# Neonatal Patient Flow: Short Stays in NICU/NICU

*Cumulative Distribution of Total NICU Days by Length of Stay*

| *Site* | *Level* | *<4 hours* | *<8 hours* | *<12 hours* | *<24 hours* | *<2 days* | *<4 days* | *<6 days* | *<10 days* | *<20 days* | *>20 days* | *Provincial Rank/50 based on 1-2 day LOS* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hôpital Montfort | 2a | 19% | 26% | 30% | 45% | 68% | 85% | 90% | 94% | 99% | 100% | 1 |
| Queensway-Carleton | 2a | 11% | 22% | 27% | 39% | 58% | 75% | 82% | 92% | 99% | 100% | 3 |
| TOH: General | 3a | 9% | 23% | 30% | 40% | 53% | 63% | 69% | 76% | 86% | 100% | 5 |
| TOH: Civic | 2c | 7% | 17% | 30% | 41% | 52% | 61% | 68% | 80% | 90% | 100% | 8 |
| CHEO | 3b | 0% | 1% | 2% | 6% | 19% | 39% | 52% | 69% | 84% | 100% | 46 |

*Source: DAD 2016/17*

- This table shows the cumulative distribution of NICU days by length of stay. For example, 68 percent of Hôpital Montfort's NICU days were for infants with LOS less than two days; 85 percent were for infants with LOS less than 4 days
- Hôpital Montfort has Ontario's highest percentage of days for <2 day NICU stays, therefore it is ranked 1st amongst provincial NICU/SCNs, whereas CHEO is ranked 46 out of 50 provincial NICUs/SCNs.

# Neonatal Patient Flow: NICU/SCN Transfers by LHIN, per capita

| | *LHIN NICU Comparison: Per Capita NICU Use* | | | |
|---|---|---|---|---|
| *LHIN* | *Number of Infants Admitted to NICU* | *Infants Admitted to NICU Per Capita* | *NICU Admissions Per Capita* | *NICU Transfers Per Capita (sorted)* |
| Hamilton Niagara Haldimand Brant | 1,965 | 13,920 | 18,198 | 4,137 |
| Toronto Central | 1,442 | 10,261 | 13,235 | 2,896 |
| Waterloo Wellington | 1,389 | 16,193 | 19,096 | 2,845 |
| Central West | 1,901 | 16,384 | 19,367 | 2,810 |
| North Simcoe Muskoka | 632 | 15,023 | 17,686 | 2,639 |
| Central East | 2,092 | 13,145 | 15,777 | 2,545 |
| **Champlain** | **1,948** | **14,291** | **17,108** | **2,502** |
| Mississauga Halton | 1,441 | 11,917 | 14,240 | 2,216 |
| Central | 1,879 | 9,855 | 11,827 | 1,872 |
| South East | 654 | 14,657 | 16,383 | 1,479 |
| North East | 666 | 12,522 | 14,064 | 1,354 |
| North West | 350 | 13,256 | 14,657 | 985 |
| Erie St. Clair | 790 | 12,614 | 13,684 | 878 |
| South West | 1,105 | 10,634 | 11,519 | 741 |
| **Total** | **18,254** | **12,824** | **15,314** | **2,346** |

*Sources: DAD 2016/17, Statistics Canada 2016 Census*

- 'Infants admitted to NICU per capita' is the rate of infants admitted to NICU, where each infant is counted only once even if they had multiple admissions within the year
- 'NICU admissions per capita' measures the rate of total NICU admissions, where multiple admissions by the same infant are counted separately

# Neonatal Patient Flow: NICU Transfers in Ontario, by LHIN, per patient

| | *LHIN NICU Comparison: Per Patient NICU Usage* | | |
|---|---|---|---|
| *LHIN* | *Infants Admitted to NICU* | *Average NICU Discharges per NICU Patient* | *Average NICU Transfers per NICU Patient (sorted)* |
| Hamilton Niagara Haldimand Brant | 1,965 | 1.31 | 0.30 |
| Toronto Central | 1,442 | 1.29 | 0.28 |
| Central East | 2,092 | 1.20 | 0.19 |
| Central | 1,879 | 1.20 | 0.19 |
| Mississauga Halton | 1,441 | 1.20 | 0.19 |
| Waterloo Wellington | 1,389 | 1.18 | 0.18 |
| North Simcoe Muskoka | 632 | 1.18 | 0.18 |
| **Champlain** | **1,948** | **1.20** | **0.18** |
| Central West | 1,901 | 1.18 | 0.17 |
| North East | 666 | 1.12 | 0.11 |
| South East | 654 | 1.12 | 0.10 |
| North West | 350 | 1.11 | 0.07 |
| South West | 1,105 | 1.08 | 0.07 |
| Erie St. Clair | 790 | 1.08 | 0.07 |
| **Total** | **18,254** | **1.19** | **0.18** |

*Sources: DAD 2016/17, Statistics Canada 2016 Census*

# Neonatal Patient Flow: NICU to NICU Transfer Patterns in the Champlain LHIN

| *Hospital From:* | *Hospital To:* | | | | | *Total transfers out:* | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Children's Hospital of Eastern Ontario* | *Hôpital Montfort* | *Queensway -Carleton Hospital* | *TOH: Civic* | *TOH: General* | *Within LHIN* | *Out of LHIN* | *NICU Discharges* | ***Percent Transferred*** |
| Children's Hospital Of Eastern Ontario | | 10 | 9 | 11 | 14 | 44 | 5 | 269 | **18%** |
| Hôpital Montfort | 35 | | | 1 | 7 | 43 | 0 | 487 | **9%** |
| Queensway-Carleton Hospital | 27 | | | 3 | 1 | 31 | 0 | 314 | **10%** |
| The Ottawa Hospital: Civic | 24 | 13 | 23 | | | 60 | 1 | 759 | **8%** |
| The Ottawa Hospital: General | 71 | 28 | 14 | 53 | | 166 | 2 | 564 | **30%** |
| Total transfers from Champlain | 157 | 51 | 46 | 68 | 22 | 344 | 8 | 2,393 | **15%** |
| Total transfers from Out of LHIN NICUs | 13 | 0 | 2 | 1 | 0 | 16 | | | |
| Total From All Hospitals | 170 | 51 | 48 | 69 | 22 | 360 | | | |

*Sources: DAD 2016/17*

- CHEO had 170 infants transferred to its NICU from other NICU/SCNs
- 15 percent of total NICU/SCN discharges in the Champlain LHIN included a transfer from another NICU/SCN
- All results exclude out of province patients since we could not track NICU/SCN transfers

# NICU Patient Flow: NICU to NICU Transfer Patterns in the South West LHIN

| | *Hospital To:* | | | | *Total transfers out:* | | | |
|---|---|---|---|---|---|---|---|---|
| *Hospital From:* | *Owen Sound Hospital* | *St. Thomas Elgin General Hospital* | *Stratford General Hospital* | *University Hospital* | *Within LHIN* | *Out of LHIN* | *NICU Discharges* | ***Percent Transferred*** |
| Owen Sound Hospital | | | | 7 | 7 | 0 | 211 | **3%** |
| St. Thomas Elgin General Hospital | | | | 1 | 1 | 0 | 75 | **1%** |
| Stratford General Hospital | | | | 14 | 14 | 1 | 207 | **7%** |
| University Hospital | 13 | 17 | 24 | | 54 | 68 | 883 | **14%** |
| Total transfers from SW NICUs | 13 | 17 | 24 | 22 | 76 | 69 | 1,376 | **11%** |
| Total transfers from Out of LHIN NICUs | 3 | 1 | 1 | 80 | 85 | | | |
| Total From All Hospitals | 16 | 18 | 25 | 102 | 161 | | | |

*Source: DAD 2016/17*

- 11 percent of total NICU discharges in the South West LHIN included a transfer from another NICU/SCN
- This exhibit is shown for comparative purposes and does not imply that the South West LHIN rate would be the right rate for Champlain LHIN
- All results exclude out of province patients since we could not track NICU/SCN transfers

# NICU Patient Flow: NICU to NICU Transfer Patterns in the Hamilton Niagara Haldimand Brant LHIN

| | *Hospital to:* | | | | | *Total transfers out:* | | | |
|---|---|---|---|---|---|---|---|---|---|
| *Hospital from:* | *Brantford General Hospital* | *Joseph Brant Hospital* | *McMaster University Medical Centre* | *St. Catharines General Hospital* | *St. Joseph's Hamilton* | *Within LHIN* | *Out of LHIN* | *NICU Discharges* | ***Percent Transferred*** |
| Brantford General Hospital | | | 18 | 1 | | 19 | 10 | 293 | **10%** |
| Joseph Brant Hospital | | | 16 | 1 | 2 | 19 | 3 | 232 | **9%** |
| McMaster University Medical Centre | 44 | 75 | | 80 | 119 | 318 | 230 | 1,114 | **49%** |
| St. Catharines General Hospital | | 1 | 29 | | | 30 | 9 | 546 | **7%** |
| St. Joseph's Hamilton | 5 | 3 | 35 | 5 | | 48 | 4 | 446 | **12%** |
| Total transfers from HNHB NICUs | 49 | 79 | 98 | 87 | 121 | 434 | 256 | 2,631 | **26%** |
| Total transfers from Out of LHIN NICUs | 19 | 3 | 76 | 10 | 9 | 117 | | | |
| Total From All Hospitals | 68 | 82 | 174 | 97 | 130 | 551 | | | |

*Source: DAD 2016/17*

- 26 percent of NICU discharges in the HNHB LHIN included a transfer from another NICU/SCN
- Transfer rates vary extensively across LHINs and imply a need to better understand NICU practice variation across Ontario
- All results exclude out of province patients since we could not track NICU/SCN transfers

# Maternal Care: Actual and Simulated Driving Times

| *Average travel times for obstetric cases 2016/17* | *Obstetric Discharges* | *Obstetric Discharges - ON Patients* | *Obstetric Discharges - QB Patients* | *Hôpital Montfort* | *Hawkesbury And District General* | *The Ottawa Hospital: General* | *Cornwall Community Hospital* | *Winchester District Memorial* | *The Ottawa Hospital: Civic* | *Queensway-Carleton Hospital* | *Pembroke Regional Hospital.* | *Almonte General Hospital* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hôpital Montfort | 3,343 | 2,668 | 647 | **24** | 91 | 26 | 92 | 64 | 25 | 31 | 128 | 61 |
| Hawkesbury And District General | 415 | 197 | 218 | 95 | **30** | 97 | 91 | 106 | 99 | 107 | 205 | 138 |
| The Ottawa Hospital: General | 3,459 | 2,915 | 411 | 28 | 100 | **27** | 96 | 63 | 26 | 30 | 123 | 59 |
| Cornwall Community | 667 | 616 | 50 | 91 | 85 | 92 | **13** | 66 | 95 | 102 | 201 | 133 |
| Winchester District Memorial | 788 | 785 | 3 | 59 | 96 | 58 | 60 | **44** | 59 | 61 | 160 | 92 |
| The Ottawa Hospital: Civic | 3,698 | 3,454 | 222 | 29 | 105 | 27 | 100 | 64 | **22** | 23 | 116 | 51 |
| Queensway-Carleton Hospital | 2,413 | 2,389 | 16 | 35 | 113 | 33 | 108 | 67 | 25 | **21** | 109 | 43 |
| Pembroke Regional Hospital | 738 | 708 | 30 | 133 | 213 | 131 | 209 | 172 | 122 | 117 | **27** | 108 |
| Almonte General Hospital | 389 | 389 | 0 | 62 | 142 | 60 | 137 | 96 | 51 | 45 | 99 | **33** |

*Source: DAD 2016/17*

- Numbers shown in red are actual average driving times, all other numbers are simulations
- For example, Almonte's obstetric patients travelled an average of 33 minutes to reach Almonte General
- They would have to travel 45 minutes to reach Queensway-Carleton, the next nearest hospital

# Recent Trends: Births

| *Hospital* | *Champlain LHIN: Trend in Births* | | | |
|---|---|---|---|---|
| | *2014/15* | *2015/16* | *2016/17* | *2yr Growth* |
| Almonte General Hospital | 309 | 392 | 367 | 19% |
| Cornwall Community Hospital | 519 | 539 | 586 | 13% |
| Hawkesbury And District General | 423 | 412 | 389 | -8% |
| Hôpital Montfort | 3,393 | 3,212 | 2,998 | -12% |
| Pembroke Regional Hospital Inc. | 750 | 743 | 696 | -7% |
| Queensway-Carleton Hospital | 2,338 | 2,384 | 2,299 | -2% |
| The Ottawa Hospital: Civic Campus | 3,140 | 3,077 | 3,207 | 2% |
| The Ottawa Hospital: General Campus | 2,927 | 2,814 | 2,739 | -6% |
| Winchester District Memorial Hospital | 757 | 744 | 772 | 2% |
| **Hospital Total** | **14,556** | **14,317** | **14,053** | **-3%** |
| Birth Centre* | 159 | 200 | 226 | 42% |
| Home* | 326 | 358 | 327 | 0% |
| **Out of Hospital*** | **485** | **558** | **553** | **14%** |
| **Champlain LHIN Total** | **15,041** | **14,875** | **14,606** | **-3%** |

*Sources: DAD 2014/15 - 2016/17; *BORN 2014/15 - 2016/17*

# Birthing Trends: Obstetric Discharges

| | *Champlain LHIN: Trend in Obstetric Discharges* | | | | | |
|---|---|---|---|---|---|---|
| *Hospital* | *2012/13* | *2013/14* | *2014/15* | *2015/16* | *2016/17* | *4yr Percent Growth* |
| Almonte General Hospital[1] | 427 | 410 | 320 | 410 | 389 | -9% |
| Cornwall Community Hospital | 572 | 602 | 579 | 593 | 667 | 17% |
| Hawkesbury And District General Hospital | 456 | 438 | 437 | 440 | 415 | -9% |
| Hôpital Montfort | 3,407 | 3,548 | 3,725 | 3,532 | 3,343 | -2% |
| Pembroke Regional Hospital Inc. | 785 | 739 | 790 | 795 | 738 | -6% |
| Queensway-Carleton Hospital | 2,542 | 2,574 | 2,467 | 2,498 | 2,413 | -5% |
| Renfrew Victoria Hospital | 61 | 82 | 18 | 1 | | |
| The Ottawa Hospital: Civic Campus | 3,824 | 3,829 | 3,634 | 3,552 | 3,698 | -3% |
| The Ottawa Hospital: General Campus | 3,646 | 3,667 | 3,650 | 3,499 | 3,459 | -5% |
| University Of Ottawa Heart Institute | 2 | 1 | 7 | 4 | 4 | |
| Winchester District Memorial Hospital | 660 | 730 | 778 | 758 | 788 | 19% |
| **Total** | **16,383** | **16,622** | **16,411** | **16,087** | **15,915** | **-3%** |

*Sources: DAD 2012/13 - 2016/17*

- The number of obstetric discharges at Champlain LHIN hospitals declined by 3 percent over from 2012/13 to 2016/17
- All hospitals except Cornwall Community Hospital and Winchester District Memorial Hospital had fewer obstetric discharges in 2016/17 than they did in 2012/13

*1. Almonte General Hospital had 411 births in 2017/18*

# Recent Trends: NICU/SCN Cases

*Champlain LHIN: Trend in NICU/SCN Cases*

| *Hospital* | *2014/15* | *2015/16* | *2016/17* | *2yr Percent Growth* |
|---|---|---|---|---|
| Children's Hospital Of Eastern Ontario | 369 | 395 | 363 | -1.6% |
| Hôpital Montfort | 462 | 551 | 608 | 32% |
| Queensway-Carleton Hospital | 287 | 332 | 320 | 11% |
| The Ottawa Hospital: Civic Campus | 817 | 750 | 849 | 4% |
| The Ottawa Hospital: General Campus | 843 | 703 | 698 | -17% |
| **Total** | **2,778** | **2,731** | **2,838** | **2.2%** |

*Sources: DAD 2014/15 - 2016/17*

- Total NICU/SCN cases at the Champlain LHIN's hospitals increased by 2 percent from 2014/15 to 2016/17
- Montfort's NICU cases increased by 32 percent, which was the most of all LHIN hospitals

# Recent Trends: NICU/SCN Days

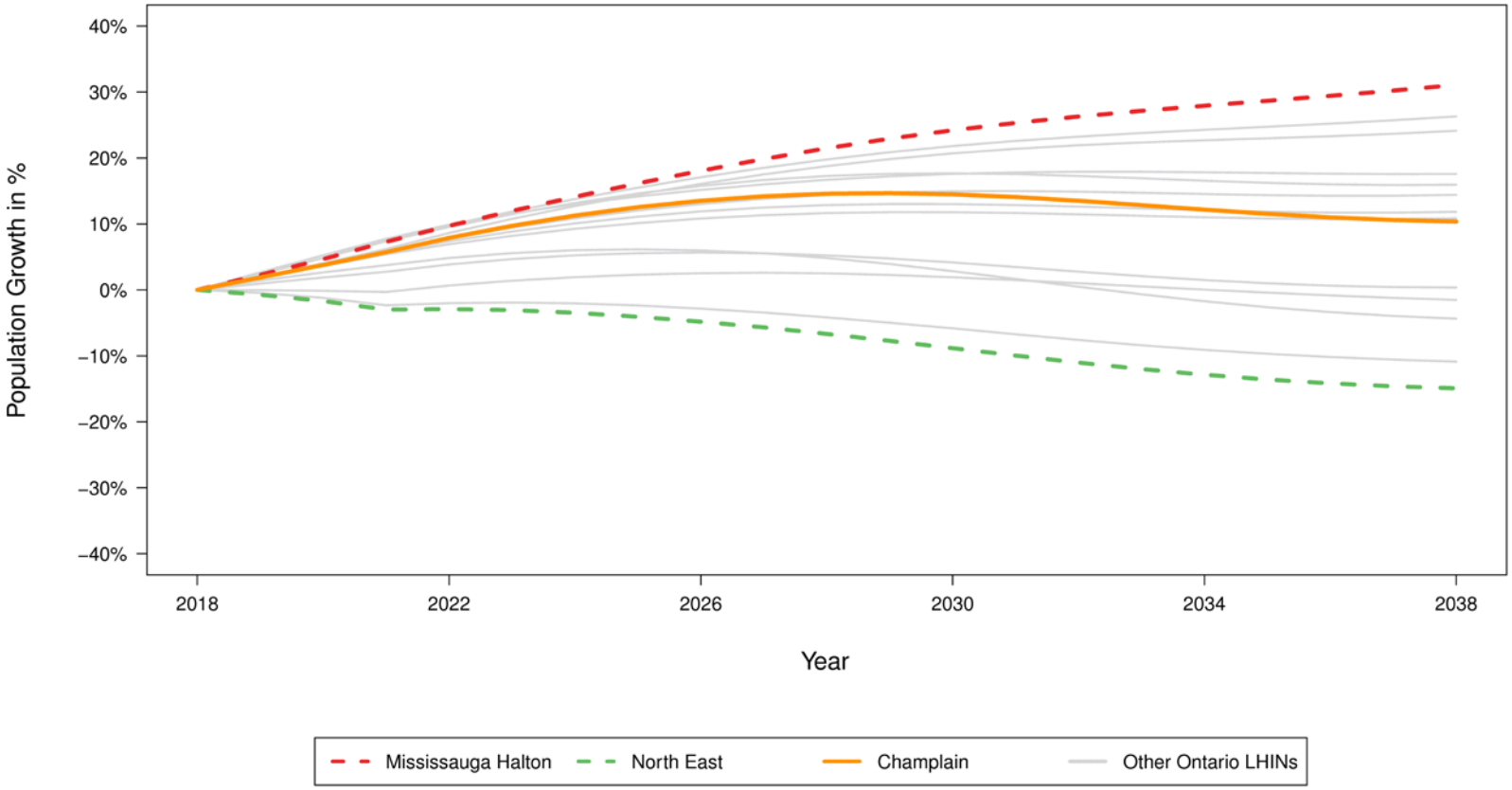
*Champlain LHIN: Trend in NICU/SCN Days*

| *Hospital* | *2014/15* | *2015/16* | *2016/17* | *2yr Percent Growth* |
|---|---|---|---|---|
| Children's Hospital Of Eastern Ontario | 5,052 | 4,493 | 4,562 | -10% |
| Hôpital Montfort | 1,193 | 1,321 | 1,604 | 34% |
| Queensway-Carleton Hospital | 901 | 1,019 | 1,047 | 16% |
| The Ottawa Hospital: Civic Campus | 5,550 | 5,218 | 5,255 | -5% |
| The Ottawa Hospital: General Campus | 7,185 | 6,622 | 6,971 | -3% |
| **Total** | **19,882** | **18,674** | **19,438** | **-2%** |

*Sources: DAD 2016/17*

- Total NICU/SCN days at the Champlain LHIN's hospitals decreased by 2 percent from 2014/15 to 2016/17
- Montfort's NICU days increased by 34 percent, which was the most of all LHIN hospitals.

# Population Trends 2018 - 2038




*Source: Ontario Ministry of Finance Population projections*

- The Champlain LHIN's population aged <1 is not expected to increase substantially over the next 20 years

# Births and Obstetrics Forecasts: Subregion

*Champlain LHIN Subregions: Births and Obstetrics Forecasts*

| *Subregion* | *Measure* | *2016/17* | *2021/22* | *2026/27* | *2036/37* | *20yr Percent Change* |
|---|---|---|---|---|---|---|
| Central Ottawa | Births | 4,061 | 4,596 | 4,746 | 4,670 | 15% |
| | Obstetrics Cases | 4,669 | 5,282 | 5,459 | 5,379 | 15% |
| Eastern Champlain | Births | 1,982 | 2,046 | 1,955 | 1,802 | -9% |
| | Obstetrics Cases | 2,216 | 2,284 | 2,183 | 2,014 | -9% |
| Eastern Ottawa | Births | 2,016 | 2,296 | 2,361 | 2,304 | 14% |
| | Obstetrics Cases | 2,279 | 2,591 | 2,665 | 2,605 | 14% |
| Western Champlain | Births | 1,457 | 1,482 | 1,418 | 1,304 | -10% |
| | Obstetrics Cases | 1,612 | 1,639 | 1,571 | 1,446 | -10% |
| Western Ottawa | Births | 2,903 | 3,312 | 3,408 | 3,319 | 14% |
| | Obstetrics Cases | 3,210 | 3,657 | 3,764 | 3,673 | 14% |
| **Total** | **Births** | **12,419** | **13,732** | **13,887** | **13,398** | **8%** |
| | **Obstetrics Cases** | **13,986** | **15,453** | **15,641** | **15,117** | **8%** |

*Sources: DAD 2016/17, Statistics Canada 2016 Census, MOF Population Projections*

# Births and Obstetrics Forecasts: Hospital

*Champlain LHIN Facilities: Births and Obstetrics Forecasts*

| *Hospital* | *Measure* | *2016/17* | *2021/22* | *2026/27* | *2036/37* | *20yr Percent Change* |
|---|---|---|---|---|---|---|
| Almonte General Hospital[1] | Births | 367 | 387 | 378 | 349 | -5% |
| | Obstetrics Cases | 389 | 409 | 400 | 370 | -5% |
| Cornwall Community Hospital | Births | 586 | 594 | 569 | 539 | -8% |
| | Obstetrics Cases | 667 | 676 | 647 | 614 | -8% |
| Hawkesbury And District General | Births | 389 | 410 | 397 | 389 | 0.0% |
| | Obstetrics Cases | 415 | 437 | 424 | 416 | 0.1% |
| Hôpital Montfort | Births | 2,998 | 3,355 | 3,416 | 3,302 | 10% |
| | Obstetrics Cases | 3,343 | 3,734 | 3,804 | 3,685 | 10% |
| Pembroke Regional Hospital Inc. | Births | 696 | 704 | 669 | 624 | -10% |
| | Obstetrics Cases | 738 | 746 | 709 | 662 | -10% |
| Queensway-Carleton Hospital | Births | 2,299 | 2,584 | 2,633 | 2,556 | 11% |
| | Obstetrics Cases | 2,413 | 2,712 | 2,765 | 2,686 | 11% |
| The Ottawa Hospital: Civic Campus | Births | 3,207 | 3,610 | 3,718 | 3,622 | 13% |
| | Obstetrics Cases | 3,698 | 4,150 | 4,276 | 4,173 | 13% |
| The Ottawa Hospital: General Campus | Births | 2,739 | 3,049 | 3,125 | 3,070 | 12% |
| | Obstetrics Cases | 3,459 | 3,841 | 3,935 | 3,869 | 12% |
| Winchester District Memorial Hospital | Births | 772 | 815 | 786 | 737 | -4.5% |
| | Obstetrics Cases | 788 | 832 | 803 | 752 | -4.5% |
| **Total** | **Births** | **14,053** | **15,506** | **15,692** | **15,189** | **8%** |
| | **Obstetrics Cases** | **15,915** | **17,543** | **17,768** | **17,233** | **8%** |

*Sources: DAD 2016/17, Statistics Canada 2016 Census, MOF Population Projections*

- Almonte General Hospital had 411 births in 2017/18, which was more than the 20-year projection shown here and based on the Ministry of Finance population projections

# Hospital Maternal Newborn Services Attributes

| Hospital | LOC Designation | Physical neonatal bassinets | Staffed neonatal bassinets | Physical maternal beds | Staffed maternal beds | Births (2016/17) |
|---|---|---|---|---|---|---|
| Almonte General Hospital | Level 1 | 0 | 0 | 7 | 5 | 367 |
| Children's Hospital of Eastern Ontario | Level 3b | 20 | 16 | 0 | 0 | 0 |
| Cornwall Community Hospital | Level 1 | 0 | 0 | 17 | 10 | 586 |
| Hawkesbury Hospital | Level 1 | 0 | 0 | 8 | 8 | 389 |
| Hôpital Montfort | Level 2a | 8 | 4 | 34 | 27 | 2,998 |
| Pembroke Regional Hospital | Level 1 | 0 | 0 | 16 | 7 | 696 |
| Queensway Carleton Hospital | Level 2a | 7 | 4 | 38 | 24 | 2,299 |
| The Ottawa Hospital - Civic | Level 2c | 19 | 17 | 43 | 37 | 3,207 |
| The Ottawa Hospital - General | Level 3a | 24 | 24 | 43 | 38 | 2,739 |
| Winchester District Memorial Hospital | Level 1 | 0 | 0 | 13 | 12 | 772 |
| Total | | 78 | 65 | 219 | 168 | 14,053 |

*Source: Hospital Self-Reported Data - November 2018*

# Primary Maternal Language for Women who Gave Birth at a Champlain LHIN Hospital, by Hospital

| | *Primary Maternal Language of Birth Mother Distribution* | | | | | *Primary Maternal Language of Birth Mother Discharges* | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *English* | *French* | *Other* | *Total* | *Missing Data* | *English* | *French* | *Other* | *Missing Data* | *Total* | *Total excluding Missing Data* |
| Almonte General Hospital | 98% | s | 1% | 100% | 3% | 391 | <6 | 6 | 11 | 412 | 401 |
| Cornwall Community Hospital | 95% | 2% | 2% | 100% | 6% | 509 | 13 | 12 | 31 | 565 | 534 |
| **Hawkesbury and District General** | **22%** | **75%** | **2%** | **100%** | **24%** | **76** | **255** | **7** | **82** | **420** | **338** |
| **Hôpital Montfort** | **43%** | **44%** | **13%** | **100%** | **1%** | **1,276** | **1,324** | **399** | **40** | **3,039** | **2,999** |
| Pembroke Regional Hospital | 96% | 3% | 1% | 100% | 14% | 589 | 19 | 7 | 84 | 699 | 615 |
| Queensway Carleton Hospital | 97% | 1% | 2% | 100% | 4% | 2,147 | 22 | 48 | 82 | 2,299 | 2,217 |
| The Ottawa Hospital – Civic | 89% | 3% | 8% | 100% | 11% | 2,557 | 93 | 236 | 318 | 3,204 | 2,886 |
| The Ottawa Hospital – General | 76% | 11% | 12% | 100% | 15% | 1,866 | 274 | 302 | 360 | 2,802 | 2,442 |
| Winchester District Memorial | 84% | 3% | 13% | 100% | 7% | 576 | 24 | 87 | 50 | 737 | 687 |
| Champlain LHIN Hospitals | 76% | 15% | 8% | 100% | 8% | 9,987 | 2,024 | 1,104 | 1,058 | 14,177 | 13,119 |

*Source: BORN Ontario 2018*

# Ontario NICUs by Hospital Birth Volume and Levels of Care

| *Site* | *Facility Type* | *Births* | *NICU Level of Care* |
|---|---|---|---|
| Humber River Hospital - Wilson Site | Large Community | 3,520 | 2b |
| Mississauga Hospital | Large Community | 3,489 | 2b |
| St. Joseph's Health Care System of Hamilton | Teaching | 3,272 | 2b |
| Hôpital Montfort | Teaching | 2,998 | 2a |
| Etobicoke General Hospital | Large Community | 2,622 | 2b |
| Scarborough General Hospital | Large Community | 2,586 | 2b |
| Oakville-Trafalgar Memorial Hospital | Large Community | 2,554 | 2b |
| Queensway-Carleton Hospital | Large Community | 2,299 | 2a |
| Rouge Valley Centenary | Large Community | 2,054 | 2b |
| Guelph General Hospital | Large Community | 1,649 | 2a |
| Belleville General Hospital | Large Community | 1,471 | 2a |
| Cambridge Memorial Hospital | Large Community | 1,429 | 2a |
| Stratford General Hospital | Large Community | 1,111 | 2a |
| Bluewater Health | Large Community | 1,013 | 2a |

*Sources: PCMCH Hospital Level of Care Designation by Hospital April 2018; DAD 2016/17*

- Montfort and Queensway-Carleton are Ontario's largest birth volume level 2a NICU hospitals
- Queensway Carleton Hospital and Hôpital Montfort are the only two large-volume hospitals in Ontario with a level 2a designation. Montfort is the only teaching hospital with a level 2a Special Care Nursery

# Ontario NICUs by Hospital Birth Volume and Levels of Care (continued)

| *Site* | *Facility Type* | *Births* | *NICU Level of Care* |
|---|---|---|---|
| North York General Hospital | Large Community | 5,660 | 2c |
| Brampton Civic Hospital | Large Community | 5,135 | 2c |
| Credit Valley Hospital | Large Community | 4,950 | 2c |
| Metropolitan Campus | Large Community | 3,663 | 2c |
| St. Joseph's Health Centre | Large Community | 3,246 | 2c |
| The Ottawa Hospital: Civic | Teaching | 3,207 | 2c |
| Markham Stouffville Hospital | Large Community | 3,186 | 2c |
| Toronto East General Hospital | Large Community | 2,858 | 2c |
| St. Michael's Hospital | Teaching | 2,787 | 2c |
| Mackenzie Health | Large Community | 2,586 | 2c |
| Southlake Regional Health Centre | Large Community | 2,553 | 2c |
| Lakeridge Health Oshawa | Large Community | 2,537 | 2c |
| Royal Victoria Regional Health Centre | Large Community | 2,023 | 2c |

| *Site* | *Facility Type* | *Births* | *NICU Level of Care* |
|---|---|---|---|
| Sinai Health System - Mount Sinai Site | Teaching | 6,596 | 3a |
| Sunnybrook Health Sciences Centre | Teaching | 4,037 | 3a |
| The Ottawa Hospital: General | Teaching | 2,739 | 3a |

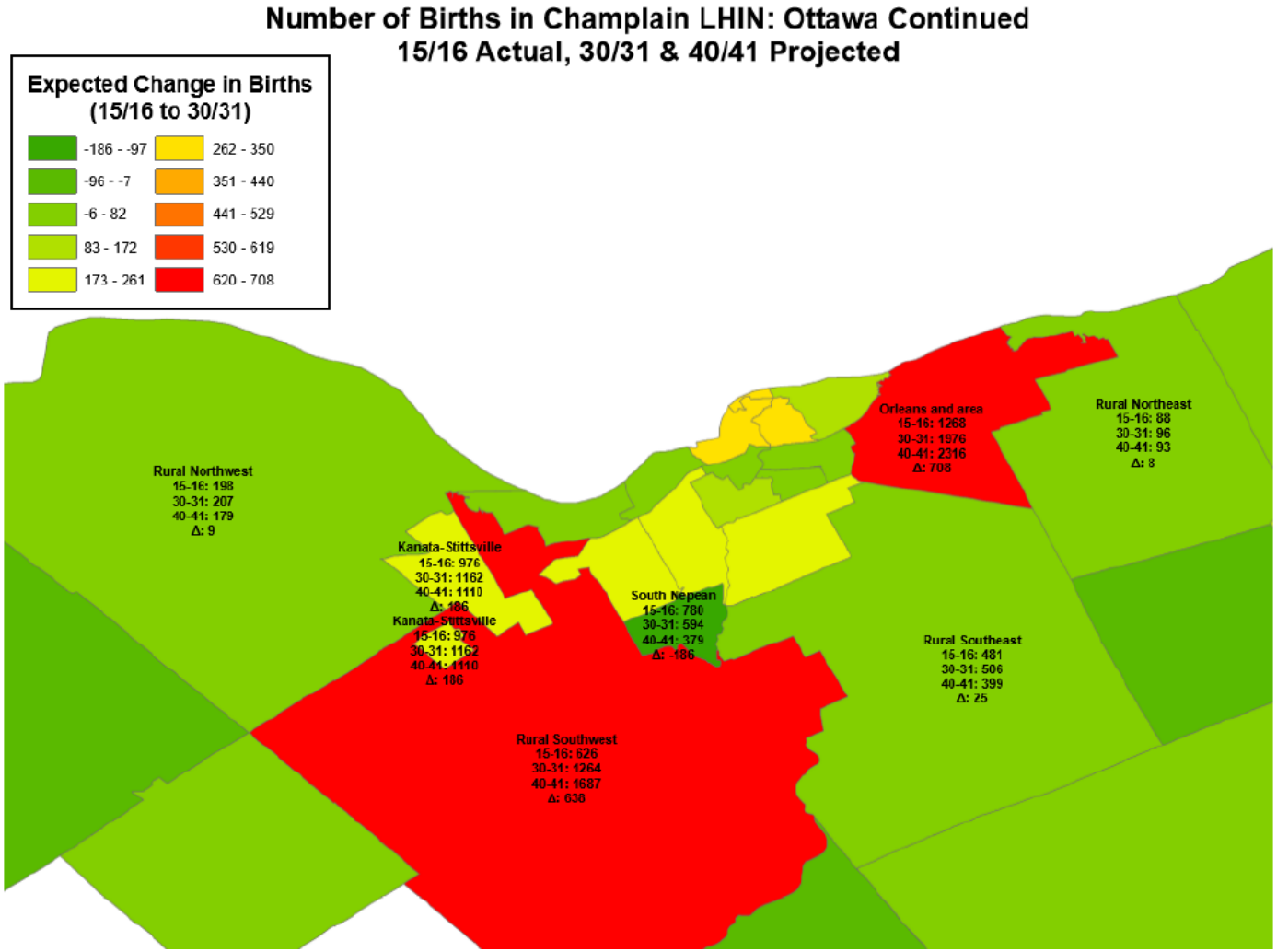
*Sources: PCMCH Hospital Level of Care Designation by Hospital April 2018; DAD 2016/17*

# Ontario NICUs by Hospital Birth Volume and Levels of Care (continued)

| *Site* | *Facility Type* | *Births* | *NICU Level of Care* |
|---|---|---|---|
| LHSC: University Hospital | Teaching | 5,464 | 3b |
| McMaster University Medical Centre | Teaching | 3,087 | 3b |
| Kingston General Hospital | Teaching | 1,855 | 3b |
| SickKids | Specialty Children's | na | 3b |
| CHEO | Specialty Children's | na | 3b |

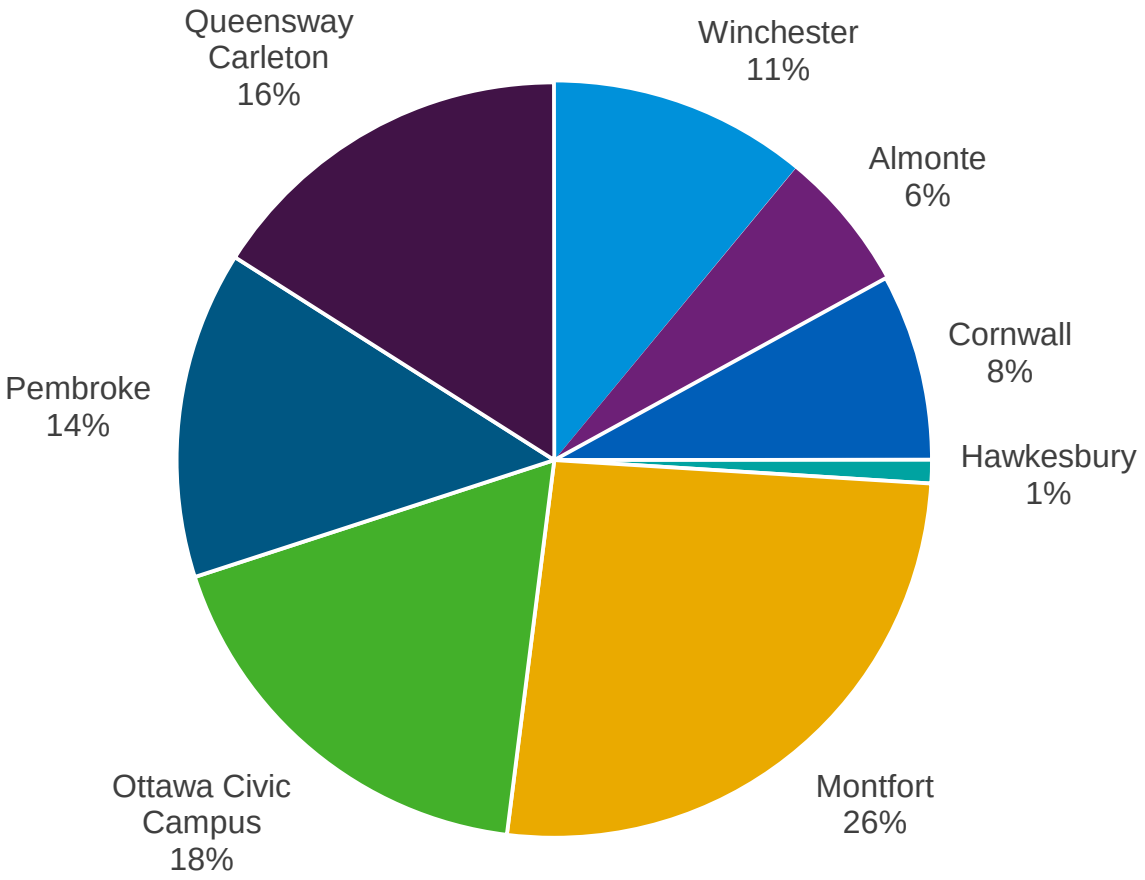
*Sources: PCMCH Hospital Level of Care Designation by Hospital April 2018; DAD 2016/17*

# Forecast Births by Ottawa Region




*Source: BORN Data Birth Projection Maps_26SEPT2017*

# Neonatal Transports by Referral Hospital in Champlain LHIN 2017-18




- The highest percentage of transports for the CHEO Neonatal Transport Team in the Champlain LHIN were from Hôpital Montfort in 2017-2018

# Hospital Model of Care & Bed Profile

| Name of organization | Maternal/ Neonatal Level of Care Provided | Model of Care Provided | Birthing Unit | | Mother/Baby Unit | | LBRP | | Special Care Nursery (SCN) | | Neonatal Intensive Care Unit (NICU) | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | # of physical beds | # of funded beds | # of physical beds | # of funded beds | # of physical beds | # of funded beds | # of physical beds | # of funded beds | # of physical beds | # of funded beds | |
| Almonte General Hospital | 1b/1 | Traditional Model | 2 | 2 | 5 | 3 | - | - | - | - | - | - | We have a combined labour, delivery and postpartum unit that is staffed with 2 RNs. Those RNs would look after any patients who might be in labour or postpartum. We are funded for 5 beds no matter where the patient is physically located. |
| CHEO | NA/3b | Traditional Model | - | - | - | - | - | - | - | - | 20 | 16 | |
| Cornwall Community Hospital | 1b/1 | Traditional Model | 5 | Refer to Comment | 12 | 7 | - | - | 2 | Refer to Comment | - | - | Patients once they deliver are moved from the LBRP to the Mother/Baby Unit (unless short on beds).<br><br>CCH has physical space for 3 isolettes but CCH according to PCMCH, CCH should not keep these babies. However, CCH feels that we are able to safely care for these low risk newborns with the physician support available (4 pediatricians); there is no funding available for this nursing staffing model. The case room that was opened in 2010, has physical capacity for 5 patients. Active labour and delivery occurs in this area and then the patient is typically transferred to the Mother/Baby Unit.<br><br>The staffing model for the combined case room and mother/baby unit functions as one entity. If the census is greater than bed available of 10, additional resources are required.<br><br>As discussed at the meeting on November 15th, within the 10 beds, patients that have gynecological surgery are also admitted to the Mother/Baby Unit. |

*Source: Bed profile survey administered by CMNRP November 2018, completed by the hospitals.*

# Hospital Model of Care & Bed Profile (continued)

| Name of organization | Maternal / Neonatal Level of Care Provided | Model of Care Provided | Birthing Unit | | Mother/Baby Unit | | LBRP | | Special Care Nursery (SCN) | | Neonatal Intensive Care Unit (NICU) | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | # of physical beds | # of funded beds | # of physical beds | # of funded beds | # of physical beds | # of funded beds | # of physical beds | # of funded beds | # of physical beds | # of funded beds | |
| Hawkesbury & District General Hospital | 1b/1 | Combined Model of Care: Patient/Family Centre Care Model and Traditional Model | - | - | 3 | 3 | 5 | 5 | - | - | - | - | Total of 8 Maternal Beds, all funded beds in one cost center. |
| Hôpital Montfort | 2a/2a | Combined Model of Care: Patient/Family Centre Care Model and Traditional Model | - | - | 17 | ? | 17 | ? | 8 | 4 | - | - | 27 of the 34 beds in the Family Birth Centre are funded. The beds are all funded in one cost center. |
| Pembroke Regional Hospital | 1b/1 | Patient/Family Centred Care Model | - | - | - | - | 16 | 7 | 2 | 0 | - | - | Special Care Nursery is for monitoring (O2 sat, fluid) babies post-delivery for the first 8 to 12 hours and this is one on one nursing. |

*Source: Bed profile survey administered by CMNRP November 2018, completed by the hospitals.*

# Hospital Model of Care & Bed Profile (continued)

| Name of organization | Maternal / Neonatal Level of Care Provided | Model of Care Provided | Birthing Unit | | Mother/Baby Unit | | LBRP | | Special Care Nursery (SCN) | | Neonatal Intensive Care Unit (NICU) | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | # of physical beds | # of funded beds | # of physical beds | # of funded beds | # of physical beds | # of funded beds | # of physical beds | # of funded beds | # of physical beds | # of funded beds | |
| Queensway-Carleton Hospital | 2a/2a | Traditional Model | 4 triage<br>8 Birthing beds<br>1 OR | 4 (1 RN for 4 beds)<br>8 (min 5 RNs for 8 beds) includes staffing for BU OR & triage after hours | 30 | 16-20 | - | - | 7 | 4 | - | - | The childbirth program has base staffing patterns and the managers either increase staffing when activity is higher, or will staff to census when activity is lower.<br>Level 2 SCN will often care for "feeders and growers" or NAS babies in the step down beds. This may result in use of all 7 beds in SCN. |
| TOH-Civic Campus | 3/2c | Traditional Model | 13 | 13 | 30 | 24 | - | - | 19 | 17 | - | - | |
| TOH – General Campus | 3/3a | Traditional Model | 13 | 13 | 30 | 25 | - | - | - | - | 24 | 24 | |
| Winchester District Memorial Hospital | 1b/1 | Traditional Model | 5 | 4 | 8 | 8 | - | - | - | - | - | - | |

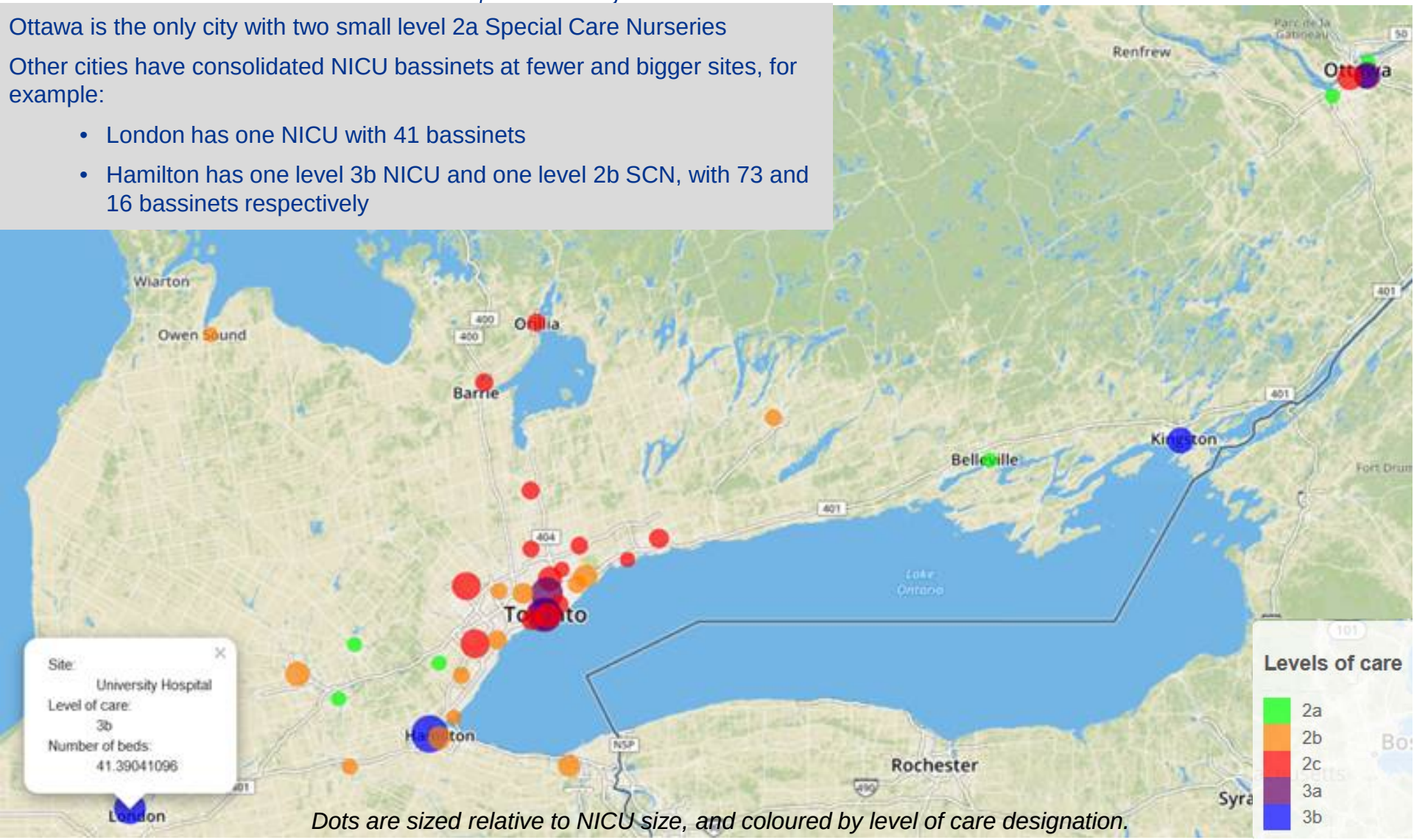
*Source: Bed profile survey administered by CMNRP November 2018, completed by the hospitals.*

# Distribution of NICU/SCN by LOC and Size in Ontario

Ottawa is the only city with two small level 2a Special Care Nurseries

Other cities have consolidated NICU bassinets at fewer and bigger sites, for example:

- London has one NICU with 41 bassinets
- Hamilton has one level 3b NICU and one level 2b SCN, with 73 and 16 bassinets respectively




*Dots are sized relative to NICU size, and coloured by level of care designation.*

# NICU Organization in Other Provinces

| *City* | *Hospital* | *NICU Bassinets** |
|---|---|---|
| Calgary | Alberta Children's Hospital | 14 |
| | Foothills Hospital (U of Calgary) | 39 |
| | Peter Lougheed | 27 |
| | Rockyview General Hospital | 33 |
| Edmonton | Grey Nun's Community Hospital | 25 |
| | Misericordia Community Hospital | 18 |
| | Royal Alexandra Hospital | 69 |
| | Stollery Children's Health Centre | 18 |
| Halifax | IWK Health Centre | 19 |
| Montreal | Montreal Children's Hospital | 52 |
| | Universite de Montreal Hopital Maisonneuve-Rosemont | 20 |
| | Universite de Montreal Hopital Sainte-Justine | 65 |
| | Jewish General Hospital - McGill University | 34 |
| Vancouver | B.C.Women&Children's Hospital | 60 |
| | St. Paul's Hospital | 9 |
| Winnipeg | Intermediate Care Women's Hospital | 60 |
| | St Boniface Hospital | 30 |
| | Winnipeg Health Sciences Centre | 18 |

*Source: [http://www.neonatalcann.ca/Test/CANN%20-%20Canada%20Wide%20NICU%20List.pdf](http://www.neonatalcann.ca/Test/CANN%20-%20Canada%20Wide%20NICU%20List.pdf)*
*And various Internet sources for bassinet numbers*
**Bassinet numbers may not be current*

# Repatriation Opportunities: Care Closer to Home

| | *Champlain LHIN Hospital Births* | | | |
|---|---|---|---|---|
| *Hospital* | *Actual Births* | *Redistributed Births* | *Absolute Change* | *% Change* |
| Almonte General Hospital | 409 | 600 | 191 | 47% |
| Cornwall Community Hospital | 567 | 766 | 199 | 35% |
| Hawkesbury And District General Hospital | 419 | 555 | 136 | 32% |
| Hôpital Montfort | 3,060 | 3,335 | 275 | 9% |
| Pembroke Regional Hospital Inc. | 705 | 846 | 141 | 20% |
| Queensway-Carleton Hospital | 2,311 | 3,206 | 895 | 39% |
| The Ottawa Hospital: Civic Campus | 3,286 | 2,195 | -1,091 | -33% |
| The Ottawa Hospital: General Campus | 2,907 | 2,275 | -632 | -22% |
| Winchester District Memorial Hospital | 743 | 629 | -114 | -15% |
| **Total** | **14,407** | **14,407** | **0** | **0%** |

*Source: DAD 2017/18*

- This shows each hospital's total births in 2017/18 and the births each hospital would have had if all births happened at the patient's closest hospital.
- For example, Almonte General Hospital's births would increase from 409 to 600 if women living close to Almonte delivered at Almonte.
- In the tables, births were redistributed only if the infant did not have a NICU admission.

# What We Heard: Patient & Family Consultations

- **One parent expressed frustration with multiple transfers to various neonatal units due to lack of beds. Overall, the infant was transferred five times. The baby's health deteriorated with each transfer, and the parents found staff struggled understanding documentation from other hospitals. After finding transcription errors in their baby's documentation, the parents found themselves checking documentation at each hospital to ensure providers had the correct information.**
- **Mothers reported experiencing different care receiving varying (and sometimes conflicting) advice depending on the staff member present or the hospital they were at. This was especially common for breastfeeding support and practices. Some mothers wanted more assistance with breastfeeding before trying formula, some felt "shamed" when they did use formula.**
- **Mothers reported that the care they received did not always feel patient-centric: some felt rushed into having inductions or C-section births. They felt that they were expected to stick to a schedule.**
- **Parents living in rural communities reported having to travel far to receive NICU/SCN care.**
- **Many mothers were overall satisfied with the care they received and expressed appreciation and gratitude towards their care team. They appreciated small acts of kindness that helped make their stay more comfortable.**
- **Mothers who gave birth at the OBWC were very satisfied with the care they received – they appreciated having the facilities (e.g. access to a tub), the physical space, and the ability to go home soon after delivering.**

# What We Heard: Health Care Provider Consultations

- **Across the hospitals and the birthing centre there are dedicated, collaborative staff and great leadership teams**
- **Planning needs to have a more regional focus, less siloed – providers need to be held accountable to plans**
- **Unpredictability of surge will continue to be an ongoing challenge for staffing**
- **With transfers, continuity of care can be lost**
- **CMNRP is a great support for training, education, and implementation of leading practices**
- **Not all hospitals credential midwives; and some sites cap midwife-supported births**
- **New midwifery practices cannot be established without additional hospital privileges**
- **Good relationships between hospitals and with the Neonatal Transport Team and CritiCall**
- **Regional guidelines and standards of care and education are required**
- **Physical infrastructure of some units is not up to current standards and is not family-centric**
- **Lack of services in the community can create bottlenecks as mothers and babies are held longer in the hospital**
- **There are challenges recruiting staff to smaller programs and communities**

# 6.3 Steering Committee Membership

# Steering Committee Membership

| Name | Organization | Role |
|---|---|---|
| **Mari Teitelbaum** | CMNRP Leadership Team | VP Provincial Programs, CHEO / Admin host |
| **Marie-Josée Trépanier** | CMNRP Leadership Team | Regional Director, CMNRP |
| **Dr. Mark Walker** | CMNRP Leadership Team | Medical Lead – Maternal, CMNRP |
| **Dr. JoAnn Harrold** | CMNRP Leadership Team | Medical Lead – Newborn, CMNRP |
| **France Morin** | CMNRP Leadership Team | Perinatal Consultant, CMNRP (Project Lead) |
| **Darlene Rose** | Champlain LHIN | Senior Integration Specialist |
| **Ann Lynch** | CHEO | VP/CNE |
| **Paula Archambault** | The Ottawa Hospital | Director – Maternal Newborn Services |
| **Dr. Stephanie Redpath** | CHEO | Neonatologist, Neonatal Transport Team Director |
| **Rachel Sutton** | Ottawa Valley Midwives | Midwife |

| Name | Organization | Role |
|---|---|---|
| **Ann Salvador** | Hôpital Montfort | Director – Family Birthing Centre |
| **Dr. Andrzej Rochowski** | Queensway Carleton Hospital | Chief Pediatrics |
| **Joyce Rolph** | Almonte General Hospital | VP/CNE |
| **Heather Arthur** | Cornwall Community Hospital | VP/CNE |
| **Denise Picard-Stencer** | Hawkesbury & District General Hospital | VP/CNE |
| **François Lemaire** | Pembroke Regional Hospital | VP/CNE |
| **Lynn Hall** | Winchester District Memorial Hospital | VP/CNE |
| **Elyse Banham** | Ottawa Birth & Wellness Centre | Executive Director |
| **Nicole Roberts** | BORN Ontario | Data Analyst, Epidemiology |
| **Amanda DeGrace** | | Family Advisor |

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