

Populations with Lower Rates of Breastfeeding:

A SUMMARY OF FINDINGS



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Acknowledgements

The Best Start Resource Centre would like to thank the key informants, service providers who completed the needs assessment, and the advisory committee for the information and feedback they provided.

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- Daniel Bedard, BORN Ontario

Disclaimer

This report is based in part on data provided by Better Outcomes Registry and Network (BORN) Ontario, a provincial program housed at the Children's Hospital of Eastern Ontario. The interpretation and conclusions contained herein do not necessarily represent those of BORN Ontario. Data to inform this report came from the historical Niday Perinatal Database and from the new BORN Information System (BIS).

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Citation

Best Start Resource Centre. (2015). *Populations with Lower Rates of Breastfeeding: A Summary of Findings*. Toronto, Ontario, Canada: author.

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Introduction

Health Nexus, through funding from the Ontario Ministry of Health and Long-Term Care (MOHLTC), initiated the implementation of the breastfeeding community project grants in December 2013, focusing on Ontario populations with lower rates of breastfeeding.

In order to support community agencies in addressing breastfeeding in priority populations, the Best Start Resource Centre, a key program of Health Nexus, completed four research validation strategies, conducted from December, 2013 to March, 2014. These strategies included:

1. A review of the breastfeeding literature.
2. A review of findings from the BORN Ontario.
3. A needs assessment of Ontario service providers who promoted/supported breastfeeding.
4. Key informant interviews with Ontario service providers working with women representing populations with lower rates of breastfeeding.

This report presents a summary of the research results and will serve as a guide to the implementation of breastfeeding community projects and other breastfeeding services in Ontario.

Note: In this report the term service provider is used to include the range of people who may provide services to women related to breastfeeding, such as physicians, midwives, nurses, peer support workers, staff in parenting programs etc.

Note: In 2015, information from BORN was updated in this report (2012/13 data updated to 2013/14 data).

Research Methods

1. Review of the Breastfeeding Literature

To identify populations at risk of poor breastfeeding outcomes and to share effective practices and practical strategies to promote breastfeeding, peer reviewed and grey literature were reviewed. Search terms were entered into the Pubmed, Google and Google Scholar search engines. Searches were limited to the past ten years (2003 to 2013). A total of 78 articles was retrieved. Articles gathered included:

- Published studies.
- Survey results.
- Systematic reviews.
- Literature reviews.

By reviewing this literature, the factors associated with poor breastfeeding outcomes and practical strategies to promote positive breastfeeding outcomes were identified.

2. Review of Findings from BORN

In order to gain a greater understanding of breastfeeding in Ontario, breastfeeding data was retrieved from BORN. We looked at factors affecting exclusive breastfeeding rates at discharge from hospital among mothers who were Ontario residents and gave birth to live full-term infants (> 37 weeks of gestational age) in the province of Ontario. This included:

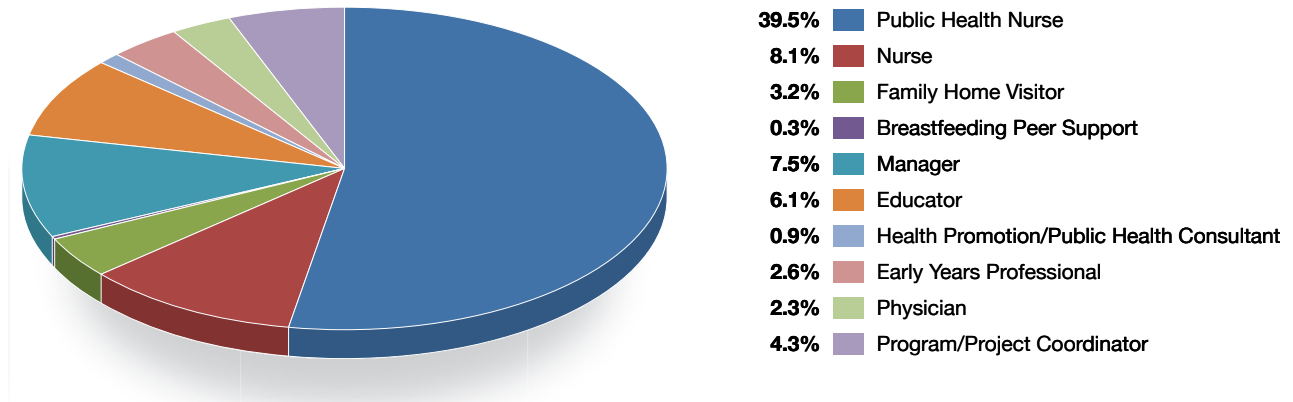
- Maternal demographics.
- Neighbourhood level demographics from the Statistics Canada Census data.
- Birth and neonatal outcomes.
- Prenatal care.
- Health status.
- Substance use.

Note: In 2015, information from BORN was updated in this report (2012/13 data updated to 2013/14 data). Due to some missing data, results should be interpreted with caution.

3. Needs Assessment of Service Providers

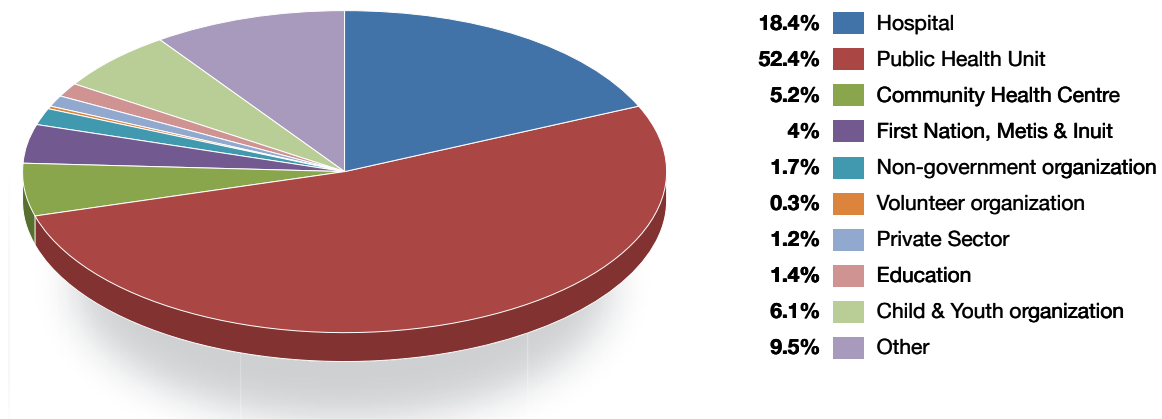
In January, 2014 the Best Start Resource Centre conducted an online needs assessment survey to identify what service providers in Ontario require to promote positive breastfeeding outcomes among populations with lower rates of breastfeeding, during pregnancy and while breastfeeding. A total of 349 individuals completed the survey.

The largest group of respondents identified themselves as public health nurses (39.5%), followed by nurses (8.1%) and managers (7.5%). Other categories included educators, family home visitors, early years' professionals, physicians, health promoters/ health promotion consultants, and breastfeeding peer support workers.



Respondents' Role/Discipline within Their Organization (Table 1)

Respondents represented a range of organizations, public health units (52.4%), hospitals (18.4%), child and youth (6.1%), community health centres (5.2%), First Nations, Métis or Inuit (4.0%), non-government (1.7%), education (1.4%), private sector (1.2%), volunteer (0.3%), and other organizations (9.5%).



Types of Services/Organizations Represented by Respondents (Table 2)

Survey respondents were also asked to identify the geographic region in which they worked in within Ontario. Overall, there was representation from across the province.



4. Key Informant Interviews

By interviewing key service providers working with prenatal and breastfeeding women, Best Start Resource Centre explored ways to reach women with lower rates of breastfeeding, including strategies to address rates of initiation, exclusivity and duration. Key informant interviews (26) were conducted between December 2013 and January 2014. Key informants included a mix of front-line service providers, managers and administrative staff.

Interviewees provided their input regarding the following themes:

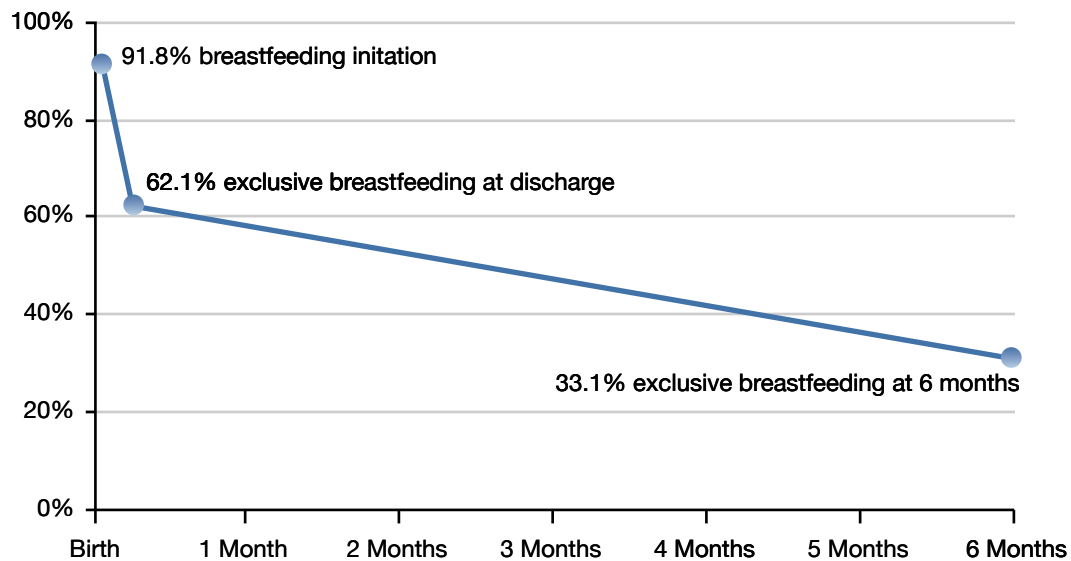
- Breastfeeding challenges.
- Breastfeeding protective factors.
- Strategies to promote breastfeeding.
- Breastfeeding supports required.
- Effective practices and practical strategies to promote breastfeeding.

Key informants represented the following types of services.

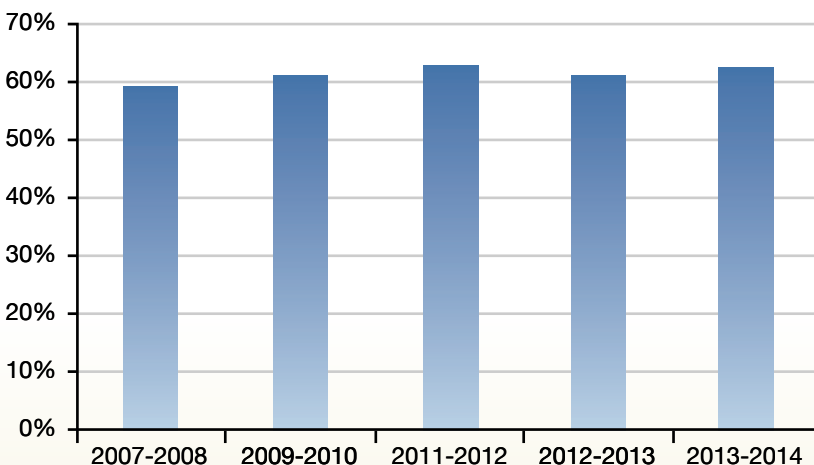
	TOTAL NUMBER
Public Health	7
Health/Health Care	6
Community Health	5
Health Promotion	4
Breastfeeding support	2
Family Medicine	2
Infant and Parenting	1
Mental Health	1
Primary Health Care	1

Breastfeeding Rates in Ontario

Statistics Canada showed that 91.8% of women in Ontario initiated breastfeeding (breastfed at least once) between 2012 and 2013. BORN data for 2013/2014 showed that 62.1% of women who were residents of Ontario and gave birth to a full-term infant (> 37 weeks of gestational age) were breastfeeding exclusively at hospital discharge. Only 33.1% of women in Ontario breastfed exclusively for 6 months or longer⁵¹. It is important to note that home births (about 2.5% of births) in Ontario are not included in BORN data. Home births are usually attended by a midwife. Only women with low risk pregnancies will have a home birth in Ontario. In general, breastfeeding initiation rates for these women are high. In table 3, data points one (breastfeeding initiation) and three (exclusive breastfeeding at 6 months) are taken from Statistics Canada (2013). They include all women giving birth, including women having a home birth or giving birth to a preterm infant.

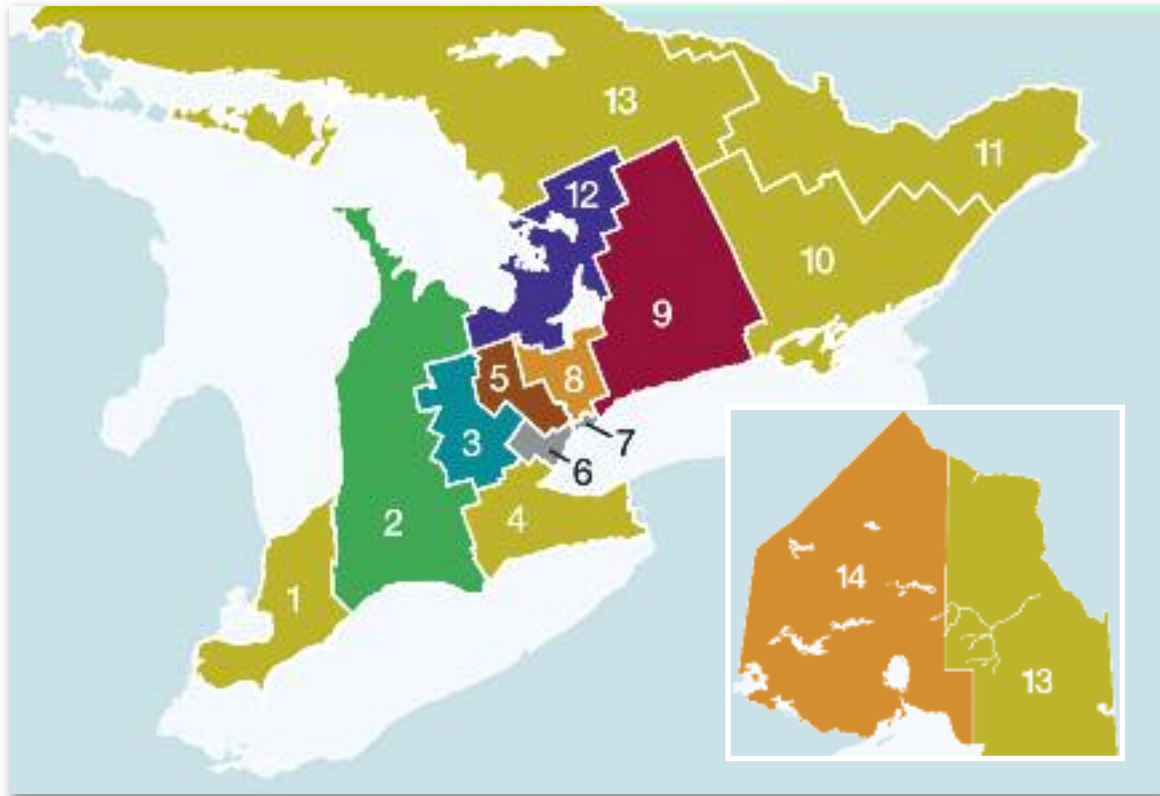


Breastfeeding Rates in Ontario: Initiation and Exclusive Breastfeeding at Discharge and Six Months (Table 3)

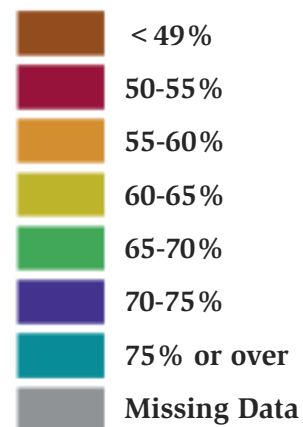


Exclusive Breastfeeding at Discharge for term live births in Ontario

By region, the Local Health Integration Networks (LHINs) with the lowest rates of exclusive breastfeeding at discharge in Ontario included Central West (43.8 %) and Central East (53.9 %). The LHINs with the highest rates of breastfeeding in Ontario included Waterloo Wellington (77.5%), and North Simcoe Muskoka (74.4%) (BORN, 2013/2014). Ontario LHINs are not-for-profit corporations who work with local health providers and community members to determine the health service priorities of their regions. Funded by MOHLTC, LHINs plan, integrate and fund local health services. There are 14 LHINs in Ontario.



PLACE OF BIRTH	EXCLUSIVE BREASTFEEDING AT DISCHARGE
(1) Erie St. Clair	61.4%
(2) South West	68.0%
(3) Waterloo Wellington	77.5%
(4) HNHB	60.9%
(5) Central West	43.8%
(6) Mississauga Halton*	58.1%
(7) Toronto Central*	72.2%
(8) Central	57.2%
(9) Central East	53.9%
(10) South East	62.3%
(11) Champlain	64.6%
(12) North Simcoe Muskoka	74.4%
(13) North East	61.7%
(14) North West	59.7%
ONTARIO	62.1%



* Excluded from calculations due to high levels of missing data



Populations with Lower Rates of Breastfeeding

In Ontario, several groups of mothers are at an increased risk of poor breastfeeding outcomes. Identification of these populations provides the opportunity to ensure targeted supports and education.

Data from Canadian Sources

Based on the literature gathered from Canadian sources, the following factors are associated with poor breastfeeding outcomes:

Maternal Age and Parity

- Younger maternal age.^{1,5,8,12-14,18,21,26,29-32,40,42,50,53,55}
- Being a first time mother.^{1,5,8,14,21,25,28,40,42,45}

Maternal Ethnicity and Origin

- Being Aboriginal.^{12,15}
- Being foreign born.^{8,17,23,58}
- Being of Caucasian ethnicity.²³

Maternal Education/Income/Work

- Lower income.^{3,5-8,13,14,31,42,19,21,40,43,44,55}
- Less educational attainment.^{4,5,17,18,28,30,40,42,49,50}
- Mothers' earlier return to work.^{1,21}

Maternal Social Support

- Being unmarried.^{3,40,42,45,50}
- Lacking social support.^{27,34}

Maternal Attitudes, Beliefs

- Not intending to breastfeed.^{3,8,48}
- Not having an attachment oriented approach.⁴⁶
- Having lower breastfeeding self-efficacy.^{11,12,34,37,38,47}

Maternal Health Concerns

- Poor maternal health.¹⁴
- Diabetes during pregnancy.¹⁶
- Maternal obesity.^{1,3,56}
- Poor maternal mental health.^{4,10,9,12,17,18,54}

Maternal Substance Use

- Smoking during pregnancy.^{1,3,8,28,30,31}

Medical Issues during Delivery

- Caesarean births.^{1,5,21,47}

Infant Health Concerns

- Preterm infants.^{33,35}
- Infant admission to the NICU.^{1,4}
- In hospital supplementation.^{12,13,17,20,21,30,47,48}

The findings related to mothers' place of birth, ethnicity and parity were conflicting. Some of the research indicated that being foreign born^{8,17,23,58}, nulliparous^{1,5,8,14,21,25,28,40,42,45} or Caucasian in ethnicity²³ is negatively associated with breastfeeding status. However evidence was also suggesting that being foreign born^{18,21,36,40,43,48,49,59}, nulliparous^{21,40,42} or Caucasian in ethnicity²⁵ is either protective against poor breastfeeding outcomes, or has no effect on breastfeeding outcomes.

BORN data from 2013/14, (see the next section for details) showed higher rates of breastfeeding in neighbourhoods with lower immigrant status and neighbourhoods with low levels of visible minority status. BORN data also showed no variance by parity. This aligns with the evidence showing that being Canadian born or Caucasian is associated with positive breastfeeding outcomes, and being nulliparous has no effect on breastfeeding outcomes.

Ontario Specific Data

BORN collects data from Ontario hospitals during the prenatal period and usually up to discharge. BORN uses aggregate data when representing specific areas or all of Ontario. Demographic information is extracted by postal code and linked to Statistics Canada Census data. Due to some missing data, results should be interpreted with caution. Ontario specific data was retrieved from BORN to provide a picture of exclusive breastfeeding at discharge for the following demographics and variables:

- Maternal age.
- Mothers' primary language.
- Mothers' parity.
- Maternal weight.

- Marital status (linked to Statistics Canada Census data).
- Education (linked to Statistics Canada Census data).
- Unemployment (linked to Statistics Canada Census data).
- Income (linked to Statistics Canada Census data).
- Visible minority and immigrant status (linked to Statistics Canada Census data).
- Mothers' place of birth.
- Caesarean births.
- Assisted vaginal births.
- Third and fourth degree or cervical laceration during childbirth.
- Pain management during labour and birth.
- Maternal health conditions including hypertensive disorders and diabetes.
- Maternal mental health concerns.
- Drug or substance exposure, alcohol exposure, and smoking during pregnancy.



To assess neighbourhood demographics BORN links birth records to data from the National Household Survey (NHS) of the 2011 Census, Statistics Canada (which is administered to random 20% sample of the population) by maternal postal code using the PCCF (Postal Code Conversion File) file, Statistics Canada. For example, on the variable of unemployment, BORN uses the following procedure:

1. Unemployment rates were calculated for each dissemination area in the province of Ontario and sectioned into quartiles.
2. Each birth record was linked to the respective dissemination area using postal code to obtain unemployment rates at the neighbourhood level.
3. The neighbourhood unemployment status is represented as the number of unemployed people in a neighbourhood, expressed as a percentage of the total population in the labour force.
4. Lowest quartile values for unemployment status represent the lower portion of the distribution by dissemination area of those unemployed in a neighbourhood relative to the highest quartile values, which represent the upper portion of the distribution of those unemployed.
5. Neighbourhood unemployment status values distributed by dissemination area were categorized by quartile. Each quartile represents approximately a quarter of the total population for Ontario, but does not necessarily represent a quarter of the term live births for Ontario in 2013/14.

Due to some missing data, results should be interpreted with caution.

Descriptions are provided in the following sections regarding any relevant Ontario trends in exclusive breastfeeding rates at discharge for women with infants born at term.

Maternal Age

The age group with the lowest rate of breastfeeding at discharge was women less than 20 years of age, with an exclusive breastfeeding rate of 51.2%. The age group with the highest rate of breastfeeding was 30 to 34 year olds, with an exclusive breastfeeding rate of 65.0% (BORN, 2013/14).

Maternal Language

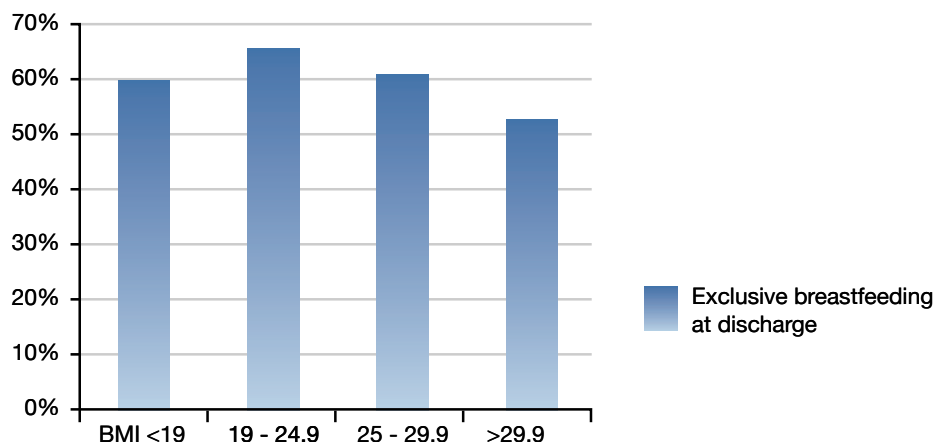
Within Ontario, the language group with the lowest rate of exclusive breastfeeding at discharge (52.2%) was women whose primary language was that other than English or French. The women with the highest rate of exclusive breastfeeding (68.2%) were those whose primary language was French (BORN, 2013/14).

Parity

Multiparous and nulliparous women had similar rates of exclusive breastfeeding at discharge, with 61.4% of multiparous women and 62.7% of nulliparous women exclusively breastfeeding at discharge (BORN, 2013/14).

Maternal Weight

Among normal weight women (BMI of 18.5 to 24.9), the rate of exclusive breastfeeding at hospital discharge was highest at 66.5%. Women who were underweight (with a BMI of less than 18.5) had a lower breastfeeding rate of 59.9%. Overweight women (with a BMI of 25.0 to 29.9) had a lower breastfeeding rate of 60.8% and obese women (with a BMI of 30 and greater) had the lowest breastfeeding rate of 52.9% at discharge (BORN, 2013/14).



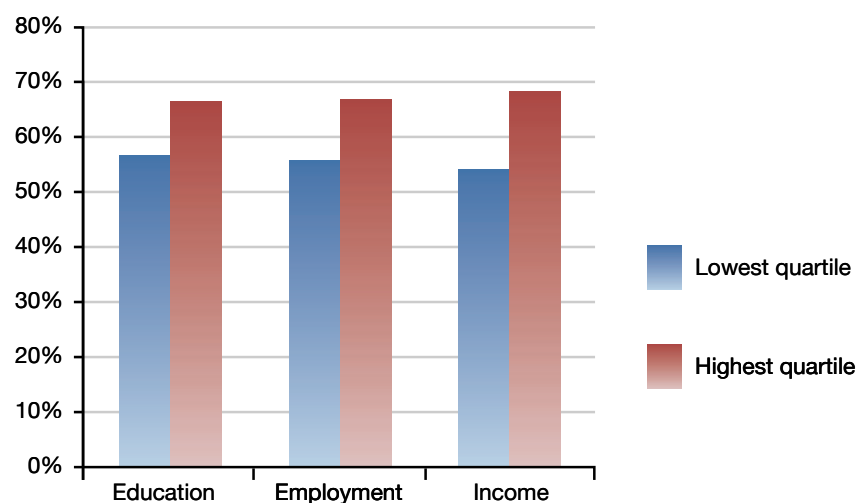
Exclusive Breastfeeding at Discharge and Maternal BMI (Table 4)

Marital Status (linked to Census)

Within Ontario marital status was associated with breastfeeding exclusivity. The quartile of neighbourhoods with the lowest proportion of legally married couples had the lowest rate of exclusive breastfeeding (57.8%). The two quartiles of neighbourhoods with the highest proportions of legally married couples had the highest rates of exclusive breastfeeding (64.8% and 64.0%) (BORN, 2011/12). Since 2012/13, BORN can no longer link breastfeeding data to neighbourhood marital status, due to changes in the Canadian Census.

Education, Employment and Income (linked to Census)

Educational attainment, employment and income were correlated with breastfeeding. Across Ontario the quartile of neighbourhoods with the highest proportion of residents who have attained post-secondary certificates, degrees or diplomas had the highest rate of exclusive breastfeeding at discharge (67.4%). Conversely, the quartile of neighbourhoods with the lowest proportion of residents who had attained post-secondary certificates, degrees or diplomas had the lowest rate of exclusive breastfeeding at discharge (57.0%). It was also found that the quartile of neighbourhoods with the lowest rate of unemployment had the highest rate of exclusive breastfeeding (67.0%). The quartile with the highest rate of unemployment had the lowest rate of exclusive breastfeeding (56.6%). Accordingly, the quartile of neighbourhoods with the highest median household incomes had the highest rate of exclusive breastfeeding at discharge (68.4%). The quartile with the lowest median household incomes had the lowest rate of breastfeeding (54.2%) (BORN, 2013/14).



Exclusive Breastfeeding at Discharge and Education, Employment and Income (Table 5)

Visible Minority and Immigrant Status

A relationship was identified between breastfeeding and living in a neighbourhood with higher proportions of visible minorities or immigrants. It was found that the quartiles of neighbourhoods with lower proportion of immigrants had higher rate of exclusive breastfeeding (67.0%, 68.1% and 65.1%), while the quartile with the highest proportion of immigrants had the lowest rate of exclusive breastfeeding (53.8%). The quartiles of neighbourhoods with lower proportion of visible minority residents had the higher rate of exclusive breastfeeding (67.6%, 67.6% and 65.5%), while the quartile of neighbourhoods with the highest proportion of visible minorities had the lowest rate of exclusive breastfeeding (54.3%) (BORN, 2013/14).



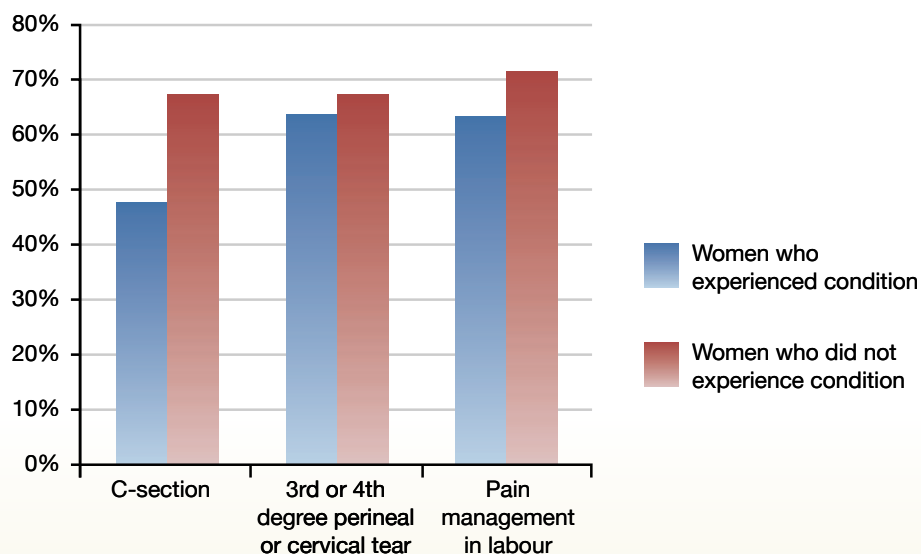
Complications and Variations during Childbirth

Some complications and variations during childbirth are correlated with breastfeeding exclusivity.

Across the province 48.5% of women who had caesarean sections breastfed exclusively at discharge, compared to 67.2% of those who had vaginal births (BORN data for 2013/14).

Among women who sustained a third or fourth degree tear or a cervical tear during childbirth, 67.4% breastfed exclusively at childbirth, compared to 63.4% of those who sustained first or second degree tears or less (BORN, 2013/14).

It was also reported that 63.0% of women who received pain management during birth breastfed exclusively at discharge, compared to 71.3% of those who did not receive any form of pain management (BORN data for 2013/14).

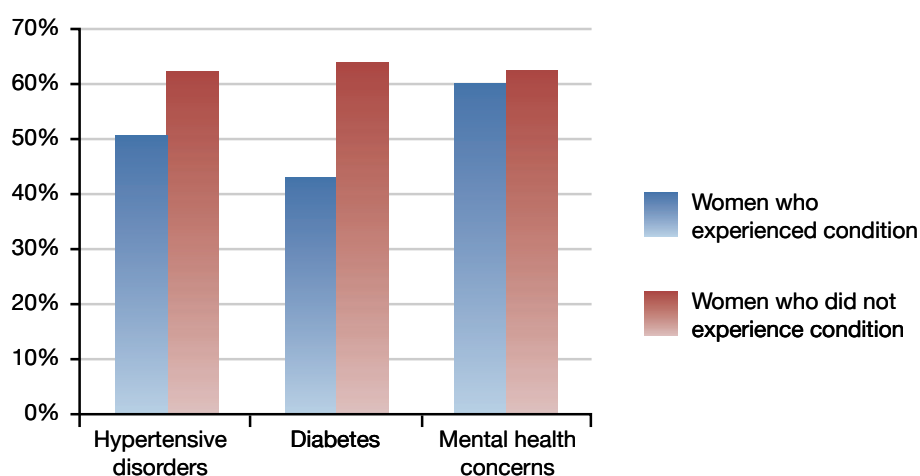


Exclusive Breastfeeding at Discharge and Complications and Variations during Childbirth (Table 6)

Mothers' Health Status

Within Ontario, 62.8% of mothers with no health conditions breastfed exclusively at discharge (compared 60.1% of those with health conditions). Compared to 62.8% of women without any reported hypertensive disorders, mothers with hypertensive disorders (including gestational hypertension, preeclampsia, pre-existing hypertension with superimposed preeclampsia, eclampsia or HELLP) had an exclusive breastfeeding rate of 50.8% upon discharge. It was also found that 42.8% of women who had diabetes in pregnancy (pre-existing or gestational) breastfed exclusively at discharge, compared to 63.3% of those without diabetes (BORN, 2013/14).

For mothers who experienced mental health concerns (such as anxiety, depression, postpartum depression, addiction, bipolar, or schizophrenia), 60.0% breastfed exclusively at discharge, compared to 62.5% of those without mental health concerns (BORN, 2013/14).



Exclusive Breastfeeding and Common Maternal Health Conditions during Pregnancy (Table 7)

Substance Use and Breastfeeding

Within Ontario, 46.9% of women with self-reported drug or substance exposure in pregnancy (i.e., cocaine, gas/glue, hallucinogens, marijuana, methadone or opioids) breastfed exclusively at discharge, compared to 62.4% of women who did not self-report any substance use. Among mothers who were exposed to alcohol on a weekly basis during pregnancy (at least one drink per week or an unknown amount), the rate of exclusive breastfeeding at time of discharge from the hospital was 58.8% percent. This is compared to 62.2% of mothers who consumed zero to three drinks per month (BORN, 2013/14).

Smoking was also shown to impact breastfeeding. Women who did not smoke throughout their entire pregnancy had a rate of exclusive breastfeeding at discharge of 63.6%. Women who smoked throughout their entire pregnancy had a rate of exclusive breastfeeding of 47.8%. Women who were smoking at their first trimester visit, but did not smoke for the rest of their pregnancy had an exclusive breastfeeding rate of 57.1%. Those who were non-smokers during the first trimester but were smoking at delivery had a breastfeeding rate of 57.9% (BORN, 2013/14).

Summary of Ontario Trends

In summary, BORN data for 2011/12 and 2013/14 suggests lower rates of exclusive breastfeeding at discharge for women delivering in hospital at term in the following Ontario populations:

Maternal Age

- Women under 20 years of age.

Maternal Ethnicity and Origin

- Women with a primary language other than English or French.
- Women who immigrated to Canada.
- Women from a visible minority group.

Women living in neighbourhoods with:

- Less education attainment.
- Higher rates of unemployment.
- Lower income.

Maternal Social Support

- Women without a partner.

Maternal Health Concerns

- Women with hypertensive disorders.
- Women with diabetes.
- Women who were overweight or obese.
- Women who were underweight.

Maternal Substance Use

- Alcohol exposure during pregnancy.
- Drug or substance use during pregnancy.
- Smoking during pregnancy.

Medical Issues during Delivery

- Women who delivered by caesarean section.
- Women who received pain management during labour and birth.

Barriers to Breastfeeding

The key informant interviews with service providers (January, 2014) identified the challenges faced by populations with lower rates of breastfeeding in relation to breastfeeding in general, as well as to breastfeeding initiation, exclusivity and duration. Challenges were largely the same regardless of the aspect of breastfeeding being addressed (i.e. initiation, duration, exclusivity). Challenges to breastfeeding included:

Maternal Confidence, Attitudes, Knowledge or Beliefs

- Negative attitude towards breastfeeding.
- Lack of intention to breastfeed.
- Lack of breastfeeding self-confidence.
- Discomfort with breastfeeding in public.
- Lack of knowledge and education.
- Inconsistent or incorrect information.

Social Determinants of Health and Individual Circumstances

- Limited social support.
- Poverty, food and housing insecurity.
- Medications and lifestyles that were seen as contra-indicated to breastfeeding.
- Shorter maternity leaves.

Breastfeeding Problems

- Pain during breastfeeding.
- Latching problems.
- Previous unsuccessful breastfeeding experiences.

Access to Services

- Lack of accessible support and services.

Conflicting and Inconsistent Messages

- Presence of formula advertisements.
- Conflicting messages given by service providers.

In order to promote breastfeeding among at-risk populations, these challenges need to be taken into consideration during the planning and implementation of breastfeeding promotion and support strategies.



Effective Breastfeeding Strategies

A substantial portion of the data from all four research validation strategies focused on effective strategies to reach and support populations with lower rates of breastfeeding. Strategies that are effective in positively influencing breastfeeding include:

Strategies Identified by Key Informants (January, 2014)

Strategies focussing on support

- Peer-to-peer provision of breastfeeding support.
- Peer, professional and family support for breastfeeding mothers.
- Interdisciplinary breastfeeding support.
- Language specific breastfeeding support.

Strategies focusing on education

- Preconception breastfeeding education.
- Prenatal breastfeeding education.
- Postpartum breastfeeding education.
- Breastfeeding promotion campaigns.

Strategies focussing on interventions and care

- Predictable, ongoing interventions.
- In-person interventions (including home-based interventions).
- Remotely (telephone) delivered interventions.
- Male partner focused interventions.
- Implementation of the Baby-Friendly Initiative (BFI).
- Midwifery care.
- In-hospital promotion of skin-to-skin mother-infant contact.
- Health care professional delivered interventions.
- Partnerships across the continuum of prenatal and postpartum care.

Key informants also identified factors that positively influenced the breastfeeding related decisions of women with lower rates of breastfeeding. Protective factors included:

- Women's desire to do what is best for their infants.
- Low cost of breastfeeding relative to formula feeding.
- Availability of peer, family and professional support.
- Exposure to breastfeeding and being breastfed themselves.

Effective Strategies Identified within the Published Literature

- Prenatal breastfeeding education.²⁸
- In-person interventions (including home-based interventions).²²
- Remotely (telephone) delivered interventions.²⁴
- Health care professional delivered interventions.²²
- Support for breastfeeding mothers.²²
- Interdisciplinary breastfeeding support.²²
- Language specific breastfeeding support.²⁴
- Prenatal childbirth and breastfeeding education.²⁸



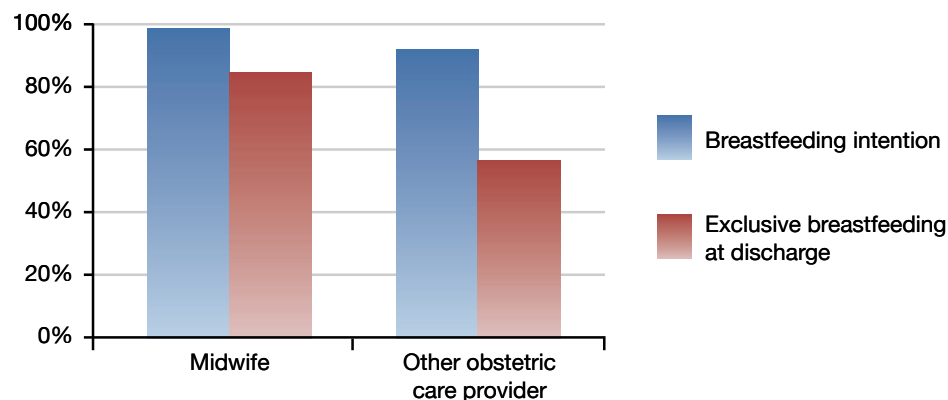
Type of Effective Support Strategies

The strategies that were effective in promoting breastfeeding among populations with lower rates of breastfeeding can be classified according to the type of support provided, including programs/services, resources/tools, prenatal strategies, social support/self-efficacy and supports for service providers.

Programs and Services

Midwifery care has been associated with higher rates of breastfeeding intention (BORN, 2013/14). Among women who received prenatal health care from a midwife, 97.9% intended to breastfeed. Of those who received prenatal health care from other health care professionals, 92.6% intended to breastfeed.

Midwifery care has also been associated with higher rates of exclusive breastfeeding (BORN data from 2013/14). Within Ontario, 84.3% of women who received prenatal care from a midwife breastfed exclusively at discharge from hospital. Among women who received care from other health care professionals, 58.7% breastfed exclusively at the same measurement point.



Exclusive Breastfeeding at Discharge or Three Days Postpartum and Prenatal Obstetric Birth Provider (Table 8)

Other programs and services mentioned by the key informants that have a positive impact on breastfeeding include:

- 24 hour telephone services.
- Implementation of BFI.
- Breastfeeding friendly places.
- Doula support during pregnancy and birth.
- Elder support in Aboriginal communities.

Effective programs are those that involve peer support, include breastfeeding social groups, breastfeeding cafés, Best Start centres, and the Canada Prenatal Nutrition Program (CPNP) (Key Informant Interviews, 2014).

Key informant interviews also identified characteristics that led programs and services to have a positive impact on breastfeeding:

- Accessibility with respect to time and location.
 - The provision of appropriate services when needed.
 - The provision of appropriate referrals.
 - Service providers including volunteers who are passionate about breastfeeding support.
 - The use of both or combined professional and peer support.
 - The promotion and reinforcement of the message that breastfeeding matters.
- (Key Informant Interviews, 2014)

Multifaceted organizational interventions were also found to be effective.^{22,39}

Resources/Tools

Several resources/tools that promoted breastfeeding in the general population were identified through key informant interviews. These included Best Start Resource Centre resources, breast models as teaching tools, health promotion campaigns that reach out to women from different demographics, and breastfeeding education during hospital pre-admission/prenatal interviews.

In the service provider needs assessment survey (2014), resources that were identified as useful or very useful for all women by the majority of service providers included websites (links and downloadable resources) and downloadable videos.

To be effective and useful specifically for populations with lower rates of breastfeeding, survey respondents reported that resources/tools should:

- Provide consistent information.
 - Be current.
 - Be culturally appropriate.
 - Provide customized information for mothers and support persons.
 - Be available in the prenatal period.
 - Be consistent with BFI guidelines.
 - Include visual information and images.
 - Avoid a preaching or judgemental tone.
- (Key Informant Interviews, 2014)

When working with populations with lower rates of breastfeeding, specific resources and educational strategies were found to be favoured:

- Breastfeeding workshops.
 - Prenatal breastfeeding classes.
 - DVDs or downloadable videos.
 - Apps.
 - Websites.
- (Key Informant Interviews, 2014)

To enhance their own understanding of populations with lower rates of breastfeeding and provide education regarding effective strategies on how to work with these populations, the majority of survey respondents indicated that they needed more information on the following topics:

- Understanding populations with lower rates of breastfeeding.
- How to develop and maintain breastfeeding classes and support groups.
- How to evaluate effective breastfeeding programs.
- How to identify effective strategies for working with specific populations with lower rates of breastfeeding.

An online format for delivering education was preferred, i.e., webinars, online courses or websites (Needs Assessment, 2014).

Prenatal Strategies

Prenatal education, information and support were identified as important sources of breastfeeding promotion by many of the key informants. It was found that prenatal decision making and support can be done both formally and informally, and can be encouraged and supported by professionals and peers in various settings, such as in a group, face-to-face, and online. Prenatal classes that incorporate or focus on breastfeeding information are preferred in general and are being piloted for populations with lower rates of breastfeeding. It was also noted that in addition to prenatal education, follow-up support very soon after birth and continued throughout the first month postpartum is important to improve breastfeeding outcomes (Key Informant Interviews, 2014).



Social Support and Self-Efficacy

The importance of social support was emphasized. It was found that individuals working in the area of breastfeeding promotion were aware of the importance of social support and tried to offer this form of support during the provision of programs and services. However, due to various limitations, this goal was not always achieved. At minimum, many programs endeavoured to provide a list of community resources that women could access to increase their social supports within their community. Some examples of programs that incorporated social support and partner education included breastfeeding clinics and drop-ins, breastfeeding support or social groups, Facebook groups, home visiting and parenting programs (Key Informant Interviews, 2014).

Several strategies to promote self-efficacy were identified:

- Building support (e.g., peer support).
- Avoiding blame-laying with respect to breastfeeding challenges.
- Evaluating women's self-efficacy and confidence.
- Remaining non-judgemental.
- Providing women with opportunities to practice and master skills.
(Key Informant Interviews, 2014)

The following factors ensure that breastfeeding education is more effective:

- Using service providers and peers according to the situation.
- Providing supportive teaching environments.
- Providing consistent and current information.
- Providing culturally appropriate content.
- Providing information customized for mothers and support persons.
- Providing prenatal education.
- Providing one-on-one educational opportunities.
- Giving information that is consistent with BFI guidelines.
- Including visual information and images.
(Key Informant Interviews, 2014)

Supports Required by Service Providers

In order to provide adequate supports and services such as those mentioned previously, service providers also require informational and practical supports. The most popular supports included printed materials, websites and networking with other service providers and peer support providers (Needs Assessment, 2014).

There was also interest in professional development, such as breastfeeding courses, workshops and seminars for health care providers (Needs Assessment, 2014). Interventions that aimed to enhance breastfeeding knowledge, confidence and behaviours of health care professionals have been shown to increase breastfeeding duration⁵⁷ and exclusivity in the general population⁵⁷.

Implementation

A wide variety of strategies to promote breastfeeding supportive knowledge and behaviours have been shown to be effective in the general population. While some strategies have been identified to be effective specifically for populations with lower rates of breastfeeding, a great deal of progress still needs to be made in the implementation of needed breastfeeding promotion and supports to reach women from populations with lower rates of breastfeeding.

Gaps in Services

While various strategies are effective in the promotion of breastfeeding among populations with lower breastfeeding rates, the following gaps were identified with respect to the services and resources that are available, with potential negative impacts on breastfeeding rates:

- Lack of community services.
- Lack of consistent messages.
- Gaps in physician education.
- Poorly timed provision of breastfeeding information.
- Services which were neither easily accessible nor available.
- Service providers who were unaware of existing services.
(Key Informant Interviews, 2014)

Long-term factors that are believed to make breastfeeding information and education more effective have been implemented to a limited degree or not implemented at all. These include:

- Far-reaching breastfeeding campaigns.
- The incorporation of breastfeeding education within the school system.
- Breastfeeding education for all professionals across the continuum of care.
- The availability of materials for those who have decided prenatally not to breastfeed.
- The provision of information to fathers and partners.
- The use of technology (such as social media) to engage women.
(Key Informant Interviews, 2014)

From the 2014 Needs Assessment, gaps were identified with respect to the resources and information/tools required by service providers to work successfully with populations with lower rates of breastfeeding. In order to learn more about supporting these at-risk populations, service providers identified the need for the following training opportunities:

- Additional workshops and in-services at their place of work.
- Webinars.

To support their efforts to reach and work with women from the target populations, service providers were looking for:

- New resources, e.g., ready to use breastfeeding workshops, toolkits, websites, and downloadable resources including videos.
(Needs Assessment, 2014)

BORN data indicates considerable differences in exclusive breastfeeding rates at discharge for LHINs when linked to various outcomes. This may in part be due to the unequal distribution of breastfeeding services in Ontario. Closer examination may assist service providers in identifying gaps in services within their communities and for specific populations.



Recommendations

There is optimism about the progress that has been made in the normalization of breastfeeding, as well as the potential to make even bigger differences through comprehensive long-term strategies.

The four research strategies detailed in this report yielded in-depth information regarding the characteristics and support of populations with lower rates of breastfeeding within Ontario. Service providers, such as managers, supervisors, program planners, educators and front-line service providers can use the information to address breastfeeding barriers and gaps in services as well as to develop and enhance programs, services and strategies specifically for at-risk populations.

In order to build upon the existing services and resources, as well as fill the identified gaps, several recommendations were made as to how to further promote breastfeeding among populations with lower rates of breastfeeding.

At a Community Level:

Recommendations for Front-Line Service Providers:

- Engage women prenatally.
- Provide women with consistent information and messages about breastfeeding.
- Refer women to available resources and services including services that provide support.
- Listen to women and support them in a non-judgemental manner.
- Include traditional teachings when working with Aboriginal women.
- Adhere to the principles of the Baby-Friendly Initiative.

Recommendations for Program Planners and Decision Makers:

- Make it a priority to identify and support populations with lower rates of breastfeeding.
- Provide prenatal breastfeeding classes.
- Provide support groups or one-on-one support programs.
- Offer home visiting for breastfeeding support.
- Consider the hiring of additional staff (including lactation consultants or staff to administer or develop peer support programs).
- Provide education and training for front-line staff about how to support populations with lower rates of breastfeeding.
- Create or obtain resources in languages spoken by the population served by the agency.

At a Provincial Level:

- Develop and offer workshops, courses or webinars about how to support populations with lower rates of breastfeeding.
- Develop educational resources (i.e. websites, toolkits and printed resources) to assist programs when training group or class facilitators and peer support workers.
- Develop ready-to-use workshops or educational resources for use by front-line service providers in prenatal classes, breastfeeding or parenting programs.
- Develop resources in languages used by priority populations.

At a Societal Level:

- Ban sponsorship of education by formula companies.
- Enforce the World Health Organization's code of marketing of breastmilk substitutes.
- Fund advertisements to promote breastfeeding.
- Fund the hiring of additional staff (including lactation consultants or staff to administer or develop peer support programs).
- Fund the purchase of breastfeeding equipment when needed.
- Support home visiting for breastfeeding support.



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*This document has been prepared with funds provided by the Government of Ontario.
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