

The Delivery of Prenatal Education in Ontario: A Summary of Research Findings



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Table of Contents

Introduction	2
Acknowledgements	3
Research Methods	5
Prenatal Education	9
The Prenatal Education Experience in Ontario	13
Provision of Prenatal Education in Ontario	22
How Prenatal Educators Can be Supported	29
Recommendations	32
References	33

Introduction

The Ministry of Health and Long-Term Care provided funding to the Best Start Resource Centre to develop key messages and tools to assist service providers in Ontario in delivering consistent and evidence-based prenatal education.

The definition of prenatal education for this project includes in-person and online prenatal education. It includes:

- Traditional prenatal education classes (designed and advertised for the general public)
- Group prenatal education courses offered through a health care provider practice (e.g. midwifery clinic prenatal program)
- Registered and non-registered groups (such as drop-in groups at a Parent Resource Centre, teen programs, the Canada Prenatal Nutrition Program)
- One-on-one prenatal education through a population-wide program (for example, telephone advice, Healthy Babies Healthy Children prenatal home visiting)
- General universal prenatal information provided by a health care provider (for example, during a prenatal appointment in an office/clinical setting, during a home visit)
- Brochures, handouts and resources
- Online courses, apps, websites

It does **NOT** include individualized prenatal medical advice or care provided by health care providers e.g. doctors, midwives, nurse practitioners or specialized health programs.

In order to develop prenatal education key messages and tools, information was gathered from multiple sources to establish the current situation for prenatal education in Ontario and determine gaps and needs related to prenatal education in Ontario (see Research Methods).

Collectively these sources provided key information on the delivery of prenatal education in Ontario, including:

- Who accesses prenatal education
- The needs of future parents and new parents
- The characteristics and needs of prenatal education providers
- Preferred methods of receiving prenatal information
- The types of prenatal education programs in Ontario
- The effectiveness of different modes of prenatal education
- Ways to increase the effectiveness of prenatal education
- Emerging or innovative prenatal education practices
- The preferred format and content for prenatal education key messages
- Opportunities/practices to support the uptake/implementation of prenatal education key messages

A summary of relevant results is provided, including recommendations for prenatal education in Ontario.

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

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- Donna Caputo, RN, BScN, PHN, Algoma Public Health
- Sharon Dore, RN, Phd, SOGC, Associate Clinical Professor, Dept. of Obs Gyn and School of Nursing, McMaster University
- Caroline Edwards, RN, PHN, Family Health-Parenting Team, Peel Region
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- Patricia Mousmanis, MD CCFP FCFP, Ontario College of Family Physicians
- Angela Murphy, RN, Perinatal Coordinator, Conestoga College
- Peggy Neil, RN, Family and Youth Outreach Nurse, Prince Edward Family Health Team
- Cindy Renault, RN, IBCLC, Lead Prenatal Educator, VON, Windsor
- Fern Santos Furtado, RN, Healthy Families Manager, Toronto Public Health
- Lia Swanson, BScN, RN MSC(T), Manager Reproductive Health Program, Niagara Region Public Health
- Anna Thurairatnam, Senior Project Manager, Provincial Council for Maternal and Child Health
- Julie Toole, RM, Policy Analyst, Association of Ontario Midwives
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Best Start Resource Centre Lead: Matthuschka Sheedy, RN, BNSc., ICCE

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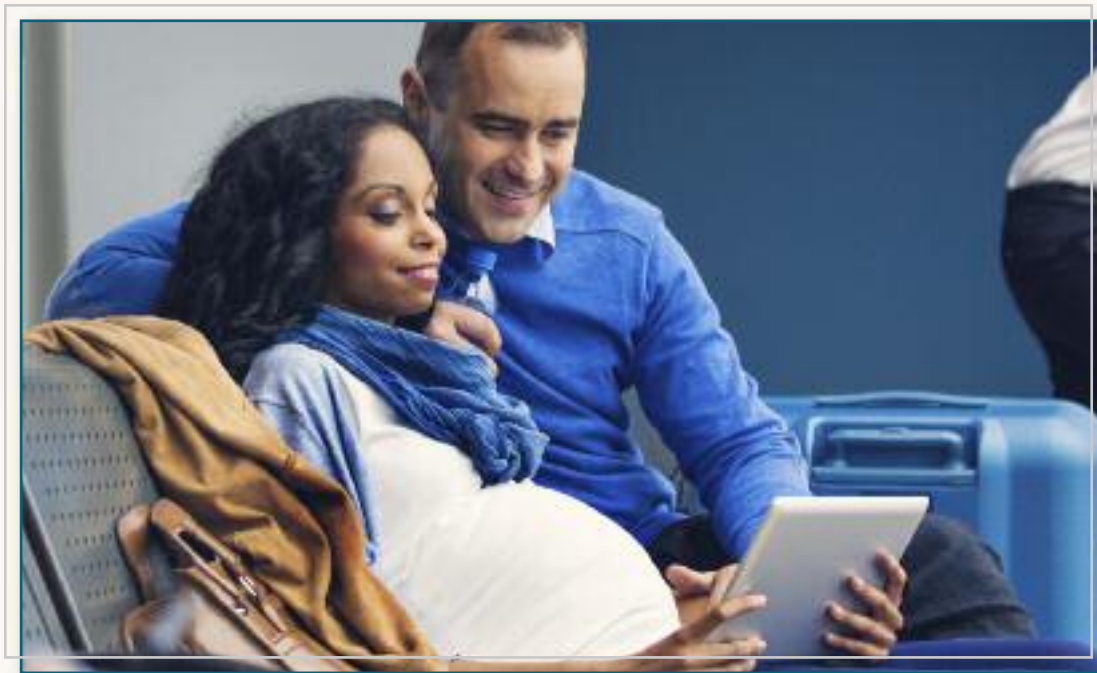
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Best Start Resource Centre
Health Nexus
180 Dundas Street West, Suite 301
Toronto, Ontario, M5G 1Z8
www.beststart.org
www.healthnexus.ca
beststart@healthnexus.ca

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Research Methods

In order to gather the information required to develop prenatal education key messages and tools, several research strategies were undertaken. The strategies included:

1. A scan of the peer reviewed and grey literature
2. A survey of Ontario residents who were planning a pregnancy, were currently pregnant or had a baby in the last 2 years
3. An online needs assessment of prenatal educators
4. An online survey of organizations in Ontario that provided prenatal education
5. An online survey of health units in Ontario
6. Better Outcomes Registry and Network (BORN) data reports
7. A review of position statements and practice guidelines related to the prenatal education topic areas
8. Interviews with key prenatal education contacts in other provinces

Literature Review

Existing peer reviewed and grey literature on prenatal education was examined. Peer reviewed literature was obtained through a search of the Cumulative Index of Nursing and Allied Health Literature (CINAHL), Medline, Academic Search Premier, Google Scholar and Evidence Based Medicine Reviews databases. The Evidence Based Medicine Reviews database contains articles that are found in the Cochrane Central Register of Controlled Trials, Cochrane Database of Systematic Reviews, Database of Abstracts of Review of Effects, and the American College of Physicians Journal Club.

Grey literature was obtained through the Google search engine. Literature that was published in the last seven years (2007-2014) was retrieved. A total of 138 relevant articles were retrieved. This added to research gathered previously to develop the 2007 report *Prenatal Education in Ontario – Better Practices*.

Survey of Ontario Residents who were New Parents, Pregnant or Planning a Pregnancy

In order to understand the needs and experiences of new and future parents in Ontario, an online survey was conducted using Leger's online panel, LegerWeb. Panel members were randomly selected to receive email invitations to this survey.

A total of 753 men and women who resided in Ontario and were planning a pregnancy, currently pregnant or had a baby in the last 2 years were surveyed between March 19th and April 30th 2014. Of the new parents surveyed, 209 were mothers who gave birth and 60 were partners. Of the expectant parents surveyed, 150 were women who were currently pregnant and 52 were partners of pregnant women. Those surveyed also included 219 women expecting to conceive in the next 2 years and 63 partners of women expecting to conceive.



Surveys of Organizations Providing Prenatal Education

Surveys were conducted with organizations providing prenatal education services in order to gain a greater understanding of the provision of prenatal education in Ontario.

Survey of Public Health Units

Family health leads were contacted in the 36 Ontario public health units. They were asked to complete the online survey for their health unit. One survey was requested per health unit. The online survey was open from February 4, 2014 to March 4 2014. All 36 public health units responded to the survey.

Survey of Other Organizations

A list was developed of non-health unit organizations that provided prenatal education in Ontario. The list was assembled from organizations that responded to a recruitment notice posted on the Best Start Maternal Newborn and Child Health Promotion (MNCHP) network listserv (over 1,552 members) and lists of local prenatal education services provided by public health units. Twenty-seven of the 36 public health units provided data on the other organizations providing prenatal education their area.

The total number of organizations invited to complete this survey was 136 (132 English and 4 French).

One response was requested per organization. The survey was open from February 4, 2014 to March 7, 2014. A total 35 organizations responded.

BORN Data

This report is based in part on data provided by Better Outcomes Registry and Network Ontario (BORN), part of the Children’s Hospital of Eastern Ontario. The interpretation and conclusions contained herein do not necessarily represent those of BORN Ontario.

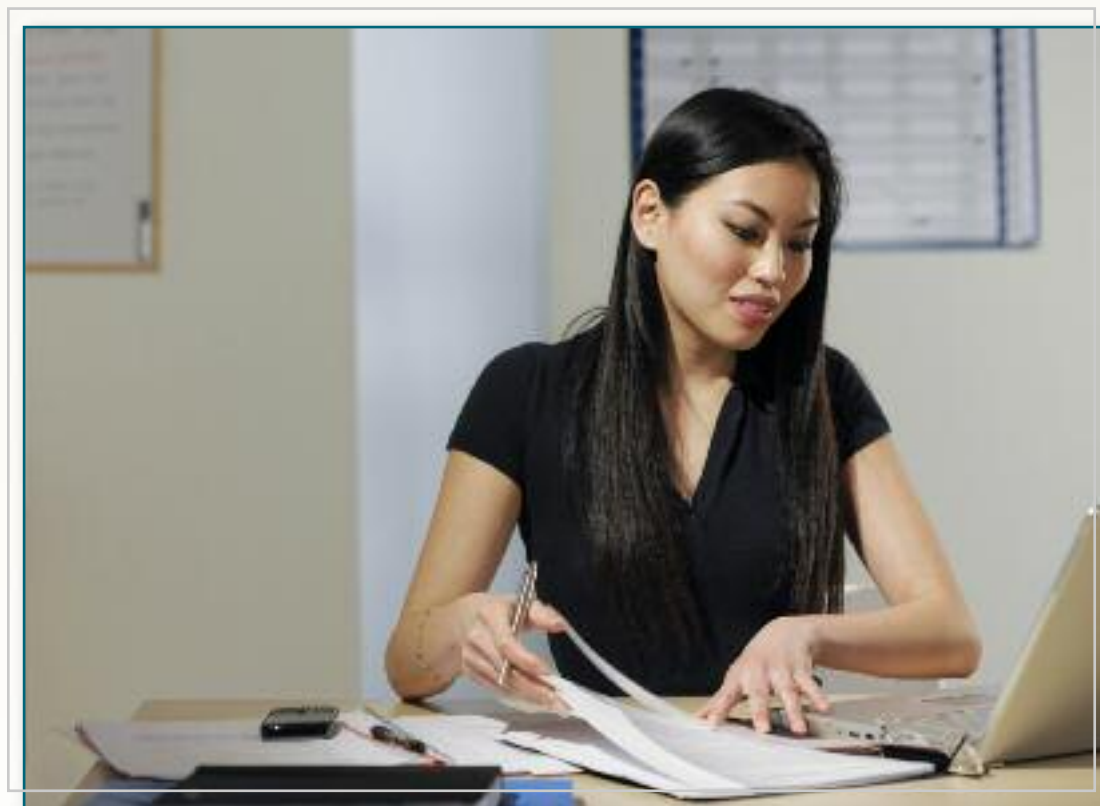
BORN provided data regarding prenatal education class attendance and demographics. This data was based on forms completed prior to delivery. Prior to April 2012 the definition of prenatal class attendance was *“Indicate whether mother attended any prenatal education classes during the current pregnancy.”* In the 2012/13 fiscal year, this was changed to *“Indicate whether the pregnant woman attended any prenatal education classes during the current pregnancy, including online education requiring registration or enrolment as well as in-person classes.”*

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

Needs Assessment of Prenatal Educators

The needs assessment of prenatal educators was developed to assist in learning about the supports most needed by prenatal educators. The survey was open to all prenatal educators in Ontario.

Respondents were recruited through a variety of channels. Self-identified prenatal educators responded to the invitation posted on the four Best Start Resource Centre listservs: the Maternal Newborn and Child Health Promotion (MNCHP) (1,552 members), the Healthy Babies Healthy Children (HBHC) (384 members), the Best Start Aboriginal Sharing Circle (BSASC) (223 members) and the Réseau de santé maternelle et infantile (RSMI) (525 members). Prenatal educators were also asked to share the invitation with their networks. The needs assessment was also shared directly with public health units. The survey invitation was also forwarded to prenatal educators identified by public health units. One response was requested per prenatal educator.



The Prenatal Educators Needs Assessment Survey was open from February 3 to March 7, 2014. There were 368 respondents in this needs assessment, with 340 stating that they provided prenatal education in Ontario. Prenatal educators who did not provide group prenatal classes may be under-represented as they may not have self-identified as prenatal educators.

Methodological Limitations

While the research strategies aimed to provide a greater understanding of prenatal education in Ontario, the information presented in this summary should be interpreted with caution due to several methodological limitations.

Due to issues such as incomplete surveys, use of varied data collection methods by organizations, and prenatal educators electing not to participate in the surveys, it is possible that the data retrieved from the surveys of prenatal educators in public health units and other organizations does not provide a complete and accurate representation of prenatal education in Ontario.

The data retrieved from the needs assessment also should be interpreted with caution as there is an under-representation of educators from non-public health organizations.

When interpreting the BORN data, it should be noted that some forms of prenatal education might be under-represented as women who received prenatal education other than traditional group prenatal education classes might have indicated that they did not receive any prenatal education. Also, the BORN data is limited to women who had hospital deliveries. Due to some missing data, results should be interpreted with caution.

Some numbers should be interpreted with caution as many women receive prenatal information through more than one source, many responding organizations provided approximate participation numbers, and several organizations did not have attendance numbers for their programs.





Prenatal Education

Approximately 50 years have passed since the inception of formal prenatal education¹. In many parts of the world, prenatal education classes are considered an essential part of planning for a healthy pregnancy^{2,3}. The World Health Organization has recognized guidance and education as key components of prenatal care⁴. Prenatal education activities are offered on an individual or group basis¹ and provide women and those who support them with information about pregnancy, the childbirth process, infant care and early parenthood⁵.

Why Women Attend Prenatal Education

The reasons for receiving prenatal education are many. Reasons include:

- To have questions and issues addressed⁶
- To facilitate partner involvement⁶
- To receive support and education⁶
- To receive a refresher⁶
- Referral from a health care professional⁶
- To reduce anxiety about labour and birth⁷
- To satisfy the wishes of a spouse or partner⁷
- To learn about caring for a baby⁷

Topics Areas Covered in Prenatal Education

Prenatal education covers a wide range of topics. The topics most commonly covered by public health units and other organizations included:

- Healthy pregnancies (prenatal care, changes in pregnancy, nutrition, physical and emotional health, environmental exposures)
- Labour and birth (stages of labour, comfort measures, medical interventions)
- Newborn care and safety (characteristics, screening, health, safe sleep, equipment)
- Breastfeeding
- Postpartum changes
- Parenting in the first 6 weeks postpartum (infant care, attachment, relationships, birth control)
- Roles, concerns and content for father/partner
(Needs Assessment, 2014; Prenatal Education Surveys, 2014)

Additional topics covered through the different modes of prenatal education included:

- Available community supports and resources
- Multiple births
- Loss of a baby
- Parenting after 6 weeks postpartum
- Settlement issues for newcomers
(Needs Assessment, 2014; Prenatal Education Surveys, 2014)

As noted above content specific to future fathers/partners is commonly included in prenatal education. Some included a section about future fathers/partners. Others integrated father/partner specific information throughout the series or had separate classes for future fathers/partners (Prenatal Education Surveys, 2014).

Many prenatal educators tailored the content to the specific needs of participants (such as participants with mental health concerns, or participants living in poverty, etc.), especially when delivering one-on-one services (Needs Assessment, 2014).



Promoting Prenatal Education Services

For public health units and other organizations, the main methods of promoting prenatal education services included:

- Posters/flyers
- Medical office referrals
- Social media
- Local print media
(Prenatal Education Surveys, 2014)

Effectiveness of Formal Prenatal Education

Prenatal education has been found to be effective when delivered in a variety of formats, including:

- Traditional Group Prenatal Education (group classes offered on a regular basis)^{6, 8, 9}
- Psychology-Based Prenatal Education (prenatal education that focuses on the psychological aspects of childbirth)¹⁰⁻¹²
- Drop-In Prenatal Education¹³
- Online Prenatal Education^{14, 15}
- One-on-One Prenatal Education^{3, 16}
- Group Prenatal Care (medical care and childbirth education offered simultaneously in a group setting)^{2, 17}
- Combined Group and Individual Prenatal Education (classes that are delivered through a mixture of both individual and group prenatal sessions)^{18, 19}

Prenatal education has also been found to be effective when tailored to specific populations such as teens^{20, 21} or specific cultural groups²².



Benefits and Challenges of Prenatal Education

Prenatal education results in many benefits. However, there have also been instances in which prenatal education has resulted in undesirable outcomes.

Benefits of Prenatal Education

Prenatal education has been found to be positively associated with:

- Health promotion behaviours such as exercise and nutrition²¹
- Prenatal adaptation³
- Pregnancy and childbirth related knowledge^{6, 23}
- Confidence^{5, 6, 23}
- Less perceived pain during labour^{21, 23}
- The likelihood of a vaginal birth^{21, 23, 24}
- The likelihood of arriving at the hospital in active labour²⁴
- The decision not to use epidural anesthesia^{21, 23, 24}
- Breastfeeding initiation²¹
- Breastfeeding continuation²¹
- Breastfeeding duration²⁵
- Breastfeeding at discharge²⁶
- The receipt of informational support²⁵
- Maternal psychological well-being²³
- Anxiety^{23, 24}
- Depression²³
- Postnatal satisfaction with the couple and parent-infant relationship²³

Less Desirable Prenatal Education Outcomes

Less favourable outcomes associated with prenatal education include:

- Reinforcing traditional gender roles²⁷
- Minimization of the role of the father²⁷
- A sense of pregnancy being unnatural⁶



The Prenatal Education Experience in Ontario

It is important to understand the characteristics and needs of women who are pregnant, their partners, new parents and those who are trying to conceive.

Class Size

The majority of formal prenatal education classes in public health units and other organizations had between 8 to 12 participants. This is similar to the drop-in prenatal programs where the majority of classes included 8 to 15 participants (Prenatal Education Surveys, 2014).

Trends in Attendance

Prenatal education was generally open to pregnant women, their partners and/or support people (Prenatal Educator Survey, 2014).

The majority of formal group and online prenatal education programs in Ontario were designed for the general population. Some of these programs were designed for specific populations. The majority of drop-in and one-on-one prenatal education programs were designed for specific populations (Prenatal Education Surveys, 2014).

In services designed for specific populations, the most common populations of interest included:

- Teens and young future parents
- Future parents at-risk from a socioeconomic perspective
- Future single parents
- Future parents who had been identified as at risk by the Children's Aid Society (Needs Assessment, 2014)

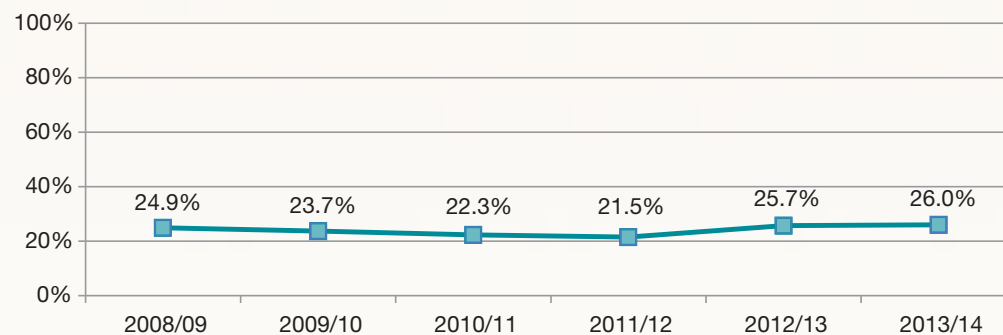
Populations Receiving Prenatal Education in Ontario

Prenatal class attendance in Ontario has remained relatively stable over the past 6 years, with about 1 in 4 pregnant women attending (BORN Prenatal Education data for 2013/2014). Please note that BORN data is limited to women who had a hospital birth and indicated they participated in online or in-person prenatal education classes. Due to some missing data, results should be interpreted with caution.

When exploring the delivery of prenatal education in Ontario, factors such as geographic location, parity, maternal age, socioeconomic status, spoken language, immigration status and minority status should be taken into consideration.

Prenatal Education Participation in Ontario Over Time

(pregnant women participating in in-person or online prenatal education)



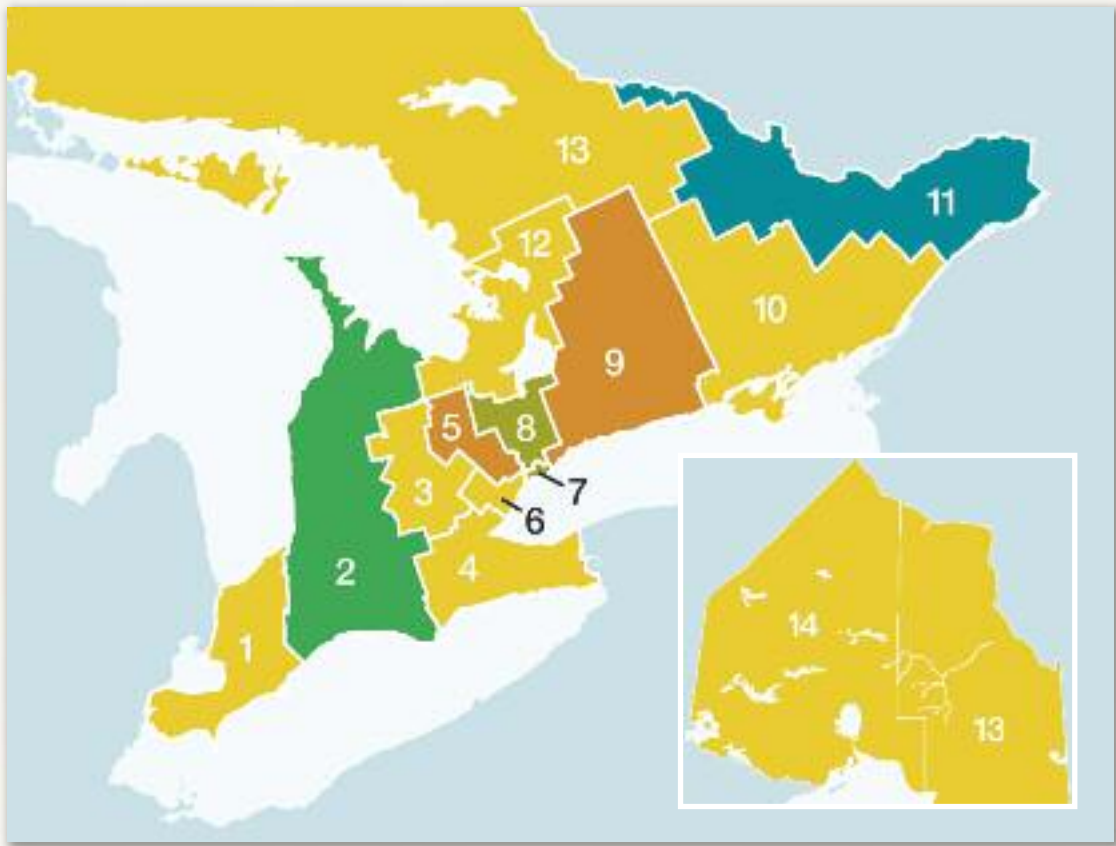
Geographic Location

According to BORN data, 26.0% of women in Ontario attended prenatal classes (online or in-person) during the woman's pregnancy at the time of data collection.

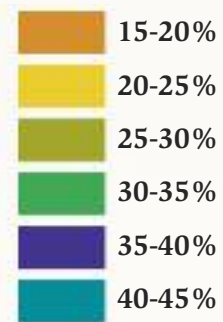
The LHINS with the lowest prenatal education participation included Central West (17.6%) and Central East (18.5%). The LHINS with the highest prenatal education participation included Champlain (41.0%), South West (30.9%), and Toronto (29.8%) (BORN Prenatal Education data for 2013/2014). Some health units have prenatal education participation rates that are almost double that of the province including Perth (50.3%), Haliburton Kawartha Pine Ridge (48.2%) and Ottawa (45.9%).

Prenatal Education Participation by LHIN

(pregnant women participating in in-person classes or online prenatal education courses)



PLACE OF BIRTH	PRENATAL CLASS PARTICIPATION
(1) Erie St. Clair	22.3%
(2) South West	30.9%
(3) Waterloo Wellington	25.0%
(4) HNHB	20.4%
(5) Central West	17.6%
(6) Mississauga Halton	24.3%
(7) Toronto Central	29.8%
(8) Central	26.5%
(9) Central East	18.5%
(10) South East	23.9%
(11) Champlain	41.0%
(12) North Simcoe Muskoka	22.3%
(13) North East	22.4%
(14) North West	22.2%
ONTARIO	26.0%



Parity

Public health unit survey results and BORN data indicated that prenatal education participation decreased with subsequent births. Nulliparous women had the highest rate of prenatal class attendance (46.3%) and those who were multiparous had the lowest (8.7%) (BORN Prenatal Education data for 2013/2014).

Maternal Age

According to the BORN data, prenatal education participation was highest in adolescents (30.3%) and lowest in those over 40 (20.5%) (BORN Prenatal Education data for 2013/2014). Anecdotally, some public health units noted an increase in women over 40 taking prenatal classes (Prenatal Education Surveys, 2014).

Education, Employment and Income

BORN data shows that prenatal education participation rates were lowest in communities with lower levels of education. Participation was lowest in communities with the highest proportion of residents that did not hold a diploma (20.2%) and highest in communities with the lowest proportion of residents that do not hold a diploma (32.3%) (BORN Prenatal Education data for 2013/2014).

The percentage of women attending prenatal classes increased with neighbourhood employment rates. Participation was lowest in the neighbourhoods with the highest unemployment rates (20.7%) (BORN Prenatal Education data for 2013/2014).

The percentage of women attending prenatal classes increased with income, measured by neighbourhood median household income. Participation was lowest in the neighbourhoods with the lowest median household incomes (18.6%) and highest in the neighbourhoods with the highest median household incomes (33.2%) (BORN Prenatal Education data for 2013/2014).



Language

Prenatal education attendance was highest for Francophone women (60.2%), followed by Anglophones (26.4%). It was lowest for women whose primary language was neither French nor English (16.7%) (BORN Prenatal Education data for 2013/2014).

Immigration and Minority Status

The percentage of women attending prenatal classes was lowest in neighbourhoods with the highest proportions of immigrants (21.0%) (BORN Prenatal Education data for 2013/2014).

The percentage of women attending prenatal classes was also lowest in neighbourhoods with the highest proportions of visible minorities (22.1%) (BORN Prenatal Education data for 2013/2014).

Overall

Overall, higher participation in prenatal education in Ontario tended to be associated with the following demographic groups:

- Nulliparous women
- Young mothers
- Mothers who lived in neighbourhoods with higher educational levels
- Mothers who lived in neighbourhoods with lower unemployment rates
- Mothers who lived in neighbourhoods with higher incomes
- Mothers who lived in neighbourhoods with lower concentrations of immigrants
- Mothers who lived in neighbourhoods with lower concentrations of visible minorities (BORN Prenatal Education data for 2013/2014)



The Prenatal Experience of Women in Ontario

Changes Made as a Result of Pregnancy or Trying to Conceive

The majority of Ontario women made at least one positive health and financial change as a result of pregnancy or planning a pregnancy. Mothers who were Canadian born were more likely to make multiple changes prior to pregnancy. Women who changed their habits prior to pregnancy were more likely to take prenatal classes.

The most common health changes for women planning a pregnancy included:

- Improving eating habits
- Attending medical check-ups
- Abstaining from alcohol
- Improving stress management
- Improving exercise routines
- Reducing exposure to environmental toxins
(Parent Survey, 2014)

Among pregnant women, the most common changes included:

- Improving eating habits
- Abstaining from alcohol
- Attending medical check-ups
- Improving exercise routines
- Improving stress management
(Parent Survey, 2014)

Resources about Pregnancy, Labour and Newborn Care

When learning about pregnancy, labour and newborn care, women accessed a variety of sources. Top sources included:

- Websites
- Friends, family and colleagues
- Health care providers
- Books, magazines and other printed materials
- Prenatal education programs
(Parent Survey, 2014)

Nearly all women who accessed these sources found them to be very useful or somewhat useful. However, foreign-born mothers were significantly more likely to consider friends, family and colleagues as their preferred source of information.

Health care providers were the source found to be the most trustworthy by women, followed by family, friends and colleagues and prenatal education programs.

Prenatal Education Courses

Virtually all women who took prenatal classes found them to be useful. About 54% of expectant women considered prenatal classes to be a trustworthy source of information. Approximately one quarter of parents who didn't take prenatal classes retrospectively wished that they had. The reasons for not taking prenatal classes were diverse. Women's top reason for not participating in a prenatal course was the belief that the information could be accessed through other sources. A lack of time and a lack of awareness were the other common reasons for not taking a prenatal course (Parent Survey, 2014).



Most women who attended prenatal classes opted for a face-to-face course format. The preferred prenatal education formats were as follows (most preferred to least preferred):

- Traditional face-to-face group programs involving a specific number of classes
- Face-to-face individual programs
- Online programs
- Face-to-face drop-in programs
- Blended online and face-to-face programs
(Parent Survey, 2014)

The reasons for selecting different types of programs varied significantly. The top reasons for selecting a particular type of program included:

- Recommendation by health care professionals
- The desire to meet other future parents in a group setting
- Recommendations from family and friends
(Parent Survey, 2014)

While women took courses at various stages in their pregnancies, the most common timing was the second or third trimester (Parent Survey, 2014).

The perceived benefits of prenatal education were quite diverse. Women most commonly perceived that prenatal education helped them with:

- Labour and birth
- Caring for their new baby
- Increasing their confidence in their capacity to have and care for a baby
(Parent Survey, 2014)

The majority of women who participated in prenatal courses did not perceive that there were any gaps in the course content. A small minority of women believed that coverage of topics such as labour, pain during labour, postpartum recovery, and breastfeeding could be improved (Parent Survey, 2014).

Pregnant women and new parents made numerous suggestions to improve the delivery of prenatal education, including more:

- Flexible hours
- Postpartum topics
- Hands-on interaction
(Parent Survey, 2014)

The Prenatal Experience of Partners in Ontario

Survey results from the partners of women who were pregnant, planning to get pregnant or new mothers provided valuable insights.

Changes Made By Partners As a Result of Pregnancy or Planning a Pregnancy

The majority of partners made at least one change prior to or during pregnancy. Partners typically made fewer changes than women.

The most common changes included:

- Improved eating habits
- Attending medical check-ups
- Improved exercise routines
- Reducing exposure to environmental toxins
- Improved stress management
- Smoking cessation
(Parent Survey, 2014)

The majority of partners also made changes to their overall life, with the most common being saving money, buying/renting a bigger place to live and buying/changing their life insurance policy (Parent Survey, 2014).



Resources about Pregnancy, Labour and Newborn Care

To learn about pregnancy, labour and newborn care, partners also accessed information from a variety of sources. Partners most commonly gathered information from:

- Friends, family and colleagues
- Books, magazines and other printed materials
- Health care providers
- Websites
- Prenatal education programs
(Parent Survey, 2014)

Partners believed that the most trustworthy source of information about pregnancy, labour and newborn care was health care providers. The majority of partners also viewed friends, family and colleagues and prenatal education programs as trustworthy sources of information.

It should be noted that the use of apps designed for expectant couples was low among both women and their partners. Only a minority of women and partners rated the use of apps as trustworthy. This might be due to a lack of familiarity, as opposed to actual distrust (Parent Survey, 2014).

Prenatal Education Courses

Most partners viewed all of the topics covered in prenatal education to be useful and important.





Provision of Prenatal Education in Ontario

Prenatal education is offered by a variety of professionals in a variety of organizations in Ontario. In order to improve the delivery of prenatal education in the province, it is important to have a strong understanding of the nature of prenatal education delivery, as well as an understanding of the role of prenatal educators.

Settings for Prenatal Education

Prenatal education was offered in Ontario by a variety of organizations, including:

- Public health units
 - Hospitals
 - Community health centres
 - Non-profit organizations
 - Private businesses
- (Prenatal Education Surveys, 2014)

Prenatal education was also delivered through programs such as the Healthy Babies Healthy Children Program and the Canadian Prenatal Nutrition Program (Prenatal Education Surveys, 2014).

Across the organizations, the program delivery settings varied greatly and included:

- Public health units
 - Hospitals
 - Workplaces
 - Schools
 - Community centres
 - Public libraries
 - Faith based locations
 - Private places of business
- (Prenatal Education Surveys, 2014)

Providers of Prenatal Education

Prenatal educators worked with public health units, not-for-profit organizations, for-profit organizations, or as independent providers (Prenatal Education Surveys, 2014).

There were approximately 901 staff prenatal educators and 120 contract prenatal educators working with health units (Prenatal Education Surveys, 2014). An accurate estimate of prenatal educators who do not work through a health unit is not available at this time.

Training and/or Certification of Prenatal Educators

Individuals providing prenatal education had a wide range of training and/or certification and provided their services within the scope of a variety of roles. Many of the prenatal educators were certified or had training as a childbirth educator from associations such as the Childbirth and Postpartum Professional Association (CAPP), or had Doula training or certification (Needs Assessment, 2014). Some prenatal educators had a broad education or an undergraduate degree that was not specific to prenatal education (Needs Assessment, 2014). Prenatal educators also received informal training such as in-house training workshops, job shadowing and observing colleagues. Some educators had no informal/formal training but instead learned on the job (Needs Assessment, 2014). A few organizations offered their own in-house training programs (Needs Assessment, 2014).

The majority of prenatal educators were trained nurses (Needs Assessment, 2014). Public health units required prenatal educators to be registered nurses (RN), public health nurses (PHN) or registered practical nurses (RPN). Other organizations required qualifications ranging from nursing to post-secondary training (Prenatal Education Surveys, 2014).

Some prenatal educators felt that there should be a standardized requirement for certification of all prenatal educators (Needs Assessment, 2014).

Prenatal Education and Language

Most organizations offered prenatal education in English.

Some public health units and organizations offered prenatal classes in:

- French
- Cantonese
- Portuguese
- Mandarin
- Low German
- Spanish
- Arabic
- Sign language
(Prenatal Education Surveys, 2014)

Public health units and other organizations also offered interpretative services if required (Prenatal Education Surveys, 2014).



Prenatal Education Cost and Registration

The registration process and cost of prenatal education varied depending on the type of prenatal education provided and the organization or health unit providing the service.

Registration Fees

Just over half (54%) of public health units did not charge a fee for formal prenatal education. Registration fees typically ranged from \$10 to \$75, with the majority between \$30 and \$50. However, a few classes were donation based. Fees included the cost of materials and sometimes refreshments. Health units' online prenatal education program fees generally ranged from \$25 to \$40. All public health units indicated they reduced and/or waived registration fees if costs were a barrier to attending the formal or online prenatal education program (Prenatal Education Surveys, 2014).

Other organizations did not charge for drop-in prenatal education programs. About 42% of other organizations did not charge a fee for formal prenatal education.

Prenatal education class fees in other organizations ranged from \$40 to \$290, with the majority costing \$100 to \$145. The fee included the cost of materials and sometimes refreshments. The fees for online prenatal education programs were \$15 to \$60. One-on-one prenatal education program fees ranged from \$125 to \$170. Unlike public health units, several organizations did not have a mechanism to reduce or waive the fee (Prenatal Education Surveys, 2014).

It is important to note that costs may vary depending on factors such as the length of the program, whether the program was subsidized, cost-recovery or for-profit, and on the qualifications of the staff delivering the education.

Registration Processes

The majority of the prenatal education registrations occurred with the pregnant women making the initial contact. Some of these women were screened and directed to an appropriate prenatal education program, while others were placed into the next scheduled class without screening. Health care providers also referred pregnant women to formal or drop-in classes. Some drop-in programs targeted to vulnerable populations required no registration (Prenatal Education Surveys, 2014).

Other registration processes included:

- Online registration
- Telephone registration
- Registration through community partners (Prenatal Education Surveys, 2014)



Prenatal Education Formats

Prenatal educators used a variety of formats to meet the different learning styles of future parents. The majority incorporated engaging activities and used a combination of paper handouts, videos and activities to support their content delivery. Informal conversations/discussions were also seen as an effective format to deliver curriculum content (Needs Assessment, 2014).

The various forms of prenatal education differed with respect to mode, length and frequency of delivery. Differences also existed with respect to timing during pregnancy.

Formal Prenatal Education

The majority of public health units and other organizations provided formal prenatal education. These programs were often offered through partnerships with other agencies and programs in the health unit.

Through the formation of partnerships, a variety of assistance was provided, including:

- Referrals to health unit services
- Guest speakers and co-presenters
- Space
- Hospital tours
- Registration assistance
- Transportation
- Curriculum review
- Participant resources
- Information about other community resources
(Prenatal Education Surveys, 2014)

While public health units and other organizations offered a variety of schedules, there was a preference for scheduling formal prenatal education in the evening, followed by weekends.

Some health units had moved away from a series format and instead offered workshops or independent classes where participants could choose the sessions of interest (Prenatal Education Surveys, 2014).

The majority of women attended prenatal education classes during their last trimester. Very few women attended during preconception or the first trimester. Some organizations offered specific programs/content on preconception or the first trimester and others promoted early prenatal education services through health care providers. Some public health units were discussing the potential of an early class to encourage education earlier in pregnancy (Prenatal Education Surveys, 2014).

Drop-In Prenatal Education

Drop-in prenatal education was offered by the majority of public health units and also by a significant portion of other organizations. These programs were often delivered through partnerships.

The majority of prenatal drop-in programs were offered during the day, followed by evenings and weekends (Prenatal Education Surveys, 2014).

The majority were offered once a week for 2 to 3 hours a session. A few were offered every second week or twice a month (Prenatal Education Surveys, 2014).

As with formal prenatal education, many attended in the late second semester and last trimester. However, prenatal drop-in programs tended to attract women earlier in the first trimester as well. Many drop-in prenatal programs were designed so that women could continue up to 6 months postpartum (Prenatal Education Surveys, 2014).

Online Prenatal Education

The majority of public health units offered or intended to offer online prenatal education. However, only a minority of other organizations offered this type of prenatal education. Some other organizations noted that they had thought about providing online education but decided against it as their local health unit had recently launched an online prenatal education program (Prenatal Education Surveys, 2014).

Participants can access online services at any time. Through the limited information available, it was found that the majority of participants accessed online prenatal education during the third trimester or late second trimester (Prenatal Education Surveys, 2014).

One-on-One Prenatal Education

Almost all public health units and a significant portion of other organizations offered one-on-one prenatal education. Many of these programs were associated with the Healthy Babies Healthy Children program (Prenatal Education Surveys, 2014).

Additional Sources of Information

Prenatal education was also offered through prenatal health fairs and social media. However, these formats were only used by a minority of educators (Prenatal Education Surveys, 2014).



Meeting the Demand

A small portion of public health units and other organizations had a hard time meeting the demand for formal and drop-in prenatal education.

Organizations that could not meet the demand offered pregnant women a variety of alternatives such as:

- Online classes run through the public health unit or other agency
- One-on-one meetings
- Being placed on a waiting list
- Written materials
- Another program option (if available)
(Prenatal Education Surveys, 2014)

Evaluation of Prenatal Education

The majority of public health units and other organizations had evaluation reports for their formal prenatal education classes. The majority of online and one-on-one programs were not evaluated (Prenatal Education Surveys, 2014).

Barriers to Prenatal Education

While the majority of prenatal educators had insufficient or incomplete information regarding the demographics of those who did not take prenatal education, there was an awareness regarding several factors that served as barriers to prenatal education (Prenatal Education Surveys, 2014).

The following characteristics were identified as being negatively associated with prenatal education participation in Ontario:

- Being multiparous
- Being an older mother
- Having a lower level of education
- Being unemployed
- Having a lower income
- Speaking a language other than English or French
- Being foreign born
- Being a member of a visible minority
- A lack of transportation to attend the programs
- A dislike of group programs
- Programs offered at an inconvenient time
- Language barriers
- The high cost of prenatal education
- Lack of specific classes and information geared toward high risk future parents
- A lack of awareness about the available programs
- Availability of information through other means
(BORN data from 2013/2014; Needs Assessment, 2014; Prenatal Education Surveys, 2014)



Addressing Barriers to Prenatal Education in Ontario

Prenatal educators were mindful of the need to reduce barriers. They developed numerous strategies to address barriers at the organization level and in partnership with other community agencies. Barriers were addressed through design and delivery of targeted programs for vulnerable women and by providing tangible supports and incentives. Some strategies included:

- Providing targeted programs such as prenatal education for adolescents
- Providing programs that met the need of those with language barriers
- Holding classes in an accessible community service
- Providing child care
- Providing transportation
- Reducing the cost of prenatal education or providing subsidies
- Having peer prenatal educators (particularly for programs developed for vulnerable populations)
- Offering shorter condensed classes
- Offering teleconferencing for isolated areas
- Offering free online prenatal education
- Offering access to other professionals such as guidance counsellors
- Offering resources and books
- Offering door prizes
- Texting reminders to participants
- Providing outreach
- Providing vitamins, food or meals
- Offering incentives such as gift certificates or baby products (Prenatal Education Surveys, 2014)

How Prenatal Educators Can be Supported

To improve prenatal education services in Ontario, it is important to identify the ways in which prenatal education providers can be supported.

Strengthening Prenatal Education Services

Prenatal educators indicated they could use support in the following priority areas:

- Reaching a larger number of future parents
- Reaching future parents earlier in the pregnancy
- Paper handouts/pamphlets
- Additional training for prenatal educators
- Making classes more interactive
(Needs Assessment, 2014)

Prenatal educators wanted support in service promotion so that parents could be more aware of the services offered and participate earlier in pregnancy. This would also help prenatal educators to be better able to reach, engage and meet the needs of those considered to be vulnerable populations.

Prenatal education providers also required support with reducing waitlists for prenatal education (Needs Assessment, 2014).

When receiving training, providers wanted current information and ideas on how to make prenatal education as interactive as possible. Educators preferred face-to-face training at workshops and conferences, and when this is not possible, remotely through webinars.



Useful Forms of Support

Prenatal educators indicated a strong interest in consistent evidence-based key messages for all providers in Ontario.

A priority need for prenatal educators was prenatal videos with Canadian content as well as interactive activities that could be used in group prenatal education classes (Needs Assessment, 2014).

Other forms of support prenatal educators wanted included:

- Prenatal apps which offer future parents information relevant to their stage of pregnancy
- Comprehensive handouts for future parents offered at low or no cost
- Free workbooks that can be downloaded or printed and used by future parents on their own
- Downloadable, editable speakers' notes
- Editable PowerPoint presentations
- Interactive, online prenatal education programs for future parents (Needs Assessment, 2014)

Prenatal educators believed that the best supports:

- Include a combination of resources that support a diverse range of learning styles
- Recognize the diverse backgrounds of the participants
- Provide the opportunity to work independently and in a facilitated manner, either in a group setting or one-on-one (Needs Assessment, 2014)



Staying Current in the Field of Prenatal Education

Prenatal educators' preferred modes of staying current included:

- Face-to-face interaction through conferences and workshops
- Discussing issues with colleagues
(Needs Assessment, 2014)

Challenges to staying current included:

- A lack of time
- Uncertainty about the credibility of some resources
- Not knowing where to find information
(Needs Assessment, 2014)

New Trends and Challenges in Prenatal Education

Prenatal educators identified new trends, challenges and concerns in prenatal education, with many focusing on online classes, resources and information. There was also a demand by future parents for online classes and online information (Needs Assessment, 2014).

The challenges and concerns associated with online education and information included:

- The lack of opportunities for social interaction between future parents
- The loss of connection between prenatal educators and participants
- Online material that is not user-friendly or written at an appropriate literacy level
- Websites may be outdated, not evidence-based or have incorrect information
- Participants may experience information overload from multiple online sources
(Needs Assessment, 2014)

Other emerging trends in prenatal education included:

- Increasing interest in social media, videos and photos
- An increase in the number of parents who do not speak English
- An increase in the number of parents with disability issues
- Decreasing prenatal class attendance
(Needs Assessment, 2014)

Challenges Faced by Prenatal Educators

Prenatal educators indicated that they faced a number of challenges, including:

- Parents needing to be convinced of the value of prenatal education
- Future parents' busy schedules
- A lack of time, resources, supports and training
- Meeting a diversity of needs
- Difficulties in delivering tailored information to certain groups or populations
- Certain organizations not supporting evidence-based practices (making it difficult to implement lessons learned in prenatal education)
- The influence of the media
(Needs Assessment, 2014)

Recommendations

The following recommendations regarding the provision of prenatal education in Ontario were derived from the data summarized in this report. It is expected that the implementation of these recommended strategies will strengthen prenatal education services.

Recommendations for Reaching Future Parents

Prenatal information should be shared through a range of channels including prenatal education classes, websites, health care providers, and printed materials, using consistent evidence-based messages.

Participation in in-person and online prenatal education is low across all demographics. For example, only 46.3% of first time pregnant women in Ontario and only 26.0% of all pregnant women indicated they participated in prenatal education (BORN Prenatal Education data for 2013/2014). Promotional efforts should be designed to provide information about the benefits of prenatal education, and to promote participation in prenatal education early in pregnancy. It is important to reach women and their partners/support people with these messages, prior to pregnancy and early in pregnancy. Efforts to promote prenatal education should include all future parents and their partners/support people, with a special focus on those who are over 40, have lower education, are unemployed, have a lower income, are a newcomer and/or a visible minority.

Recommendations for Prenatal Educator Training

Prenatal education providers should be offered training in-person, face-to-face through workshops and conferences (or via webinars if in-person is not an option).

Recommendations for the Development of Prenatal Education Tools and Resources

Resources and tools for service providers should make a strong case for prenatal education, in terms of impact, value, etc. and should share evidence-based key messages for prenatal education.

Supports should be developed for prenatal educators that will help them more effectively reach future parents, especially those who are at a higher risk. Tools for use in providing prenatal education are also important, such as current Canadian videos and interactive prenatal education activities. There is strong interest in a resource that provides consistent prenatal education messages for Ontario.

Provincial Network

Consideration should be made to create a strong provincial network of prenatal education providers to support learning, networking and sharing opportunities. A network could also help in ensuring consistent prenatal education messages and in supporting effective evidence-based approaches to prenatal education across all providers and across the range of prenatal education formats in Ontario. This potential network could include a listserv, newsletter, networking/learning opportunities etc.

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