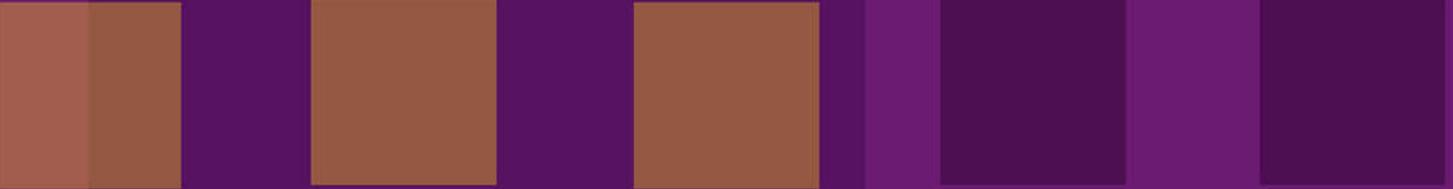


BREASTFEEDING PRACTICES IN THE REGION OF PEEL 2009/2010

A Peel Health Technical Report



 **Region of Peel**
Working for you
Public Health

Acknowledgements

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EXECUTIVE SUMMARY

Peel Public Health identified *Nurturing the Next Generation* as one of its key strategic priorities. The overall goal of this priority is to optimize early child development, focusing on preconception to 12 months of age.

In 2010, the Family Health Division of Peel Public Health adopted the model, ***A Framework for Reconceptualizing Early Childhood Policies and Programs to Strengthen Lifelong Health*** to provide a theoretical underpinning for their work.¹ Early childhood experiences impact the physical, social, and emotional development of children including the development of the brain, cardiovascular system, immune system, and metabolic regulatory system. Positive experiences can lead to lifelong health and wellbeing and negative experiences can set the stage for many chronic diseases later on in life. As identified in the model, the three foundations of health are stable, responsive relationships, safe, supportive environments, and appropriate nutrition. Healthy nutrition from birth ensures children will have an optimal beginning for a healthy life. Breastfeeding, as the recommended method for infant feeding, protects and contributes to the foundation of a child's optimal health and well-being.

The Breastfeeding Committee for Canada, the Public Health Agency of Canada, Health Canada, Dietitians of Canada, Canadian Paediatric Society, and the World Health Organization recommend exclusive breastfeeding for the first six months of life, with continued breastfeeding to age two years and beyond, with the addition of complementary foods at six months of age.

Peel Public Health received the Baby-Friendly Initiative (BFI) designation in June 2009. The BFI is a global strategy led by WHO/UNICEF designed to increase maternal and infant health by improving breastfeeding initiation, exclusivity and duration.

The *Breastfeeding Practices in the Region of Peel* report presents the results of Peel Public Health's third breastfeeding survey, which was conducted between December 2009 and January 2011. This telephone survey was completed by mothers at six months and 12 months postpartum to capture information about infant feeding practices and postpartum experiences.

Of the 8,251 births to mothers living in Peel between June and December 2009, a total of 1,336 mothers agreed to be contacted for this survey. Respondents in this survey represent a convenience sample of new mothers in Peel. Among those who agreed to be contacted, 790 mothers completed the survey at six months postpartum, with a completion rate of 69%. Mothers who were breastfeeding at six months were asked to be contacted again at 12 months postpartum. Of the 409 mothers who agreed to be contacted at 12 months, the completion rate was 88%.

The goal of the survey is to provide information to assist in improving/maintaining breastfeeding initiation, duration, and exclusivity rates in the Region of Peel.

This report provides information related to breastfeeding and postpartum experiences of Peel mothers in 2009/2010, including measures collected at six and 12 months postpartum. The main measures of interest, breastfeeding initiation, continued breastfeeding at six months postpartum and exclusive breastfeeding at six months postpartum, are examined by key respondent characteristics, including:

- Maternal age group
- Immigrant status
- Length of time in Canada
- Ethnic origin
- Highest level of education
- Total household income
- Marital status
- Hospital of birth
- Type of birth (singleton vs. multiple)
- Whether this infant was their first child or not

This report also presents information on rates of breastfeeding at 12 months postpartum, reasons for discontinuing breastfeeding, duration of breastfeeding, awareness and use of resources for breastfeeding, as well as awareness and prevalence of postpartum depressive symptoms.

Respondent Characteristics

Mothers surveyed were predominantly between the ages of 25 to 39 years, with those consenting to be surveyed at 12 months being older than the sample at six months postpartum. Consistent with the population size within each municipality, the majority of mothers lived in Brampton and Mississauga, with Caledon mothers representing a smaller proportion of the sample at six months (4%) and 12 months (3%). Most mothers surveyed were legally married and had some trade school/college or university education. The two most common maternal ethnic origins reported at six months and 12 months were Canadian (15%) and East Indian (10%). Almost 60% of mothers surveyed were foreign born.

Results:

Almost all (97%) mothers surveyed reported initiating breastfeeding.

First time mothers were more likely to initiate breastfeeding compared to repeat mothers (99% versus 95% respectively), suggesting a mother's previous experience impacts her decision to breastfeed subsequent children.

Mothers who identified as Canadian, British or European were less likely to initiate breastfeeding than their non-Canadian, non-British or non-European counterparts.

More than 4 in 10 (44%) mothers reported their partner, mother or mother-in-law influenced their infant feeding decision

Just under half of mothers (48%) reported making their infant feeding decision themselves.

However, 22% reported their partner helped with the decision and another 22% reported their mother or mother-in-law helped them make their decision. This suggests that the targeted audience for promoting breastfeeding should extend beyond pregnant women.

Less than one quarter (23%) of Peel mothers reported exclusively breastfeeding their infant at six months (i.e., the baby has not received any other food or liquid than breast milk since birth).

The proportion of mothers who exclusively breastfed varied by education, income, immigrant status, and ethnicity.

Almost 60% of mothers were breastfeeding their infants at six months postpartum

Compared to mothers younger than 25, those aged 35 years and older were more likely to breastfeed at six months. Mothers with higher income and education were more likely to be breastfeeding at six months postpartum.

Mothers who were recent immigrants were more likely to breastfeed at six months than non-immigrant mothers. The proportion of mothers breastfeeding at six months decreased as length of time in Canada increased.

At 12 months postpartum, more than half of recent immigrant mothers reported breastfeeding (54%).

“Not enough breast milk” was the most common reason reported for discontinuing breastfeeding among those surveyed at six months (42%). Among these women, 38% said they believed this because pumping showed a small supply of breast milk.

The most common supports reported by non-breastfeeding mothers were hospital staff (73%), doctors (50%), and public health nurses (21%).

Almost two-thirds (60%) of non-breastfeeding mothers surveyed reported they would consider breastfeeding if they became pregnant again.

Most mothers (87%) had heard of postpartum depression.

Canadian-born mothers were less likely to report postpartum depressive symptoms than mothers who had lived in Canada for 10 years or less.

Mothers with a household income of less than \$50,000 were more likely to report depressive symptoms than those with an income of \$80,000 or more.

Next Steps

Peel Public Health will continue to work to promote breastfeeding as the normal method of infant feeding. Additional data collection will build on the results of this survey and help monitor Peel Public Health's progress in the future.

KEY MESSAGES

Breastfeeding initiation rates are high and need to be maintained.

Breastfeeding exclusivity rates up to six months and breastfeeding duration rates need to increase to national and international recommendations.

RECOMMENDATIONS

It is recommended that:

- Peel Public Health, Peel Region hospitals, physicians, and community partners work collaboratively to increase breastfeeding duration and exclusivity in the Region of Peel.
- Peel Public Health assist Peel hospitals to achieve Baby-Friendly Initiative designation.
- Peel Public Health continue to offer breastfeeding services to all mothers.
- The Baby-Friendly Initiative be the standard to guide practice and messages related to infant feeding in Peel.
- Breastfeeding strategies be targeted to priority populations such as repeat mothers, mothers with lower levels of education and income, and immigrant mothers.
- Breastfeeding messaging be expanded to address the number one identified barrier to breastfeeding, perceived lack of breast milk supply.
- Breastfeeding strategies and promotional materials be adapted to engage not only the mother but also her partner and extended family members.
- Peel Public Health continue to analyze breastfeeding surveillance data, monitor breastfeeding trends, and identify community and hospital practices that impact breastfeeding.

INTRODUCTION

Issue

The Region of Peel is a diverse community of approximately 1.3 million residents. It is part of the Greater Toronto Area (GTA), located west of Toronto. Peel has experienced rapid population growth, increasing by 58% between 1991 and 2006. Almost half (49%) of Peel residents are immigrants. In 2010, there were almost 16,000 births to Peel residents. Peel has a high proportion of young families; therefore healthy child development is of particular significance.

Peel Public Health identified *Nurturing the Next Generation* as one of its key strategic priorities. The overall goal of this priority is to optimize early child development, focusing on preconception to 12 months of age.

In 2010, the Family Health Division of Peel Public Health adopted the model, ***A Framework for Reconceptualizing Early Childhood Policies and Programs to Strengthen Lifelong Health*** to provide a theoretical underpinning for their work.¹ Early childhood experiences impact the physical, social, and emotional development of children including the development of the brain, cardiovascular system, immune system, and metabolic regulatory system.¹ Positive experiences can lead to lifelong health and wellbeing and negative experiences can set the stage for many chronic diseases later on in life. As identified in the model, the three foundations of health are stable, responsive relationships, safe, supportive environments and appropriate nutrition. Healthy nutrition from birth ensures children will have an optimal advantage for a healthy life. Breastfeeding, as the recommended method for infant feeding, protects, and contributes to the foundation of a child's optimal health and well-being.

Research shows breastfed babies are at a lower risk for respiratory, ear, and gastrointestinal infections. In addition, research indicates a lower risk for negative long term health implications for those who have been breastfeed. For example, the risk of obesity in later life is decreased by 14 to 33% for babies who were breastfed compared to formula fed babies.² Healthy nutrition from birth helps ensure that children have an optimal beginning for a healthy life.

Breastfeeding is the normal method for infant feeding. Breastfeeding protects and contributes to the foundation of a child's optimal health and wellbeing. The Breastfeeding Committee for Canada, the Public Health Agency of Canada, Health Canada, Dietitians of Canada, Canadian Paediatric Society, and the World Health Organization recommend exclusive breastfeeding for the first six months of life, with continued breastfeeding to age two years and beyond, with the addition of complementary foods at six months of age.

Context

Peel Health can work with community partners to influence the development and implementation of healthy policies, and the creation or enhancement of supportive environments for breastfeeding. Epidemiological analysis of surveillance data,

monitoring trends over time, and identification of emerging trends and priority populations in breastfeeding, can contribute to this. It is important that Peel Public Health and Peel's Regional hospitals work collaboratively toward a seamless transition from hospital to community for all families with newborns.

Peel Public Health received the Baby-Friendly Initiative (BFI) designation in June 2009. The BFI is a global strategy led by WHO/UNICEF designed to increase maternal and infant health by improving breastfeeding initiation, exclusivity and duration. A key component of BFI is to have breastfeeding policies in place for hospitals and community health settings providing maternal/child health services.

Peel Breastfeeding Surveys

This is the third breastfeeding survey conducted by Peel Public Health, administered by CCI Research Inc. The first two surveys were conducted in 1999/2000 and 2004/2005. Where relevant, this report includes comparisons to these years. As such, each survey builds on the foundation of the previous surveys.

An additional survey *Formula Supplementation for Newborns in Peel Region Hospitals* was conducted in 2008/2009. Peel Public Health surveyed 1,125 new mothers who had given birth in one of Peel Region's three hospitals to ask about their experiences of feeding their infant while in hospital. The rate of supplementation with infant formula was 72% at one Peel hospital and 54% at the other two hospitals in Peel.

Given these results, Peel Public Health has been actively working with Trillium Health Centre, Credit Valley Hospital, and Brampton Civic Hospital to support changes in hospital practice aimed at improving breastfeeding exclusivity rates.

This *Breastfeeding Practices in the Region of Peel 2009/2010* survey obtained information about breastfeeding initiation, duration and exclusivity. It examines demographic characteristics associated with infant feeding behaviour. In addition to the measures of breastfeeding practices, data were gathered regarding awareness of postpartum depression and its symptoms as well as the prevalence of self-reported postpartum depressive symptoms among new mothers; use of breastfeeding resources; and awareness of Peel Public Health's "Formula? No Thanks" media campaign, which started in December 2008.

Survey Goal

The goal of the survey is to provide information to assist in improving/maintaining breastfeeding initiation, duration, and exclusivity rates in the Region of Peel.

Survey Objectives

1. To determine the proportion of mothers in Peel who:
 - initiated breastfeeding
 - breastfed their infants at six months of age
 - breastfed exclusively to six months of age
 - breastfed their infants at 12 months of age
2. To identify:
 - demographic factors associated with breastfeeding initiation and duration rates
 - reasons for discontinuing breastfeeding
3. To gather information regarding:
 - awareness of and use of resources for the breastfeeding mother
 - knowledge of supports and resources for non-breastfeeding mothers
 - awareness of the *Formula? No Thanks* media campaign
 - awareness of postpartum depression and its symptoms
 - prevalence of self-reported postpartum depressive symptoms



METHODS

Sample Description

The target population for the survey was mothers who reside in Peel and gave birth to an infant between June 1st and December 24th, 2009. Mothers in this survey represent a convenience sample of mothers in Peel. Mothers who agreed to participate in the six-month survey and were breastfeeding at the time of the interview, were asked whether they would be willing to be contacted at 12 months postpartum for a subsequent interview. CCI Research Inc was contracted to administer the survey on behalf of Peel Public Health.

Six-Month Survey Sample

As routine practice, mothers are asked to consent to having information about them and their infant(s) released to their local public health department prior to discharge from hospital. Public health nurses (PHNs) from the Healthy Babies, Healthy Children program (HBHC) contact mothers by telephone to assess whether there are any concerns that may affect the child's health and development and whether additional support may be needed.

For the survey, PHNs asked mothers at the end of these assessments if they would be willing to participate in an interview about their breastfeeding experience at six months postpartum. Contact information was compiled for mothers who agreed to participate and provided to the survey administrator (CCI Research Inc).

There were 8,251 births in Peel between June and December 2009 recorded in the Integrated Services for Children Information System (ISCIS) database. The target sample size for the six-month survey was estimated to be 975 mothers.

HBHC contacts all mothers who consent. Initial contact is attempted via telephone. Follow up contact by mail occurs where telephone contact is not successful after multiple attempts. Consent to participate in the six-month survey was obtained only from mothers who were contacted by telephone by HBHC. In total, 1,336 mothers (16.2% of 8,251 births in the time period) agreed to be contacted for the survey and 62 mothers did not agree to be contacted. The remainder of the 6,853 mothers who gave birth between June and December 2009 were either not contacted by HBHC, or were not asked to participate in the survey (see Diagram 1).

12-Month Survey Sample

Mothers who were still breastfeeding at the completion of the six-month interview were asked if they could be contacted for a follow up interview regarding their breastfeeding experience at 12 months postpartum. The contact information for those mothers who agreed to be contacted was maintained by the survey administrator for follow up at the appropriate time.

Of the 454 mothers who reported they were still breastfeeding during their six-month interview, 409 mothers (90%) agreed to be contacted at 12 months postpartum. Of the 409 mothers who agreed to be contacted at 12 months, 325 interviews were completed.

Consent for Participation

Mothers were invited to participate in the six-month survey at the time of their initial routine telephone call from a PHN from Peel's HBHC program. Mothers were provided with a brief overview of the purpose of the survey (see Appendix 1). They were also informed that: participation would be voluntary and confidential; they could refuse to answer any of the questions; and Peel Public Health and the survey administrator would be subject to the privacy laws outlined in the Municipal Freedom of Information and Protection of Privacy Act (MFIPPA) and the Personal Health Information Protection Act (PHIPA).

The names and contact information of consenting mothers was recorded on paper-based consent forms by the PHN and forwarded to the Administrative Assistant for the Epidemiology Team for entry into a spreadsheet. The password protected spreadsheet was provided to CCI Research via email at the beginning of the data collection period.

When contacted by the survey administrator at six months postpartum, mothers were reminded of their consent to participate and asked whether they were still willing to participate in the survey. For those mothers who did not recall agreeing to participate during their initial telephone call, the survey description and consent information was provided again and the mother was asked whether she was willing to participate in the survey. If needed, arrangements were made for the interviewer to call back at a more convenient time.

At the beginning of each interview the participant was reminded that they could choose not to answer any of the questions or decide to end the interview at any time. Participants were not provided with an incentive to participate in the survey.

Mothers who had concerns about the survey or who wanted to receive the results were provided with the name and telephone number of one of the Epidemiologists at Peel Public Health involved in the survey.

Survey

Structured telephone survey instruments were developed by Peel Public Health for use at six and 12 months postpartum. These survey instruments were based on those used in 2004/2005, with some additional questions and modifications based on the results of the 2004/2005 study.

The telephone surveys were conducted by five female interviewers from CCI Research Inc. Each interviewer was provided with a detailed description of the study and was specifically trained on the proper procedures for handling calls and call attempts, respondent refusals, respondent unease, survey questions, comments and the provision of support resources. Respondents were informed that their telephone interview may be monitored for quality assurance purposes. Supervisors and managers from CCI Research Inc. were available to provide assistance and support to interviewers during data collection.

Six-Month Survey

The six-month survey instrument consisted of 38 items and had an average completion time of 12 minutes (see Appendix 2 for survey instrument). The survey instrument was pilot tested with a total of 20 mothers between December 1st and 5th, 2009 to check the flow and logic of the survey. No major issues were identified with the survey during the pilot test and the responses from the 20 pilot interviews were included in the final dataset for analysis.

12-Month Survey

The 12-month survey instrument included 20 items and had an average completion time of between six to seven minutes (see Appendix 3 for survey instrument). The 12-month survey instrument was pilot tested on June 17, 2010 with 17 mothers. No major issues were identified during the pilot interviews and the responses were included in the final dataset.

Data Collection

Calls to respondents were made Monday through Friday between 9:00 a.m. and 9:00 p.m. and weekends between 11:00 a.m. and 4:00 p.m. Up to 10 call attempts were made to each of the telephone numbers provided to CCI Research (n=1,314). After 10 call attempts, telephone numbers were removed and deemed 'terminated'. During data collection at 12 months postpartum, 15 call attempts were made before a contact was terminated.

Responses from participants were recorded using a Computer Assisted Telephone Interview (CATI) system. This system followed an automatic skip pattern based on the responses and verified the responses to increase data accuracy. Each survey instrument item included valid 'don't know' and 'refused' response options.

For mothers who did not speak English or were not comfortable answering the survey in English, a professional third party interpretation service was used. At six months postpartum, a total of 52 surveys were conducted in a language other than English (including Punjabi, Spanish, Hindi, Arabic, Urdu, Vietnamese, Gujarati, Mandarin, Polish, Armenian, Nepali and Twi in descending order). Seven surveys at 12 months postpartum were conducted in a language other than English (Punjabi and Arabic).

The data were collected during overlapping time periods: December 1st 2009 to July 5th, 2010 (six-month survey) and June 17th, 2010 to January 23rd, 2011 (12-month survey).

Data Analysis

Analysis of the responses was conducted using SPSS (Version 19) statistical software and data were graphed using Microsoft Excel. Peel Public Health received two separate SPSS datasets from CCI Research which contained the responses for the six-month and 12-month survey.

The results section of this report presents the findings as proportions of responses by mothers. In some cases, proportions are based on all mothers' responses (e.g., the proportion of mothers who initiated breastfeeding), whereas in some cases they are

based on a subset of the data (e.g., the proportion of breastfeeding mothers who knew about specific breastfeeding support services).

When multiple response options were possible, percentages were based on the total number of respondents therefore, the percentages may total to more than 100%.

For each proportion, the 95% confidence interval (95% CI) has been presented (see Appendix 4), in order to demonstrate the range of values in which the true population value most likely lies. Wide confidence intervals may be the result of a small sample size and imply less precision or confidence in the estimate.

The effect of small sample sizes should be taken into consideration when interpreting analysis conducted on subgroups such as ethnic origin. Small sample sizes increase the probability of a difference being observed due to chance, and resulting findings should be interpreted with caution.

The responses “don’t know” or “refused” were excluded from the analyses except where the proportion of respondents giving a “don’t know” or “refused” answer was greater than five per cent, or where “don’t know” was a valid response option. To ensure confidentiality, data were suppressed where the count was less than five. This is noted within the report as ‘NR = Not releasable due to small numbers’.

The statistical significance of difference in proportion between demographic groups has been assessed using the appropriate comparison of proportions test (e.g., chi-square, Fisher’s exact). Where applicable, post-hoc analyses were conducted to assess statistical differences between groups or categories of interest.

This report includes analysis that is considered exploratory. The statements made about statistical significance are based on multiple statistical tests; however, the resulting p-values have not been adjusted to account for these multiple testing effects. As a result, some of the statements about statistically significant differences may be due to chance. The terms ‘more likely’ and ‘less likely’ are used to describe statistically significant differences in this report.

Given that potential respondents were not randomly sampled from the Healthy Babies, Healthy Children sampling frame, estimation weights to account for differences in geographic distribution of the respondents were not appropriate.

Comparison to Previous Survey Reports

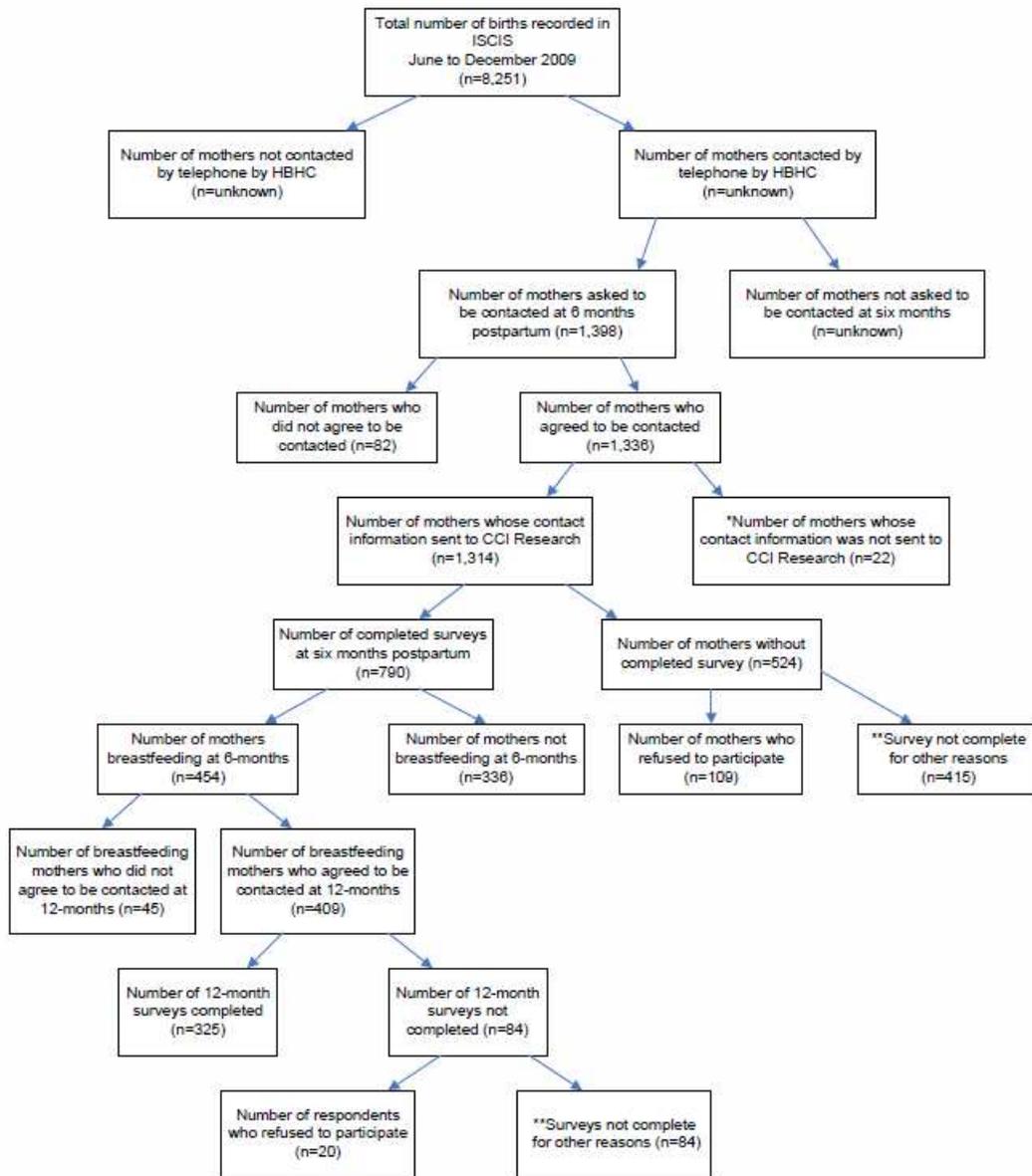
With each new breastfeeding survey conducted by Peel Public Health there have been methodological and analytical changes which affect the comparability of the results. Where appropriate, comparisons for several important breastfeeding indicators have been presented for each survey period in this report. Any comparisons made using this data should be interpreted with caution, as changes in methodology and survey wording may have impacted on the results.

RESULTS

Completion Rate

Diagram 1 describes the flow of potential respondents throughout the survey.

Diagram 1: Flowchart of Potential Respondents to Survey



*reasons to be determined

**reasons include: out of service number, wrong number, moved, fax/computer line, business number, not eligible, unable to contact after 10/15 call attempts

Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Contact information for a total of 1,314 mothers was provided to CCI Research by Peel Public Health. Table 1 provides a detailed description of the outcome of call attempts to each of these telephone numbers.

Table 1: Call Attempts and Results, Peel, 2009/2010

Call Type	Six-month Survey		12-month Survey	
	Number	Per cent	Number	Per cent
Complete	790	60%	325	79%
Answering machine	0	--	0	--
Business number*	2	0%	0	--
Call back, no specific time	0	--	0	--
Call back	0	--	0	--
Fax/computer line*	3	0%	0	--
Hang up	37	3%	0	--
Interpreter required	0	--	0	--
Language barrier	0	--	0	--
Line is busy	0	--	0	--
Moved, no new number*	17	1%	2	0%
No answer	0	--	0	--
Not eligible*	37	3%	13	3%
Not in service*	88	7%	22	5%
Number removed at respondent's request	2	0%	0	--
Refused	100	8%	19	5%
Refused by someone other than respondent	7	1%	1	0%
Wrong number*	20	2%	2	0%
Partial/continue survey later	0	--	0	--
Terminate (not complete after 10 call attempts)	211	16%	25	6%
Total	1,314	100%	409	100%

* Not included in denominator of response rate

Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

For the six-month survey, the completion rate was 69% - calculated as the total number of complete calls (790 calls) divided by the total number of legitimate calls (1,147 calls) completed. The number of legitimate calls does not include calls to telephone numbers which were: business numbers, fax/computer lines, the potential respondent had moved and did not provide a new number, number was deemed not eligible, number was not in service, and wrong numbers.

Mothers who were breastfeeding at the six-month survey were asked for consent to be contacted at 12 months postpartum. Among the 409 mothers who agreed to be contacted again, the completion rate was 88%.

Sample Description

Of the 790 completed surveys at six months, 426 respondents lived in Mississauga (54%), 336 lived in Brampton (43%) and 28 lived in Caledon (4%). There was a small over-representation of respondents from Mississauga compared to the proportion of live births in Mississauga in 2008.

The respondents to the six-month survey were similar in terms of age group, type of birth, having had a previous child and hospital of birth when compared to the cohort of live births in Peel in 2008 from the provincial Better Outcomes Registry and Network (BORN) dataset.

Table 2: Characteristics of Sample Respondents (2009/2010) and Live Births (2008), Peel

Characteristic	Six-month Survey Sample (%)	12-Month Survey Sample (%)	2008 Live Births from BORN (%)
Municipality			
Brampton	42.5	40.0	45.8
Caledon	3.5	2.8	3.4
Mississauga	53.9	57.2	50.8
Maternal age group (years)			
Less than 25	11.3	7.0	13.3
25 to 29	27.7	26.8	30.5
30 to 34	38.1	42.7	34.3
35 to 39	17.2	19.1	18.1
40+	5.7	4.5	3.9
Respondent's first child			
Yes	45.7	46.5	42.6
No	54.3	53.5	57.4
Type of birth			
Single	97.8	99.1	98.5
Twins	2.0	0.9	1.4
Triplets	0.1	0.0	0.0
Birth Hospital			
William Osler Center (Brampton Civic Hospital)	28.0	--	26.6
William Osler Health Center (Etobicoke Campus)	4.1	--	8.0
Trillium Health Centre	21.3	--	21.7
Credit Valley Hospital	29.4	--	25.1
Georgetown Hospital	0.4	--	1.4
Midwife-attended home birth	0.3	--	<0.5*
Other	16.6	--	16.7

* Estimate of the proportion of live births which occurred at home with a mid-wife
Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Of the 325 completed surveys at 12 months, 186 respondents lived in Mississauga (57%), 130 lived in Brampton (40%) and 9 lived in Caledon (3%).

Mothers who participated in the 12-month survey tended to be older than mothers in the six-month sample or in the 2008 cohort of live births.

Table 3 provides the demographic characteristics of respondents in the six-month and 12-month surveys. Given that demographic data of this kind are not currently available in the BORN dataset, information for the purposes of comparison is not available. Census data for all women in Peel may not provide an accurate comparison because mothers may differ from women who are not mothers.

The majority of respondents in the six-month survey were married, had at least some university education and had a household income of \$50,000 or more. The 12-month survey sample had a higher proportion of respondents with a completed university education or higher, who were married and who had higher household incomes.

Table 3: Demographic Characteristics of Respondents in Six-Month and 12-Month Survey Sample, Peel, 2009/2010

Characteristic	Six-Month Survey Sample (%)	12-Month Survey Sample (%)
Education		
No schooling	0.0	0.3
Some schooling but less than high school diploma	3.2	1.2
Completed high school	14.6	8.6
Some trade school or college	5.7	4.3
Completed trade school or college	24.5	26.2
Some university	4.3	3.1
Completed university	34.2	38.3
Post graduate	13.5	17.9
Marital Status		
Married (legally)	87.3	92.6
Common-law	5.4	4.0
Living with partner	0.5	0.0
Single (never married)	5.4	3.1
Separated (not legally divorced)	1.3	0.0
Divorced	0.0	0.3
Before tax annual household income		
Less than \$10,000	3.4	1.2
\$10,000 to less than \$20,000	5.7	3.1
\$20,000 to less than \$30,000	7.3	4.9
\$30,000 to less than \$40,000	7.1	6.8
\$40,000 to less than \$50,000	7.1	8.3
\$50,000 to less than \$60,000	7.2	8.9
\$60,000 to less than \$70,000	7.5	7.7
\$70,000 to less than \$80,000	7.3	10.2
\$80,000 or more	32.7	36.3
Don't know	5.9	4.3
Refused/No response	8.7	8.3

Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

The majority of respondents in both the six-month and 12-month survey samples were born outside of Canada. The average number of years in Canada was 10.3 years among mothers in the six-month survey and 10.5 years among those in the 12-month survey sample.

The most common ethnic origins reported among respondents in the six-month survey were: Canadian (15%), East Indian (10%), Italian (7%), Punjabi (6%) and English (6%). In addition, 24% of respondents categorized themselves as being in an “other” ethnic origin outside those listed.

Table 4: Ethnic Origin and Immigrant Status of Respondents in Six-Month and 12-Month Survey Sample, Peel, 2009/2010

Characteristic	Six-Month Survey Sample (%)	12-Month Survey Sample (%)
<i>Ethnic or cultural origins (multiple responses)</i>		
Canadian	14.7	15.2
<i>East Asian</i>		
East Asian	2.6	3.2
Chinese	4.8	6.3
Filipino	4.3	2.8
<i>South Asian</i>		
East Indian	9.6	10.1
Punjabi	6.4	4.7
Pakistani	5.3	3.8
Sri Lankan	1.6	1.6
<i>British</i>		
English	5.6	6.3
Irish	4.5	6.0
Scottish	3.4	3.2
<i>European</i>		
Croatian	1.4	0.6
Dutch (Netherlands)	0.8	0.9
French	1.9	2.2
German	2.3	3.8
Greek	0.8	0.9
Hungarian	0.8	0.9
Italian	6.5	5.1
Polish	2.7	2.5
Portuguese	4.7	4.7
Spanish	2.5	1.3
Ukrainian	1.0	1.9
<i>Caribbean</i>		
Jamaican	4.8	2.8
Trinidadian/Tobagoan	1.3	0.3
West Indian	3.6	3.8
<i>South American</i>		
Guyanese	1.0	0.6

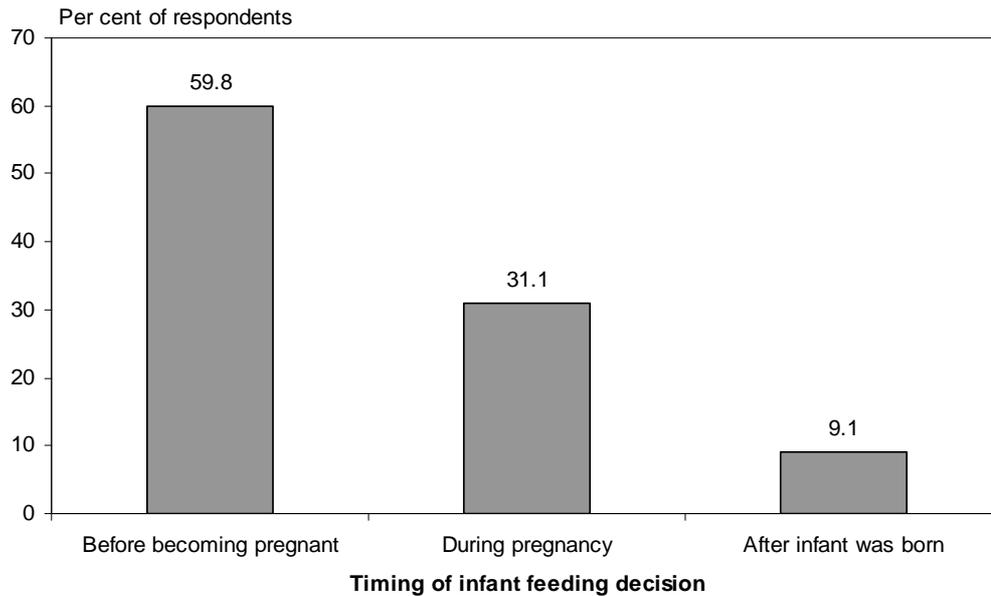
Other	23.5	27.8
Born in Canada		
Yes	41.5	41.5
No	58.5	58.5
Number of years in Canada		
Mean	10.3 years	10.5 years
Median	8 years	8 years
Minimum to Maximum	0-37 years	1-37 years

Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Six-Month Survey Results

Sixty per cent of mothers reported first thinking about how they would feed their infant before they were pregnant. Nine per cent of mothers did not think about infant feeding until after the baby was born.

Figure 1: Timing of Infant Feeding Decision, Peel, 2009/2010



Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Almost half of mothers reported they did not have any help in making the decision about feeding their baby. For mothers that identified a source of help, the most common external sources were a partner, mother or mother-in-law, experience with a previous child and other relatives.

Table 5: Source of Help with Infant Feeding Decision, Peel, 2009/2010

Source of help	Per cent of respondents
Myself (no one)	48.4
Partner	22.5
Mother/mother-in-law	22.0
Previous experience with other child	11.1
Other relative	8.9
Books/magazines/media	7.5
Friends/co-workers	4.9
Prenatal/breastfeeding class	4.8
Doctor	4.7
Nurse at hospital	1.9
Public Health Nurse	1.8
Nurse at doctor's office	1.0
Lactation consultant	0.9
Midwife	NR
La Leche League	NR
Formula? No Thanks campaign	NR
Breastfeeding in Peel website	NR
Other	5.8

NR = Not releasable due to small numbers

Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Breastfeeding Initiation

Almost all mothers reported having initiated breastfeeding. Initiation includes those who reported feeding their newborns breast milk (exclusively or in combination with formula) or who reported trying to breastfeed. There was no significant difference between breastfeeding initiation rates in Peel from 94% in 2004/2005 to 97% in 2009/2010.

Table 6: Breastfeeding Initiation, Peel, 2009/2010

Initiated breastfeeding	Per cent of respondents	Lower 95% CI	Upper 95% CI
Yes	96.7	95.1	97.8
No	3.3	2.2	4.9

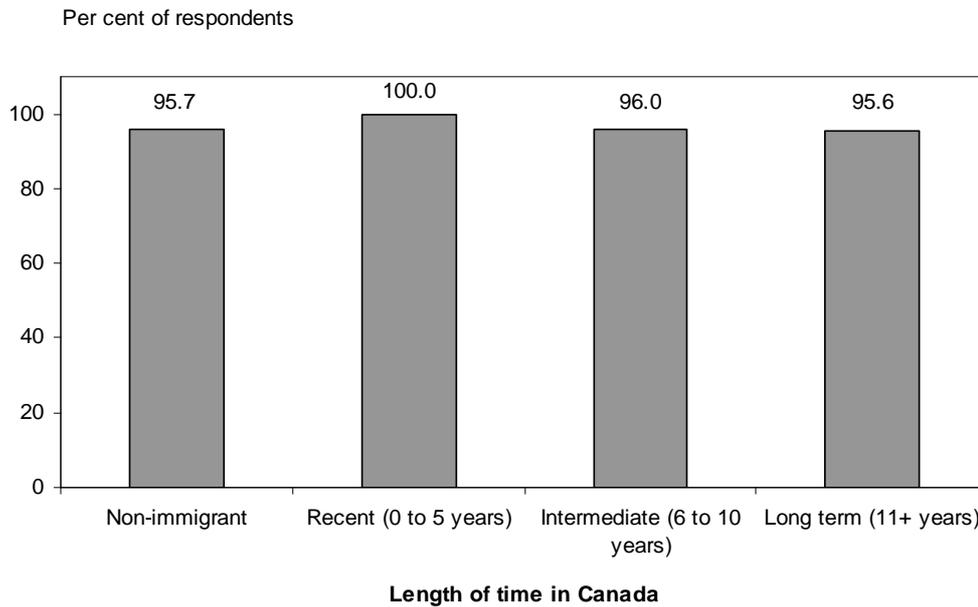
Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

First time mothers were more likely to report breastfeeding initiation than repeat mothers (99% vs. 95% respectively).

Table A1 in Appendix 4 provides breastfeeding initiation rates by select characteristics of the mother.

There was no significant difference in breastfeeding initiation between Canadian-born (non-immigrant) and foreign-born (immigrant) mothers.

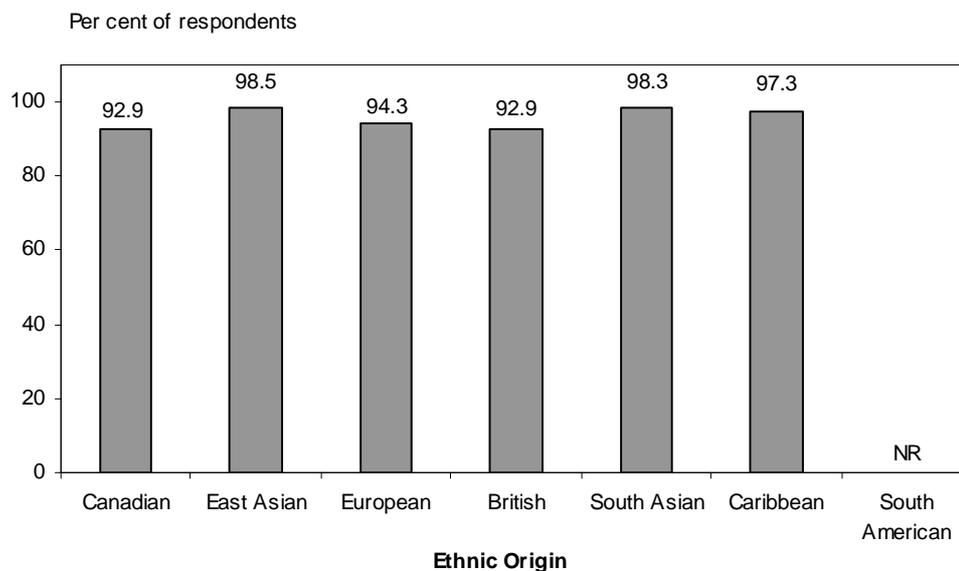
Figure 2: Breastfeeding Initiation by Mother’s Length of Time in Canada, Peel, 2009/2010



Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Mothers who reported their ethnic origin as Canadian were less likely to initiate breastfeeding than those who did not report being Canadian (93% vs. 97%). Those who reported being European or British were also less likely than their non-European or non-British counterparts to initiate breastfeeding.

Figure 3: Breastfeeding Initiation by Mother’s Ethnic Origin, Peel, 2009/2010



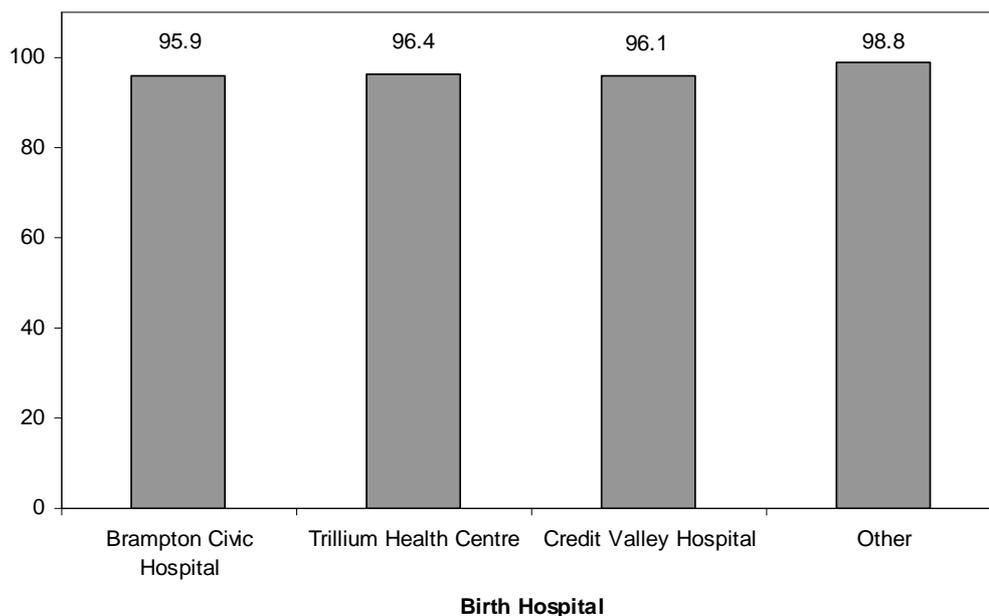
NR = Not releasable due to small numbers

Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

There was no significant difference in the proportion of mothers who reported initiating breastfeeding based on birth hospital.

Figure 4: Breastfeeding Initiation by Birth Hospital, Peel, 2009/2010

Per cent of respondents



Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Mothers were also asked about what they fed their newborns. Just over half of mothers reported feeding their newborns breast milk only (54%), compared to 38% who fed their newborns breastmilk and formula and 8% who fed them formula only.

Breastfeeding at Six Months

At six months postpartum, 58% of mothers reported they were breastfeeding their infants. This rate has remained the same since 2004/2005.

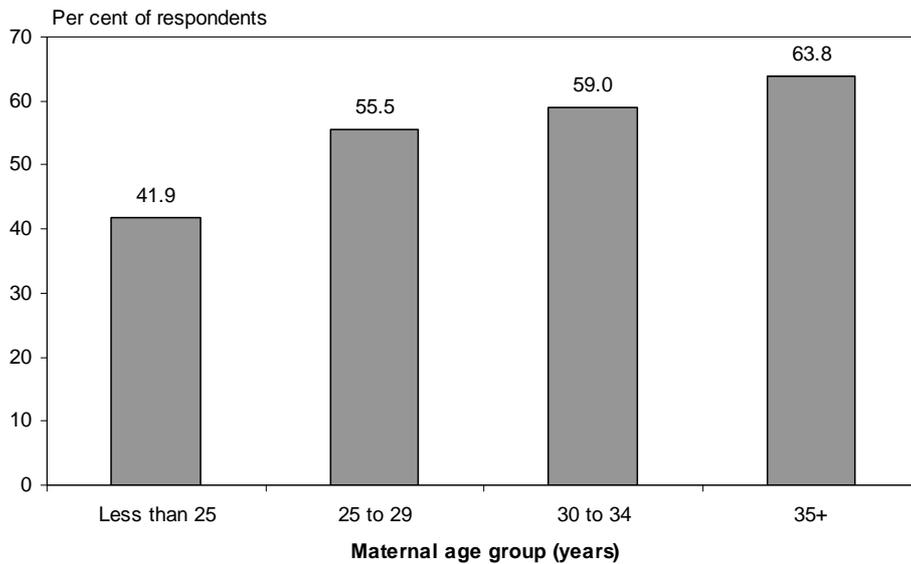
Table 7: Any Breastfeeding at Six Months, Peel, 2009/2010

Breastfeeding at six months	Per cent of respondents	Lower 95% CI	Upper 95% CI
Yes	57.6	54.1	61.1
No	42.4	38.9	45.9

Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

The proportion of mothers who were breastfeeding at six months postpartum increased by maternal age group. Mothers who were less than 25 years of age were significantly less likely to be breastfeeding at six months compared to those 35 years of age or older.

Figure 5: Breastfeeding at Six Months by Maternal Age Group, Peel, 2009/2010

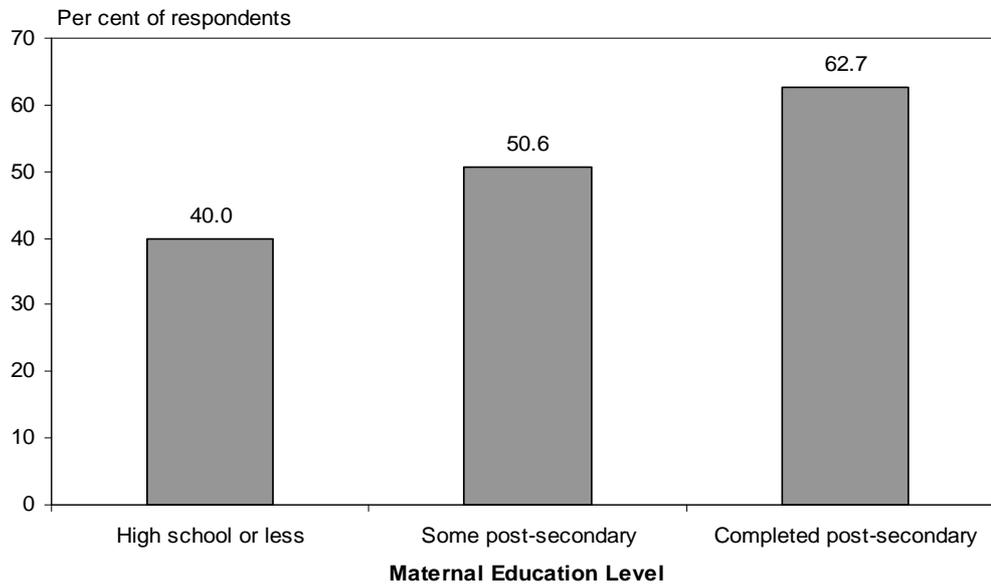


Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

There was no difference between the proportion of first time mothers who were breastfeeding at six months compared to the proportion of repeat mothers (57% vs. 59%, respectively) (data not shown).

Mothers who had completed post-secondary education were significantly more likely to breastfeed at six months compared to those with a high school education or less.

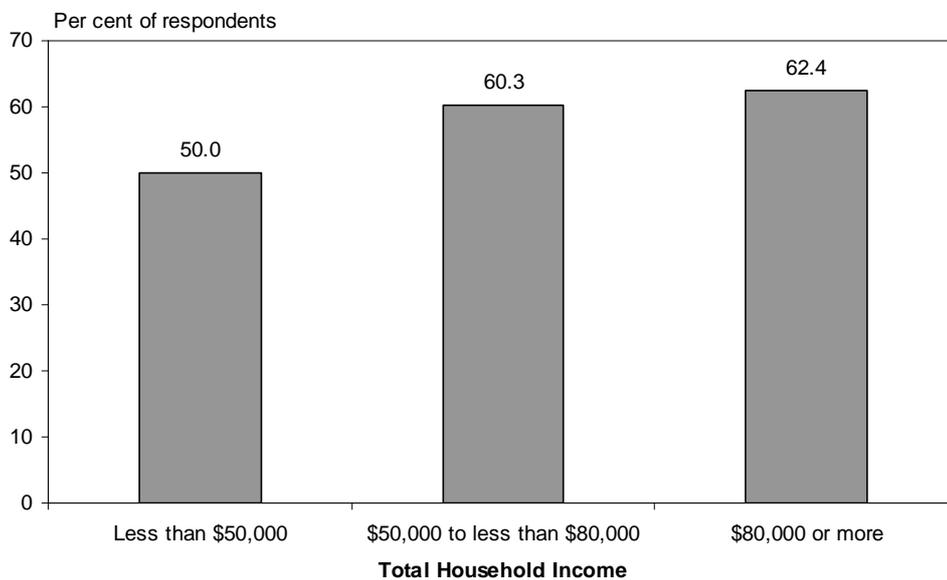
Figure 6: Breastfeeding at Six Months by Maternal Education Level, Peel, 2009/2010



Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Mothers who had a higher total household income (\$80,000 or more) were more likely to report breastfeeding at six months compared to those in the lowest income group.

Figure 7: Breastfeeding at Six Months by Household Income, Peel, 2009/2010

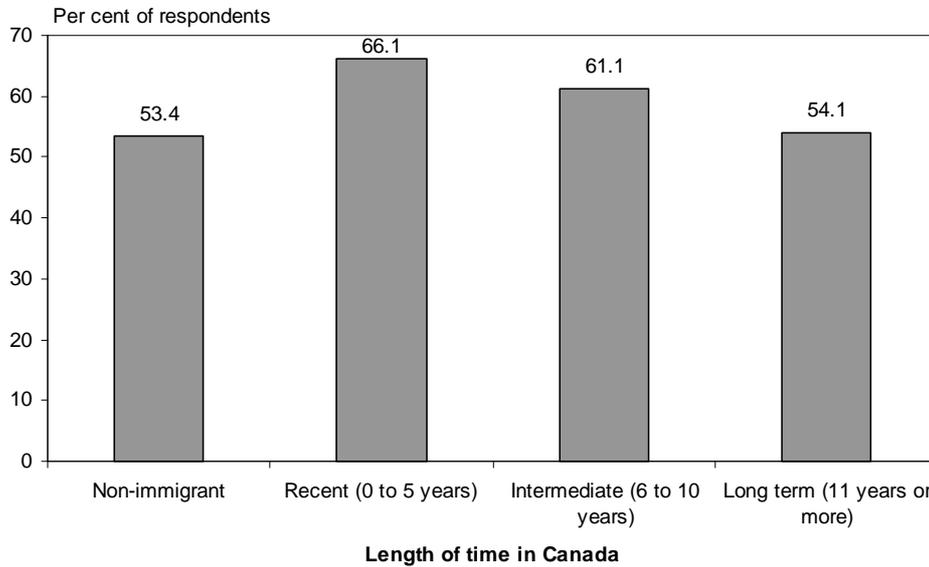


Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Mothers who were recent immigrants to Canada (less than five years) were more likely to report breastfeeding at six months than non-immigrant mothers. Among immigrants,

the proportion of mothers who were breastfeeding at six months decreased as the length of time in Canada increased.

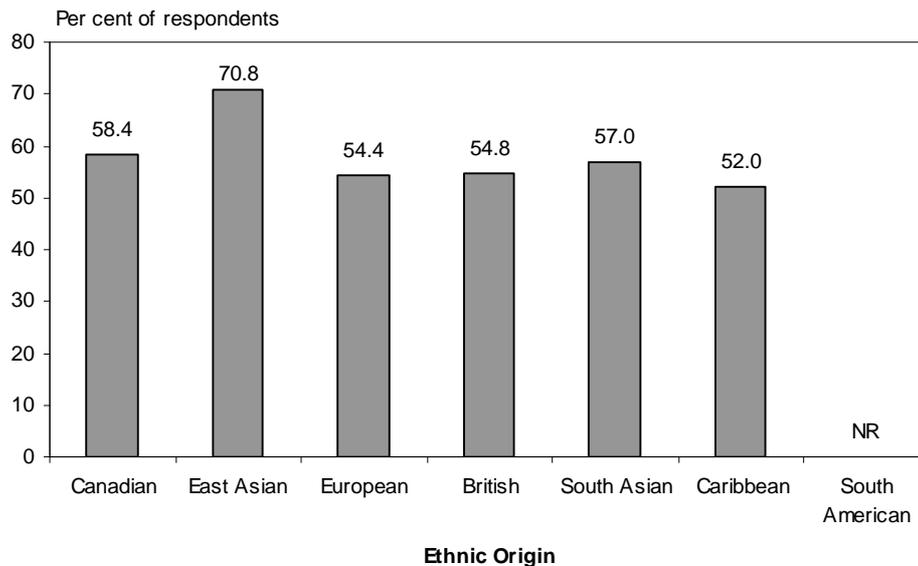
Figure 8: Breastfeeding at Six Months by Mother’s Length of Time in Canada, Peel, 2009/2010



Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

East Asian women were more likely to breastfeed at six months compared to their non-East Asian counterparts. No other differences in breastfeeding at six months were found based on the mother’s ethnic origin.

Figure 9: Breastfeeding at Six Months by Mother’s Ethnic Origin, Peel, 2009/2010

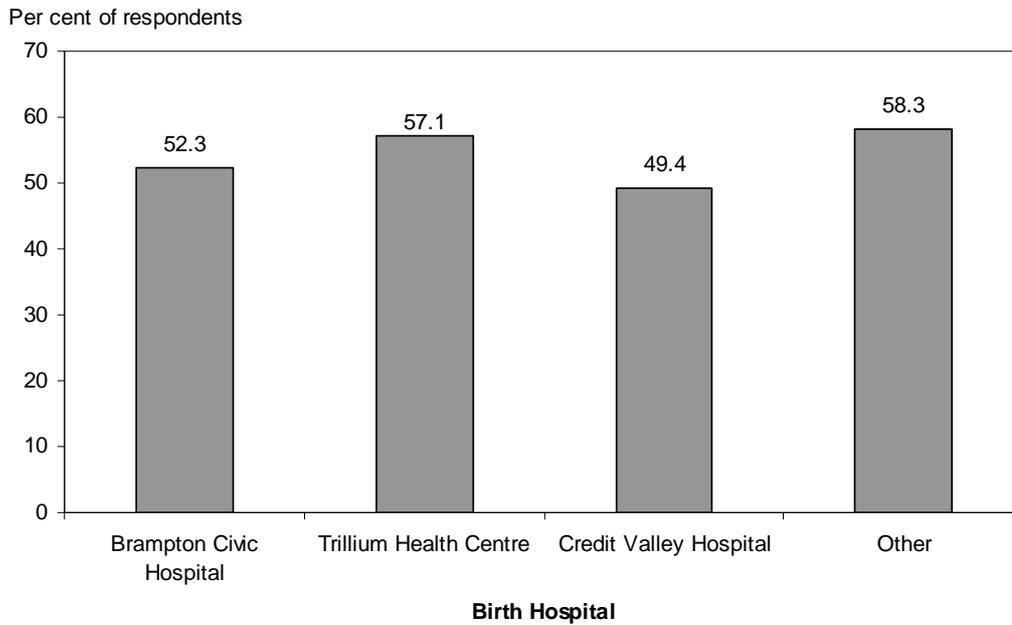


NR = Not releasable due to small numbers

Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

There was no significant difference in the proportion of mothers breastfeeding at six months based on the hospital of birth.

Figure 10: Breastfeeding at Six Months by Birth Hospital, Peel, 2009/2010

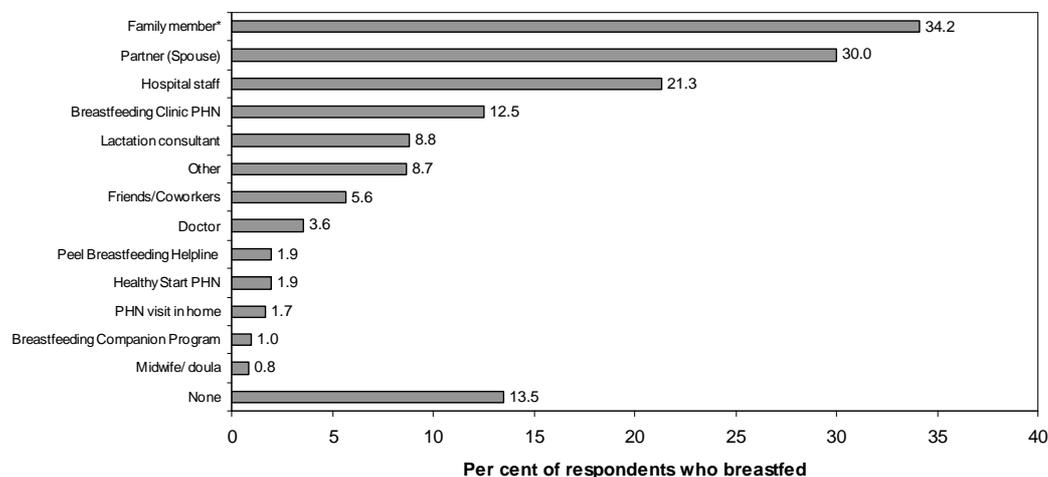


Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Sources of Support for Breastfeeding Mothers

Mothers who breastfed their newborn were asked who or what gave them the most help or support with breastfeeding. The highest proportion of mothers reported that a family member (this includes a parent, mother, mother-in-law, family member or relative) provided the most support, followed by partner/spouse, hospital staff, breastfeeding clinic public health nurse, or a lactation consultant.

Figure 11: Sources of Most Help or Support for Breastfeeding, Peel, 2009/2010



* Parent/mother/mother-in-law/family member/relative

Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Mothers who breastfed their newborns were also asked about whether they tried to obtain support from specified organizations or individuals listed in the figure above. The most common sources of help with breastfeeding were: hospital staff (61%), a public health nurse at a breastfeeding clinic (30%), the breastfeeding helpline (24%) and a doctor (21%).

Table 8: Sources of Help or Support with Breastfeeding, Peel, 2009/2010

Source of support	Number of respondents	Per cent of respondents who breastfed newborn
Hospital staff	485	61.4
PHN at breastfeeding clinic**	240	30.4
Breastfeeding helpline*	186	23.5
Doctor	162	20.5
Healthy Start PHN*	157	19.9
PHN home visit**	74	9.4
Mother in Breastfeeding Companions program*	28	3.5

*- programs and services offered through Peel Public Health

**- service offered collaboratively between Peel Public Health and Peel hospitals

Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Of the women who tried to obtain help or support with breastfeeding from each source, a minority experienced difficulties getting the support they wanted.

Table 9: Proportion of Mothers Who Experienced Difficulties Getting Help or Support with Breastfeeding from Specified Sources, Peel, 2009/2010

Source of support	Number of mothers who tried to obtain help	Per cent of mothers who experienced difficulties receiving help or support from this source
Hospital staff	485	13.6
PHN home visit	74	13.5
Mother in Breastfeeding Companions program	28	10.7
Breastfeeding helpline	186	6.5
Doctor	162	6.2
PHN at breastfeeding clinic	240	4.2
Healthy Start PHN	157	3.2

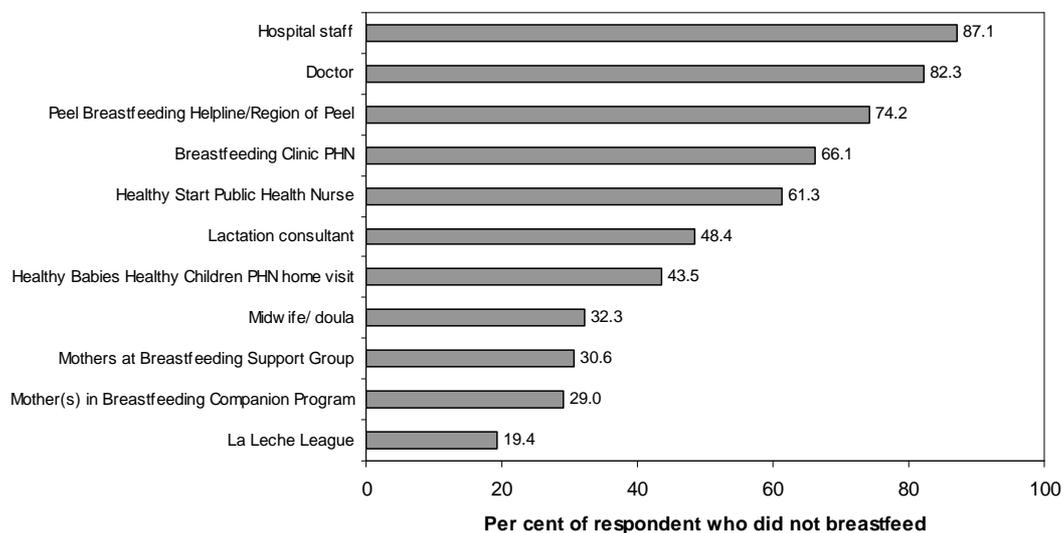
Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Support for Non-Breastfeeding Mothers

Mothers who reported they did not breastfeed their infants were asked about their awareness of support services for infant feeding in Peel.

The vast majority of mothers who did not breastfeed were aware of the sources of support available for infant feeding.

Figure 12: Awareness of Infant Feeding Support Sources Among Non-Breastfeeding Mothers, Peel, 2009/2010



Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

The most commonly reported infant feeding support services used by non-breastfeeding mothers with their newborn included: hospital staff (73%), doctors (50%) and public health nurses (21%) (data not shown).

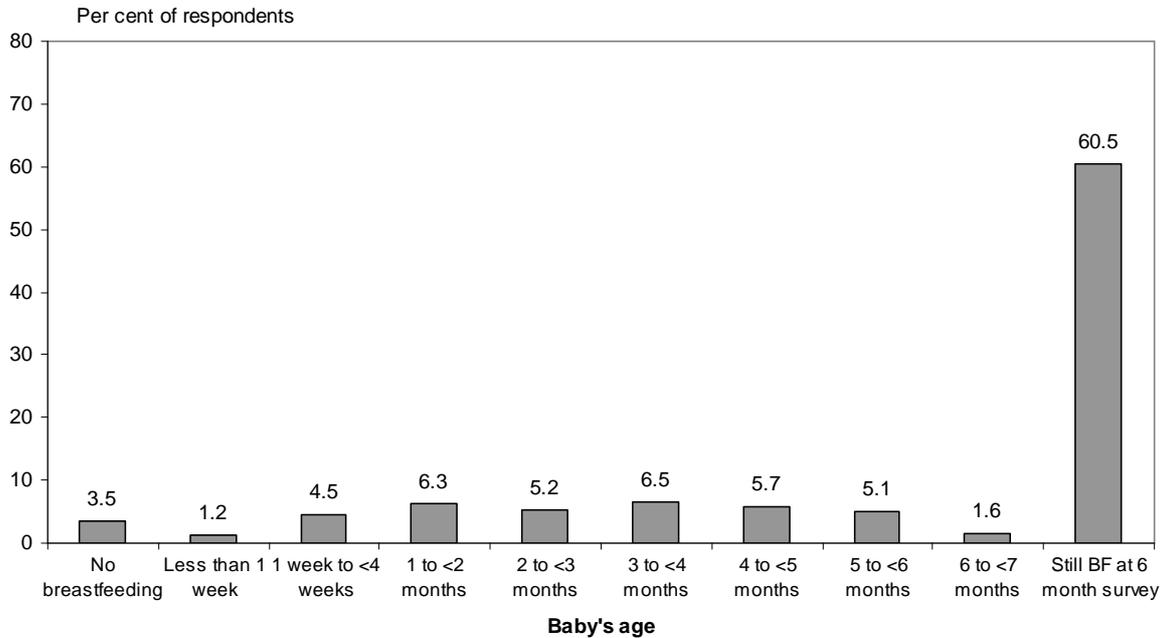
Sixty per cent of mothers who did not breastfeed their current baby reported that they would consider breastfeeding if they were to become pregnant again.

Breastfeeding Duration

Mothers were asked during the six-month survey about when they discontinued breastfeeding and when they introduced other liquids. These two variables were used to define the duration of breastfeeding (meaning any breastfeeding, with or without other liquids for the first time) and duration of exclusive breastfeeding (which ends when other liquids are introduced).

Of all mothers surveyed at six months postpartum, close to 4% did not initiate breastfeeding and another 6% of mothers discontinued breastfeeding by the time their baby was four weeks old. At the time of the six-month survey, 61% of mothers were still breastfeeding.

Figure 13: Duration of Breastfeeding Among Mothers Surveyed at Six Months, Peel, 2009/2010



Note: 4.9% of women surveyed responded that they did not know the duration of breastfeeding and were excluded from the analysis.

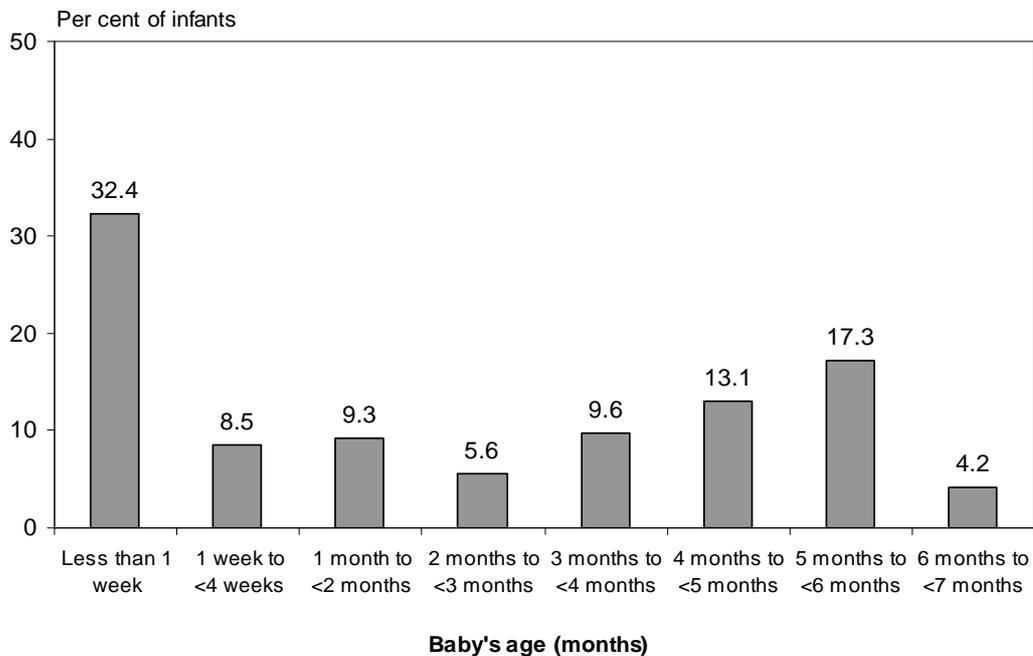
Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Of those mothers who had discontinued breastfeeding by the time of the six-month survey, 29% stopped breastfeeding entirely when they first introduced other liquids and foods (other fluids may include formula, water, evaporated milks, goat or cow's milk, teas and infusions, cereals and thickeners) to their infant (data not shown).

The figure below includes all mothers who initiated breastfeeding, but were not exclusively breastfeeding at the time of the six-month survey.

Of those mothers who were not exclusively breastfeeding at six months, over 30% introduced fluids other than breast milk in less than a week following delivery.

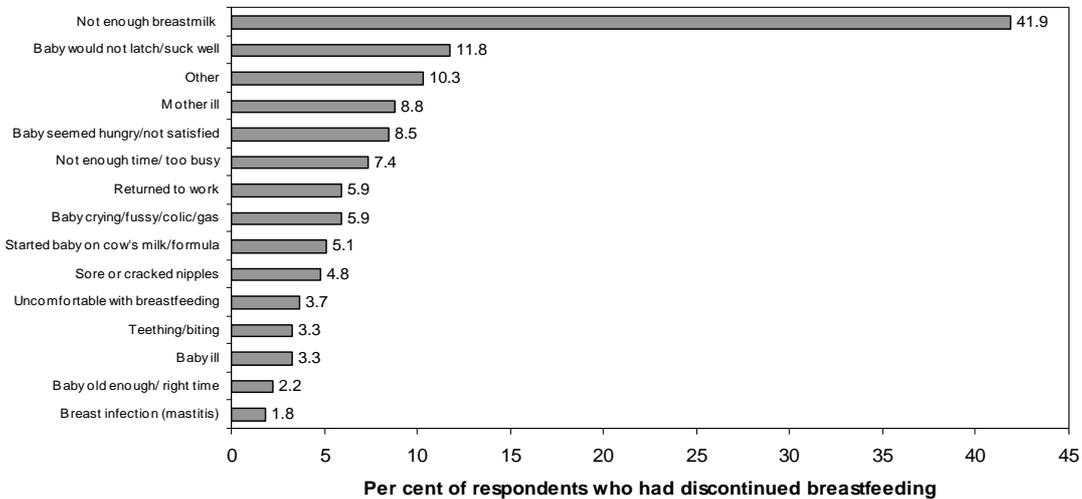
Figure 14: Infant's Age When First Introduced Fluids Other than Breast Milk, Peel, 2009/2010



Note: This figure excludes those who exclusively breastfed at the time of the six-month survey
 Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Mothers who had stopped breastfeeding by six months postpartum were asked for their reasons for discontinuing breastfeeding. The most common reasons for discontinuing breastfeeding were: not enough breast milk, baby not latching or sucking well at the breast, other reasons not listed, the mother being ill or the baby seeming hungry or not satisfied.

Figure 15: Reasons for Discontinuing Breastfeeding, Peel, 2009/2010



Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Among those mothers who reported there was not enough breast milk (n=114), the most commonly reported reasons for this belief were: pumping showed small supply of breast milk (38%), other reasons not listed (29%), baby drank supplement when offered (16%) or the baby cried when put into the crib (5%).

Among those mothers who reported the baby seemed hungry or not satisfied (n=23), the most commonly reported reasons were the baby drank supplement when offered (44%) or the baby cried when put into the crib (26%).

Exclusive Breastfeeding at Six Months

Twenty-three per cent of mothers were exclusively breastfeeding their infants at six months postpartum. This proportion has increased from 11% in 2004/2005.

Table 10: Exclusive Breastfeeding at Six Months, Peel, 2009/2010

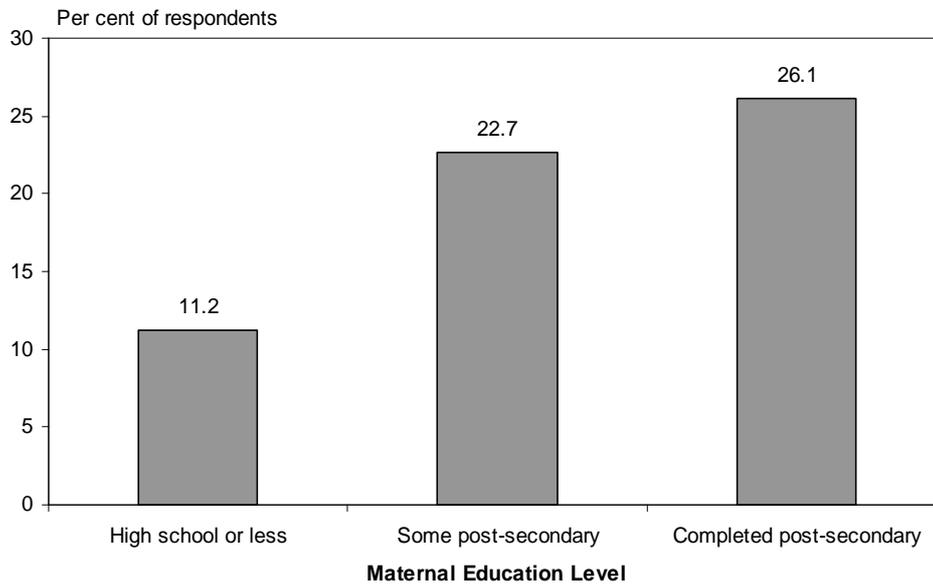
Exclusive breastfeeding at six months	Per cent of respondents	Lower 95% CI	Upper 95% CI
Yes	23.0	18.9	24.7
No	76.8	68.9	75.2

Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

There was no difference in exclusive breastfeeding at six months between first time mothers and repeat mothers (22% vs. 24%, respectively).

Mothers who had completed post-secondary education were significantly more likely to report exclusive breastfeeding at six months postpartum than those with a high school education or less.

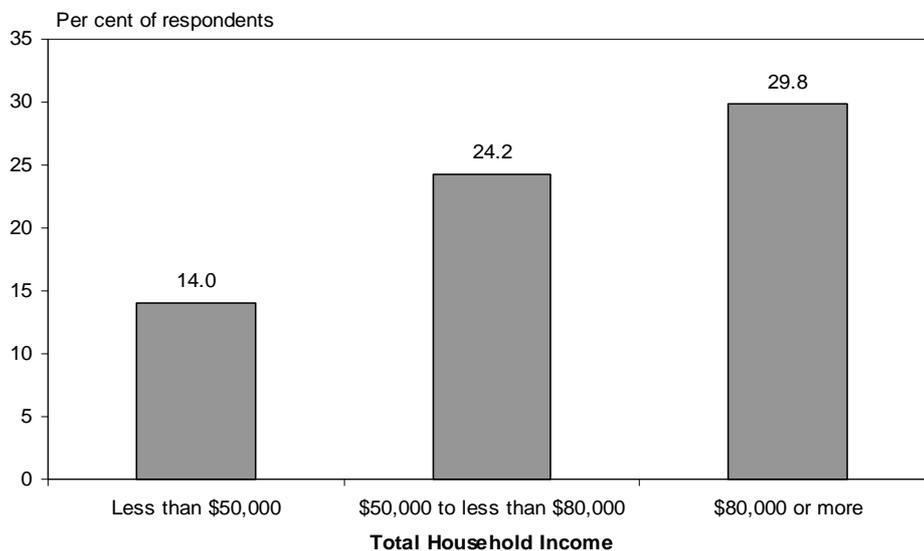
Figure 16: Exclusive Breastfeeding at Six Months by Maternal Education, Peel, 2009/2010



Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Mothers who had household incomes in the highest group were more likely to exclusively breastfeed at six months compared to those in the lowest income group.

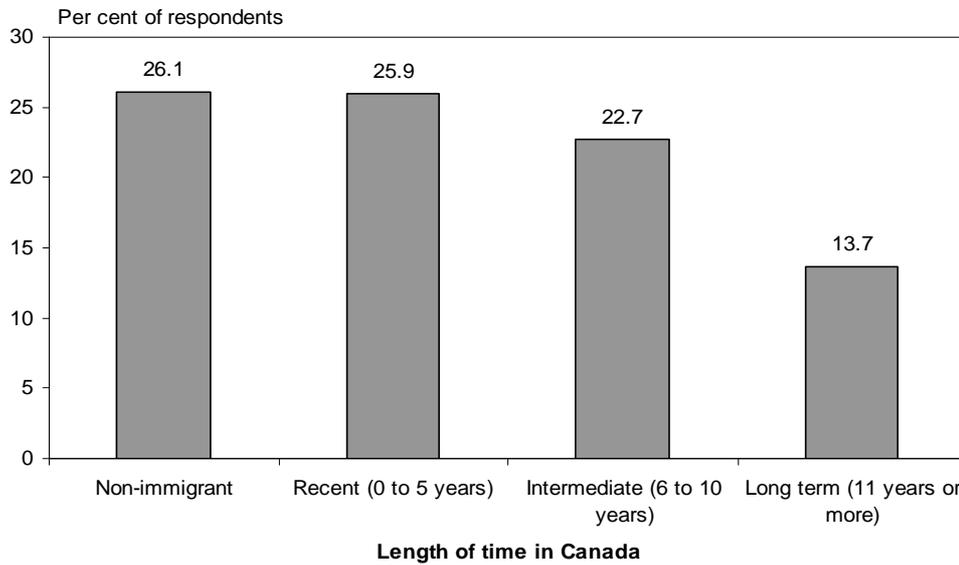
Figure 17: Exclusive Breastfeeding at Six Months by Total Household Income, Peel, 2009/2010



Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Compared to non-immigrants, mothers who have been in Canada for 11 years or more were significantly less likely to be exclusively breastfeeding at six months.

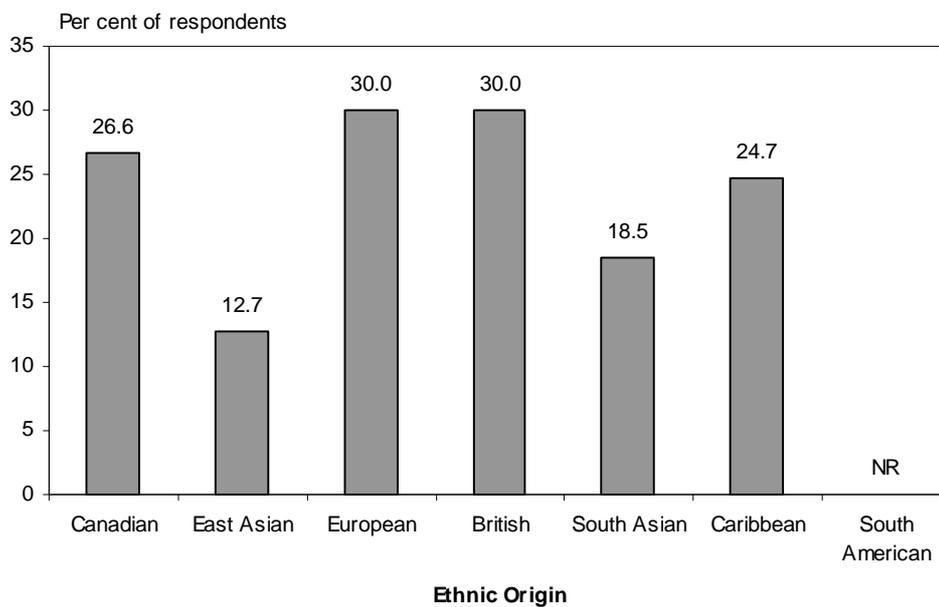
Figure 18: Exclusive Breastfeeding at Six Months by Length of Time in Canada, Peel, 2009/2010



Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Mothers who reported being of European origin were more likely to be exclusively breastfeeding at six months compared to non-European mothers.

Figure 19: Exclusive Breastfeeding at Six Months by Mother's Ethnic Origin, Peel, 2009/2010

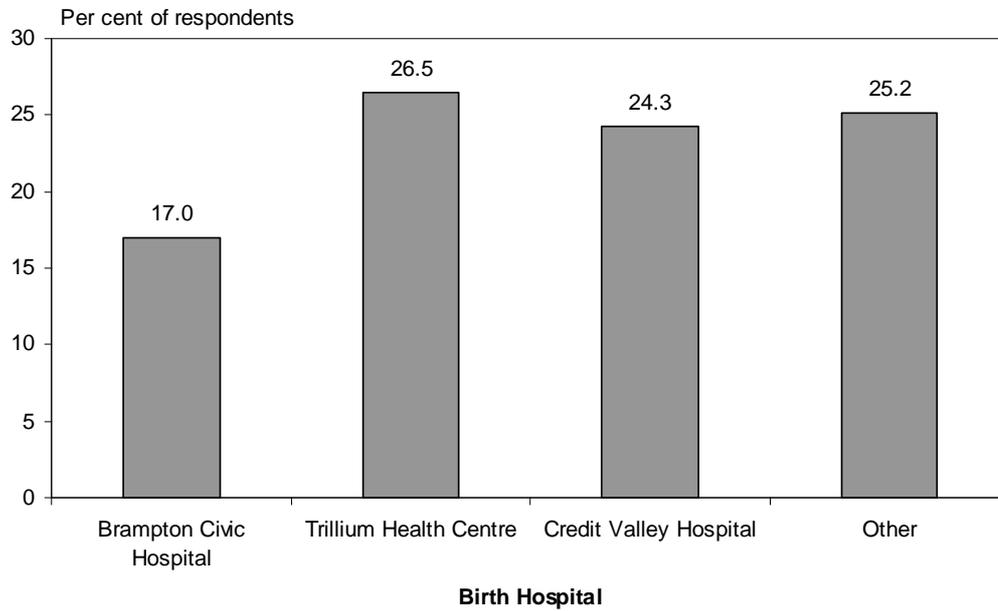


NR = Not releasable due to small numbers

Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

The proportion of mothers who reported exclusively breastfeeding at six months was not significantly different by hospital of birth.

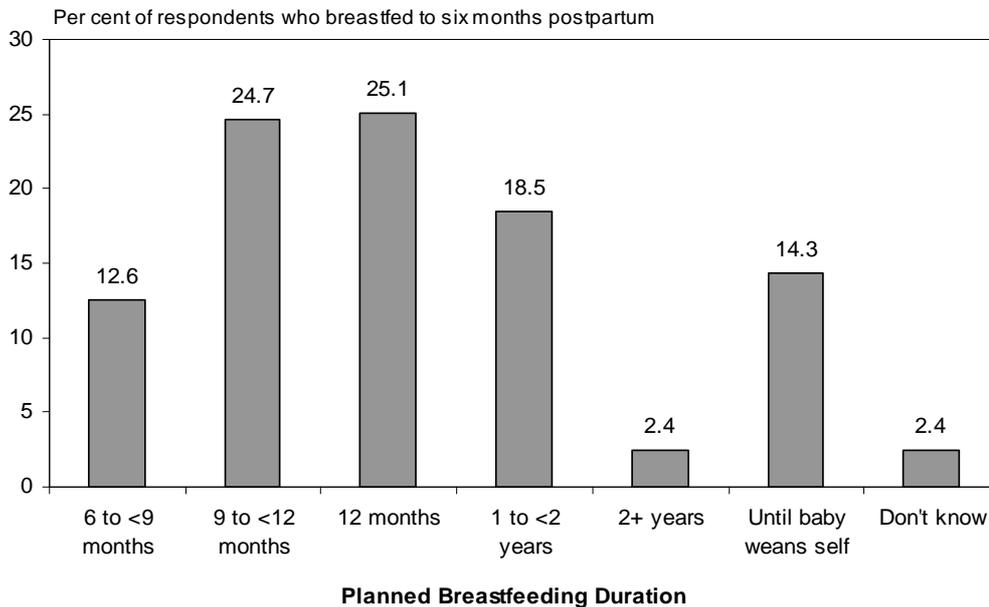
Figure 20: Exclusive Breastfeeding at Six Months by Birth Hospital, Peel, 2009/2010



Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Mothers who were exclusively breastfeeding at six months postpartum were asked how long they planned to breastfeed their infant. Two per cent of mothers planned to breastfeed their infants to two years of age or older. An additional 14% of mothers planned to breastfeed until their infant weaned themselves.

Figure 21: Planned Breastfeeding Duration among Mothers Who Breastfed to Six Months, Peel, 2009/2010



Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Internet Access and Website Use

All mothers were asked about their use of the internet for finding health related information as well as their knowledge and use of the *breastfeedinginpeel.ca* website.

The majority of mothers use the internet (89%) and most use it to obtain health related information (73%). Among those who use the internet to find health information, 41% had seen or heard of the *breastfeedinginpeel.ca* website and 21% had visited the site.

Formula? No Thanks Campaign

All mothers were asked whether they had heard or read about the *Formula? No Thanks* media campaign, which was launched by Peel Public Health in December 2008. The campaign focused on the risks of formula feeding.

Twenty-three per cent of mothers were aware of this media campaign. The most common sources of information about the campaign were: posters at the doctor's office, other sources not listed, posters in the mall, newspaper ads and ads in buses.

Of all mothers surveyed, 7% stated that the campaign influenced their decision to breastfeed their baby (somewhat influenced or definitely influenced) and 6% stated that the campaign influenced the timing with which they introduced other fluids into their infant's diet.

Postpartum Depression and Depressive Symptoms

New mothers are at an increased risk of developing mood disorders in the postpartum period. It is estimated that 10 to 20 per cent of women experience postpartum depression in the year following birth.³

Eighty-seven per cent of mothers had heard of the phrase 'postpartum depression'. Mothers were asked to identify some of the symptoms of postpartum depression. Almost 70% of mothers identified sadness or crying as a symptom of postpartum depression, with a much lower proportion identifying any of the other potential symptoms.

Table 11: Identified Symptoms of Postpartum Depression, Peel, 2009/2010

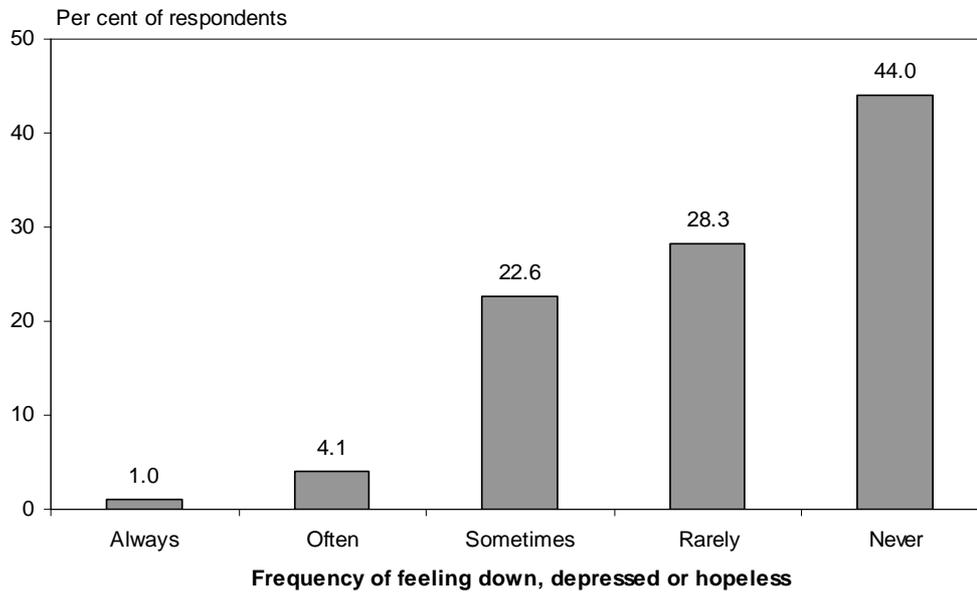
	Per cent of respondents who identified symptom
Sadness or crying	69.4
Guilt or negative feelings for baby	35.3
Frustration, irritability or anger	23.5
Changes in sleep, appetite or energy level	23.4
Anxiety or fears	16.1
Don't know	3.9
Other	1.8

Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

All mothers were asked about their emotions after having their baby, regardless of breastfeeding practice.

Five per cent of mothers reported feeling down, depressed or hopeless, always or often since their baby was born.

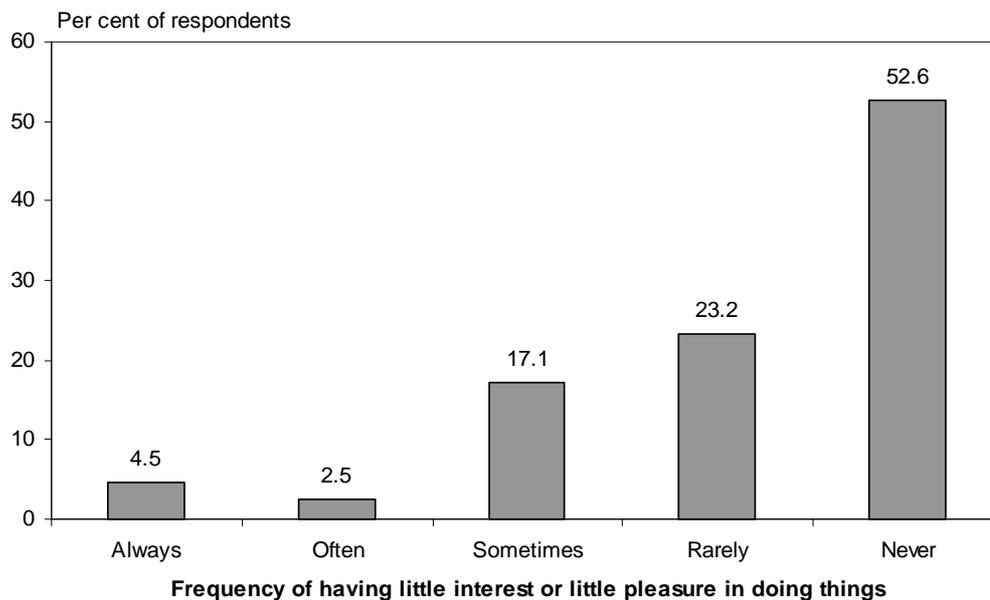
Figure 22: Feelings of Depression or Hopelessness After Baby, Peel, 2009/2010



Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Seven per cent of mothers reported having little interest or pleasure in doing things (always or often) since their baby was born.

Figure 23: Frequency of Feelings of Little Interest or Pleasure After Baby, Peel, 2009/2010



Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

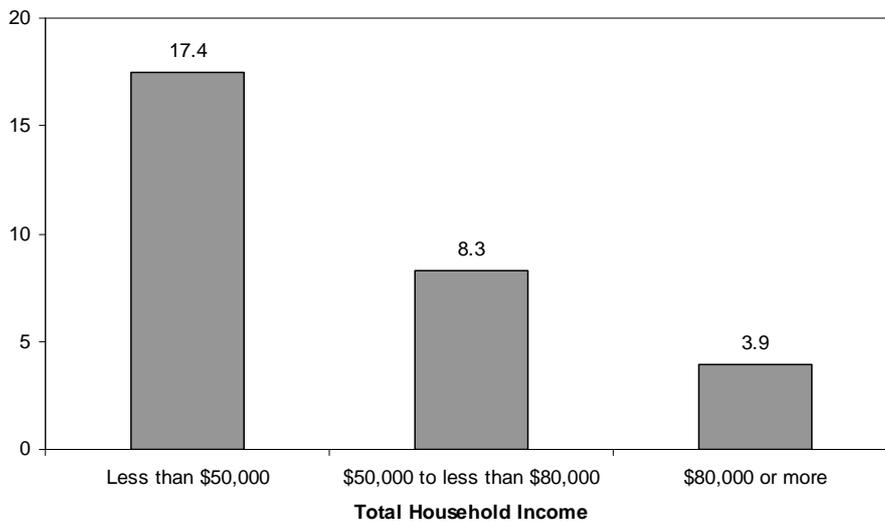
The two questions above can be combined to estimate the prevalence of self-reported postpartum depressive symptoms. Women who responded “always” or “often” to either

question were considered to have postpartum depressive symptoms. Women with depressive symptoms may or may not meet the diagnostic criteria for postpartum depression, which would be assessed by a health care professional.

Based on the above definition, 10.4% of mothers (95% CI: 8.4% to 12.8%) experienced postpartum depressive symptoms.

Mothers who were in the lowest income group were significantly more likely to report depressive symptoms than those in the highest income group.

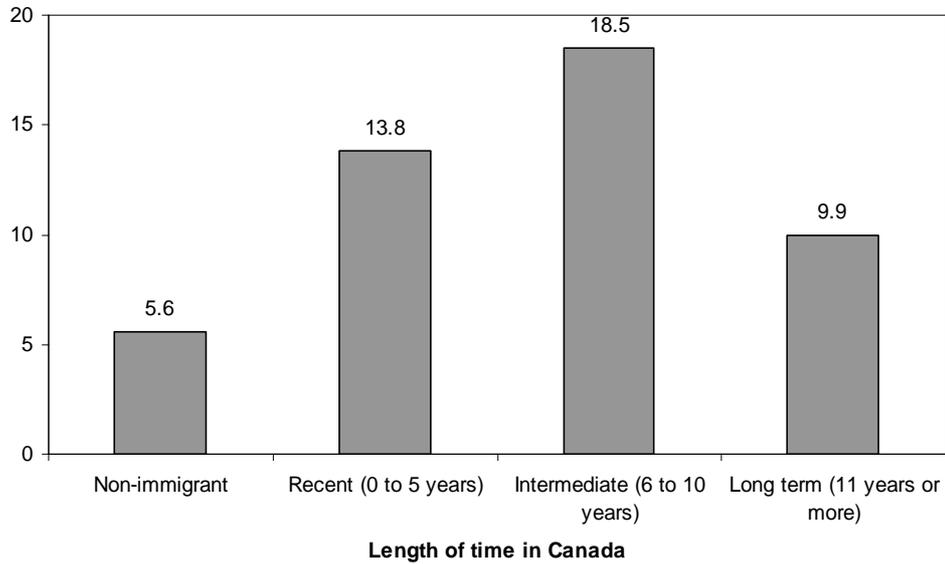
Figure 24: Self-reported Depressive Symptoms by Household Income, Peel, 2009/2010



Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Canadian born (non-immigrant) mothers were significantly less likely than mothers who had been in Canada for 10 years or less (recent and intermediate immigrants) to report postpartum depressive symptoms.

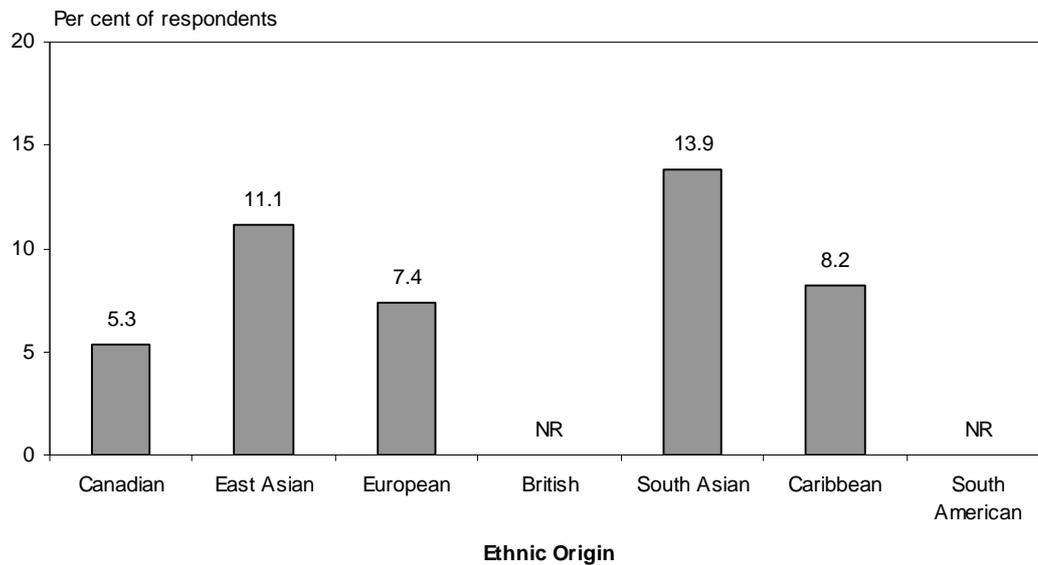
Figure 25: Self-reported Depressive Symptoms by Length of Time in Canada, Peel, 2009/2010



Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

There were differences in self-reported postpartum depressive symptoms based on ethnic origin. South Asian mothers were more likely to report depressive symptoms compared to their non-South Asian counterparts.

Figure 26: Self-reported Depressive Symptoms by Mother's Ethnic Origin, Peel, 2009/2010



NR = Not releasable due to small numbers

Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

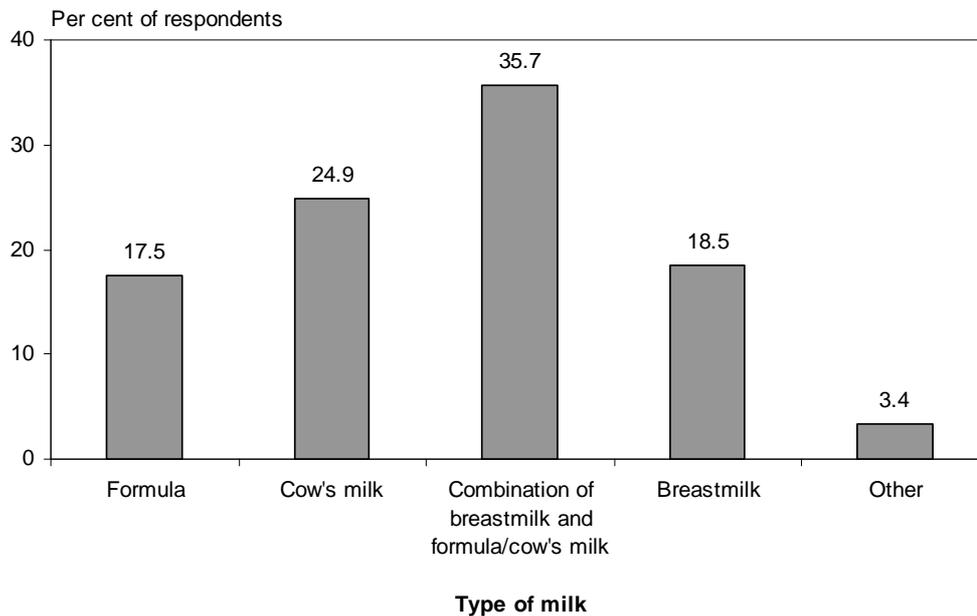


12-Month Survey Results

Mothers who were breastfeeding their infants at six months postpartum were asked to consent to being contacted again when their infants were 12 months of age.

At 12 months postpartum, 54% of mothers were still providing breast milk – with infants receiving breast milk in combination with formula or cow’s milk (36%) or breast milk alone (19%).

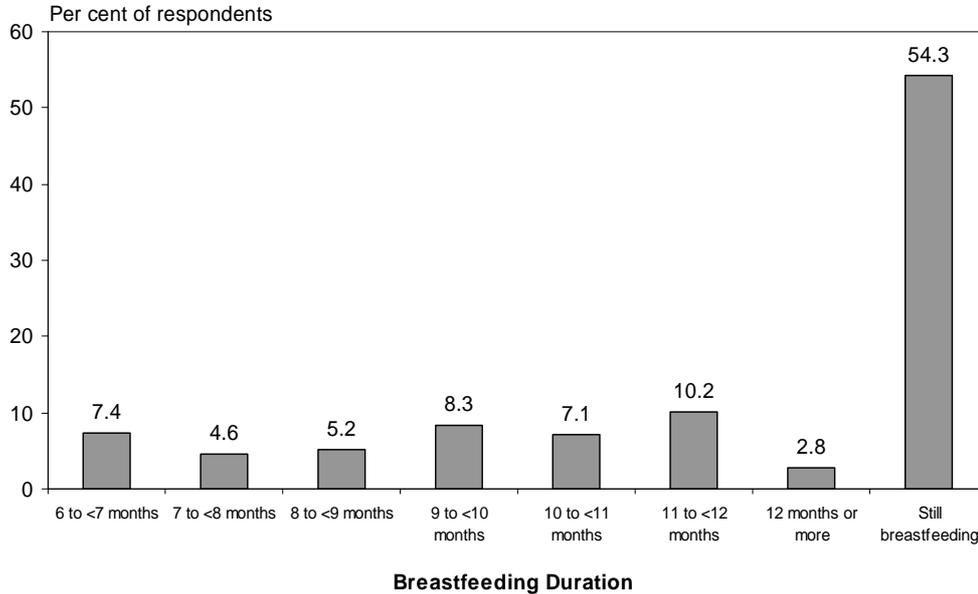
Figure 27: Type of Milk Being Provided at 12 Months, Peel, 2009/2010



Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Of mothers who had been breastfeeding at six months postpartum, there was a relatively even distribution of the proportion who stopped breastfeeding each month between six and 12 months postpartum. At 12 months postpartum, over half of those mothers who had been breastfeeding at six months, were still breastfeeding.

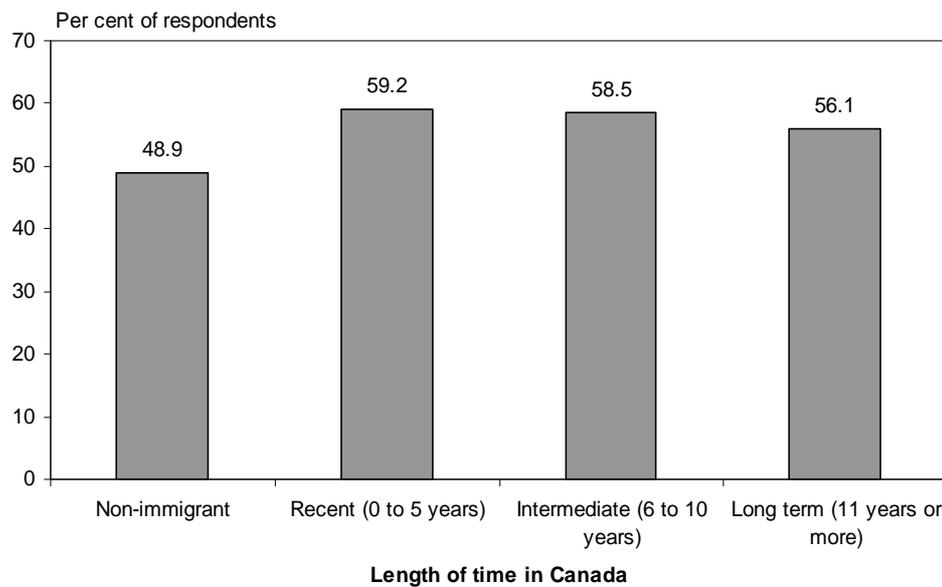
Figure 28: Breastfeeding Duration Among Mothers Surveyed at 12 Months, Peel, 2009/2010



Note: Women surveyed at 12 months were those who were still breastfeeding at the time of the six-month survey
 Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

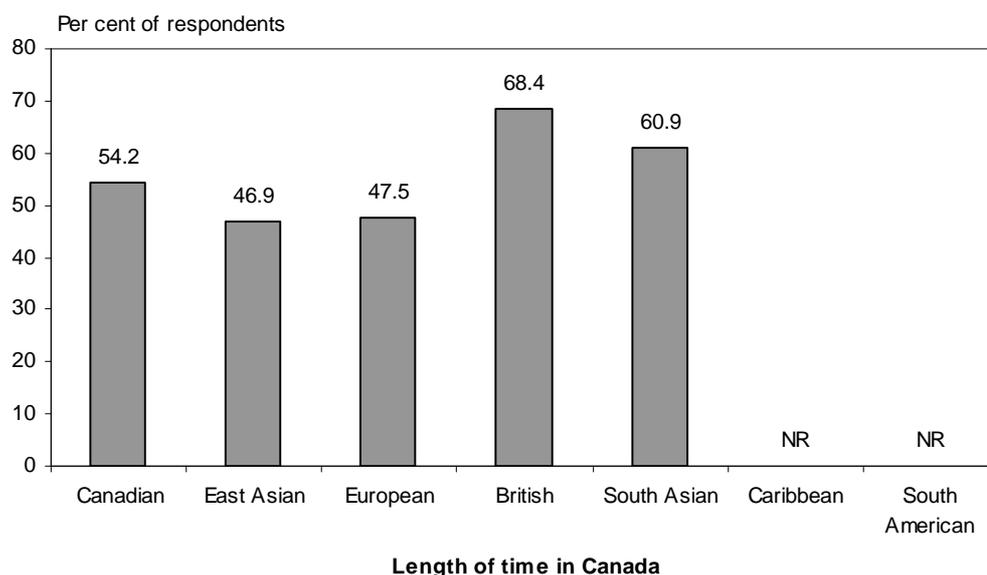
There were no differences in breastfeeding until 12 months by mother’s age, immigrant status, income, education, ethnic origin, marital status or whether they were a first-time mother or not (Table A4, Appendix 4).

Figure 29: Breastfeeding at 12 Months by Mother’s Length of Time in Canada, Peel, 2009/2010



Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Figure 30: Breastfeeding at 12 Months by Mother’s Ethnic Origin, Peel, 2009/2010



NR = Not releasable due to small numbers

Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

The most common reasons for discontinuing breastfeeding by 12 months postpartum were: returning to work, not having enough breast milk, feeling that the baby was old enough or that it was the right time, or that the baby was teething or biting.

Table 12: Reasons for Discontinuing Breastfeeding Among Mothers Surveyed at 12 Months, Peel, 2009/2010

Reason for discontinuing	Per cent of respondents
Returned to work	30.9
Not enough breast milk	19.5
Baby old enough or was the right time	14.1
Teething or biting	12.8
Baby seemed hungry or not satisfied	7.4
Started baby on cow's milk or formula	6.0
Not enough time or too busy	4.7
Sore or cracked nipples	3.4
Mother was ill	3.4
Returned to school	NR
Doctor or health care provider said to quit	NR
Baby crying, fussy, colic, gas	NR
Poor weight gain	NR
Uncomfortable with breastfeeding	NR
Baby would not latch or not sucking well at the breast	NR
Baby was ill	NR
Flat or inverted nipples	NR
Breast infection (mastitis)	NR

Lack of support	NR
Interfered with social life/ marital life	NR
Other reason	18.1

NR = Not releasable due to small numbers

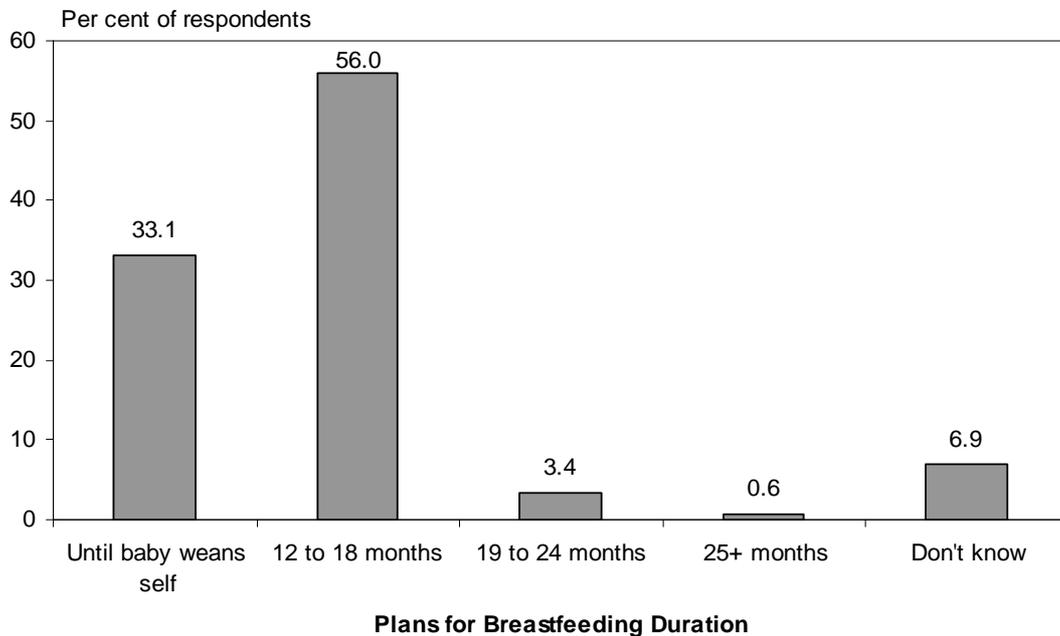
Notes: Responses sum to more than 100% due to multiple responses

Women surveyed at 12 months were those who were still breastfeeding at the time of the six-month survey

Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Mothers who were breastfeeding at the time of the 12-month survey were asked how long they plan to continue breastfeeding their infant. One-third of these mothers planned to breastfeed until their baby weaned themselves.

Figure 31: Plans for Breastfeeding Duration Among Mothers Breastfeeding at 12 Months Postpartum, Peel, 2009/2010



Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Sources of Support and Use of Services

Mothers were asked what or who provided the most help or support while they were breastfeeding.

Table 13: Sources of Most Help or Support While Breastfeeding Among Mothers Surveyed at 12 Months, Peel, 2009/2010

Source of support	Per cent of mothers
Family member	41.2
Partner (spouse)	30.5
Breastfeeding Clinics	11.7
Friends/coworkers	7.4
Hospital staff	4.3
Doctor	4.3
Other	4.3
Lactation consultant	2.8
Peel Breastfeeding Helpline	1.5
Healthy Start PHN	NR
HBHC PHN visit in home	NR
Midwife or doula	NR
Mothers in Breastfeeding Companion Program	NR
La Leche League	NR
Mothers in breastfeeding support group	NR
None of the above	21.5

NR = Not releasable due to small numbers

Note: Women surveyed at 12 months were those who were still breastfeeding at the time of the six-month survey

Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Mothers who breastfed to six months postpartum or longer, had a high level of awareness about programs and services available in Peel to help or support mothers with breastfeeding. However, almost two-thirds of the mothers reported that they had not used any of the breastfeeding support programs or services in the past six months.

Table 14: Awareness and Use of Breastfeeding Support Services and Programs Among Mothers Surveyed at 12 Months, Peel, 2009/2010

Service or program	Per cent of mothers who were aware of the service	Per cent of mothers who had used the service in the past six months
Hospital staff	88.0	12.9
Healthy Start PHN	69.5	4.9
Doctor	79.7	19.4
HBHC PHN visit in home	49.2	2.5
Peel Breastfeeding Helpline	72.0	15.4
Breastfeeding Clinics PHN	72.3	8.6
Midwife/doula	43.7	0.6
Lactation consultant	61.8	6.2
Mother(s) in Breastfeeding Companion Program	32.0	2.2
Mothers at Breastfeeding Support Group	34.5	NR
La Leche League	40.9	1.8
Other	1.8	2.2
None of the above	5.5	64.6

NR = Not releasable due to small numbers

Note: Women surveyed at 12 months were those who were still breastfeeding at the time of the six-month survey

Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health.

Although not shown in the table above, 92% of mothers who breastfed to six months postpartum or longer reported they were currently using none of the breastfeeding support services or programs above.

DISCUSSION

This report provides information related to breastfeeding and postpartum experiences of Peel mothers in 2009/2010, including measures collected at six and 12 months postpartum. The main measures of interest, breastfeeding initiation, continued breastfeeding at six months postpartum and exclusive breastfeeding at six months postpartum are examined by key respondent characteristics, including:

- Maternal age group
- Immigrant status
- Length of time in Canada
- Ethnic origin
- Highest level of education
- Total household income
- Marital status
- Hospital of birth
- Type of birth (singleton vs. multiple)
- Whether this infant was their first child or not

Breastfeeding Initiation

Almost all Peel mothers initiated breastfeeding (97%). The definition of breastfeeding initiation includes those who fed their newborn breast milk (with or without other liquids) and those who reported trying to breastfeed their newborn. There may be some variation in the definitions used by mothers who reported “trying” to breastfeed based on their interpretations of the question and what might constitute “trying”.

First time mothers were more likely to initiate breastfeeding compared to repeat mothers. This suggests that a mother’s previous experience with breastfeeding has an important impact on subsequent decisions. Assistance for making an informed decision regarding infant feeding needs to be reinforced with both first time and repeat mothers.

Breastfeeding Exclusivity

Almost 40% of mothers reported feeding their newborns a combination of breast milk and formula. The survey did not ask mothers about the relative frequency of feeds of breast milk versus formula, therefore, cannot distinguish between mothers who fed their newborns breast milk predominantly or formula predominantly. Future surveys should ask specifically about the frequency of formula feeding among those who do not report exclusive breastfeeding practices.

Peel Public Health is currently working with the three regional hospitals to decrease formula supplementation. It is anticipated that the proportion of mothers who report feeding their infants combinations of breast milk and formula would decline with the reduction of formula supplementation in hospital. Mothers who are better supported to breastfeed while in hospital have been shown to have more success in breastfeeding their infants and are more likely to meet the recommendations related to exclusive breastfeeding to six months postpartum.⁴⁻⁶

Less than one quarter (23%) of Peel mothers are meeting the recommendations regarding exclusive breastfeeding to six months postpartum. Exclusive breastfeeding to six months was found to be positively associated with mothers having a higher level of education, higher total household income level and being born in Canada.

Infant Feeding Decision Making

Mothers were asked to identify who helped them the most in making their decision about how to feed their newborn. Almost half of the mothers reported that they made the decision for themselves. It is unclear how these women came to their decision and what factors may have influenced those decisions. Another 44% of mothers reported that their partner or mother/mother-in-law helped them make feeding decisions. This suggests that partners and mothers/mothers in law should be part of the intended audience of efforts aimed at promoting breastfeeding as the normal method of infant feeding.

Breastfeeding Duration

For 42% of mothers who reported discontinuing breastfeeding prior to six months postpartum, the reason cited for discontinuing was “not enough breast milk”. Without specific medical reasons to the contrary, a mother’s breast milk supply is sufficient to meet the needs of the infant.^{4,7} Mothers who felt that they did not have an adequate supply cited specific reasons for this belief (e.g., pumping showed small supply of breast milk, baby drank supplement when offered or the baby cried when put into the crib). Hence, expansion of breastfeeding messaging beyond the benefits of breastfeeding to include strategies that address the barriers to breastfeeding is needed.

Postpartum Mood Disorders

Ten per cent of mothers surveyed reported postpartum depressive symptoms. Mothers with lower income levels and immigrant mothers were more likely to report depressive symptoms compared to their counterparts. The proportion of women reporting postpartum depressive symptoms in Peel is lower than the national average, 10-20%.³

Breastfeeding Experiences in Hospital

This survey did not ask mothers specifically about their breastfeeding experiences while in hospital. Some of this information may be gathered from data collected by the provincial Better Outcomes Registry and Network (BORN) for all births in Peel: 92% of Peel mothers in 2007 and 2008 expressed the intent to breastfeed their infants in the prenatal period. At the time of discharge from hospital, 37% of mothers were feeding their infant breast milk only, while 30% were feeding them a combination of breast milk and formula. *Born in Peel Examining Maternal and Infant Health* states the likelihood of exclusive breastfeeding at discharge was associated with select interventions during delivery. For example, mothers who delivered their infant by Caesarean section were less likely to be exclusively breastfeeding at discharge compared to those who had a vaginal delivery.

Comparison to Previous Surveys

The 2009/2010 survey results can be compared to the previous breastfeeding surveys to examine changes in breastfeeding practices over time. These comparisons should be interpreted with caution as changes in survey methodology and question wording may affect the comparability of the responses. The 2004/2005 survey results below are unweighted and therefore may be slightly different than the figures reported in the report *Breastfeeding Practices in the Region of Peel 2004/2005*.

Breastfeeding initiation rates have increased in Peel, from 84% in 1999/2000 to 94% in 2004/2005 and 97% in 2009/2010. It is important to note that the 2000 survey questionnaire did not ask mothers who indicated their newborns were not fed breast milk whether they ever tried to breastfeed their infants.

The proportion of mothers who were breastfeeding at six months postpartum was the same in 2004/2005 and 2009/2010 (58% in each time period). These rates were higher than in 1999/2000 (43%).

The proportion of mothers who are exclusively breastfeeding their infants at six months postpartum increased from 11% in 2004/2005 to 23% in 2009/2010.

Comparison to Other Regions

There is a consensus across the GTA (Peel, Durham, Halton and Toronto) that almost half of all mothers reported they made their decision about infant feeding before pregnancy.

Other regions also conduct periodic surveys or ongoing surveillance to measure breastfeeding rates in their jurisdictions. Although differences in rates must be interpreted with caution due to different methods of data collection, the rates of breastfeeding in neighbouring regions may be used as context for interpretation of the Peel results.

In Halton in 2007/2008, 93% of mothers initiated breastfeeding with 64% of mothers continuing to breastfeed at six months postpartum.⁸ Twelve per cent of mothers exclusively breastfed to six months, with supplementation in hospital leading to a notable reduction in breastfeeding exclusivity. Sixteen per cent exclusively breastfed to six months when only home experiences, not including supplementation given in hospital setting, were included.

In Durham in 2007, 86% of mothers initiated breastfeeding, 45% breastfed to six months and 3% exclusively breastfed to six months.⁹ Durham reported a decrease in exclusive breastfeeding rates from 5 months to six months postpartum (11% vs. 3%).

In 2007/2008, Toronto Public Health conducted an infant feeding survey of new, first-time mothers who gave birth in a hospital in Toronto.¹⁰ Ninety-six per cent of first-time mothers initiated breastfeeding. Of those who initiated, 73% continued to breastfeed to six months postpartum and 18% were exclusively breastfeeding at six months postpartum.

An examination of the breastfeeding rates reported in surrounding regions suggests that the experiences reported by Peel mothers are relatively consistent with the experiences of mothers in surrounding areas. Peel mothers were reported to have the highest rates of exclusive breastfeeding at six months postpartum (23% compared to 12% in Halton and 3% in Durham), although these differences may be attributed to differences in data collection methods or survey questions. Comparison has not been made with Toronto data as Toronto only surveyed first time mothers.

KEY MESSAGES

Breastfeeding initiation rates are high and need to be maintained.

Breastfeeding exclusivity rates up to six months and breastfeeding duration rates need to increase to national and international recommendations.

RECOMMENDATIONS

It is recommended that:

- Peel Public Health, Peel Region hospitals, physicians, and community partners work collaboratively to increase breastfeeding duration and exclusivity in the Region of Peel.
- Peel Public Health assist Peel hospitals to achieve Baby-Friendly Initiative designation.
- Peel Public Health continue to offer breastfeeding services to all mothers.
- The Baby-Friendly Initiative be the standard to guide practice and messages related to infant feeding in Peel.
- Breastfeeding strategies be targeted to priority populations such as repeat mothers, mothers with lower levels of education and income, and immigrant mothers.
- Breastfeeding messaging be expanded to address the number one identified barrier to breastfeeding, perceived lack of breast milk supply.
- Breastfeeding strategies and promotional materials be adapted to engage not only the mother but also her partner and extended family members.
- Peel Public Health continues to analyze breastfeeding surveillance data, monitor breastfeeding trends, and identify community and hospital practices that impact breastfeeding.



STRENGTHS AND LIMITATIONS

The survey described in this report represents the third of a series conducted by Peel Public Health to measure breastfeeding practices in Peel region. The surveyed mothers were asked comprehensive questions to assess their breastfeeding experience, allowing for an examination of a variety of aspects of breastfeeding including initiation, duration, exclusivity, and supports and barriers experienced by Peel mothers. This survey also

included questions regarding the self-reported prevalence of postpartum depressive symptoms among new mothers which had not been collected during previous surveys.

There are limitations to the survey and results described in this report which must be considered in order to assess the quality and usefulness of the results.

The mothers recruited to participate in the survey were not sampled from the population of mothers during the study period. They represent a convenience sample of mothers contacted by telephone by Healthy Babies Healthy Children public health nurses during their routine telephone brief assessment of all new mothers living in Peel. Therefore, they may not be representative of the whole population of new mothers in Peel.

Due to the small number of mothers from Caledon, comparison of breastfeeding practices between municipalities was not possible.

Due to methodological differences and changes in questionnaire wording, comparisons to previous survey results should be made with caution.

The definitions of breastfeeding initiation, duration and exclusivity used in this report may differ slightly from those used in other reports and by other organizations. For example, the Breastfeeding Committee of Canada reports exclusive breastfeeding rates among “healthy term infants”, meaning infants that were born after 37 weeks of gestation and were not transferred to other hospital units. The questionnaire used in this survey did not capture information about the infant’s gestational age or health condition.

A number of factors which may influence breastfeeding practices were not included in the survey instrument. Examples include the type of delivery (vaginal or Caesarean section), early skin-to-skin contact, timing of putting the newborn to the breast after delivery, provision of formula to mothers upon discharge from hospital, or breastfeeding experiences with previous children. Information related to these topics may have aided in the interpretation of the results. Future data collection should include these contextual variables.



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Note to nurse: **Will an interpreter be required for the interview?**

- Yes
- No

If yes, what language will the interview need to be conducted in?

- Punjabi Urdu Hindi Polish
- Vietnamese Tamil Spanish

Cantonese

Other, please specify _____

APPENDIX 2 – SIX MONTH BREASTFEEDING SURVEY

Introduction

I1. Hello, may I please speak with <FNAME> <LNAME>?

- | | |
|------------------------|------------------------------------------|
| 1. IF YES | GO TO Question I2 |
| 2. Goes to get them | Go to QI2a |
| 3. IF NO not available | GO TO Question I1a |
| 4. REFUSED | Okay, thank you very much for your time. |

Goodbye.

I2. Hello, my name is ____ and I'm calling from CCI Research on behalf of Peel Public Health. We are conducting a survey about feeding your baby and about your feelings as a new mother. Soon after the birth of your baby, a Public Health Nurse from the Healthy Babies/Healthy Children Program contacted you and asked for your consent to participate in the survey. Do you remember agreeing to participate?

- | | |
|------------|------------------------------------------|
| 1. IF YES | GO TO Question I3 |
| 2. IF NO | GO TO Question I1b |
| 3. REFUSED | Okay, thank you very much for your time. |

Goodbye.

I2a. Hello <Fname>, my name is ____ and I'm calling from CCI Research on behalf of Peel Public Health. We are conducting a survey about feeding your baby and about your feelings as a new mother. Soon after the birth of your baby, a Public Health Nurse from the Healthy Babies/Healthy Children Program contacted you and asked for your consent to participate in the survey. Do you remember agreeing to participate?

- | | |
|------------|--------------------------------------------------|
| 1. IF YES | GO TO Question I3 |
| 2. IF NO | GO TO Question I1b |
| 3. REFUSED | Okay, thank you very much for your time. Goodbye |

I1a. Can you tell me when would be a better time to call back?

Yes, record callback information. Then stop, thank them and let them know you will call back at indicated time.

I1b. Is it all right if I give you the information about the survey now to see if you would like to participate?

- | | |
|-----------|------------------------------------|
| 1. IF YES | GO TO I1d READ "SCRIPT FOR LETTER" |
| 2. IF NO | GO TO QUESTION 1c |

BELOW

I1c. Is there a better time to call you back?

- | | |
|------------------|-----------------------------------|
| 1. IF YES | RECORD CALL BACK INFORMATION |
| 2. IF NO, STOP → | THANK YOU VERY MUCH FOR YOUR TIME |

I1d. SCRIPT FOR LETTER

It is important for Peel Public Health to learn more about infant feeding in the Region of Peel as well as your feelings as a new mother. Peel Health is asking a sample of new mothers to help us by answering a 15-minute telephone interview, which is being conducted over the next few months.

Participation in this survey is confidential and voluntary and you may refuse to answer any question.

Peel Public Health works under all laws guiding privacy and the collection, use and disclosure of your personal health information. They also require the people they hire to do the survey (such as, interviewers like me) to work under these laws to protect the privacy of the information you give us and to use it only for this purpose. The information we collect will be used to better understand infant feeding in Peel as well as your feelings as a new mother.

If you have any concerns about the survey or wish to find out about the results, we can provide you with the name and number of someone at Peel Public Health. We value your knowledge and ideas and feel that your answers will help us provide more effective services to families living in the Region of Peel. *GO TO I3*

(Note: if respondent wants contact information for someone at Peel Public Health concerning the survey, tell them to contact Andrea James at Peel Public Health at 905-791-7800 ext 2857).

I3. Are you willing to participate in this survey now? It will take about 15 minutes of your time.

- 1. IF YES *GO TO I4*
- 2. IF NO -later *GO TO I4a*
- 3. IF NO – never *Thank you very much for your time. Goodbye.*

I4. Please remember that you can refuse to answer any questions or stop the interview at any time if you wish. Your answers to the questions will be kept completely confidential and no one will be able to link your name to the answers you give. I would also like you to be aware that this call may be monitored for quality assurance purposes.

CONTINUE TO SURVEY.

I4a. When would be a better time to call you back?

RECORD CALL BACK INFORMATION

Breastfeeding Initiation

1. First, is your baby living with you now?

- 1. Yes Go to Q2
- 2. No Go to Q1a
- 3. Refused Go to Q1a

1a. Would you like [the number for Peel Public Health? They can help direct your call to services that you may find helpful.](#)

- 1. Yes Go to Q1b
- 2. No Okay, thank you very much for your time.
- 3. Refused Okay, thank you very much for your time.

1b. Call Health Line Peel at 905-799-7700 <end of interview>

We know that some mothers choose to breastfeed, some choose not to and some are not able to breastfeed for as long as they would like. We would like to find out a little bit about your experience.

2. When you had your baby about six months ago, what did you feed your newborn? (DO NOT READ LIST - Check one only)
(Interviewer Prompt: We are looking for what was fed to the newborn from 0-6 weeks old. If respondent indicates they used a bottle, ask if they put breast milk or formula in the bottle and record accordingly)

- 1. Breastmilk only (go to Q3) Interviewer Probe "Were you feeding your baby only breastmilk?"
- 2. Combination of breastmilk and formula (Go to Question 3)
- 3. Formula only - (Go to Question 2i) Interviewer Probe "Were you feeding your baby formula only?"
- 4. Other, specify _____ go to Question 2i
- 5. Don't know go to Question 18
- 6. Refused / no response go to Question 18

(Re-code Other if needed)

2i. Did you ever try to breastfeed?

- 1. If **YES** Go to Question 3
- 2. If **NO** Go to Question 3
- 3. Refused/no response Go to Question 3

3. When did you first think about how you would feed your baby? Was it...
(Read options) (Select one only)

- 1. Before you became pregnant
- 2. During your pregnancy
- 3. After your baby was born

4. Don't know
5. Refused / no response

4. Who or what helped you with your decision about feeding your baby?
(DO NOT READ - Select all that apply)
(Interviewer probe: "Did anything or anyone else influence you?" Probe once)

1. Myself (no one)
2. Partner
3. Mother/mother-in-law
4. Other relative
5. Doctor
6. Midwife
7. Lactation consultant
8. Nurse in doctor's office
9. Public Health Nurse
10. Previous experience with other child
11. Books/magazines/media
12. Friends/co-workers
13. La Leche League (community group)
14. Prenatal/breastfeeding class
15. "Formula? No Thanks"
16. "Breastfeeding in Peel" website / Peel website
17. Other, specify _____
18. None of the above
19. Don't know
20. Refused / No response

If Q2= 1 or 2 then continue to Q5

If Q2 = 3 then

If 2i=1 then go to Q8

If 2i=2 then go to Q8

If 2i=3 then go to Q8

If Q2 = 4 then go to Q8

Use of Resources

5. Who or what gave you the most help or support with breastfeeding?
(DO NOT READ - Select all that apply.)
(Interviewer probe: "Were there any other people who gave you help or support?" probe once.)

1. Hospital staff
2. Healthy Start Public Health Nurse
3. Doctor
4. Public Health Nurse visit in home
5. Peel Breastfeeding Helpline telephone contact
6. Breastfeeding Clinic Public Health Nurse
7. Midwife / doula
8. Lactation consultant
9. Partner (spouse)

10. Mother(s) in Breastfeeding Companion Program
11. Mothers at Breastfeeding Support Group
12. Friends/Coworkers
13. Parent/mother/mother-in-law/family member/relative
14. La Leche League
15. Other (specify)
16. None of the above/no support
17. Don't know/ Can't remember
18. Refused / no response

Question 6:

There are many other services in Peel to help or support mothers with breastfeeding. I am going to ask you whether you ever tried to use any of these other services.

Only ask Q6a if Q5#1

Q6a. Did you ever try to obtain help or support with breastfeeding from hospital staff?

1. Yes
2. No
3. Don't know
4. Refused

Only ask Q6b if Q5#2

Q6b. Did you ever try to obtain help or support with breastfeeding from a Healthy Start Public Health Nurse?

1. Yes
2. No
3. Don't know
4. Refused

Only ask Q6c if Q5#3

Q6c. Did you ever try to obtain help or support with breastfeeding from a doctor?

1. Yes
2. No
3. Don't know
4. Refused

Only ask Q6d if Q5#4

Q6d. Did you ever try to obtain help or support with breastfeeding from a Public Health Nurse home visit?

- 1.) Yes
2. No
3. Don't know
4. Refused

Only ask Q6e if Q5#5

Q6e. Did you ever try to obtain help or support with breastfeeding from a Peel Breastfeeding Helpline telephone contact?

1. Yes
2. No
3. Don't know
4. Refused

Only ask Q6f if Q5#6

Q6f. Did you ever try to obtain help or support with breastfeeding from a Breastfeeding Clinic Public Health Nurse?

1. Yes
2. No
3. Don't know
4. Refused

Only ask Q6g if Q5#10

Q6g. Did you ever try to obtain help or support with breastfeeding from the Mother(s) in the Breastfeeding Companion Program?

1. Yes
2. No
3. Don't know
4. Refused

Question 7

Only ask Q7a IF: Q5=1 or Q6a=yes

Q7a. You indicated that you had either received or tried to get help with breastfeeding from hospital staff. Did you ever experience any difficulties getting help or support with breastfeeding from hospital staff?

1. Yes (GO TO Q7a_i)
2. No (skip Q7a_i)
3. Don't know (skip Q7a_i)
4. Refused (skip Q7a_i)

Q7a_i What type of difficulties did you experience?

INTERVIEWER: DO NOT READ LIST Select all that apply.

1. Difficulty getting a referral
2. Difficulty getting an appointment
3. No specialists in the area
4. Did not have a phone number
5. Could not get through (i.e. no answer)
6. Waited too long to speak to someone
7. Waited too long - between booking appointment and visit
8. Waited too long - to see the doctor (i.e. in-office waiting)
9. Transportation - problems
10. Language - problem
11. Cost
12. Personal or family responsibilities
13. General deterioration of health
14. Appointment cancelled or deferred by specialist
15. Still waiting for visit
16. Did not get adequate information or advice
17. Did not know where to go / call / uninformed
18. Unable to leave the house because of a health problem
19. Other – Specify _____

20. Don't know
21. Refused / No response

Only ask Q7b IF: Q5=2 or Q6b=yes

Q7b. You indicated that you had either received or tried to get help with breastfeeding from a Healthy Start Public Health Nurse. Did you ever experience any difficulties getting help or support with breastfeeding from a Healthy Start Public Health Nurse?

1. Yes (GO TO Q7b_i)
2. No (skip Q7b_i)
3. Don't know (skip Q7b_i)
4. Refused (skip Q7b_i)

Q7b_i What type of difficulties did you experience?

INTERVIEWER: DO NOT READ LIST. Select all that apply.

1. Difficulty getting a referral
2. Difficulty getting an appointment
3. No specialists in the area
4. Did not have a phone number
5. Could not get through (i.e. no answer)
6. Waited too long to speak to someone
7. Waited too long - between booking appointment and visit
8. Waited too long - to see the doctor (i.e. in-office waiting)
9. Transportation - problems
10. Language - problem
11. Cost
12. Personal or family responsibilities
13. General deterioration of health
14. Appointment cancelled or deferred by specialist
15. Still waiting for visit
16. Did not get adequate information or advice
17. Did not know where to go / call / uninformed
18. Unable to leave the house because of a health problem
19. Other – Specify _____
20. Don't know
21. Refused / No response

Only ask Q7c IF: Q5=3 or Q6c=yes

Q7c. You indicated that you had either received or tried to get help with breastfeeding from a doctor. Did you ever experience any difficulties getting help or support with breastfeeding from a doctor?

1. Yes (GO TO Q7c_i)
2. No (skip Q7c_i)
3. Don't know (skip Q7c_i)
4. Refused (skip Q7c_i)

Q7c_i What type of difficulties did you experience?

INTERVIEWER: DO NOT READ LIST. Select all that apply.

1. Difficulty getting a referral
2. Difficulty getting an appointment
3. No specialists in the area
4. Did not have a phone number
5. Could not get through (i.e. no answer)
6. Waited too long to speak to someone
7. Waited too long - between booking appointment and visit
8. Waited too long - to see the doctor (i.e. in-office waiting)
9. Transportation - problems
10. Language - problem
11. Cost
12. Personal or family responsibilities
13. General deterioration of health
14. Appointment cancelled or deferred by specialist
15. Still waiting for visit
16. Did not get adequate information or advice
17. Did not know where to go / call / uninformed
18. Unable to leave the house because of a health problem
19. Other – Specify _____
20. Don't know
21. Refused / No response

Only ask Q7d IF: Q5=4 or Q6d=yes

Q7d. You indicated that you had either received or tried to get help with breastfeeding from a Public Health Nurse home visit. Did you ever experience any difficulties getting help or support with breastfeeding from a Public Health Nurse visit in your home?

1. Yes (GO TO Q7d_i)
2. No (skip Q7d_i)
3. Don't know (skip Q7d_i)
4. Refused (skip Q7d_i)

Q7d_i What type of difficulties did you experience?

INTERVIEWER: DO NOT READ LIST. Select all that apply.

1. Difficulty getting a referral
2. Difficulty getting an appointment
3. No specialists in the area
4. Did not have a phone number
5. Could not get through (i.e. no answer)
6. Waited too long to speak to someone
7. Waited too long - between booking appointment and visit
8. Waited too long - to see the doctor (i.e. in-office waiting)
9. Transportation - problems
10. Language - problem
11. Cost
12. Personal or family responsibilities
13. General deterioration of health

14. Appointment cancelled or deferred by specialist
15. Still waiting for visit
16. Did not get adequate information or advice
17. Did not know where to go / call / uninformed
18. Unable to leave the house because of a health problem
19. Other – Specify _____
20. Don't know
21. Refused / No response

Only ask Q7e IF: Q5=5 or Q6e=yes

Q7e. You indicated that you had either received or tried to get help with breastfeeding from a Peel Breastfeeding Helpline telephone contact. Did you ever experience any difficulties getting help or support with breastfeeding from a Peel Breastfeeding Helpline telephone contact?

1. Yes (GO TO Q7e_i)
2. No (skip Q7e_i)
3. Don't know (skip Q7e_i)
4. Refused (skip Q7e_i)

Q7e_i What type of difficulties did you experience?

INTERVIEWER: DO NOT READ LIST. Select all that apply.

1. Difficulty getting a referral
2. Difficulty getting an appointment
3. No specialists in the area
4. Did not have a phone number
5. Could not get through (i.e. no answer)
6. Waited too long to speak to someone
7. Waited too long - between booking appointment and visit
8. Waited too long - to see the doctor (i.e. in-office waiting)
9. Transportation - problems
10. Language - problem
11. Cost
12. Personal or family responsibilities
13. General deterioration of health
14. Appointment cancelled or deferred by specialist
15. Still waiting for visit
16. Did not get adequate information or advice
17. Did not know where to go / call / uninformed
18. Unable to leave the house because of a health problem
19. Other – Specify _____
20. Don't know
21. Refused / No response

Only ask Q7f IF: Q5=6 or Q6f=yes

Q7f. You indicated that you had either received or tried to get help with breastfeeding from a Breastfeeding Clinic Public Health Nurse. Did you ever experience any difficulties getting help or support with breastfeeding from a Breastfeeding Clinic Public Health Nurse?

1. Yes (GO TO Q7f_i)
2. No (skip Q7f_i)
3. Don't know (skip Q7f_i)
4. Refused (skip Q7f_i)

Q7f_i What type of difficulties did you experience?

INTERVIEWER: DO NOT READ LIST. Select all that apply.

1. Difficulty getting a referral
2. Difficulty getting an appointment
3. No specialists in the area
4. Did not have a phone number
5. Could not get through (i.e. no answer)
6. Waited too long to speak to someone
7. Waited too long - between booking appointment and visit
8. Waited too long - to see the doctor (i.e. in-office waiting)
9. Transportation - problems
10. Language - problem
11. Cost
12. Personal or family responsibilities
13. General deterioration of health
14. Appointment cancelled or deferred by specialist
15. Still waiting for visit
16. Did not get adequate information or advice
17. Did not know where to go / call / uninformed
18. Unable to leave the house because of a health problem
19. Other – Specify _____
20. Don't know
21. Refused / No response

Only ask Q7g IF: Q5=10or Q6g=yes

Q7g. You indicated that you had either received or tried to get help with breastfeeding from the Mother(s) in the Breastfeeding Companion Program. Did you ever experience any difficulties getting help or support with breastfeeding from the Mother(s) in Breastfeeding Companion Program?

1. Yes (GO TO Q7g_i)
2. No (skip Q7g_i)
3. Don't know (skip Q7g_i)
4. Refused (skip Q7g_i)

Q7g_i What type of difficulties did you experience?

INTERVIEWER: DO NOT READ LIST. Select all that apply.

1. Difficulty getting a referral
2. Difficulty getting an appointment
3. No specialists in the area
4. Did not have a phone number
5. Could not get through (i.e. no answer)
6. Waited too long to speak to someone
7. Waited too long - between booking appointment and visit
8. Waited too long - to see the doctor (i.e. in-office waiting)
9. Transportation - problems
10. Language - problem
11. Cost
12. Personal or family responsibilities
13. General deterioration of health
14. Appointment cancelled or deferred by specialist
15. Still waiting for visit
16. Did not get adequate information or advice
17. Did not know where to go / call / uninformed
18. Unable to leave the house because of a health problem
19. Other – Specify _____
20. Don't know
21. Refused / No response

Breastfeeding Definitions

8. What kind of milk are you feeding your baby NOW?
(READ LIST - Select one)
1. Formula (If Q2=1 or 2 - go to Q10. If Q2=3 or 4- go to Q14)
 2. Cows milk (If Q2=1or 2 - go to Q10. If Q2=3 or 3- go to Q14)
 3. Combination of breastmilk and formula/cow's milk (go to Q10)
 4. Breastmilk (GO TO QUESTION 9; if Q2=2 go to Q10)
 5. Other (specify) (Go to Q 14) _____
 6. Don't know (Go to Q14)
 7. Refused/no response (go to Q 14)
9. Has your baby received **ONLY** breastmilk since birth? **Breastmilk** includes breastfeeding, expressed breastmilk or donor milk and undiluted drops or syrups consisting of vitamins, mineral supplements or medicines.
1. Yes (Go to Q13)
 2. No (Go to Q10)
 3. Don't know (Go to Q13)
 4. Refused / no response (Go to Q13)
10. How old was your baby when you first introduced any other liquids / foods in addition to breastmilk? **Other liquids or foods** include commercial formula, water/glucose water, evaporated milks, goat's milk, cow's milk and traditional drinks such as sweetened and flavoured waters, teas and infusions, cereals and thickeners or any other food.
(DO NOT READ LIST but prompt if necessary – Choose One)
1. Less than 1 week
 2. 1 week to less than 4 weeks
 3. 1 month to less than 2 months
 4. 2 months to less than 3 months
 5. 3 months to less than 4 months
 6. 4 months to less than 5 months
 7. 5 months to less than 6 months
 8. 6 months to less than 7 months
 9. don't know
 10. refused / no response

If Q8=1 or 2 then GO TO Question 11

If Q8=3 then GO TO Question 13

If Q8=4 then GO TO Question 13

Breastfeeding Duration

11. How old was your baby when you stopped feeding him/her breastmilk?
(DO NOT READ LIST but prompt if necessary- Select one)
1. Less than 1 week
 2. 1 week to less than 4 weeks
 3. 1 month to less than 2 months
 4. 2 months to less than 3 months
 5. 3 months to less than 4 months
 6. 4 months to less than 5 months
 7. 5 months to less than 6 months
 8. 6 months to less than 7 months
 9. don't know
 10. refused / no response
12. Mothers stop breastfeeding for a number of reasons. Would you tell me why you decided to stop breastfeeding?
(DO NOT READ LIST - Select all that apply)
1. Baby crying/fussy/colic/gas
 2. Poor weight gain
 3. Baby seemed hungry/ not satisfied (Go to Question 12i)
 4. Not enough breastmilk (Go to Question 12ii)
 5. Flat or inverted nipples
 6. Sore or cracked nipples
 7. Breast infection (mastitis)
 8. Returned to work
 9. Returned to school
 10. "Uncomfortable" with breastfeeding
 11. Lack of support (specify) _____
 12. Doctor / health care professional said to quit
 13. Interfered with social life / marital life
 14. Started baby on cow's milk/formula
 15. Baby would not latch/not sucking well at breast
 16. Baby old enough/right time
 17. Baby ill
 18. Mother ill
 19. Teething/biting
 20. Not enough time/too busy
 21. Other (specify) _____
 22. Don't know / can't remember
 23. Refused / No response

Skip Question 12i if Question 12 does not equal 3 (i.e. only ask if Q12=3)
(DO NOT READ LIST)

12i. Can you tell me why you felt your baby seemed hungry or not satisfied?

1. Baby crying when put in crib
2. friends or parents advice
3. baby drank supplement when offered
4. baby wanted to suck
5. baby had difficulty staying asleep
6. Other (specify) _____
7. don't know
8. refused

Skip Question 12ii if Question 12 does not equal 4 (i.e. only ask if Q12=4)
(DO NOT READ LIST)

12ii. Can you tell me why you felt there was not enough breastmilk?

1. Baby crying when put in crib
2. health professional said this in first 1-2 days after birth
3. friends or parents advice
4. pumping showed a small supply
5. baby drank supplement when offered
6. baby wanted to suck
7. baby had difficulty staying asleep
8. Other (specify) _____
9. don't know
10. refused

(Go to Q 17)

Decision Making

13. How long do you plan to breastfeed your baby? Would you say until the baby is...
(READ LIST - Select one)
(Interviewer Prompt: This is referring to the baby's age, not the length of time)

1. 6 months to less than 9 months old
2. 9 months to less than 12 months old
3. 12 months
4. more than 1 year to less than 2 years old
5. 2 years old or more or
6. Until baby weans self
7. Don't know
8. Refused / no response

(Go to Q 17)

Questions for mothers who have never breastfed.

14. There are many services available in Peel to help or support mothers with feeding their babies. As I read through the list, please let me know which services you were aware of in Peel:

(READ LIST – Select all that apply)

1. Hospital staff
2. Healthy Start Public Health Nurse
3. Doctor
4. Peel Breastfeeding Helpline Telephone Contact / Region of Peel – Public Health Phone Line
5. Healthy Babies Healthy Children Public Health Nurse visit in home
6. Breastfeeding Clinic Public Health Nurse
7. Midwife / doula
8. Lactation consultant
9. Mother(s) in Breastfeeding Companion Program
10. Mothers at Breastfeeding Support Group
11. La Leche League
12. Other (specify)
13. None of the above
14. Don't know/ can't remember
15. Refused / no response

15. As I read through the following list, please indicate which of the following services you used with feeding your newborn, or are currently using?

(READ EACH OPTION – Select all that apply)

a) Used with newborn b) Use now

1. Hospital staff
2. Public Health Nurse
3. Doctor
4. Region of Peel – Public Health Phone Line
5. Midwife / doula
6. Other (specify)
7. None of the above
8. Don't know/ Can't remember
9. Refused / no response

16. If you were to become pregnant again, would you consider breastfeeding as an option for feeding your baby?

1. Yes
2. No
3. Don't know
4. Refused

Formula? No Thanks

(Ask of all moms regardless of whether they breastfed)

The next set of questions is about your awareness of a media campaign called “Formula? No Thanks” that is being run by Peel Public Health. This campaign started in December 2008 and provided information about the risks of formula feeding. This information was provided through posters, in malls, bus ads, newspaper ads and doctors offices. The posters and ads have a baby on them saying no thanks to formula. Regardless of whether you breastfed or not, to assist us in planning in the future, it would be helpful for us to know if you were aware of the campaign.

17. Have you heard or read about the “Formula? No Thanks” campaign?

1. Yes (Go to Q17i)
2. No (Go to Q18)
3. don't know (Go to Q18)
4. refused (Go to Q18)

Skip to Question 18 if Question 17 does not equal 1 (i.e. only ask if Q17=1)

17i. How did you find out about the “Formula? No Thanks” campaign?
(Do not read Select all that apply)

[Interviewer Probe: “Was there anywhere else?]

1. from posters in the mall
2. from ads in Peel buses
3. from posters in doctor's offices
4. from newspaper ads
5. from web banners on parenting websites such as “Today's Parent”
6. from a call to Peel Public Health
7. from browsing the Internet
8. other, please specify _____
9. don't know
10. refused

If respondent breastfed (i.e. Q2=1 or 2) AND if Q17=1, ask next two questions. Otherwise, skip to next section (i.e. skip to Q18).

17ii. Did the campaign influence your decision to breastfeed your baby?

1. no, not at all
2. yes, somewhat
3. yes, definitely
4. don't know
5. refused

17iii. Did the information provided in the “Formula? No Thanks” campaign influence how long you breastfed before you introduced other foods or liquids in addition to breastmilk? **Other liquids or foods** include commercial formula, water/glucose water, evaporated milks, goat's milk, cow's milk and traditional drinks such as sweetened and flavoured waters, teas and infusions, and cereals and thickeners or any other food.

1. no, not at all

2. yes, somewhat
3. yes, definitely
4. don't know
5. refused

Internet/Web Site Use

Now some questions about using the internet to obtain health information.

18. Do you use the internet?

1. Yes (go to Q19)
2. No (includes no access to web) (go to Q22)
3. Don't know (go to Q22)
4. Refused (go to Q22)

19. Have you used the internet to access health-related information?

1. Yes (go to Q20)
2. No (go to Q22)
3. Don't know (go to Q22)
4. Refused (go to Q22)

20. Have you ever seen or heard of Peel Public Health's Breastfeeding Website at www.breastfeedinginpeel.ca?

1. Yes
2. Qualified yes (I think so, I guess so)
3. No (go to Q22)
4. Don't know (go to Q22)
5. Refused (go to Q22)

21. Did you visit the Breastfeeding in Peel website?

1. Yes
2. Qualified yes (I think so, I guess so)
3. No
4. Don't know
5. Refused

Emotions after Having a Baby (Asked to All Moms Regardless of Breastfeeding Practice)

Many new mothers experience different feelings after the birth of a baby...

22. Since your new baby was born, how often have you felt down, depressed or hopeless?

1. always
2. often
3. sometimes
4. rarely
5. never
6. don't know
7. refused (if Q22=g then skip to Q24)

23. Since your new baby was born, how often have you had little interest or little pleasure in doing things?

1. always
2. often
3. sometimes
4. rarely
5. never
6. don't know
7. refused

Awareness of Postpartum Depression

Pop-up screen: If the respondent wants information about postpartum mood disorder, suggest they call the Peel Health Contact Centre number (905-799-7700) or if it's after hours TeleHealth Ontario 1-866-797-0000. If the respondent is emotionally distressed and needs to talk to someone about their emotional distress they can call Distress Centre Peel at (905) 278-7208 which is available 24/7.

24. Have you heard of the phrase "postpartum depression"?

< If respondent asks for information about postpartum depression or baby blues please go to pop up screen >

1. Yes
2. No
3. Don't know
4. Refused

if <2, 3 or 4> [go to Q26]

25. What are some symptoms of postpartum depression?

Interviewer: If R asks for the answer: "Some symptoms are: crying, feeling frustrated, angry and overwhelmed, difficulty concentrating and sleeping, no feelings for the baby, changes in appetite, anxiety."

Interviewer: DO NOT READ, - Check all that apply

1. Sadness/Crying: feeling down, depressed, tearful, emotional, feel empty
2. Frustration/Irritability/Anger: moody, can't stand baby crying, annoyed, resentment, overwhelmed, difficulty concentrating, stressed
3. Anxiety/Fears: worry, panic attacks, scary thoughts, fear they cannot take care of baby
4. Sleep/Appetite/Energy changes: can't sleep, sleeping too much, tired, exhausted, fatigue, constantly having to do something, not eating, eating too much
5. Guilt/Feelings for baby: feeling inadequate, ashamed, incapable, no feelings for baby, don't feel connected to baby, don't love baby
6. Other, specify
7. don't know
8. refused

Demographics

Questions About Yourself

26. Is this your first child?

1. Yes
2. No
3. Refused/no answer

27. Was this a single birth?

(If not single, prompt for type of birth and select appropriate option)

1. Single
2. Twins
3. Triplets
4. Other (specify)
5. Refused/no answer

28. Were you born in Canada?

1. Yes Go to Q29
2. No Go to Q28i
3. Refused/no answer Go to Q29

28i. How many years have you lived in Canada

1. Answer
2. Refused/no answer

28ii. In which country were you born?

1. Answer_____
2. Refused/no answer

29. What is your date of birth? yyyy/mmm/dd (insert separate field with calculated age)

30. What is the highest level of education that you have ever completed?
(READ LIST - Select one)

1. No schooling
2. Some schooling but less than high school diploma
3. Completed high school
4. Some trade school or college
5. Completed trade school or college
6. Some university
7. Completed university
8. Post graduate
9. Don't know
10. Refused/no response

31. What is your marital status?
(READ LIST - Select one)

1. Married (legally)
2. Common-law
3. Living with partner
4. Single (never married)
5. Widowed
6. Separated (not legally divorced)
7. Divorced
8. Don't know
9. Refused/no response

32. What are the ethnic or cultural origins of your family/ancestors? Do not include religious affiliations. (Do not read, Select all that apply)

1. Canadian
2. Chinese
3. Croation
4. Dutch (Netherlands)
5. East Asian
6. East Indian
7. English
8. Filipino
9. French
10. German
11. Greek
12. Guyanese
13. Hungarian
14. Irish
15. Italian
16. Jamaican
17. Pakistani
18. Polish
19. Portuguese
20. Punjabi
21. Scottish

22. Spanish
23. Sri Lankan
24. Trinidadian/Tobagoan
25. Ukrainian
26. West Indian
27. Other
If Other, please specify _____
28. Don't know
29. Refused

33. I will now read you a list. Can you estimate in which of the following groups your household income falls before tax? Is it...
(READ LIST - Select one)

1. Less than \$10,000
2. \$10,000 to less than \$20,000
3. \$20,000 to less than \$30,000
4. \$30,000 to less than \$40,000
5. \$40,000 to less than \$50,000
6. \$50,000 to less than \$60,000
7. \$60,000 to less than \$70,000
8. \$70,000 to less than \$80,000
9. \$80,000 or more
10. Don't know
11. Refused/no response

34. What is your Postal code? Record response _____
1. Don't know
2. Refused

34a. Confirmation of Postal Code Repeat back postal code using alpha, numeric, alpha.

35. Could you tell me in what municipality you reside?

1. Mississauga
2. Brampton
3. Caledon
4. Other (specify and still include in survey)
5. Don't know
6. Refused/no response

Questions About Your Baby

36. Where was your baby born?

(Read List)

1. William Osler Center (Brampton Civic Hospital)
2. William Osler Health Center (Etobicoke Campus)
3. Trillium Health Centre
4. Credit Valley Hospital
5. Georgetown Hospital
6. Midwife-attended home birth
7. Other, specify
8. Don't know
9. Refused/No response

CONSENT TO BE CONTACTED AGAIN FOR THE 12-MONTH SURVEY (only asked if mother is still breastfeeding at 6-months if Q8 = 3 or 4)

37. Peel Public Health would like us to contact you again when your baby is 12-months old to participate in another questionnaire about infant feeding. If you agree to participate, it will involve answering a 15 minute questionnaire over the telephone. All of your answers will be kept confidential. You do not have to consent. If you do agree to participate, you can at any time refuse to answer any question. Your decision will not affect the quality of service that you receive from the Peel Public Health.

Would you be willing to be contacted again in six-months to participate?

1. Yes (Go to Q 38)
2. No (Go to end)
3. Don't know (Go to end)
4. Refused (Go to end)

Instructions for Interviewer (do if Q 37 = yes)

38. Could you please confirm the following information for me?

Your last name is <insert LNAME> and your first name is <FNAME> and your phone number is <insert PHONE>?

1. Correct Go to Qend
2. No Go to Q38a
3. Refused

38a. Could you please give me your correct name/phone number:

1. Answer
4. Refused/no response

Qend. This brings us to the end of our survey. Peel Health would like to thank you for your time in participating in this survey with us. Have a good day/night.
If respondent has any questions about the survey, have them call Andrea James at 905-791-7800 x2857.

Was LanguEDGE (an interpreter) used to complete this survey?

- 01. Yes
- 02. No

Select language:

- 01. Arabic
- 02. Cantonese
- 03. Croatian
- 04. Farsi
- 05. German
- 06. Gujarati
- 07. Hindi
- 08. Korean
- 09. Mandarin
- 10. Mongolian
- 11. Polish
- 12. Portuguese
- 13. Punjabi
- 14. Russian
- 15. Somali
- 16. Spanish
- 17. Tamil
- 18. Turkish
- 19. Urdu
- 20. Vietnamese
- 21. Other

Other language used to complete this survey



APPENDIX 3 – 12-MONTH BREASTFEEDING SURVEY

11. Hello, may I please speak with _____?

- a.) IF YES GO TO Question I2
- b.) IF NO GO TO Question I1a
- c.) REFUSED Thank you very much for your time. Goodbye.

11a. Can you tell me when would be a better time to call back?

- a.) IF YES Record callback information
- b.) IF NO Thank you very much for your time. Goodbye.

12. Hello, my name is _____ and I'm calling on behalf of Peel Public Health. As part of an infant feeding survey we spoke with you six months ago about feeding your baby. At the end of the survey, we asked for your consent to be contacted again to participate when your baby was about 12 months old. Do you remember agreeing to participate?

- a.) IF YES GO TO Question I3
- b.) IF NO GO TO Question I1b
- c.) REFUSED Thank you very much for your time. Goodbye.

11b. Is it all right if I give you the information about the survey now to see if you would like to participate?

- a.) IF YES READ "SCRIPT FOR LETTER" BELOW
- b.) IF NO GO TO QUESTION 1c

11c. Is there a better time to call you back?

- a.) IF YES Record callback information
- b.) IF NO Thank you very much for your time. Goodbye.

SCRIPT FOR LETTER

It is important for Peel Public Health to learn more about infant feeding in the Region of Peel. Peel Public Health is asking a sample of new mothers who were breastfeeding when their baby was 6-months old, to help us by answering a 10-minute telephone interview, which is being conducted over the next few months.

Participation in this survey is confidential and voluntary and you may refuse to answer any question.

Peel Public Health works under all laws guiding privacy and the collection, use and disclosure of your personal health information. They also require the people they hire to do the survey (such as interviewers like me) to work under these laws to protect the privacy of the information you give us and to use it only for this purpose. The information we collect will be used to better understand infant feeding in Peel.

If you have any concerns about the survey or wish to find out about the results, we can provide you with the name and number of someone at Peel Public Health. We value your knowledge and ideas and feel that your answers will help us provide more effective services to families living in the Region of Peel. GO TO I3

(Note: if respondent wants contact information for someone at Peel Public Health concerning the survey, tell them to contact **Sheila Datta at Peel Public Health at 905-791-7800 ext. 2857**).

I3. Are you willing to participate in this survey now? It will take about 10 minutes of your time.

- a.) IF YES GO TO Question I4
- b.) IF NO GO TO Question I4a
- c.) IF NO- NEVER Thank you very much for your time. Goodbye.

I4. Please remember that you can refuse to answer any questions or stop the interview at any time if you wish. Your answers to the questions will be completely confidential and no one will be able to link your name to the answers you give. I would also like you to be aware that this call may be monitored for quality assurance purposes.

CONTINUE TO SURVEY.

I4a. Is there a better time to call you back?

- a.) IF YES Record callback information
- b.) IF NO Thank you very much for your time. Goodbye.

Breastfeeding Duration

1. When Peel Public Health contacted you six months ago, you were still breastfeeding your baby. What kind of milk are you feeding your baby NOW?

- 1 Formula (breastfed initially) (go to Q3)
- 2 Cow's milk (breastfed initially) (go to Q3)
- 3 Combination of breastmilk and formula/cow's milk (go to Q3)
- 4 Breastmilk (go to Q2)
- 5 Other (specify) (go to Q3) _____
- 8 Don't know (go to Q11)
- 9 Refused/no response (go to Q11)

2. Has your baby received only breastmilk since birth?

[Interviewer Prompt: **Breastmilk** includes breastfeeding, expressed breastmilk or donor milk and undiluted drops or syrups consisting of vitamins, mineral supplements or medicines.]

- 1 Yes (Go to Q6)
- 2 No (Go to Q3)
- 8 Don't know (go to Q14)
- 9 Refused /no response (go to Q14)

3. How old was your baby when he or she first received **any** other liquids or foods in addition to breastmilk?

[Interviewer Prompt: **Other liquids or foods** include commercial formula, water/glucose water, evaporated milks, goat's milk, cow's milk and traditional drinks such as sweetened and flavoured waters, teas and infusions, and cereals and thickeners or any other food.]

(DO NOT READ LIST)

- 1 Less than 1 week
- 2 1 week to less than 4 weeks
- 3 1 month to less than 2 months
- 4 2 months to less than 3 months
- 5 3 months to less than 4 months
- 6 4 months to less than 5 months
- 7 5 months to less than 6 months
- 8 6 months to less than 7 months
- 9 7 months to less than 8 months
- 10 8 months to less than 9 months
- 11 9 months to less than 10 months
- 12 10 months to less than 11 months
- 13 11 months to less than 12 months
- 14 12 months or more
- 98 Don't know
- 99 Refused / no response

If Q1=1, 2, or 5 then GOTO Q4

If Q1=3, then GOTO Q6

If Q1=4, then GO TO Q6

Only ask Q4 & Q5 if Q1=1 or Q1=2 or Q1=5

4. How old was your baby when you stopped feeding him/her breastmilk?
(DO NOT READ LIST but prompt if necessary)

- 1 6 months to less than 7 months
- 2 7 months to less than 8 months
- 3 8 months to less than 9 months
- 4 9 months to less than 10 months
- 5 10 months to less than 11 months
- 6 11 months to less than 12 months
- 7 12 months or more
- 8 Don't know
- 9 Refused / no response

5. Mothers stop breastfeeding for a number of reasons. What were some of your reasons?(DO NOT READ LIST – Select all that apply)

- 1 Baby crying/fussy/colic/gas
- 2 Poor weight gain
- 3 Baby seemed hungry/ not satisfied (Go to Question 5i)
- 4 Not enough breastmilk (Go to Question 5ii)
- 5 Flat or inverted nipples
- 6 Sore or cracked nipples
- 7 Breast infection (mastitis)
- 8 Returned to work
- 9 Returned to school
- 10 "Uncomfortable" with breastfeeding
- 11 Lack of support
- 12 Doctor / health care professional said to quit
- 13 Interfered with social life / marital life
- 14 Started baby on cow's milk/formula
- 15 Baby would latch/not sucking well at breast
- 16 Baby old enough/right time
- 17 Baby ill
- 18 Mother ill
- 19 Teething/biting
- 20 Not enough time/too busy
- 21 Other (specify) _____
- 99 Don't know / can't remember

Skip Question 5i if Question 5 does not equal 3 (i.e. only ask if Q5=3)

5i. Can you tell me why you felt your baby seemed hungry or not satisfied?

(DO NOT READ LIST)

- 1 Baby crying when baby put in crib
- 2 Friends or parents advice
- 3 Baby drank supplement when offered or ate food

- 4 Baby wanted to suck (Interviewer note: sucking can mean any type of sucking, for example on a thumb, pacifier, motioning with lips)
- 5 Baby had difficulty staying asleep
- 6 Other (specify) _____
- 8 Don't know
- 9 Refused

Skip Question 5ii if Question 5 does not equal 4 (i.e. only ask if Q5=4)

5ii. Can you tell me why you felt there was not enough breastmilk?
(DO NOT READ LIST)

- 1 Baby crying when baby put in crib
- 2 Advised by a Health professional
- 3 Friends or parents advice
- 4 Pumping showed a small supply
- 5 Baby drank supplement when offered or ate food
- 6 Baby wanted to suck (Interviewer note: sucking can mean any type of sucking, for example on a thumb, pacifier, motioning with lips)
- 7 Baby had difficulty staying asleep
- 8 Other (specify) _____
- 9 Don't know
- 10 Refused

(Go to Q7)

Decision Making

Only ask Q6 if Q1=3 or Q1=4

6. How long do you plan to continue to breastfeed your baby?

- 1 Until he or she is _____ months olds
- 2 Until baby self weans/no longer interested
- 998 Don't know
- 999 Refused / no response

Usage of Resources

7. Mothers tell us they continue to breastfeed because of help or support they receive. Who or what gave you the most help or support with breastfeeding?

(DO NOT READ - Select all that apply.)

(Use one prompt: Were there any other people who gave you help or support?)

- 1 Hospital staff
- 2 Healthy Start Public Health Nurse

- 3 Doctor
- 4 Healthy Babies Healthy Children Public Health Nurse visit in home
- 5 Peel Breastfeeding Helpline telephone contact
- 6 Breastfeeding Clinics (Public Health Nurse at clinics)
- 7 Midwife / doula
- 8 Lactation consultant
- 9 Partner (spouse)
- 10 Mother(s) in Breastfeeding Companion Program
- 11 Mothers at Breastfeeding Support Group
- 12 Friends/Coworkers
- 13 Parent/mother/mother – in- law/family member/relative
- 14 La Leche League
- 15 Other (specify) _____
- 16 None of the above/no support
- 98 Don't know/can't remember
- 99 Refused/no answer

8. There are many services in Peel to help or support mothers with breastfeeding. As I read through this list, please indicate which breastfeeding services you were **aware** of:
(READ EACH OPTION - Select all that apply)

(Interviewer Probe: After reading each option probe with Yes or No)

- 1 Hospital staff
- 2 Healthy Start Public Health Nurse
- 3 Doctor
- 4 Healthy Babies Healthy Children Public Health Nurse visit in home
- 5 Peel Breastfeeding Helpline telephone contact
- 6 Breastfeeding Clinics Public Health Nurse
- 7 Midwife / doula
- 8 Lactation consultant
- 9 Mother(s) in Breastfeeding Companion Program
- 10 Mothers at Breastfeeding Support Group
- 11 La Leche League
- 12 Other (specify) _____
- 13 None of the above
- 98 Don't know/ Can't remember
- 99 Refused / no response

9. As I read through the list, please indicate which breastfeeding services you **used** with feeding your child in the last 6 months (READ EACH OPTION – Select all that apply)

(Interviewer Probe: After reading each option probe with Yes or No)

- 1 Hospital staff
- 2 Healthy Start Public Health Nurse
- 3 Doctor

- 4 Healthy Babies Healthy Children Public Health Nurse visit in home
- 5 Peel Breastfeeding Helpline telephone contact
- 6 Breastfeeding Clinics Public Health Nurse
- 7 Midwife / doula
- 8 Lactation consultant
- 9 Mother(s) in Breastfeeding Companion Program
- 10 Mothers at Breastfeeding Support Group
- 11 La Leche League
- 12 Other (specify)
- 13 None of the above
- 98 Don't know/ Can't remember
- 99 Refused / no response

Ask 10 If Q1=3,4

10. As I read through the list, please indicate which breastfeeding services you are **currently** using (READ EACH OPTION)

(Interviewer Probe: After reading each option probe with Yes or No)

- 1 Hospital staff
- 2 Healthy Start Public Health Nurse
- 3 Doctor
- 4 Healthy Babies Healthy Children Public Health Nurse visit in home
- 5 Peel Breastfeeding Helpline telephone contact
- 6 Breastfeeding Clinics Public Health Nurse
- 7 Midwife / doula
- 8 Lactation consultant
- 9 Mother(s) in Breastfeeding Companion Program
- 10 Mothers at Breastfeeding Support Group
- 11 La Leche League
- 12 Other (specify)_____
- 13 None of the above
- 98 Don't know/ Can't remember
- 99 Refused / no response

Demographics

Questions About Yourself

11. Is this your first child?

- 1 Yes
- 2 No
- 9 Refused/no answer

12. Was this a single birth?

(If not single, prompt for type of birth and select appropriate option)

- 1 Single
- 2 Twins
- 3 Triplets
- 4 Other (specify)
- 9 Refused/no answer

13. Were you born in Canada?

- a) Yes Go to Q14
- b) No Go to Q13i
- c) Refused/no answerGo to Q14

13i. How many years have you lived in Canada?

- (a) Answer
- (b) Refused/no answer

13ii. Where were you born?

- a) Answer
- b) Refused/no answer

14. What is your date of birth? yyyy/mmm/dd (insert separate field with calculated age)

15. What is the highest level of education that you have ever completed?

(READ LIST - Select one)

- 1 No schooling
- 2 Some schooling but less than high school diploma
- 3 Completed high school
- 4 Some trade school or college
- 5 Completed trade school or college
- 6 Some university
- 7 Completed university
- 8 Post graduate
- 9 Refused/no response

16. What is your marital status?

- 1 Married (legally)
- 2 Common-law
- 3 Living with partner
- 4 Single (never married)
- 5 Widowed
- 6 Separated (not legally divorced)
- 7 Divorced
- 8 Don't know
- 9 Refused/no response

17. What are the ethnic or cultural origins of your family/ancestors? Do not include religious affiliations. (DO NOT READ LIST - Select all that apply)

- 1 Canadian
- 2 Chinese
- 3 Croation
- 4 Dutch (Netherlands)
- 5 East Asian
- 6 East Indian
- 7 English
- 8 Filipino
- 9 French
- 10 German
- 11 Greek
- 12 Guyanese
- 13 Hungarian
- 14 Irish
- 15 Italian
- 16 Jamaican
- 17 Pakistani
- 18 Polish
- 19 Portuguese
- 20 Punjabi
- 21 Scottish
- 22 Spanish
- 23 Sri Lankan
- 24 Trinidadian/Tobagoan
- 25 Ukrainian
- 26 West Indian
- 27 Other , specify _____
- 98 Don't know
- 99 Refused

18. I will now read you a list. Can you estimate in which of the following groups your household income falls (before tax)? Is it...

(READ LIST - Select one)

- 1 Less than \$10,000
- 2 \$10,000 to less than \$20,000
- 3 \$20,000 to less than \$30,000
- 4 \$30,000 to less than \$40,000
- 5 \$40,000 to less than \$50,000
- 6 \$50,000 to less than \$60,000
- 7 \$60,000 to less than \$70,000
- 8 \$70,000 to less than \$80,000
- 9 \$80,000 or more
- 98 Don't know
- 99 Refused/no response

19. In which municipality do you live?

- 1 Mississauga
- 2 Brampton
- 3 Caledon
- 8 Don't know
- 9 Refused

20. What is your postal code? Record response

- a. Don't know
- b. Refused

This brings us to the end of our survey. Peel Public Health would like to thank you for your time in participating in this survey with us. Have a good day/night

If respondent has any questions about the survey, have them call Sheila Datta at 905-791-7800x2857

Was LanguEdge (an interpreter) used to complete this survey?

- 1 Yes
- 2 No

Select language:

- 01. Arabic
- 02. Cantonese
- 03. Croatian
- 04. Farsi
- 05. German
- 06. Gujarati
- 07. Hindi
- 08. Korean
- 09. Mandarin
- 10. Mongolian
- 11. Polish
- 12. Portuguese
- 13. Punjabi
- 14. Russian
- 15. Somali
- 16. Spanish
- 17. Tamil
- 18. Turkish
- 19. Urdu
- 20. Vietnamese
- 21. Other

Other language used to complete this survey

APPENDIX 4 - REFERENCE TABLES

**Table A1: Breastfeeding Initiation by Respondent Characteristics
Peel, 2009/2010**

	Number	Total	Per cent	Lower 95% CI	Upper 95% CI	p-value
Maternal age group (years)						
Less than 25	86	86	100.0	94.7	99.9	0.094
25 to 29	205	211	97.2	93.6	98.8	
30 to 34	281	290	96.9	94.0	98.5	
35+	164	174	94.3	89.4	97.1	
Immigrant status						
Non-immigrant	314	328	95.7	92.8	97.6	0.195
Immigrant	450	462	97.4	95.4	98.6	
Length of time in Canada						
Non-immigrant	314	328	95.7	92.8	97.6	0.05
Recent (0 to 5 years)	177	177	100.0	97.4	99.9	
Intermediate (6 to 10 years)	121	126	96.0	90.5	98.5	
Long term (11 years or more)	152	159	95.6	90.8	98.1	
Ethnic origin (multiple response)						
Canadian	105	113	92.9	86.1	96.7	0.023
East Asian	64	65	98.5	90.6	99.9	0.715
European	182	193	94.3	89.8	97	0.038
British	78	84	92.9	84.5	97.1	0.048
South Asian	233	237	98.3	95.4	99.5	0.127
Caribbean	73	75	97.3	89.8	99.5	1.0
South American	NR	NR	NR	NR	NR	1.0
Highest education level						
High school or less	133	140	95.0	89.6	97.8	0.418
Some post-secondary	76	79	96.2	88.5	99.0	
Completed post-secondary	552	568	97.2	95.4	98.3	
Household income before tax						
Less than \$50,000	237	242	97.9	95.0	99.2	0.422
\$50,000 to less than \$80,000	167	174	96.0	91.6	98.2	
\$80,000 or more	248	258	96.1	92.8	98	
Number of previous children						
First-time mother	358	361	99.2	97.4	99.8	0.000
Repeat mother	406	429	94.6	91.9	96.5	
Marital status						
Married/common-law	708	732	96.7	95.1	97.8	0.711
Not married/common-law	55	57	96.5	86.8	99.4	
Type of birth						
Singleton	749	773	96.9	95.3	98	0.105
Multiple	NR	NR	NR	NR	NR	
Birth Hospital						
Brampton Civic Hospital	211	220	95.9	92.1	98.0	0.381
Trillium Health Centre	162	168	96.4	92.0	98.5	
Credit Valley Hospital	222	231	96.1	92.5	98.1	
Other	166	168	98.8	95.3	99.8	

NR = Not releasable due to small numbers

Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health

**Table A2: Breastfeeding at Six Months by Respondent Characteristics
Peel, 2009/2010**

	Number	Total	Per cent	Lower 95% CI	Upper 95% CI	p-value
Maternal age group (years)						
Less than 25	36	86	41.9	31.5	53.0	0.007
25 to 29	117	211	55.5	48.5	62.2	
30 to 34	171	290	59.0	53.0	64.6	
35+	111	174	63.8	56.1	70.8	
Immigrant status						
Non-immigrant	175	328	53.4	47.8	58.8	0.049
Immigrant	280	462	60.6	56.0	65.1	
Length of time in Canada						
Non-immigrant	175	328	53.4	47.8	58.8	0.028
Recent (0 to 5 years)	117	177	66.1	58.6	72.9	
Intermediate (6 to 10 years)	77	126	61.1	52.0	69.5	
Long term (11 years or more)	86	159	54.1	46.0	61.9	
Ethnic origin (multiple response)						
Canadian	66	113	58.4	48.7	67.5	0.918
East Asian	46	65	70.8	58.0	81.1	0.026
European	105	193	54.4	47.1	61.5	0.315
British	46	84	54.8	43.6	65.5	0.641
South Asian	135	237	57.0	50.4	63.3	0.814
Caribbean	39	75	52.0	40.2	63.6	0.327
South American	NR	NR	NR	NR	NR	1.0
Highest education level						
High school or less	56	140	40.0	31.9	48.6	0.000
Some post-secondary	40	79	50.6	39.2	62.0	
Completed post-secondary	356	568	62.7	58.5	66.6	
Household income before tax						
Less than \$50,000	121	242	50.0	43.5	56.5	0.013
\$50,000 to less than \$80,000	105	174	60.3	52.6	67.6	
\$80,000 or more	161	258	62.4	56.2	68.3	
Number of previous children						
First-time mother	204	361	56.5	51.2	61.7	0.613
Repeat mother	251	429	58.5	53.7	63.2	
Marital status						
Married/common-law	433	732	59.2	55.5	62.7	0.001
Not married/common-law	21	57	36.8	24.8	50.7	
Type of birth						
Singleton	449	773	58.1	54.5	61.6	0.081
Multiple	NR	NR	NR	NR	NR	
Birth Hospital						
Brampton Civic Hospital	115	220	52.3	45.5	59.0	0.193
Trillium Health Centre	96	168	57.1	49.3	64.7	
Credit Valley Hospital	114	231	49.4	42.8	56.0	
Other	98	168	58.3	50.5	65.8	

NR = Not releasable due to small numbers

Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health

**Table A3: Exclusive Breastfeeding at Six Months by Respondent Characteristics
Peel, 2009/2010**

	Number	Total	Per cent	Lower 95% CI	Upper 95% CI	p-value
Maternal age group (years)						
Less than 25	13	85	15.3	8.7	25.1	0.161
25 to 29	40	197	20.3	15.1	26.7	
30 to 34	70	270	25.9	20.9	31.7	
35+	39	160	24.4	18.1	31.9	
Immigrant status						
Non-immigrant	82	314	26.1	21.4	31.4	0.095
Immigrant	89	427	20.8	17.2	25.1	
Length of time in Canada						
Non-immigrant	82	314	26.1	21.4	31.4	0.022
Recent (0 to 5 years)	42	162	25.9	19.5	33.5	
Intermediate (6 to 10 years)	27	119	22.7	15.7	31.5	
Long term (11 years or more)	20	146	13.7	8.8	20.6	
Ethnic origin (multiple response)						
Canadian	29	109	26.6	18.8	36.1	0.389
East Asian	7	55	12.7	5.7	25.1	0.067
European	54	180	30.0	23.5	37.3	0.014
British	24	80	30.0	20.5	41.4	0.124
South Asian	42	227	18.5	13.8	24.3	0.058
Caribbean	18	73	24.7	15.6	36.4	0.770
South American	NR	NR	NR	NR	NR	1.0
Highest education level						
High school or less	15	134	11.2	6.6	18.1	0.001
Some post-secondary	17	75	22.7	14.1	34.1	
Completed post-secondary	138	529	26.1	22.4	30.1	
Household income before tax						
Less than \$50,000	32	229	14.0	9.9	19.3	0.000
\$50,000 to less than \$80,000	40	165	24.2	18.1	31.6	
\$80,000 or more	71	238	29.8	24.2	36.1	
Number of previous children						
First-time mother	73	334	21.9	17.6	26.8	0.485
Repeat mother	98	407	24.1	20.1	28.6	
Marital status						
Married/common-law	164	684	24.0	20.9	27.4	0.021
Not married/common-law	6	56	10.7	4.4	22.6	
Type of birth						
Singleton	170	725	23.4	20.4	26.7	0.137
Multiple	NR	NR	NR	NR	NR	
Birth Hospital						
Brampton Civic Hospital	35	206	17.0	12.3	23.0	0.117
Trillium Health Centre	41	155	26.5	19.8	34.2	
Credit Valley Hospital	52	214	24.3	18.8	30.7	
Other	41	163	25.2	18.8	32.7	

NR = Not releasable due to small numbers

Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health

**Table A4: Breastfeeding at 12 Months by Respondent Characteristics
Peel, 2009/2010**

	Number	Total	Per cent	Lower 95% CI	Upper 95% CI	p-value
Maternal age group (years)						
Less than 25	NR	NR	NR	NR	NR	0.501
25 to 29	44	84	52.4	41.3	63.3	
30 to 34	70	134	52.2	43.5	60.9	
35+	46	74	62.2	50.1	73.0	
Immigrant status						
Non-immigrant	66	135	48.9	40.2	57.6	0.115
Immigrant	110	190	57.9	50.5	64.9	
Length of time in Canada						
Non-immigrant	66	135	48.9	40.2	57.6	0.437
Recent (0 to 5 years)	42	71	59.2	46.8	70.5	
Intermediate (6 to 10 years)	31	53	58.5	44.2	71.6	
Long term (11 years or more)	37	66	56.1	43.3	68.1	
Ethnic origin (multiple response)						
Canadian	26	48	54.2	39.3	68.4	1.0
East Asian	15	32	46.9	29.5	65.0	0.456
European	38	80	47.5	36.3	58.9	0.197
British	26	38	68.4	51.2	82.0	0.082
South Asian	56	92	60.9	50.1	70.7	0.139
Caribbean	NR	NR	NR	NR	NR	1.0
South American	NR	NR	NR	NR	NR	0.691
Highest education level						
High school or less	17	33	51.5	33.9	68.8	0.627
Some post-secondary	NR	NR	NR	NR	NR	
Completed post-secondary	148	267	55.4	49.2	61.5	
Household income before tax						
Less than \$50,000	42	79	53.2	41.7	64.4	0.550
\$50,000 to less than \$80,000	52	87	59.8	48.7	70.0	
\$80,000 or more	62	118	52.5	43.2	61.7	
Number of previous children						
First-time mother	87	151	57.6	49.3	65.5	0.265
Repeat mother	89	174	51.1	43.5	58.8	
Marital status						
Married/common-law	170	313	54.3	48.6	59.9	1.0
Not married/common-law	NR	NR	NR	NR	NR	
Type of birth						
Singleton	174	322	54.0	48.4	59.6	1.0
Multiple	NR	NR	NR	NR	NR	

NR = Not releasable due to small numbers

Source: Breastfeeding Practices in the Region of Peel 2009/2010, Peel Public Health

