

BREASTFEEDING PRACTICES IN THE REGION OF PEEL 2004/2005

A Peel Health Status Report



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EXECUTIVE SUMMARY

Breastfeeding during the first six months of life is widely recognized to be the optimal method of feeding because it provides benefits to both mother and infant. The Breastfeeding Council for Canada, the Canadian Pediatric Society and the World Health Assembly all recommend “exclusive” breastfeeding for the first six months of life, after which time, breastfeeding is supplemented by complementary foods to two years and beyond.

One of the Ontario Ministry of Health and Long-Term Care’s Mandatory Health Programs and Services Guidelines is “to increase to 50 per cent the percentage of infants breastfed up to six months by the year 2010.”

In 2004/05, Peel Health undertook two telephone surveys of new mothers in the Region of Peel. Survey tools were designed to collect information about breastfeeding practices among new mothers at six and 12 months post-partum. This survey was a follow-up to a breastfeeding survey conducted in 2000.

Over the course of the data collection phase for the six-month survey, a total of 1,258 telephone numbers were called and 928 surveys completed, yielding a response rate of 82%. For the 12-month survey, a total of 473 telephone numbers were called and 411 surveys completed, yielding a response rate of 93%.

Mothers in the 2004/05 surveys were slightly older than the general population of new mothers (based on those who gave birth in the year 2001). In addition, a higher proportion of mothers in both the six-month and 12-month surveys were married compared to 2001 census data. A larger proportion of survey respondents also indicated that they had completed university compared to the 2001 Census population.

Due to differences in respondent characteristics between the six- and 12-month surveys and the available live birth and census data, estimates should be interpreted with caution as they may not be representative to the general population of new mothers.

Results - Six-Month Post-Partum Survey

Breastfeeding Initiation

A total of 71% of the 882 mothers surveyed fed their newborns breastmilk, 17% fed their newborns a combination of breastmilk and formula, while 12% fed their newborns formula. Of those who fed their newborn formula, 48.5% said that they

had tried to breastfeed. This translates to a breastfeeding initiation rate of 94%. Breastfeeding initiation rates varied with a number of maternal characteristics.

Breastfeeding Duration

In 2004/05, 58% of all respondents reported that they breastfed their baby to six months or longer. The six-month breastfeeding duration rate varied with a number of characteristics including: age group of mother; highest level of education completed; marital status; household income; and period of immigration for those mothers who were foreign-born.

Breastfeeding Exclusivity Duration

Exclusive breastfeeding was defined as a feeding method in which babies received only breastmilk since birth. In 2004/05, approximately one in 10 respondents exclusively breastfed their babies to six-months of age. This duration rate varied according to country of birth, whether it was the mother's first child and Post-Partum Screening Tool scores.

Reasons for Stopping Breastfeeding

The single most commonly reported reason for stopping breastfeeding was 'not having enough breastmilk' (43.6%), followed by 'baby seemed hungry/not satisfied' (22.2%) and 'not enough time/too busy' (12.6%).

Plans to Continue Breastfeeding

Intended breastfeeding duration has been found to be a strong predictor of actual length of breastfeeding. Almost half (46%) of mothers still breastfeeding at six-months post-partum planned to stop breastfeeding before their child was 12-months old.

Return to Work

The majority (72%) of mothers who breastfed their newborns had worked outside of the home during this most recent pregnancy. Mothers who had already returned to work at the time of the survey indicated that they returned to work when their baby was between one and six months old, with an average of 3.8 months. Approximately two-thirds (68%) of these mothers reportedly breastfed when they went back to work or school.

Breastfeeding Supports and Use of Breastfeeding Resources

Respondents who had breastfed were asked who or what gave them the most support with breastfeeding. The most commonly reported supports were hospital staff (29%), their partner/spouse (28%) and relatives (27%). The proportion of mothers reporting selected sources of support varied with characteristics of the mother.

Awareness of Breastfeeding Services by Mother's Breastfeeding Status

Awareness of selected breastfeeding services varied between mothers who breastfed and those who did not. Mothers who had breastfed their infants were more likely to be aware of hospital staff (92.7%), lactation consultants (65.3%) and La Leche League (42.4%) compared to mothers who had not breastfed their infants (86.9%, 51.7% and 18.9% respectively).

Use of Breastfeeding Resources/Services Among Mothers Who Breastfed

Respondents who had breastfed their newborn were asked to indicate which breastfeeding services they used with their newborn and which they were still currently using at the time of the six-month survey. The majority of respondents (84.3%) reported that they used hospital staff as breastfeeding services with their newborn. The second most commonly used service with newborns was 'doctor' (36.2%) followed by 'lactation consultant' (30.6%), Breastfeeding Clinic PHN (28.5%), Peel Breastfeeding Helpline (27.7%), Healthy Start PHN (24.0%) and Healthy Babies Healthy Children PHN (11.4%). The remaining services were less commonly used. At six-months post partum, most (76.9%) respondents were not using any breastfeeding services.

Use of Resources/Services Among Mothers Who Did Not Breastfeed

The majority of respondents who had not breastfed their newborn reported that they used hospital staff (78.0%) with their newborn, followed by a 'doctor' (46.4%) and 'Health Line Peel' (8.1%). Almost one-in-five respondents (17.6%) indicated that they used none of the mentioned services with their newborn.

Comfort with Breastfeeding in Selected Environments

Nine out of 10 mothers (90%) reportedly breastfed in the presence of close family. Of those who did, 94% felt comfortable doing so. Although a smaller proportion of mothers (70%) breastfed in the presence of friends, the vast majority of them (95%) also felt comfortable doing so. In addition to this, the next most commonly reported places in which mothers breastfed were: in malls

(51%), in restaurants (34%), in or at recreational facilities (28%), in places of worship (18%), in the workplace (22%) and on public transportation (3%).

Reasons for Not Breastfeeding in Public Places

Respondents who did not report having breastfed in selected public places were asked to indicate why they did not breastfeed in such a public place. The most common reported reasons were that they did not feel comfortable (45%), 'the situation never arose' (43%) and that they pumped milk so they fed the baby by bottle (10%).

Results- 12-Month Post-Partum Survey

Almost half (48%) of mothers who were still breastfeeding at six months post-partum were continuing to breastfeed to at least 12 months. Of the mothers who were still breastfeeding at six-months post-partum, 8% were still exclusively breastfeeding at the time of the 12-month survey, although this is not recommended as infants require solid food to be introduced at the age of six months. Most mothers stopped exclusively breastfeeding between 4 months to less than 7 months.

Reasons for Stopping Breastfeeding between Six and 12 Months Post-Partum

The single most commonly reported reason for stopping breastfeeding between six- and 12-months post-partum was 'not having enough breastmilk' (26%), followed by 'baby old enough / right time' (23%), 'returned to work' (20%), 'baby seemed hungry/not satisfied' (19%), and 'other' (16%).

Return to Work or School

Respondents who breastfed babies for six to 12 months who participated in the 12-month survey were also asked questions related to returning to work or school. Mothers who had already returned to work at the time of the survey indicated that they returned to work when their baby was between one and 12 to 13 months old, with an average of 9.3 months. Approximately two-thirds (64%) of these mothers reportedly breastfed when they went back to work or school.

Breastfeeding Supports and Use of Breastfeeding Resources – 12-Month Survey

Respondents who reported that they planned to continue breastfeeding after they return to work or who had already returned to work and continued breastfeeding were asked to indicate who or what gave them the most support with

breastfeeding. The most commonly reported supports were their partner/spouse (37%), relatives (37%) and hospital staff (15%).

Awareness of Breastfeeding Services – Among Mothers Who Breastfed to Between Six and 12-Months

Mothers who participated in the 12-month survey, were asked if they were aware of selected breastfeeding services. Almost all mothers (96%) reported being aware of 'hospital staff', followed by 'doctor' (88%), 'Peel Breastfeeding Helpline' (83%), 'Healthy Start Public Health Nurse' (78%), 'Breastfeeding Clinics Public Health Nurse' (76%), and 'lactation consultant' (73%). Most mothers were also aware of other services. Awareness was lowest for the 'Mothers at Breastfeeding Support Group' (39%) and the 'Mothers at Breastfeeding Companion Program' (27%). The proportion of respondents who were aware of selected services varied with selected characteristics of the mother.

Use of Breastfeeding Resources/Services Among Mothers Who Breastfed

Respondents who participated in the 12-month survey, were asked to indicate which breastfeeding services they used within the six-months prior to the survey and which services they were currently using. The majority of respondents (73%) reported that they did not use any of the services during the previous six months and 90% were not using any of the services at the time of the survey.

Comfort with Breastfeeding in Selected Environments Between Six and 12 Months Post-Partum

Approximately nine out of 10 mothers (91%) reported having breastfed in the presence of close family between six- and 12-months post-partum. Of those who did, 97% felt comfortable doing so. Although a smaller proportion of mothers (81%) breastfed in the presence of friends, the vast majority of them (98%) also felt comfortable doing so. The next most commonly reported places in which mothers breastfed were: in malls (69%), in restaurants (51%), in or at recreational facilities (48%), in places of worship (34%), in the workplace (33%) and on public transportation (11%).

Summary

The 2004/05 study found an overall breastfeeding initiation rate of 94%, a six month duration rate of 58% and an exclusive breastfeeding rate at six months of about 10%. The factors impacting these rates are well explained in the body of the report. Of the women breastfeeding at six months, almost half of them (49%) were still breastfeeding at 12 months. When asked how long they planned to continue, many (29%) planned to stop at 13 months, some (12.4%) at 18 months and still others (14%) at 24 months.

While this study was a follow-up to a 2000 breastfeeding survey, there are important methodological differences between the 2000 and 2004/05 surveys which limit the ability to make comparisons. As we continue to survey this population in the coming years we will be able to build on the foundation of the 2004/05 survey.

There are a number of breastfeeding programs and community initiatives in the Region of Peel. These programs provide the full spectrum of breastfeeding promotion from direct service to advocacy and health education. Although the last few years have seen an increase in the number of services available, this increase does not keep pace with the Region's large birth cohort and continued population growth. The recommendations (see page 64) should be taken into consideration by health care providers and community agencies as they strive to meet the needs of Peel's growing population.

INTRODUCTION

Breastfeeding during the first six months of life is widely recognized to be the optimal method of feeding and provides benefits to both the mother and infant. The Breastfeeding Council for Canada¹, the Canadian Pediatric Society² and the World Health Assembly and World Health Organization³, all recommend “exclusive” breastfeeding for at least the first six months of life, with complementary foods being added and breastfeeding continuing for up to two years and beyond.

Breastfeeding reduces maternal anxiety, develops maternal self-esteem, promotes contraction of the uterus, improves bone remineralization and possibly reduces the risk of ovarian cancer.⁴ It also benefits the mother by helping her to lose weight and return to her pre-pregnancy weight more quickly.⁵ Breastfeeding provides optimal nutritional, immunological and emotional benefits for the growth and development of infants.⁶ For example, it provides protection against gastrointestinal and respiratory infections, middle ear infections and possibly enhances cognitive function.

One of the Ontario Ministry of Health and Long-Term Care’s Mandatory Health Programs and Services Guidelines is “to increase to 50 per cent the percentage of infants breastfed up to six months by the year 2010.”⁷

In 2004/05, Peel Health undertook two telephone surveys of new mothers in the Region of Peel. The study was a follow-up to a 2000 survey that was carried out with the primary purpose of determining the breastfeeding initiation and duration rates in Peel.⁸ The 2004/05 survey tools were also designed to collect information about breastfeeding initiation rates, duration rates and other breastfeeding practices among new mothers when their child was six-months old and again when their child was 12 months old. Demographic information about the mother was also gathered.

In addition, the surveys were designed to gather information about:

- the proportion of women who initiated breastfeeding
- the proportion of women who breastfed their infants to six months and 12 months of age in the Region of Peel
- the proportion of women who breastfed exclusively for specific durations
- factors associated with breastfeeding initiation and duration rates
- reasons for discontinuation of breastfeeding
- awareness of resources for the breastfeeding mother, and usage of those resources
- comfort with breastfeeding in public

- return to work/school after maternity leave

Mothers who never breastfed their infants were also asked questions about their awareness and utilization of resources.

METHODOLOGY

Sample Selection

The target population for this study was Peel mothers with six-month old children, i.e. mothers who gave birth between March 13, 2004 and September 10, 2004. Later, those who were still breastfeeding at six months were interviewed for a follow-up survey at 12-months post-partum.

Six-Month Post-Partum Survey

Mothers who resided in Peel Region, delivered a baby (excluding stillbirths) between the time period of interest, and gave their verbal consent to a public health nurse (PHN) during a routine Healthy Babies Healthy Children (HBHC) Program assessment were eligible to participate in the six-month survey.

Mothers who chose not to participate for any reason, who were not residents of Peel during their pregnancy, or who did not have a telephone could not be included. Also excluded were any women who were no longer caring for their infant and mothers who had other personal reasons for exclusion as determined by the attending public health nurse.

The target sample size for the six-month survey was 800 completed surveys. Assuming a response rate of 68%, as per the 1999/2000 Breastfeeding Survey, the aim was to have approximately 1,180 consents collected. The actual number of consents that Peel Public Health collected was 1,258.

12-Month Post-Partum Survey

Mothers included in the 12-month post-partum survey were mothers who were still breastfeeding at the completion of the six-month survey and consented to being re-contacted half a year later.

The target sample size for the 12-month survey was 560 completed surveys, based on the assumption that approximately 70% of mothers would still be breastfeeding their child at six months and consent to a follow-up survey at 12-months post partum. However, only 410 mothers who were still breastfeeding at six-months postpartum consented to be called for the 12-month survey. In order to augment the sample size for the 12-month survey, additional mothers were interviewed at six-months. In total, 473 mothers who breastfed for at least six months, consented to be contacted for the 12-month survey.

Survey Administration

A survey company (Compustat Consultants Inc., henceforth referred to as Compustat) was contracted to administer the survey on behalf of Peel Health. A third-party verbal translation service, Language Line Services, was utilized by Compustat so as to include non-English-speaking mothers in the sample. Secure electronic files were forwarded to Compustat containing mothers' names, telephone numbers, municipalities of residence, the date of birth of their baby, whether translation was required and if so the language required for translation. In addition, a blinded variable was included in the file that indicated one of two categories (A or B) for the mothers Post-Partum Screening Tool (PPST) Score. PPSTs are part of the Parkyn Tool used in the HBHC Program. The PPST is a screening tool used by all hospitals in Ontario to assess all mothers and their infants. Public Health Units then use these screening tools as further assessments for follow-up under the HBHC Program. Scores of 9 or above are reflective of those families with more risk factors.

Two survey tools were developed based on the 2000 survey tool and existing surveys developed by other health units, with modifications to reflect recommended breastfeeding definitions, and to gather information specific to the study objectives (*see Appendix A on page 71 and Appendix B on page 85*). The six-month survey instrument was pilot-tested from September 6, 2004 to September 23, 2004 on a total of 31 completed surveys to check the flow and logic of the survey. No major revisions were required. The 12-month survey was pilot-tested on March 28, 2005, in a similar manner, on a total of 5 completed surveys. No changes were required. The pilot for the 12-month survey involved less completes than that the six-month survey, due to the similarities between the survey questions.

Data were collected between September 30, 2004 and March 23, 2005 for the six-month survey. For the 12-month survey, data were collected between March 28, 2005 and September 14, 2005. Mothers were called at various times of the day and week, weekdays between 9:00 a.m. and 9:00 p.m. and weekends between 10:00 a.m. and 4:00 p.m. A maximum of 10 call attempts were made in order to obtain the desired number of completed telephone surveys for the six-month survey; a maximum of 15 call attempts were made for the 12-month survey. The larger number of call attempts for the 12-month survey was in an effort to increase the number of completed surveys for analysis since the originally desired sample size was not obtained.

At the beginning of each call, mothers were again asked if they would verbally consent to participate in the study. Data were entered using a customized Computer Assisted Telephone Interview (CATI) system. Respondents could

refuse to answer any question and were free to end the interview at any point during the survey.

Data Analysis

Preliminary analyses of data were conducted by Compustat using SPSS for Windows version 12.0, and tables of results were provided to Peel Health. Data files in SPSS format were also provided, which allowed further cross-tabulations to be performed by Peel Public Health using SPSS Version 13.0, and charts and tables to be prepared using Microsoft Excel 2002.

For the six-month survey, of the 928 telephone interviews that were completed, 536 (58%) were from Mississauga, 352 (38%) were from Brampton and 40 (4%) were from Caledon. Brampton was somewhat over-sampled, thus the overall results for Peel required “weighting” to eliminate any geographic bias. Results were weighted to reflect the average number of births by municipality over the five-year period 1997 to 2001. Additional information about the weighting methodology can be found in the Data Sources, Methods and Limitations section of the report (see page 56). The total number of weighted responses included in the results was 882, with 536 (60.8%) respondents from Mississauga, 306 (34.7%) from Brampton and 40 (4.5%) from Caledon. Because of rounding to whole numbers, there are times when the weighted responses sum to different totals depending on which respondents were included in a given analysis.

For the 12-month survey, of the 411 telephone interviews that were completed, 61% were from Mississauga, 35% were from Brampton and 4% were from Caledon. The overall results for Peel were also weighted for the same reasons and using the same methodology referred to above (see page 56). The total number of weighted responses included in the results was 400, with 243 (60.7%) respondents from Mississauga, 139 (34.7%) from Brampton and 18 (4.5%) from Caledon.

Data shown in most tables throughout this report are weighted responses, with the exception of the information pertaining to call attempts. Overall results for Peel Region are accurate to within $\pm 3\%$ for the six-month survey and $\pm 5\%$ for the 12-month survey – meaning that 19 times out of 20, results would be accurate to within three percentage points for the six-month survey. The accuracy level for Mississauga is $\pm 4\%$ (six-month survey) and $\pm 6\%$ (12-month survey). The accuracy for Brampton is $\pm 5\%$ (six-month survey) and $\pm 8\%$ for the 12-month survey. Given the small sample size and accuracy levels for Caledon, this municipality has been excluded from the analyses showing municipal comparisons, but otherwise included in the results for the Region overall.

The Results section of this report presents findings as proportions of weighted responses by the mother. In some cases, proportions are based on all mothers' responses (e.g. the proportion of mothers who initiated breastfeeding) whereas in other cases, they are based on a subset of the data (e.g. the proportion of mothers who breastfed and were aware of selected services).

Differences in proportions between demographic groups have been highlighted. Words such as "more likely" or "less likely" are only used when those differences have been found to be statistically significant at the 95% confidence level.

When multiple responses were allowed, percentages were based on the total number of respondents, thus percentages may total to more than 100%.

2000 Survey versus 2004/05 Surveys

There are important methodological differences between the 2000 and 2004/05 breastfeeding surveys which limit the ability to make comparisons. For additional information, please refer to Table 1 below. For this reason, coupled with the differences in respondent characteristics between surveys, making direct comparisons between the 2000 and 2004/05 surveys is not recommended. The improved methodology for the 2004/05 surveys, resulted in better quality data. For program planning purposes only, Appendix C contains tables with breastfeeding initiation and six-month duration rates derived from both the 2000 and 2004/05 breastfeeding surveys.

Table 1: Comparisons between 2004/05 Breastfeeding Surveys and 2000 Breastfeeding Survey Methodologies, Region of Peel, 2004/05

		2004/05 Breastfeeding Survey		2000 Breastfeeding Survey
		Six-Month Post-Partum	12-Month Post-Partum	
Survey sample size (unweighted)		n=928	n=411	n=541
		Peel		Peel
Sampling frame		New moms through HBHC Program		New moms from PPST from HBHC data
Time period of babies' births		March 30 - Sept 23, 2005		April-June 1999
Age of babies at time of survey		~6 months	~12 months	10-12 months
Interviews administered by		External Survey House		Volunteers trained by PHN's
Survey Translations	Number of Languages	13	12	Conducted in 11 different languages
	Conducted by	3rd Party Language Line		Volunteers
Weighting applied		Yes		No

RESULTS

Response Rates (for six-month and 12-month surveys)

Over the course of the data collection phase for the six-month survey, a total of 1,258 telephone numbers were called and 928 surveys completed, yielding a response rate of 82%.* For the 12-month survey, a total of 473 telephone numbers were called and 411 surveys completed, yielding a response rate of 93%. Table 2 (see below) shows the outcome of the data collection phases by call disposition category.

Table 2
Call Attempts and Results,
Region of Peel, 2004/05

Call Disposition	Six-Month Post-Partum Survey		12-Month Post-Partum Survey	
	Number	Per Cent	Frequency	Per Cent
Completed	928	74	411	87
Unable to be reached (terminated)	147	12	23	5
Not in Service	55	4	16	3
Refused	49	4	7	1
Wrong Number	32	3	8	2
Not Eligible	23	2	3	1
Moved, No New Number	10	1	3	1
Hung up	7	1	0	--
Fax/Computer Line	5	0	2	0
Call Back	2	--	0	--
Total number called	1,258		473	

* The response rates were calculated as the number of completed calls divided by the subtotal, times 100. The subtotal was comprised of the number of completes, call backs, refusals, those with answering machines, language barriers and those who hung up or were unable to be reached (i.e. excludes not eligible, not in service, wrong number and business categories).

Notes: Numbers are based on unweighted data. Calls were classified as "Unable to be reached" where no contact was made after 10 call attempts to that number.

Source: Compustat Consultants Inc. "Region of Peel 6-Month Breastfeeding Survey", August 2005

There were 536 completed calls during the six-month survey for Mississauga, 352 for Brampton and 62 for Caledon respondents; however after weighting, there were a total of 536 respondents for Mississauga, 306 for Brampton and 40 for Caledon included in the analyses in the remainder of this report (i.e. a total weighted sample of 882). For the 12-month survey, there were 249 completed calls for Mississauga, 144 for Brampton and 18 for Caledon respondents. This translated to 243 respondents from Mississauga, 139 from Brampton, and 18 from Caledon after weighting, yielding a total weighted sample of 400 for Peel.

Respondent Characteristics (for six-month and 12-month surveys)

Table 3 (see page 10) depicts overall demographic information of the survey respondents and provides comparison data where available. Mothers in the 2004/05 surveys were slightly older than those who gave birth in the year 2001 (based on data from the Live Birth file for Peel). Comparisons are made with 2001, as it is the year for which the most recent Census data are available as well as the official birth data used in-house. Mothers who participated in the six-month survey ranged in age from 18 to 46 years with an average age of 31.5 years. Similarly, those from the 12-month survey ranged in age from 18 to 44 years, with an average age of 32.2 years (data not shown).

Marital status was similar for mothers in both the six-month and 12-month surveys, where the majority of mothers in each (94% versus 97% respectively) were either married or living in common-law relationships. Only 5% of mothers in the six-month survey and 3% of mothers in the 12-month survey were single and had never been married. The remaining mothers in both surveys were separated or divorced. Higher proportions of mothers in both surveys were married compared to those who gave birth in the year 2001 (see Table 3 on page 10). Mothers aged less than 25 years were less likely to be married and more likely to be single or living common-law compared to mothers aged 25 years or more (data not shown).

Country of birth was similar for mothers in both the six- and 12-months surveys. Forty-six per cent (46%) of mothers who participated in the six-month survey were born in a country other than Canada. Of those born outside of Canada, 36% had lived in Canada for five years or less and 65% had lived in Canada for six years or more (Table 3). Those who were not born in Canada most often reported India (24%), Pakistan (6%), the Philippines (6%), Jamaica (6%), or Poland (5%) as their country of birth. A total of 56 surveys were completed in languages other than English, including Punjabi, Hindi, Urdu, Vietnamese, Tamil, Polish, Cantonese, Mandarin, Portuguese, Spanish, Arabic, Persian and Turkish (data not shown).

Similarly, 46% of all mothers who participated in the 12-month survey were born in a country other than Canada. Of those, approximately 40% had lived in Canada for five years or less, while 60% had lived in Canada for six or more years. A total of 13 surveys were completed in languages other than English, including Arabic, Mandarin, Punjabi, Tamil, Turkish, Urdu, Spanish and Vietnamese (data not shown).

Overall, a larger proportion of respondents from both of the 2004/05 surveys had completed university compared to the 2001 Census population. In addition, a larger proportion of respondents from the 12-month survey (54%) in 2004/05 had completed university compared to the six-month survey (44%) in 2004/05.

Due to differences in respondent characteristics between surveys and the Census, estimates should be interpreted with caution as they may not be representative to the general population of new mothers in Peel.

Table 3: Respondent Characteristics in 2004/05 Breastfeeding Surveys and Available Live Birth or Census Data, Region of Peel, 2001 and 2004/05

Respondent Characteristics		Per Cent from Six-Month 2004/05 Survey (N=882)	Per Cent from 12-Month 2004/05 Survey (N=400)	Per Cent in Live Birth* or Census† Data (2001)
Mother's Age	< 25 years	7.4	4.7	14.2*
	25-29 years	26.3	22.8	29.9*
	30-34 years	39.9	43.5	35.7*
	35-39 years	20.8	22.6	17.6*
	40+ years	5.6	6.4	2.6*
Mother's Highest Level of Education Completed	High school or less	21.0	14.1	37.1†
	Some post-secondary	6.5	6.8	15.3†
	Completed technical/ trade/ college	29.1	24.9	26.9†
	Completed university	43.5	54.2	20.7†
	Don't know	--	--	--
	Other	--	--	--
Marital Status	Married	87.5	92.5	79.4*
	Common-law/Partner	6.5	4.4	n/a
	Single (never married)	4.6	2.5	8.7*
	Separated/divorced	1.4	NR	0.4*
	no response	--	--	11.4*
Country of Birth	Canada	46.2	45.5	n/a
	Other	53.7	54.5	n/a
	No response	0.1	--	n/a
Years in Canada (among Foreign-born)		(n=474)	(n=218)	
	5 years or less	35.7	40.2	19.1†
	6 or more years	64.3	59.8	80.9†
	No response/refused	--	--	--
Parity	First-born	46.6	49.4	43.2†
	Multiparous	53.4	50.6	56.8†
	no response	--	--	0.0†

Notes: 2001 Census data are based on information for both sexes and all ages combined.

NR = Not releasable due to small numbers (<5). n/a = no comparison data available.

Sources: Peel Breastfeeding Survey, 2004/05 and 2000.

*Ontario Live Birth database 2001, HELPS (Health Planning System), Public Health branch, Ontario Ministry of Health and Long-Term Care; †2001 Census, Statistics Canada, results for the Region of Peel.

Approximately one-third of mothers (33%) in the six-month survey reported having household annual incomes greater than \$80,000 while another third (34%) reported incomes of between \$40,000 and \$79,999 (see *Table 4 below*). Only 5% of mothers reported an income of less than \$20,000. Fifteen per cent of respondents either refused to provide information on income or did not know into which category their household income fell. These proportions were similar for the 12-month survey respondents. Although there appears to be lower proportions of women in the lowest and highest income category compared to the 2001 Census, results must be interpreted with caution if comparing the distribution of respondents by income with 2001 Census data.

Table 4
Respondent Characteristics compared to available Live Birth* or Census† Data,
Region of Peel, 2004/05

Respondent Characteristics		Per Cent found in 6-Month Post-Partum Survey (N=882)	Per Cent found in 12-Month Postpartum Survey (N=400)	Per Cent in Live Birth* or Census† Data
Household Income Level	Less than \$20,000	4.8	4.0	8.9 †
	\$20,000 to \$39,999	13.4	9.8	14.6 †
	\$40,000 to \$59,999	16.1	17.8	17.8 †
	\$60,000 to \$79,999	17.7	20.0	18.0 †
	\$80,000 or more	32.5	35.3	40.7 †
	Don't know	8.4	7.5	---- †
	Refused	6.9	5.8	---- †

Notes: 2001 Census data are based on information for both sexes and all ages combined.

NR = Not Releasable due to small numbers (<5). n/a = no comparison data available. ---- = not calculated

Sources: Region of Peel Prenatal Education Classes Telephone Survey 2003;

* Ontario Live Birth Database 2000, HELPS (Health Planning System), Public Health Branch, Ontario Ministry of Health and Long-Term Care; † 2001 Census, Statistics Canada, results for the Region of Peel.

SIX-MONTH POST-PARTUM SURVEY RESULTS

Breastfeeding Initiation

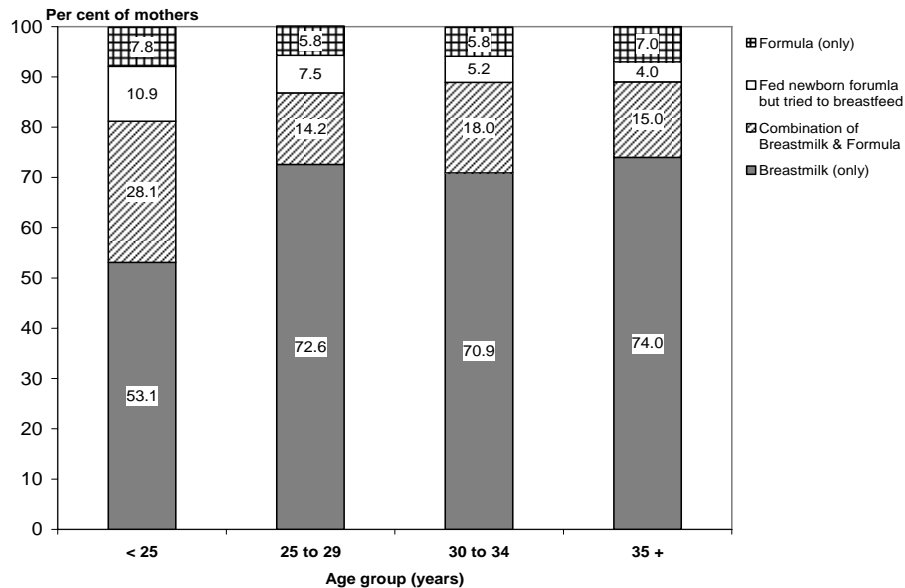
The 2004/05 breastfeeding initiation rates were calculated two ways:

- The first method used the definition from the survey conducted in 1999/2000 survey which did not account for those new moms who did not initially indicate that they fed their newborn breastmilk, but said that they had tried to. Using this definition, the breastfeeding initiation rate in 2004/05 was 88%.
- The second calculation of breastfeeding initiation rates included those respondents who did not initially indicate that they fed their newborn breastmilk but then indicated that they tried to breastfeed. This method is more commonly used in breastfeeding surveys and is the method of preference in this report.

A total of 71% of the 882 mothers surveyed fed their newborns breastmilk, 17% fed their newborns a combination of breastmilk and formula, while 12% fed their newborns formula. Of those who fed their newborn formula, 48.5% said that they had tried to breastfeed. This translates to a breastfeeding initiation rate of 94%.

Although a trend was not observed across age groups for overall breastfeeding initiation rates, a higher proportion of mothers aged 25 years and older reported feeding their newborns 'breastmilk' than younger mothers (see *Figure 1 below*).

Figure 1: Proportion of Mothers by Method of First Feeding Their Newborn and Age Group of Mother, Region of Peel, 2004/05

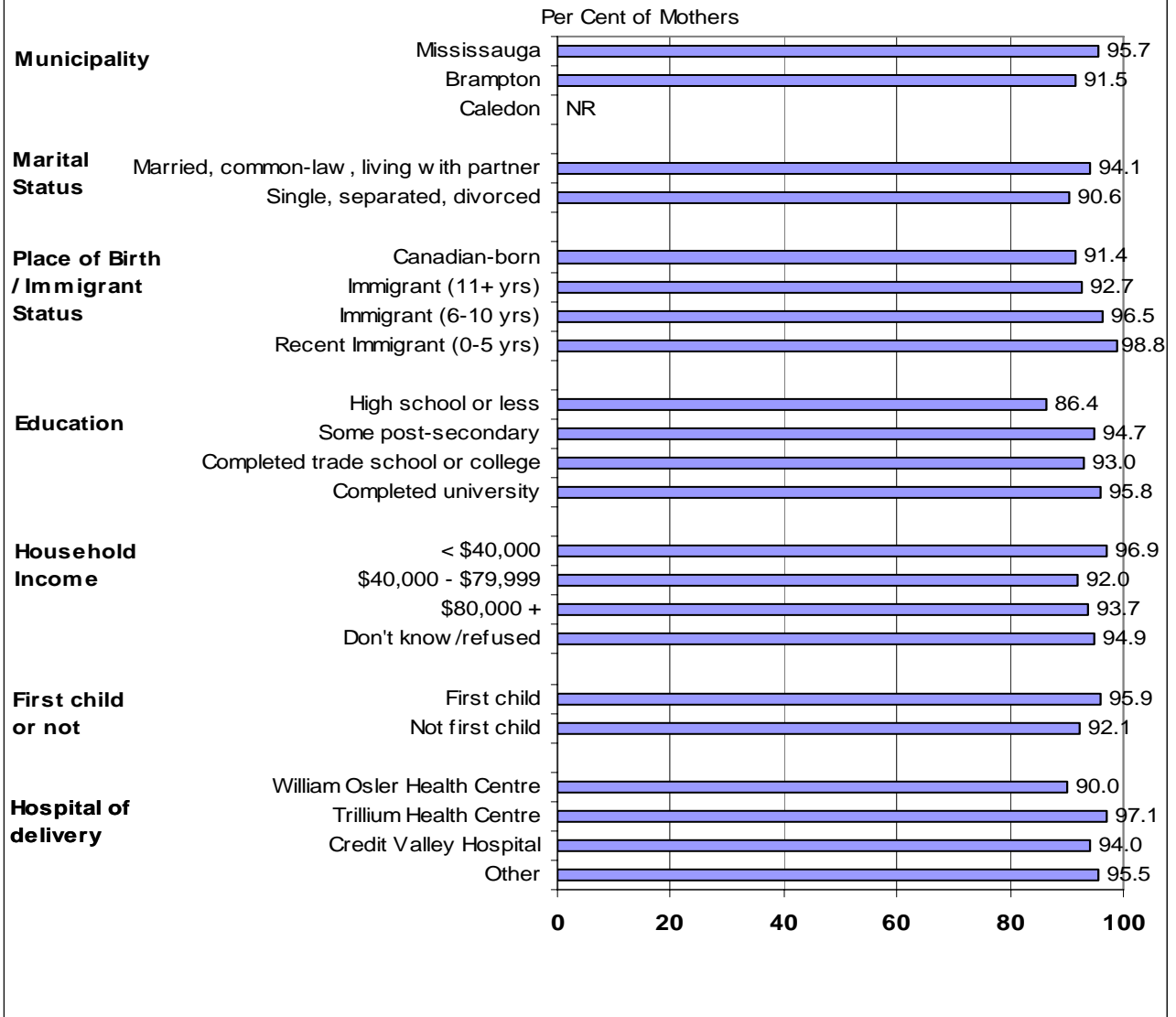


As shown in Figure 2 (see *following page*) breastfeeding initiation rates varied significantly with a number of characteristics including: municipality of residence; age group of mother; highest level of education completed; marital status; country of birth of mother; period of immigration for mother; whether it was the mothers first child or not; and hospital of birth of this most recent child. These differences include:

- Mississauga mothers (96%) were more likely than Brampton mothers (92%) to initiate breastfeeding.
- Breastfeeding initiation rates generally increased with mothers education, from 86% of those who completed high school or less to 98% of those who completed university.
- Mothers who were Canadian born (91%) were less likely than foreign-born mothers (96%) to have initiated breastfeeding.
- Mothers for whom this was their first child (96%) were more likely to have initiated breastfeeding than those who had had other children (92%).

An overall trend was not observed across income categories nor for high-risk moms compared to low-risk moms (based on PPST scores) (data not shown).

Figure 2
Proportion of Mothers Who Initiated Breastfeeding by
Selected Characteristics,
Region of Peel, 2004/05



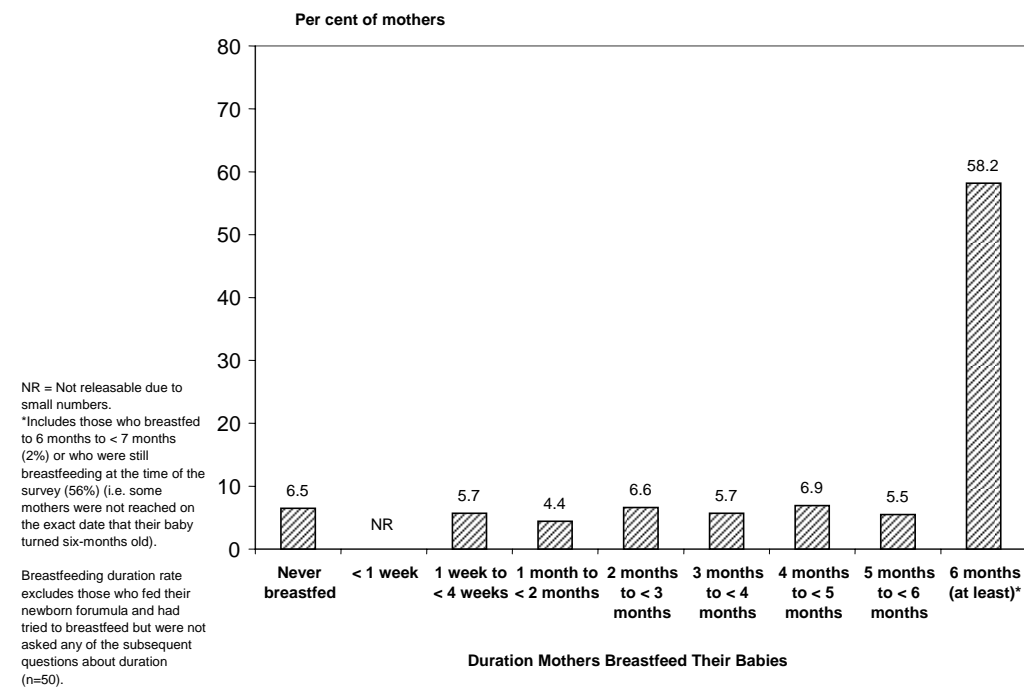
Breastfeeding Duration

The six-month breastfeeding duration rate can be presented in two ways. One way compares the number of women who initiated breastfeeding and breastfed for six months or longer to the number of women who initiated breastfeeding, regardless of how long they breastfed. Another way compares the number of women who breastfed their babies for six months or longer to the total number of women who participated in the survey. Since the Ministry of Health and Long-Term Care's Mandatory Guidelines' goal is to "increase to 50% the number of infants breastfed to six months", the total rate based on all women was used.

In 2004/05, 58% of all respondents reported that they breastfed their baby to six months or longer, and approximately 7% of mothers surveyed had never breastfed (see Figure 3 below).

Mothers who breastfed their newborn were asked when they had stopped breastfeeding. Figure 3 shows the proportion of all mothers by duration of breastfeeding. In 2004/05 the duration of breastfeeding for all mothers was similarly distributed among the monthly intervals.

Figure 3: Proportion of Mothers by Duration of Breastfeeding at Six-Month Post-Partum Survey, Region of Peel, 2004/05



In 2004/05, the six-month breastfeeding duration rate varied with a number of characteristics including: age group of mother (see *Figure 4 on following page*); highest level of education completed; marital status; household income; and period of immigration for those mothers who were foreign-born (see *Figure 5 on page 19*). Rates were similar based on municipality of residence; country of birth of mother; whether it was the mothers first child or not; high-risk moms versus low-risk moms (based on PPST scores); and hospital of birth of this most recent child. Notable differences and/or trends observed include:

- Six-month breastfeeding duration rates increased from 41% of mothers less than 25 years old to 63% of those aged 35 years and older.
- Mothers who were married, common-law or living with their partner (59.2%) were more likely to breastfeed to six-month compared to those who were single, separated or divorced (39%)
- Mothers who completed university (70%) were more likely than those who completed high school or less (42%) or those who completed trade school or college (50%) to breastfeed their babies for six months.
- Respondents with a household income of less than \$40,000 (50%) were less likely than those with an income of \$40,000 or more to breastfeed their babies for six months.
- Among immigrant mothers, those who immigrated 11 or more years ago (52%) were less likely than more recent immigrants to breastfeed for a duration of six months.

Figure 4: Proportion of Mothers Who Breastfed Their Babies For At Least Six-Months by Age Group of Mother, Region of Peel, 2004/05

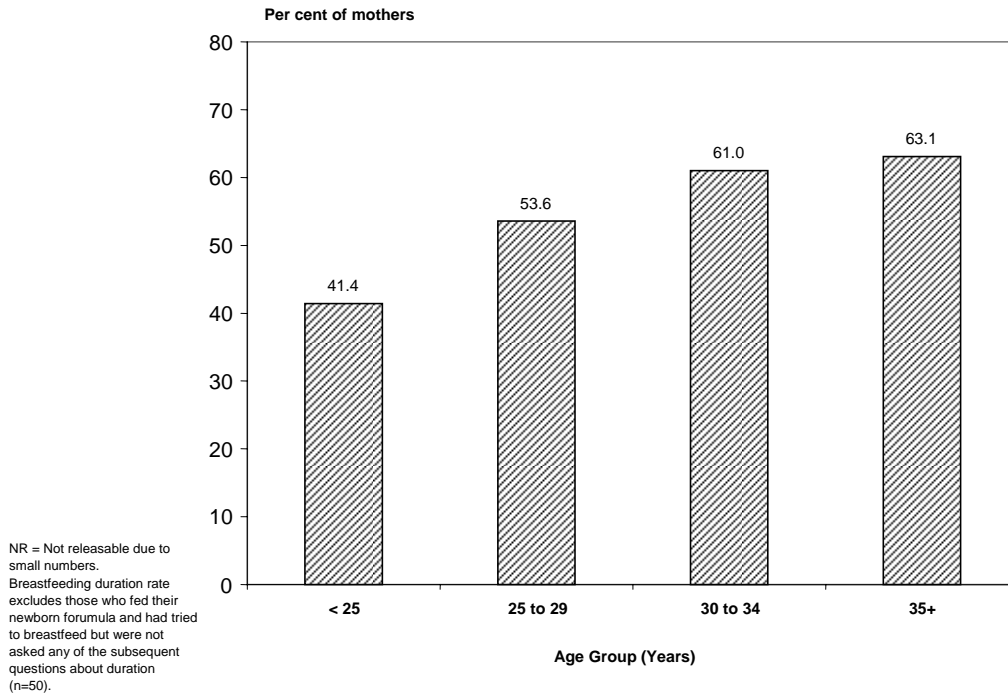
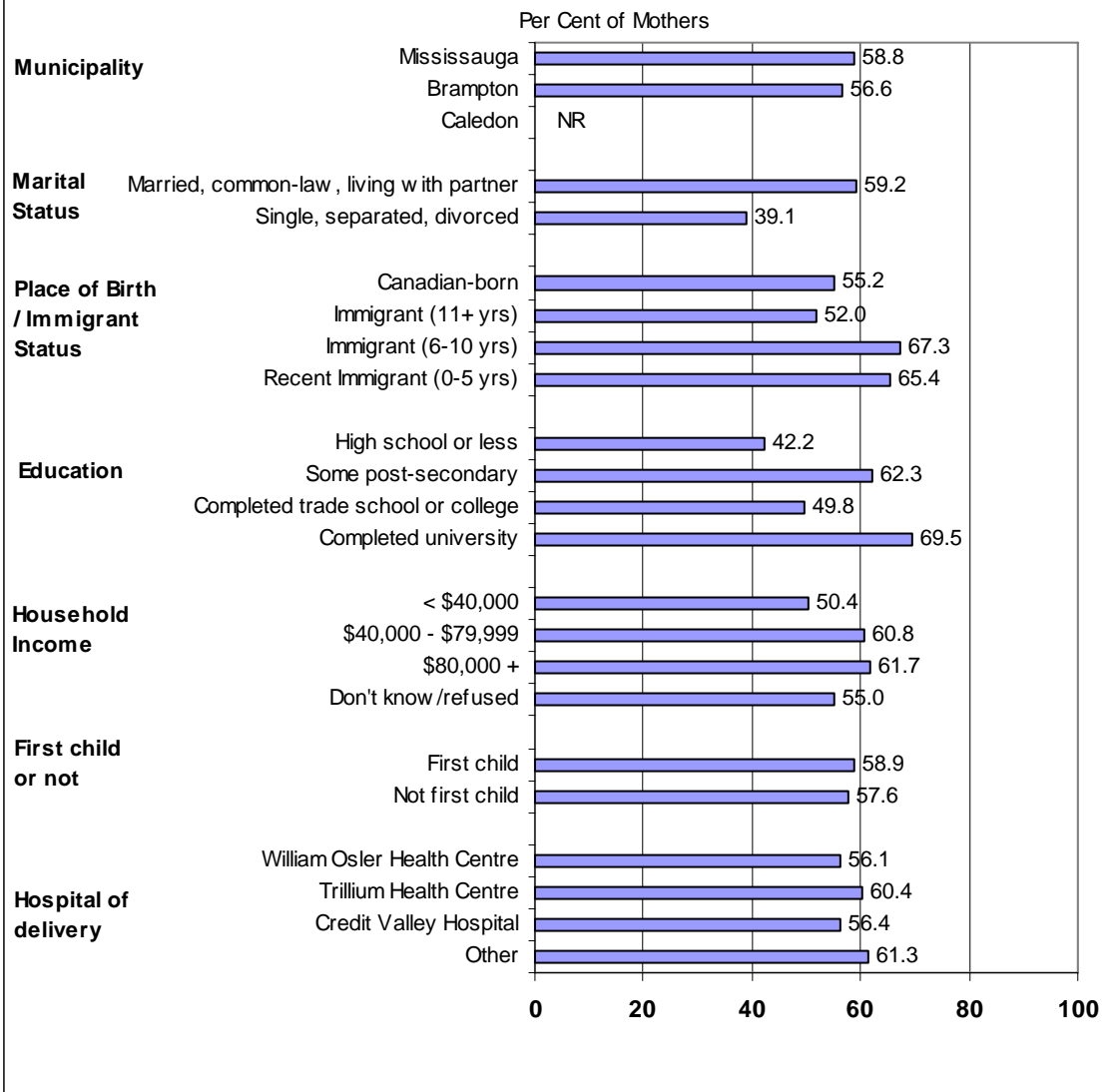


Figure 5
Proportion of Mothers Who Breastfed Their Babies For At Least Six Months by Selected Characteristics of Mother, Region of Peel, 2004/05



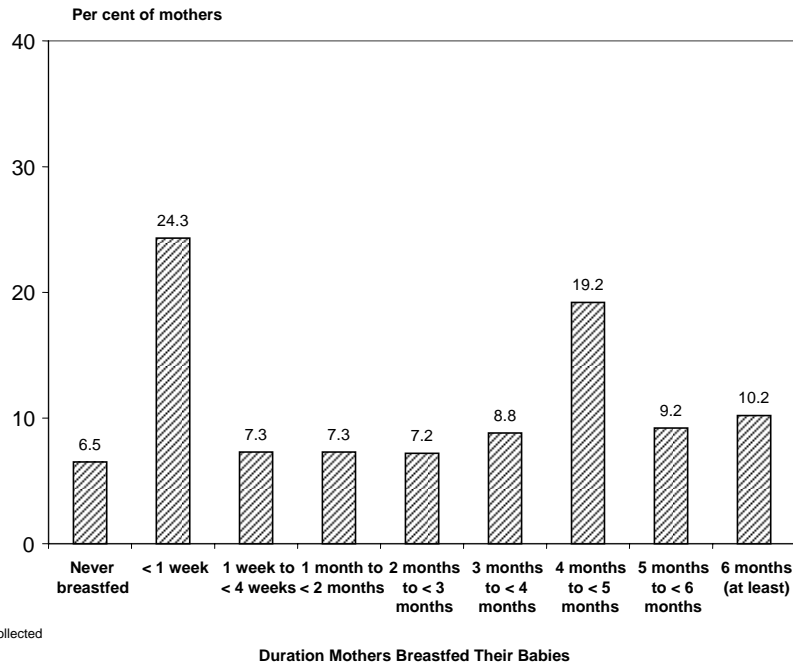
Duration of Exclusive Breastfeeding

Definitions for exclusive breastfeeding were derived from the Breastfeeding Committee for Canada's guideline for data collection which is specific for infants to the age of six months. Exclusive breastfeeding was defined as a feeding style in which babies received only breastmilk since birth. Breastmilk included breastfeeding, expressed breastmilk or donor milk. Undiluted drops or syrups consisting of vitamins, mineral supplements or medicines were allowed to be included.⁹ Mothers were considered to have stopped breastfeeding exclusively when other liquids or foods were introduced in addition to breastmilk. Other liquids or foods included 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.⁹

Figure 6 (see *following page*) shows the proportion of all mothers surveyed by duration of exclusive breastfeeding at the time of the six-month survey. Approximately one in 10 respondents exclusively breastfed their babies to six-months of age. The most common duration of exclusive breastfeeding for all moms was less than one week (reported by almost one in four mothers or 24%), followed by four to less than five months (reported by one in five mothers or 20%). The proportion of mothers who exclusively breastfed was similarly distributed among the remaining monthly intervals.

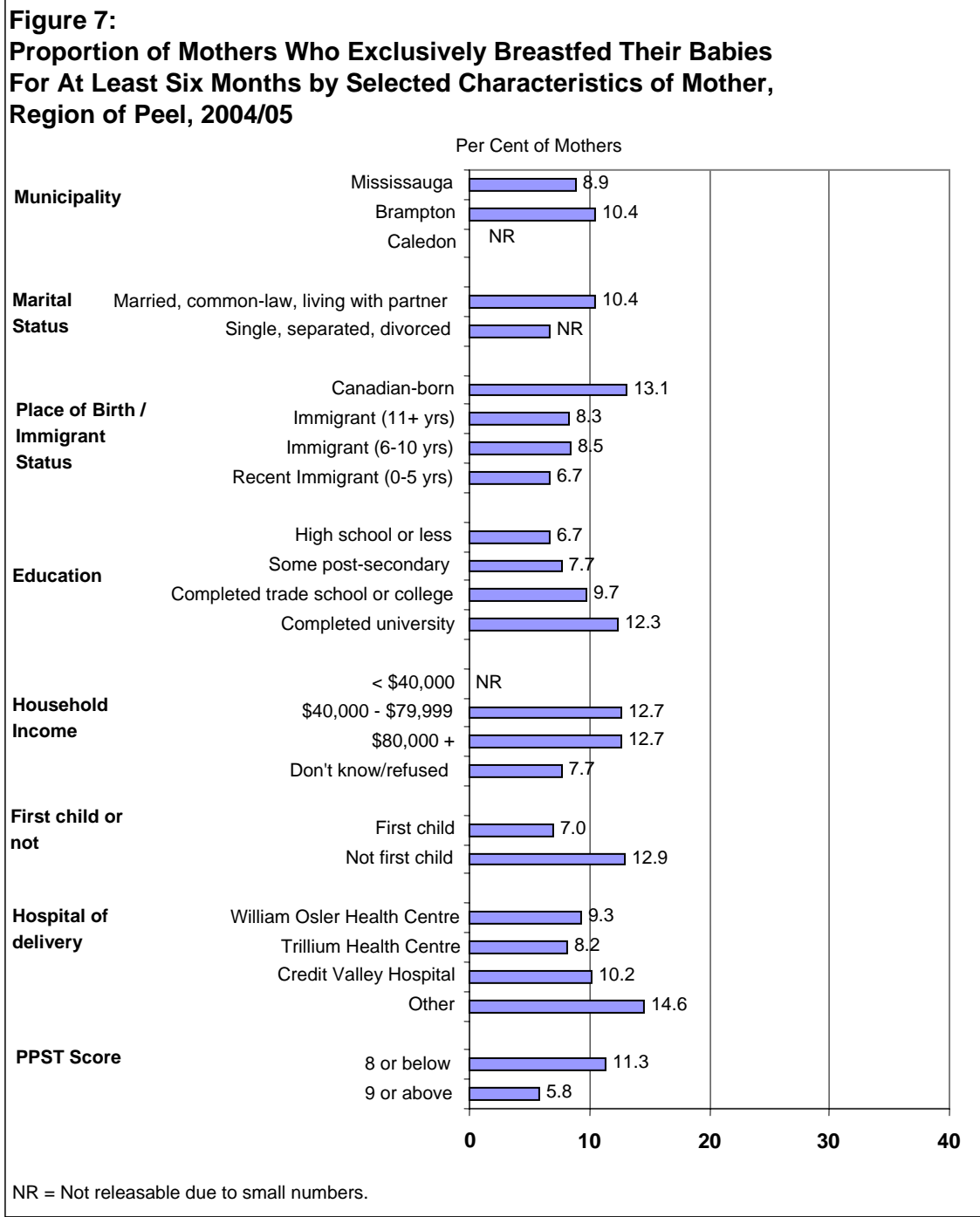
Figure 6 shows the proportion of all mothers surveyed by duration of exclusive breastfeeding at the time of the six-month survey. Approximately one in 10 respondents exclusively breastfed their babies to six-months of age. The most common duration of exclusive breastfeeding for all moms was less than one week (reported by almost one in four mothers or 24%), followed by four to less than five months (reported by one in five mothers or 20%). The proportion of mothers who exclusively breastfed was similarly distributed among the remaining monthly intervals.

Figure 6: Proportion of Mothers by Duration of Exclusive Breastfeeding, Region of Peel, 2004/05



In 2004/05, the six-month duration rate for exclusive breastfeeding did not vary according to age group, municipality of residence, education, marital status, income category, period of immigration or hospital of delivery. However, it did vary according to country of birth, whether it was the mother’s first child or not and PPST scores (see *Figure 7 on following page*). Notable differences and/or trends observed include:

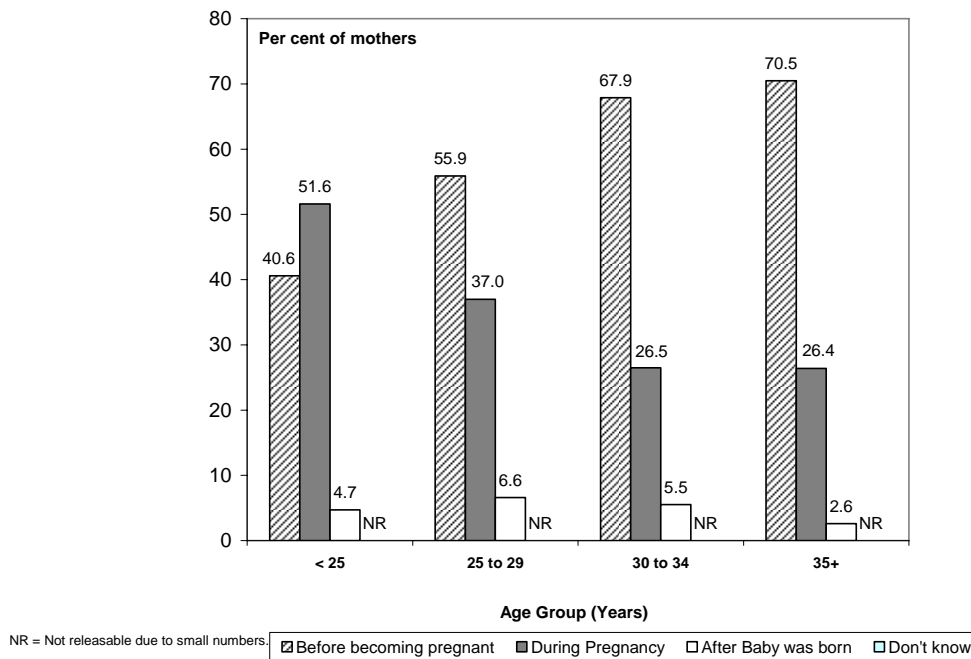
- Canadian-born mothers (13%) were more likely than foreign-born mothers (7% to 9% depending on period of immigration) to breastfeed exclusively for six months.
- Mothers for whom this was their first child (7%) were less likely than those with other children (13%) to breastfeed exclusively for six months, and
- Mothers with a PPST score of 8 or below (11%) were more likely than those with a score of 9 or above (6%) to breastfeed exclusively for six months.



Infant Feeding Decisions

Respondents were asked when they first thought about how they would feed their baby. The majority of respondents (63.3%) thought about it prior to becoming pregnant, 31.2% thought about it during their pregnancy, while 5.1% didn't think about it until after their baby was born. The proportion of respondents who first thought about how they would feed their baby before becoming pregnant increased by age group from 40.6% of those less than 25 years old to 70.5% of those aged 35 years and older (see *Figure 8 below*). Younger mothers less than 25 years of age were most likely to first think about how they would feed their child during pregnancy.

Figure 8: Proportion of Mothers by When They First Thought About How They Would Feed Their Baby and Age Group of Mother, Region of Peel, 2004/05

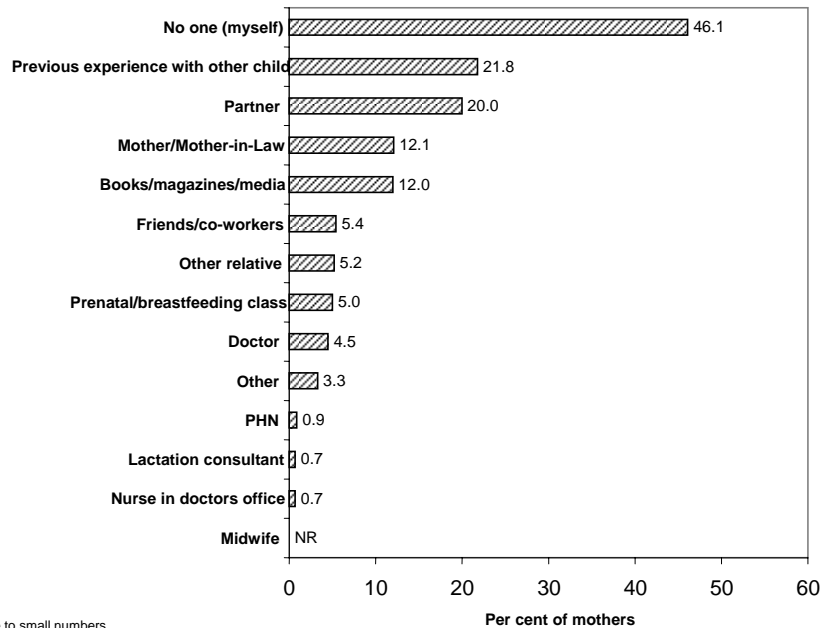


Respondents were then asked who or what helped them with their decision about feeding their baby. They were allowed to provide multiple responses.

A little less than half (46.1%) of respondents reported that no one helped with their decision about feeding their baby (see *Figure 9 on following page*). Approximately one in five respondents indicated that their previous experience with another child (21.8%) or their partner (20.0%) influenced their decision.

Respondent's mothers/mother-in-laws (12.1%) and books/magazines/media (12.0%) were also commonly reported to influence infant feeding decisions.

Figure 9: Proportion of Mothers by Whom or What Helped With Their Decision About Feeding Their Baby, Region of Peel, 2004/05



NR = Not releasable due to small numbers.
 Note: Percentages do not add to 100% due to multiple response options.

The proportion of mothers reporting that their ‘mother/mother-in-law’, ‘books/magazines/media’, their ‘partner’, their ‘prenatal/breastfeeding class’ or ‘other relative’ helped influence them with their decision about feeding their babies varied with selected characteristics of the mother.

Partner

- Foreign-born respondents (24.7%) were more likely to have been influenced by their partners in their decision about feeding their baby than were Canadian-born respondents (14.7%).
- Respondents for whom this was their first child (23.6%) were more likely to be influenced by their partners in their decision about feeding their baby compared to those who have had other children (16.8%).

Mother/mother-in-law

- The proportion of respondents whose ‘mother/mother-in-law’ helped with their decision about feeding their baby decreased across age

groups from 26.6% of those under 25 years of age to 5.7% of mothers aged 35 years and older (*data not shown*).

- Foreign-born respondents (15.2%) were more likely to have been influenced by their mothers or mothers-in-law compared to Canadian-born respondents (8.4%) (*data not shown*).
- Respondents for whom this was their first child (17.8%) were more likely to be influenced by their mothers or mothers-in-law compared to those who have had other children (7.2%) (*data not shown*).

Books/Magazines/Media

- Those with a high school education or less (3.8%) were less likely than respondents who completed higher levels of education to report that books/magazines/media helped them with their decision about feeding their baby (*data not shown*).
- Canadian-born respondents (20.3%) were more likely to have been influenced by books/magazines/media compared to foreign-born respondents (4.7%).
- Respondents for whom this was their first child (16.5%) were more likely to be influenced by books/magazines/media compared to those who have had other children (7.9%)
- The proportion of respondents who reported that 'books/magazines/media' influenced their infant feeding decision was lowest among those with lower household income increasing from 3.1% of those in households earning under \$40,000 to almost one in five (19.9%) of those in households earning \$80,000 and over.

Other relative

- Respondents for whom this was their first child (8.5%) were more likely to report that another relative helped with their decision about feeding their baby compared to those who had had other children (2.1%).

Prenatal / Breastfeeding Class

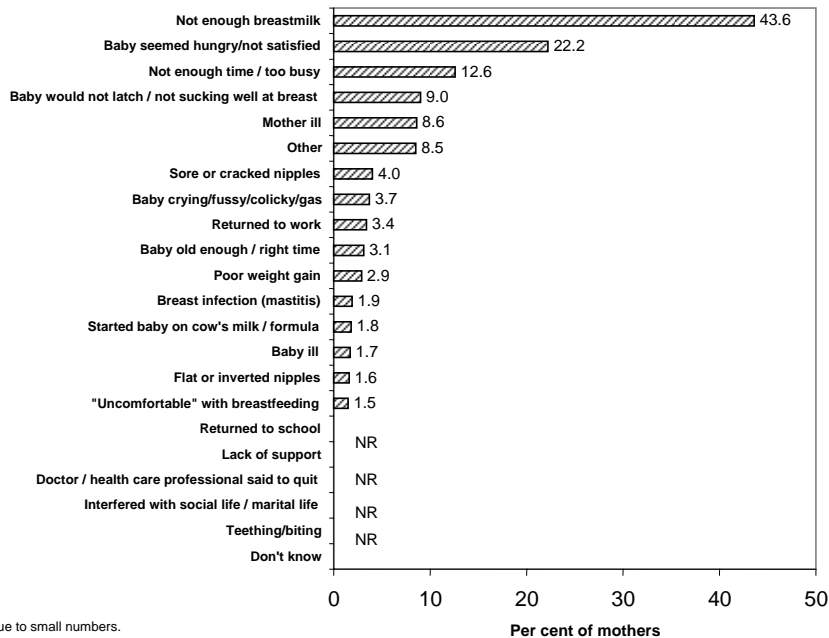
- Canadian-born respondents (7.4%) were more likely to report that their 'prenatal/breastfeeding' class helped their decision about feeding their baby than were Foreign-born respondents (3.0%).

Reasons for Stopping Breastfeeding

Figure 10 (see below) depicts reasons for stopping breastfeeding. The single most commonly reported reason for stopping breastfeeding was 'not having enough breastmilk' (43.6%), followed by 'baby seemed hungry/not satisfied' (22.2%) and 'not enough time/too busy' (12.6%).

An estimated 8.5% of respondents indicated and specified 'other' reasons for stopping breastfeeding. The most common 'other' reason reported was that the 'baby didn't like breastmilk /refused to take the breast or weaned him or herself' reported by an estimated 4.9% of all mothers who had breastfed and stopped. Less common 'other' reasons related to the mother being on medication or going for medial tests as well as frustration, depression, discomfort or fatigue of the mother.

Figure 10: Proportion of Mothers Who Breastfed by Reasons for Stopping by Six-Months Post-Partum, Region of Peel, 2004/05



NR = Not releasable due to small numbers.
 Note: Percentages do not add to 100% due to multiple response options.

Plans to Continue Breastfeeding

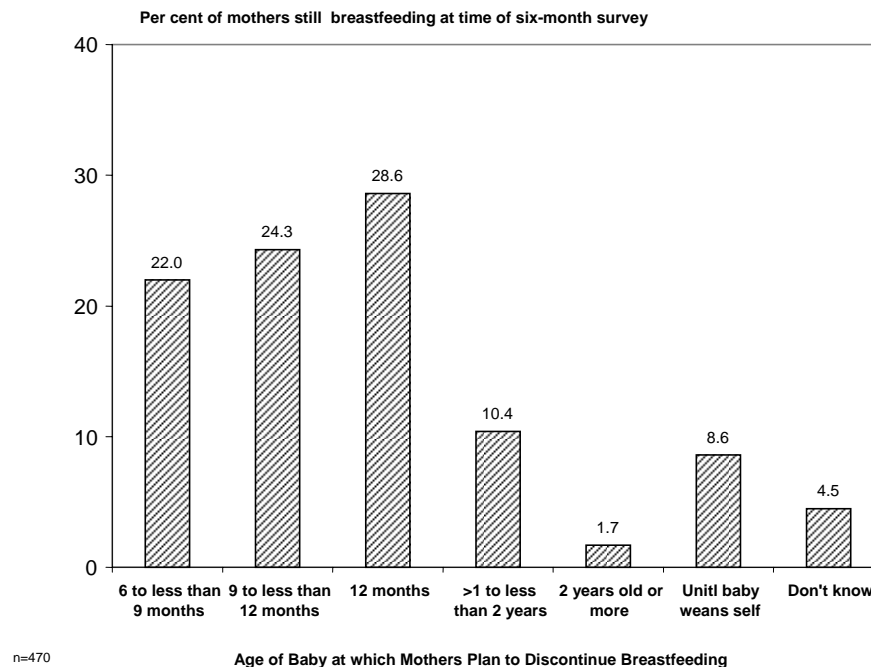
Intended breastfeeding duration has been found to be a strong predictor of actual length of breastfeeding.¹⁰

Mothers who were still breastfeeding at the time of the survey were asked to indicate how long they planned to breastfeed their baby in terms of the age of the baby when they plan to stop.

Almost half (46%) of mothers still breastfeeding at six-months post-partum planned to stop breastfeeding before their child was 12-months old (see *Figure 11 below*). Four in ten mothers (41%) who were still breastfeeding at the time of the survey planned to continue to at least 12 months or more. In addition, about one in 10 (9%) planned to continue breastfeeding until their baby weaned himself or herself.

Among those mothers still breastfeeding at six-months post-partum, those who were born in Canada (24%) were less likely than foreign-born mothers (32%) to plan to continue breastfeeding their baby to 12 months (*data not shown*).

Figure 11: Proportion of Mothers Breastfeeding at Time of Six-Month Survey by Planned Duration of Breastfeeding (Based on Age of Baby), Region of Peel, 2004/05



Return to Work or School

Respondents who breastfed their newborns (currently or formerly) were also asked questions related to returning to work or school; whether they plan to continue breastfeeding when they return to work/school; or if they had already returned, whether they continued to breastfeed. Those who indicated feeding their newborns formula (but had tried to breastfeed) were not asked these questions.

The majority (72%) of mothers who breastfed their newborns had worked outside of the home during this most recent pregnancy. When asked if they were planning to return (or go) to work in the next six months or to school within the next school year, 62% of these mothers indicated that they did indeed plan to return to work/school, 23% did not plan to, 7% had already returned to work/school and the remaining 8% did not know or provide a response.

The vast majority (97%) of mothers who were still breastfeeding at six months and had not yet returned to work, indicated their baby's age when they plan to return to work, while 3% did not know. Responses ranged from 6 months of age to 18 months of age with an average of 11.5 months. Only 28% of these mothers indicated that they planned to continue breastfeeding when they return to work or school, while 62% did not plan to and 10% did not know.

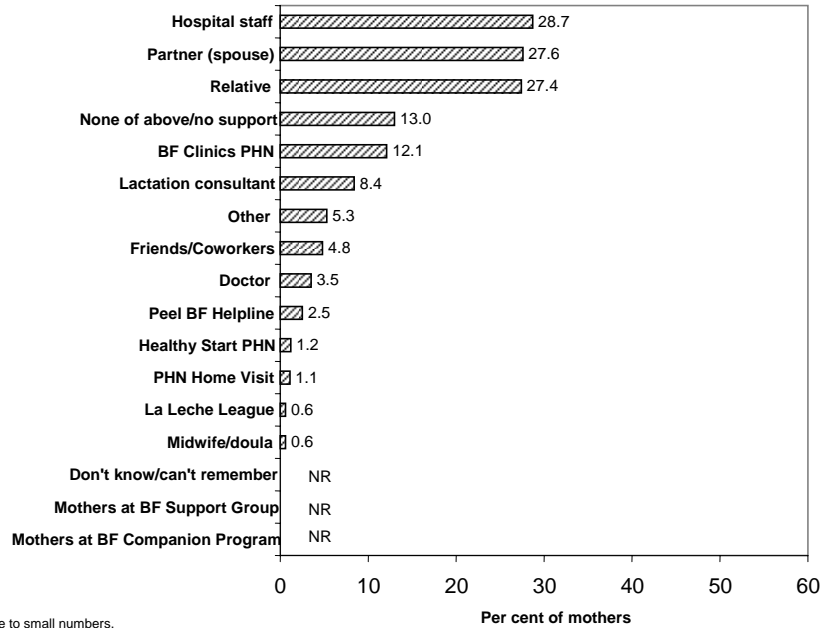
Mothers who had already returned to work at the time of the survey indicated that they returned to work when their baby was between one and six months old, with an average of 3.8 months. Approximately two-thirds (68%) of these mothers continued to breastfeed after returning to work or school.

Breastfeeding Supports and Use of Breastfeeding Resources

Whom or What Gave the Most Support with Breastfeeding

Respondents who had breastfed were asked who or what gave them the most support with breastfeeding. The most commonly reported supports were hospital staff (29%), their partner/spouse (28%) and relatives (27%) (*see Figure 12 on following page*). Approximately 13% reported that none of the listed people or services provided them with the most support.

Figure 12: Proportion of Mothers by Whom or What Gave Them the Most Support with Breastfeeding, Region of Peel, 2004/05



The proportion of mothers reporting that ‘hospital staff’, ‘breastfeeding clinics Public Health Nurses’, ‘their partner/spouse’, ‘other relative’, a ‘lactation consultant’ or their ‘friends/coworkers’ gave them the most support with breastfeeding varied with selected characteristics of the mother (*data not shown*).

Hospital staff

- The proportion of respondents indicated that ‘hospital staff’ gave them the most support with breastfeeding was higher among Mississauga mothers (33.1%) compared to Brampton mothers (21.0%).

Breastfeeding Clinic’s Public Health Nurses

- The proportion of respondents indicated that ‘Breastfeeding clinic’s Public Health Nurses’ gave them the most support with breastfeeding was higher among Brampton mothers (17.9%) compared to Mississauga mothers (9.1%).
- Canadian-born respondents (15.2%) were more likely to report that ‘breastfeeding clinic’s public health nurses’ gave them the most support with breastfeeding compared to foreign-born respondents (9.8%).

- Mothers with PPST scores of 9 or above (16.9%) were more likely to report having received the most support from 'breastfeeding clinic's public health nurses' compared to those who had scores of 8 or below (10.8%).
- The proportion of respondents reporting that 'breastfeeding clinic public health nurses' gave them the most support in breastfeeding increased across income categories from 9.6% of those with household incomes of less than \$40,000 to 14.6% of those with incomes of \$80,000 and over. However, this increase was not statistically significant.

Partner/spouse

- Respondents who were born in Canada (23.8%) were less likely than foreign-born respondents (30.4%) to report that their spouse/partner gave them the most support in breastfeeding.
- Those who immigrated to Canada 11 or more years ago (24.1%) were less likely than those who immigrated 6 to 10 years ago (39.2%) to report that their partner/spouse gave them the most support with breastfeeding.

Other relative

- The proportion of respondents whose 'other relatives' gave them the most support in breastfeeding decreased across age groups from 46.2% of those under 25 years of age to 20.8% of mothers aged 35 years and older (*data not shown*). The proportion of respondents reporting that 'other relatives' gave them the most support in breastfeeding was significantly lower among those with household incomes of \$80,000 and over (22.4%) compared to those with incomes of \$40,000 to \$79,999 (31%).

Lactation consultant

- Respondents whose household incomes were in the \$40,000 to \$79,999 range (5.8%) were less likely than those with household incomes of \$80,000 and over (15.4%) to report that a lactation consultant gave them the most support with breastfeeding. Estimates for the lowest income category could not be released due to small numbers.
- Canadian-born respondents (11.2%) were more likely than foreign-born ones (6.1%) to report that 'lactation consultants' gave them the most support with breastfeeding.

- Respondents for whom this was their first child (10.9%) were more likely than other respondents (6.1%) to report that 'lactation consultants' gave them the most support with breastfeeding.

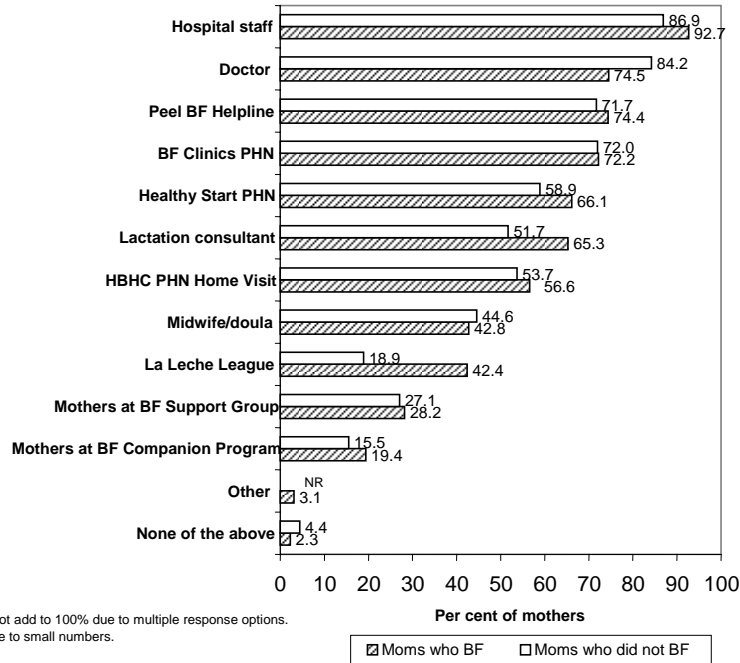
Friends/coworkers

- Canadian-born respondents (7.4%) were more likely than foreign-born respondents (2.6%) to report that their 'friends/coworkers' gave them the most support with breastfeeding.

Awareness of Breastfeeding Services by Mother's Breastfeeding Status

The most commonly reported breastfeeding services/resources about which mothers were aware were hospital staff, doctors, Peel Breastfeeding Helpline, and Breastfeeding Clinic's Public Health Nurses (*see Figure 13 on following page*). Awareness of four selected breastfeeding services varied between mothers who breastfed and those who did not. Mothers who had breastfed their infants were more likely to be aware of hospital staff (92.7%), lactation consultants (65.3%) and the La Leche League (42.4%) compared to mothers who had not breastfed their infants (86.9%, 51.7% and 18.9% respectively). In contrast, mothers who did not breastfeed their child were more likely to be aware of 'doctors' as a service (84.2%) compared to those who breastfed (74.5%). Awareness of the remaining services was comparable between both groups of mothers.

Figure 13: Proportion of Mothers Who Were Aware of Selected Breastfeeding Services by Breastfeeding Status, Region of Peel, 2004/05



Awareness of Breastfeeding Services – Among Mothers Who Breastfed

The proportion of mothers reporting that they were aware of each of these selected breastfeeding services varied with selected characteristics of the mother as follows (*data not shown*):

Hospital staff

- The proportion of respondents indicating that they were aware of ‘hospital staff’ as a breastfeeding support service was significantly higher among Canadian-born respondents (97.1%) compared to those who were foreign-born (89.0%).
- Awareness of ‘hospital staff’ as breastfeeding support increased across income categories, from 88.9% of those with household incomes of less than \$40,000 to 95.8% of those with incomes of \$80,000 and over.

Doctor

- The proportion of respondents indicated that they were aware of ‘doctors’ as a breastfeeding support service was significantly higher among Canadian-born respondents (82.5%) compared to those who were foreign-born (68.0%).

- Among foreign-born survey respondents, awareness of 'doctors' as a breastfeeding support increased significantly with time since immigration, from 61.3% of those who immigrated 1 to 5 years ago to 75.3% of those who immigrated 11 or more years ago.
- Awareness of 'doctors' as breastfeeding support increased across income categories, from 64.7% of those with household incomes of less than \$40,000 to 72.4% of those with incomes of \$80,000 and over.
- Mothers with PPST scores of 9 or above (64.2%) were less likely to be aware of 'doctors' as a breastfeeding support compared to those who had scores of 8 or below (77.3%).
- The proportion of respondents who were aware of 'doctors' as a breastfeeding resource increased, although not significantly, from 65.4% of those less than 25 years old to 77.7% of those aged 35 years and older.

Peel Breastfeeding Helpline Telephone Contact

- The proportion of respondents indicating that they were aware of the 'Peel Breastfeeding Helpline telephone contact' as a breastfeeding support service was significantly higher among Canadian-born respondents (80.7%) compared to those who were foreign-born (69.2%).
- Among foreign-born survey respondents, awareness of 'Peel Breastfeeding Helpline telephone contact' as a breastfeeding support increased significantly with time since immigration, from 61.9% of those who immigrated 1 to 5 years ago to 78.9% of those who immigrated 11 or more years ago.
- Awareness of the 'Peel Breastfeeding Helpline telephone contact' as breastfeeding support increased across income categories from 64.4% of those with household incomes of less than \$40,000 to 79.9% of those with incomes of \$80,000 and over.
- The proportion of respondents who were aware of the 'Peel Breastfeeding Helpline telephone contact' as a breastfeeding resource increased from 61.5% of those less than 25 years old to 79.7% of those aged 35 years and older.
- Awareness of the 'Peel Breastfeeding Helpline telephone contact' generally increased with educational attainment from, 69.5% of respondents who completed high school or less to 74.5% of those who completed university.

Breastfeeding Clinic Public Health Nurse

- The proportion of respondents indicating that they were aware of 'Breastfeeding Clinic Public Health Nurses' as a breastfeeding support service was significantly higher among Canadian-born

respondents (82.5%) compared to those who were foreign-born (63.8%).

- Among foreign-born survey respondents, awareness of 'Breastfeeding Clinic Public Health Nurses' as a breastfeeding support increased significantly with time since immigration, from 50.6% of those who immigrated 1 to 5 years ago to 75.3% of those who immigrated 11 or more years ago.
- Respondents with household incomes of less than \$40,000 (62.2%) were less likely than those from households in the higher income categories to be aware of the 'Breastfeeding Clinics Public Health Nurses' as a breastfeeding support.

Healthy Start Public Health Nurse

- Awareness of 'Healthy Start Public Health Nurses' as a breastfeeding support service was significantly higher among Canadian-born respondents (73.4%) compared to those who were foreign-born (60.0%).

Lactation Consultant

- The proportion of respondents indicating that they were aware of 'lactation consultants' as a breastfeeding support service was significantly higher among Canadian-born respondents (83.7%) compared to those who were foreign-born (50.2%).
- Among foreign-born survey respondents, awareness of 'lactation consultants' as a breastfeeding support increased significantly with time since immigration, from 38.1% of those who immigrated 1 to 5 years ago to 66.9% of those who immigrated 11 or more years ago.
- Awareness of 'lactation consultants' as breastfeeding support increased across income categories, from 45.2% of those with household incomes of less than \$40,000 to 84.2% of those with incomes of \$80,000 and over.
- The proportion of respondents who were aware of 'lactation consultants' as a breastfeeding resource increased from 42.3% of those less than 25 years old to 70.4% of those aged 35 years and older.
- Awareness of 'lactation consultants' was higher among respondents who were married, common-law or living with their partner (66.3%), compared to those who were single, separated or divorced (45.0%).
- Awareness of 'lactation consultants' increased with increased level of educational attainment, from 42.6% of respondents who completed high school or less to 71.8% of those who completed university.

- Awareness of 'lactation consultants' was significantly higher among respondents who live in Mississauga (67.1%) compared to Brampton (59.7%); however, this difference was primarily due to differences between those who completed trade school or college in Mississauga compared to Brampton.

HBHC PHN Home Visit

- Awareness of home visits by a 'HBHC Public Health Nurse' as a breastfeeding support was higher among those who were Canadian-born (63.6%) compared to foreign-born respondents (50.7%).

Midwife/Doula

- The proportion of respondents indicating that they were aware of 'midwives/doulas' as a breastfeeding support service was significantly higher among Canadian-born respondents (55.3%) compared to those who were foreign-born (32.5%).
- Among foreign-born survey respondents, awareness of 'midwives/doulas' as a breastfeeding support increased significantly with time since immigration, from 24.4% of those who immigrated 1 to 5 years ago to 41.0% of those who immigrated 11 or more years ago.
- Awareness of midwives/doulas as breastfeeding support increased across income categories, from 27.4% of those with household incomes of less than \$40,000 to 55.8% of those with incomes of \$80,000 and over.
- Awareness of midwives/doulas increased with increased level of educational attainment, from 31.2% of respondents who completed high school or less to 46.0% of those who completed university.

La Leche League

- The proportion of respondents indicating that they were aware of the 'La Leche League' as a breastfeeding support service was significantly higher among Canadian-born respondents (65.9%) compared to those who were foreign-born (23.4%).
- Among foreign-born survey respondents, awareness of the 'La Leche League' as a breastfeeding support increased significantly with time since immigration, from 13.8% of those who immigrated 1 to 5 years ago to 32.5% of those who immigrated 11 or more years ago.
- Awareness of the 'La Leche League' as breastfeeding support increased across income categories, from 14.7% of those with

household incomes of less than \$40,000 to 65.0% of those with incomes of \$80,000 and over.

- The proportion of respondents who were aware of the 'La Leche League' as a breastfeeding resource increased from 15.4% of those less than 25 years old to 45.3% of those aged 35 years and older.
- Awareness of the 'La Leche League' was higher among respondents who were married, common-law or living with their partner (43.9%), compared to those who were single, separated or divorced (15.0%).
- Awareness of the 'La Leche League' increased with increased level of educational attainment from, 20.7% of respondents who completed high school or less to 52.3% of those who completed university.

Mothers at Breastfeeding Support Group

- Among foreign-born survey respondents, awareness of 'mothers at breastfeeding support group' as a breastfeeding support increased significantly with time since immigration, from 20.0% of those who immigrated 1 to 5 years ago to 30.7% of those who immigrated 11 or more years ago.
- Awareness of mothers at breastfeeding support group was lower among respondents who were married, common-law or living with their partner (27.5%), compared to those who were single, separated or divorced (42.5%).

Awareness of Breastfeeding Services – Among Mothers Who Did Not Breastfeed

The proportion of mothers who did not breastfeed and who reported that they were aware of selected breastfeeding services varied with selected characteristics of the mother as follows:

Doctor

- The proportion of respondents indicating that they were aware of 'doctors' as a breastfeeding support service was significantly higher among Canadian-born respondents (91.4%) compared to those who were foreign-born (75.6%).

Peel Breastfeeding Helpline Telephone Contact (Health Line Peel / Peel Breastfeeding Helpline telephone contact / 2nd Tier Breastfeeding Help Line

- The proportion of respondents indicating that they were aware of the 'Health Line Peel / Peel Breastfeeding Helpline telephone contact / 2nd

Tier Breastfeeding Help Line' as breastfeeding support service was significantly higher among Canadian-born respondents (79.7%) compared to those who were foreign-born (60.0%).

Breastfeeding Clinic Public Health Nurse

- The proportion of respondents indicating that they were aware of 'Breastfeeding Clinic Public Health Nurses' as a breastfeeding support service was significantly higher among Canadian-born respondents (83.1%) compared to those who were foreign-born (57.8%).

Lactation Consultant

- The proportion of respondents indicating that they were aware of 'lactation consultants' as a support service was significantly higher among Canadian-born respondents (62.7%) compared to those who were foreign-born (37.8%).
- Awareness of 'lactation consultants' increased with increased level of educational attainment, from 40.4% of respondents who completed some post-secondary or high school or less to 64.7% of those who completed trade school, college or university.
- Awareness of 'lactation consultants' was significantly higher among respondents who live in Mississauga (61.9%) compared to Brampton (40.7%).

Midwife/Doula

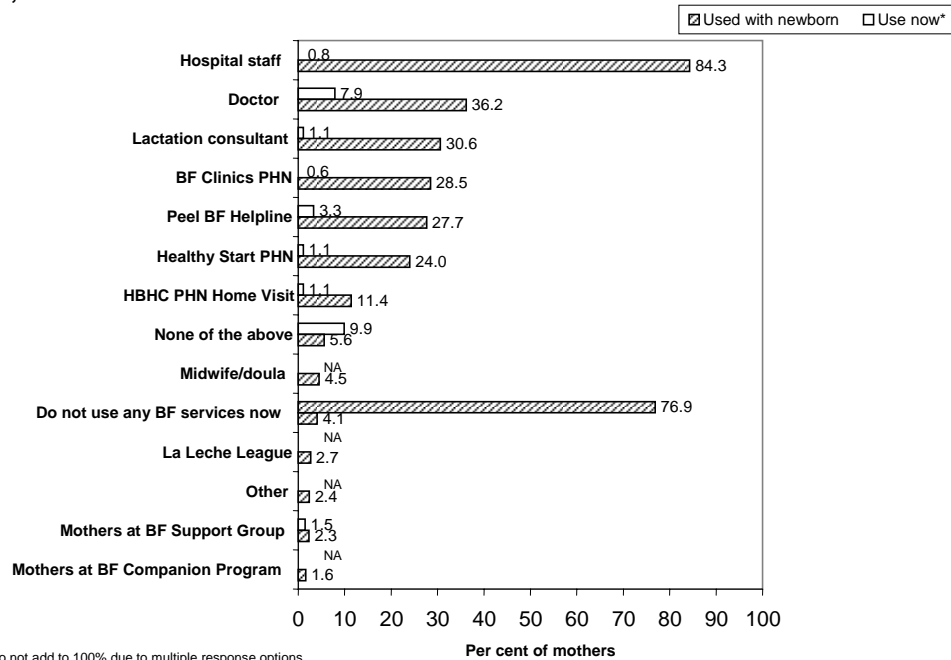
- Awareness of 'midwife/doula' increased with increased level of educational attainment, from 36.0% of respondents who completed some post-secondary or high school or less to 52.9% of those who completed trade school, college or university.

Use of Breastfeeding Resources/Services Among Mothers Who Breastfed

Respondents who had breastfed their newborn were then asked to indicate which breastfeeding services they used with their newborn and which they were still currently using at the time of the six-month survey.

The majority of respondents (84.3%) reported that they used hospital staff as breastfeeding services with their newborn (*see Figure 14 on following page*). The second most common breastfeeding service reportedly used with newborns was 'doctor' (36.2%), followed by 'lactation consultant' (30.6%), Breastfeeding Clinic PHN (28.5%), Peel Breastfeeding Helpline (27.7%), Healthy Start PHN (24.0%) and Healthy Babies Healthy Children PHN (11.4%). The remaining services were less commonly used.

Figure 14: Proportion of Mothers Who Used Selected Breastfeeding Services, Region of Peel, 2004/05



At six months post-partum, most (76.9%) respondents were not using any breastfeeding services. However, 7.9% reported using ‘doctors’, 3.3% the ‘Peel Breastfeeding Helpline’, and 1.5% used ‘Mothers at Breastfeeding Support Group’. Only an estimated 1% to 2% used breastfeeding services such as lactation consultant, Healthy Start PHN, HBHC PHN Home Visit, hospital staff or Breastfeeding Clinics PHNs.

Hospital staff

- Respondents who resided in Mississauga (87.4%) were more likely than those who resided in Brampton (78.6%) to report using hospital staff as a breastfeeding service with their newborn.
- The proportion of respondents indicating that they used hospital staff as a breastfeeding service with their newborn was significantly higher among Canadian-born respondents (88.3%) compared to those who were foreign-born (81.1%).
- Among respondents who immigrated to Canada, the proportion who used hospital staff as a service with their newborn was significantly higher for recent immigrants (86.9% of those who immigrated 1 to 5 years before) compared to those who immigrated 11 or more year before (77.1%).

- Respondents for whom this was their first child (91.8%) were more likely to use hospital staff as a breastfeeding service with their newborn than were those who had at least one child previously (77.6%).

Breastfeeding Clinics Public Health Nurse

- Respondents who lived in Brampton (33.7%) were more likely than those who lived in Mississauga (25.2%) to report using Breastfeeding Clinics PHNs as a breastfeeding service with their newborn.
- Respondents with a household income of less than \$40,000 were less likely than those in the higher income categories to use a breastfeeding clinic PHN with their newborn.
- Respondents who were Canadian-born (33.0%) were more likely than those who were foreign-born (24.8%) to report using a breastfeeding clinic PHN with their newborn.
- Respondents for whom this was their first child (34.3%) were more likely to use a Breastfeeding Clinic PHN with their newborn compared to those who had a child previously (23.4%).
- Respondents with a PPST score of 9 or above (37.3%) were more likely to use a breastfeeding clinic PHN with their newborn compared to those with a score of 8 or below (26.0%).

Healthy Start Public Health Nurse

- Respondents aged less than 25 years (9.6%) were less likely than other age groups to report using a Healthy Start PHN as a breastfeeding service with their newborn.
- Use of Healthy Start PHNs with their newborn generally increased with education, from 16.7% of those with some post-secondary education to 28.8% of those who completed university. An exception was among those with a high school education or less of whom 21.3% used this service.

Doctor

- Respondents for whom this was their first child (40.1%) were more likely than those who had had a child previously (32.8%) to use a doctor as a breastfeeding service with their newborn.

Lactation Consultant

- Mississauga respondents (33.7%) were more likely than Brampton respondents (24.5%) to use a lactation consultant with their newborn.

- Use of lactation consultants with their newborns was generally lowest in respondents under 25 years of age (17.3%) compared to the other age groups.
- Use of a lactation consultant with their newborn increased with education from 16.4% of those who completed high school or less to 35.1% of those who completed university.
- Respondents who were married/common-law/living with their partners (31.4%) were more likely than those who were single/separated/divorced (15.0%) to use a lactation consultant with their newborn.
- Use of a lactation consultant with their newborn increased with income from 20.7% of those with a household income of less than \$40,000 to 42.3% of those with a household income of \$80,000 or more.
- Respondents who were Canadian-born (41.5%) were more likely than those who were foreign-born (21.7%) to report having used a lactation consultant with their newborn.
- Among immigrant mothers, those who immigrated 11 or more years before (28.9%) were more likely than those who immigrated more recently to use a lactation consultant.
- Respondents for whom this was their first child (41.7%) were more likely to use a lactation consultant with their newborn compared to those who had a child previously (20.7%).
- Respondents with a PPST score of 9 or above (37.0%) were more likely than those with a score of 8 or below (28.9%) to use a lactation consultant with their newborn.

Peel Breastfeeding Helpline Telephone Contact

- Respondents for whom this was their first child (34.2%) were more likely to use the Peel Breastfeeding Helpline with their newborn than were those who had previously had a child (21.9%).

Healthy Babies Healthy Children PHN home visit

- Respondents with a household income of under \$40,000 in the previous year (20.6%), were more likely than those in the higher income categories to use a HBHC PHN home visit with their newborn.
- The proportion of respondents indicating that they used a HBHC PHN home visit as a breastfeeding service with their newborn was significantly higher among foreign-born respondents (14.5%) compared to those who were Canadian-born (7.5%).
- Respondents with a PPST score of 9 or above (18.2%) were more likely to use an HBHC PHN home visit with their newborn compared to those with a PPST score of 8 or below (9.6%).

La Leche League

- Canadian-born respondents (4.6%) were more likely than foreign-born ones (1.2%) to report having used La Leche League as a breastfeeding service with their newborn.

Any Other

- Brampton respondents (4.0%) were more likely than Mississauga respondents (1.6%) to report using 'any other' breastfeeding services with their newborn.
- Respondents for whom this was their first child (3.6%) were more likely to use 'any other' breastfeeding service than those who had had a child previously (1.2%)

None of the Service Options Listed

- Respondents living in Brampton (9.1%) were more likely than those in Mississauga (4.3%) to report using none of the services listed with their newborn.
- Foreign-born respondents (7.2%) were more likely than those who were Canadian-born (3.7%) to report not having used any of the breastfeeding services listed.
- Respondents who had previously had a child (9.0%) were more likely to not use any of the services listed than those for whom this was their first child (1.6%).

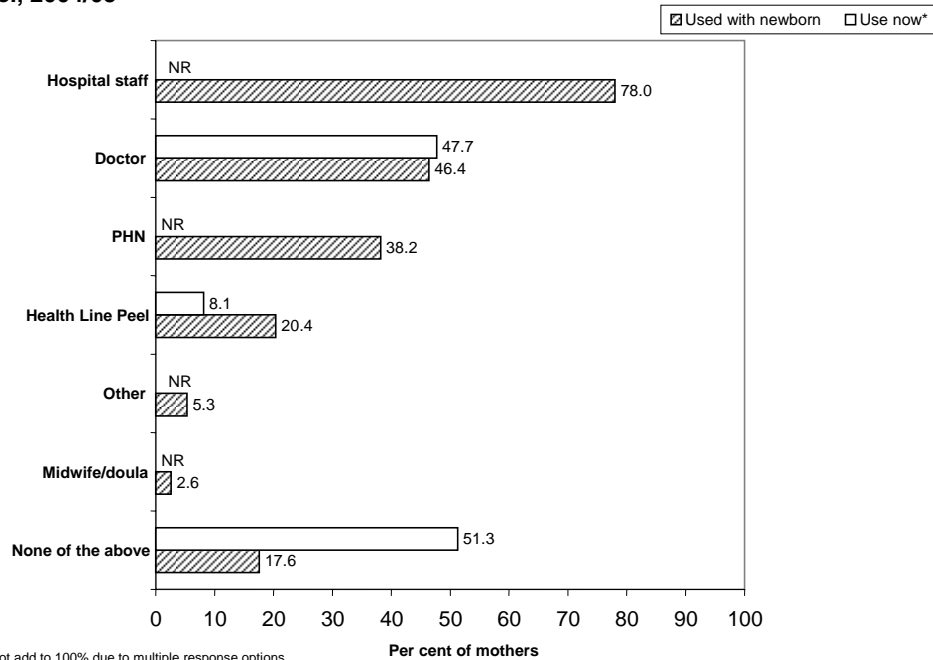
Use of Resources/Services Among Mothers Who Did Not Breastfeed

Respondents who had not breastfed their newborn were also asked to indicate which services they used with their newborn and which they were still currently using at the time of the six-month survey.

The majority of respondents (78.0%) reported that they used hospital staff with their newborn (see *Figure 15 on following page*). The second most commonly reported service used with newborns was 'doctor' (46.4%) followed by 'Health Line Peel' (8.1%). Almost one-in-five respondents (17.6%) indicated that they did not use any of the mentioned services with their newborn.

At the time of the six-month post-partum survey, more than half (51.3%) of respondents indicated that they did not use any of the mentioned services, while 47.7% indicated using a doctor and 8.1% Health Line Peel. Due to small numbers, estimates of the use of the remaining services could not be reported for mothers who did not breastfeed their infant.

Figure 15: Proportion of Mothers Who Did Not Breastfeed by Use of Selected Services with Newborn and at Six-Months Post-Partum, Region of Peel, 2004/05



Comfort with Breastfeeding in Selected Environments

There are a number of factors that influence duration of breastfeeding such as supportive practices and written breastfeeding policies at health care institutions, as well as education and support for parents by health professionals and educators. Supportive environments for breastfeeding in the community and workplace are also an important measure aimed at improving breastfeeding duration.¹¹

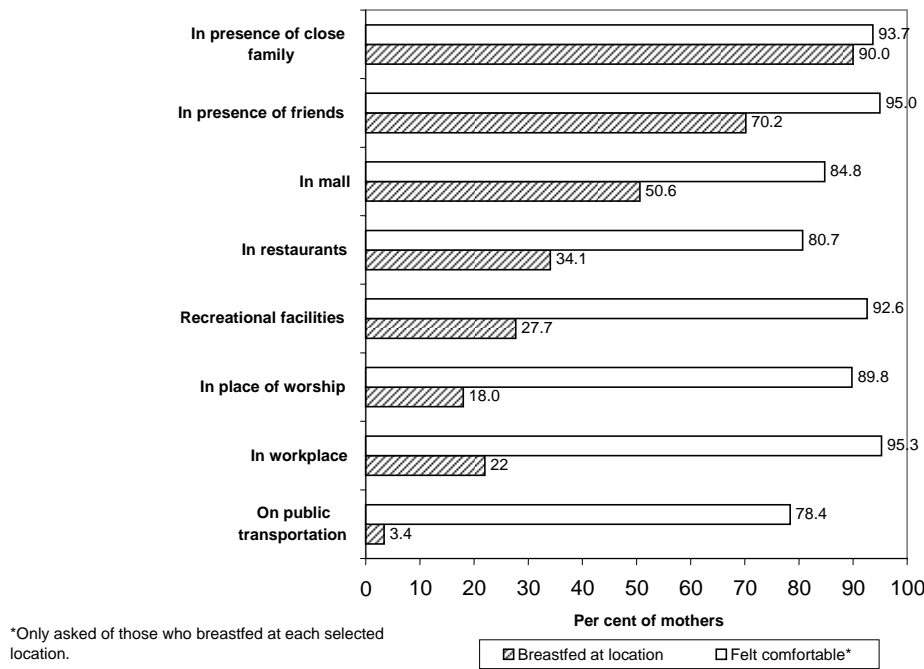
According to the Rapid Risk Factor Surveillance System, in 2004, 58% of Peel residents thought that it was acceptable for a mother to breastfeed her baby while in a restaurant and 26% thought it to be acceptable while in a shopping mall. Attitudes toward breastfeeding in these public settings varied by sex and age group. A larger proportion of males than females felt that breastfeeding was acceptable in restaurants or shopping malls (data not shown). Peel residents aged 25 to 44 years were more likely to feel that breastfeeding in both settings is acceptable than were other age groups (data not shown).¹²

Respondents who breastfed were asked to identify selected environments in which they breastfed their babies. Such environments included not only specific locations, but also in the presence of certain people. If they did indeed report having breastfed at selected locations, they were then asked whether they felt comfortable breastfeeding in those environments.

Nine out of 10 mothers (90%) reported breastfeeding in the presence of close family. Of those who did, 94% felt comfortable doing so (*see Figure 16 on following page*). Although a smaller proportion of mothers (seven out of 10 mothers or 70%) breastfed in the presence of friends, the vast majority of them (95%) also felt comfortable doing so.

In addition to this, the next most commonly reported places in which mothers breastfed were: in malls (51%), in restaurants (34%), in or at recreational facilities (28%), in places of worship (18%), in the workplace (22%) and on public transportation (3%). Although breastfeeding in these places was much less commonly reported, this may be explained, in part, due to the fact that mothers may not have all visited these locations during their pregnancy. Mothers who breastfed in these locations, reported relatively high comfort levels ranging from 78% to 95%.

Figure 16: Proportion of Mothers Who Breastfed in Selected Environments and Whether They Felt Comfortable, Region of Peel, 2004/05



Whether a mother reported breastfeeding in selected environments varied with a number of characteristics including: municipality of residence; age group of mother; highest level of education completed; household income; country of birth of mother; and whether it was the mother’s first child or not. These differences include:

- Mississauga mothers (15%) were less likely than Brampton mothers (24%) to have breastfed in a place of worship. They were also less likely to have breastfed in the presence of friends (Mississauga: 67% vs. Brampton 75%).
- Mothers less than 25 years of age (37%) were less likely to have breastfed their baby in a mall compared to older age groups (52%). These younger mothers (54%) were also less likely to have breastfed in the presence of friends compared to those aged 25 years and older (71%).
- Having breastfed in restaurants increased with age group from 15% of mothers less than 25 years old to 40% of those aged 35 years and older. Similarly, having breastfed in recreational facilities also increase with age

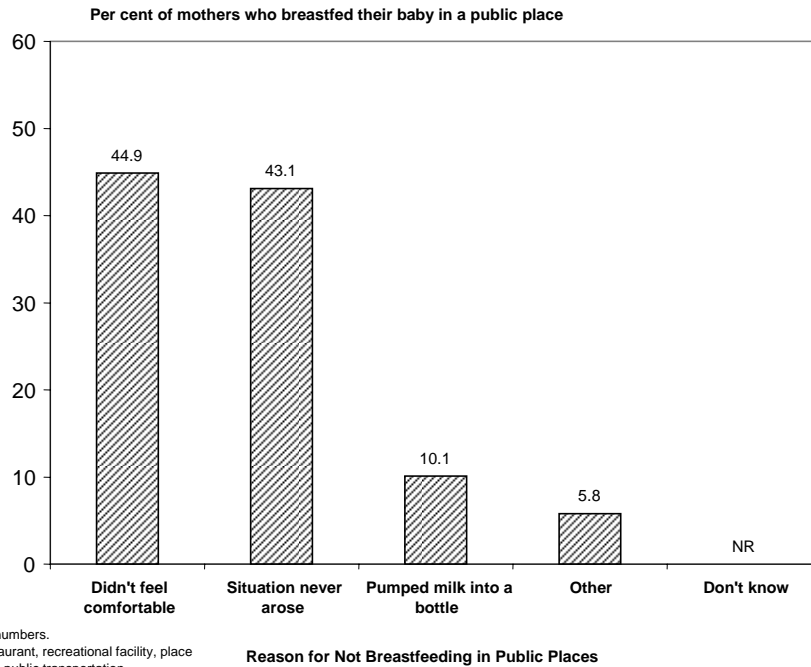
- group from 14% of those less than 25 years of age to 32% of those aged 35 years and older.
- Mothers with a high school education or less were generally least likely to have breastfed in malls, restaurants, recreational facilities, workplaces and in the presence of close family or friends compared to mothers who were more educated (data not shown).
 - Having breastfed their baby in a mall increased with household income category from 38% of those with incomes of less than \$40,000 to 60% of those with incomes of \$80,000 and over.
 - Mothers who were Canadian-born were more likely than foreign-born mothers to have breastfed in a mall (56% vs. 46%), in restaurants (44% vs. 26%), in or at recreational facilities (36% vs. 21%), in the workplace (25% vs. 19%), in the presence of close family (94% vs. 87%) and in the presence of friends (83% vs. 60%).
 - Mothers for whom this was their first child were less likely than those who had other children to have breastfed their baby in a mall (46% vs. 55%), in restaurants (26% vs. 41%), in or at recreational facilities (23% vs. 32%), in places of worship (14% vs. 22%), in the workplace (21% vs. 22%) and in the presence of close friends (65% vs. 75%).

Reasons for Not Breastfeeding in Public Places

Respondents who did not report having breastfed in a mall, restaurant, recreational facility, place of worship, the workplace or on public transportation were then asked to indicate why they did not breastfeed in such a public place.

The most commonly reported reason was that they did not feel comfortable (45%), followed by 'the situation never arose' (43%) and that they pumped milk so they could feed the baby by bottle (10%) (see *Figure 17 on following page*). Six per cent of mothers reported 'other' reasons including that they fed their baby formula/bottle when in public, because the baby would be distracted in public places, and not wanting others to feel uncomfortable, or due to illness.

Figure 17: Proportion of Mothers Who Did Not Breastfeed Their Baby in Public Places* by Reason, Region of Peel, 2004/05



n=279
 NR=Not releasable due to small numbers.
 *Public place such as a mall, restaurant, recreational facility, place of worship, in the workplace or on public transportation.

Respondents who were born in a country other than Canada (50%) were more likely to report not breastfeeding in public places because they didn't feel comfortable compared to Canadian-born mothers (38%).

12-MONTH POST-PARTUM SURVEY RESULTS

The following results pertain to the 12-Month Post-Partum Survey which included mothers who were still breastfeeding at the time of the six-month survey.

Method of Breastfeeding at 12-Months Post Partum

A total of 14% of the 400 mothers who completed the survey fed their 12-month-olds breastmilk alone while 35% fed them a combination of breastmilk and formula or cow's milk. Therefore, almost half (49%) of mothers who were still breastfeeding at six months were continuing to breastfeed to at least 12 months post-partum. In addition, 29% of respondents fed their 12-month-olds formula, 20% fed them cow's milk, and 3% fed them something else primarily identified as a combination of formula and either cow's or goat's milk. The proportion of mothers who reported feeding their 12-month-olds any of these types of 'milk' did not differ by age group (*data not shown*).

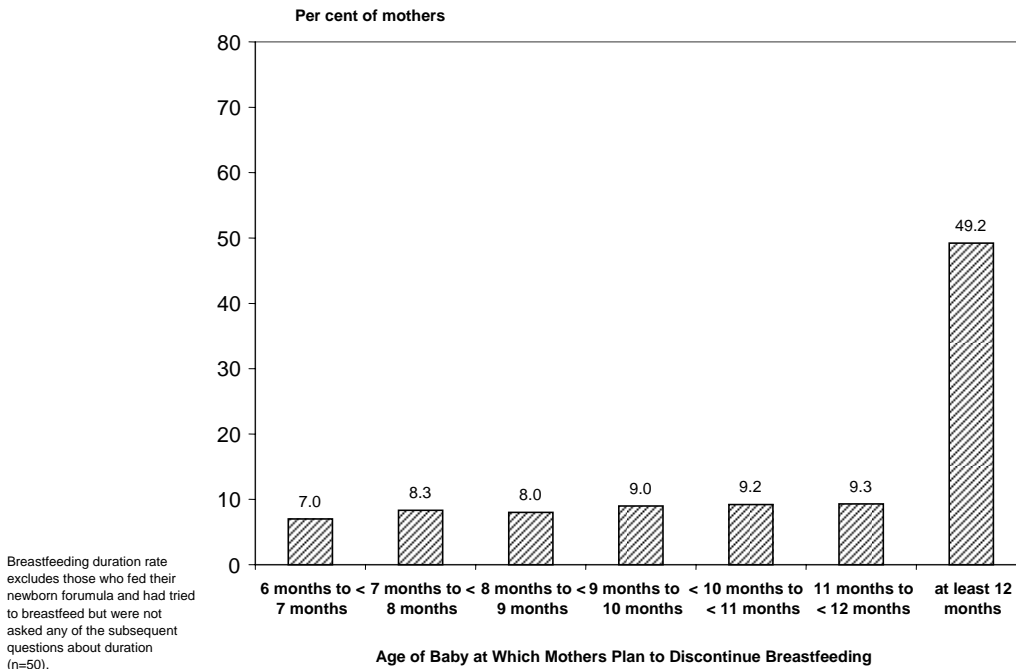
Among mothers surveyed at 12 months (i.e. those who were still breastfeeding at six months), the method of feeding their baby at the time of the survey (in terms of what kind of milk they were feeding them) did not vary significantly by demographic characteristics (*data not shown*).

Breastfeeding Duration at 12 Months Post-Partum

The 12-month breastfeeding duration rate, of 49%, presented here was calculated by comparing the number of women who breastfed their babies for 12 months or longer to the total number of women who were still breastfeeding at six months and who participated in the 12-month survey.

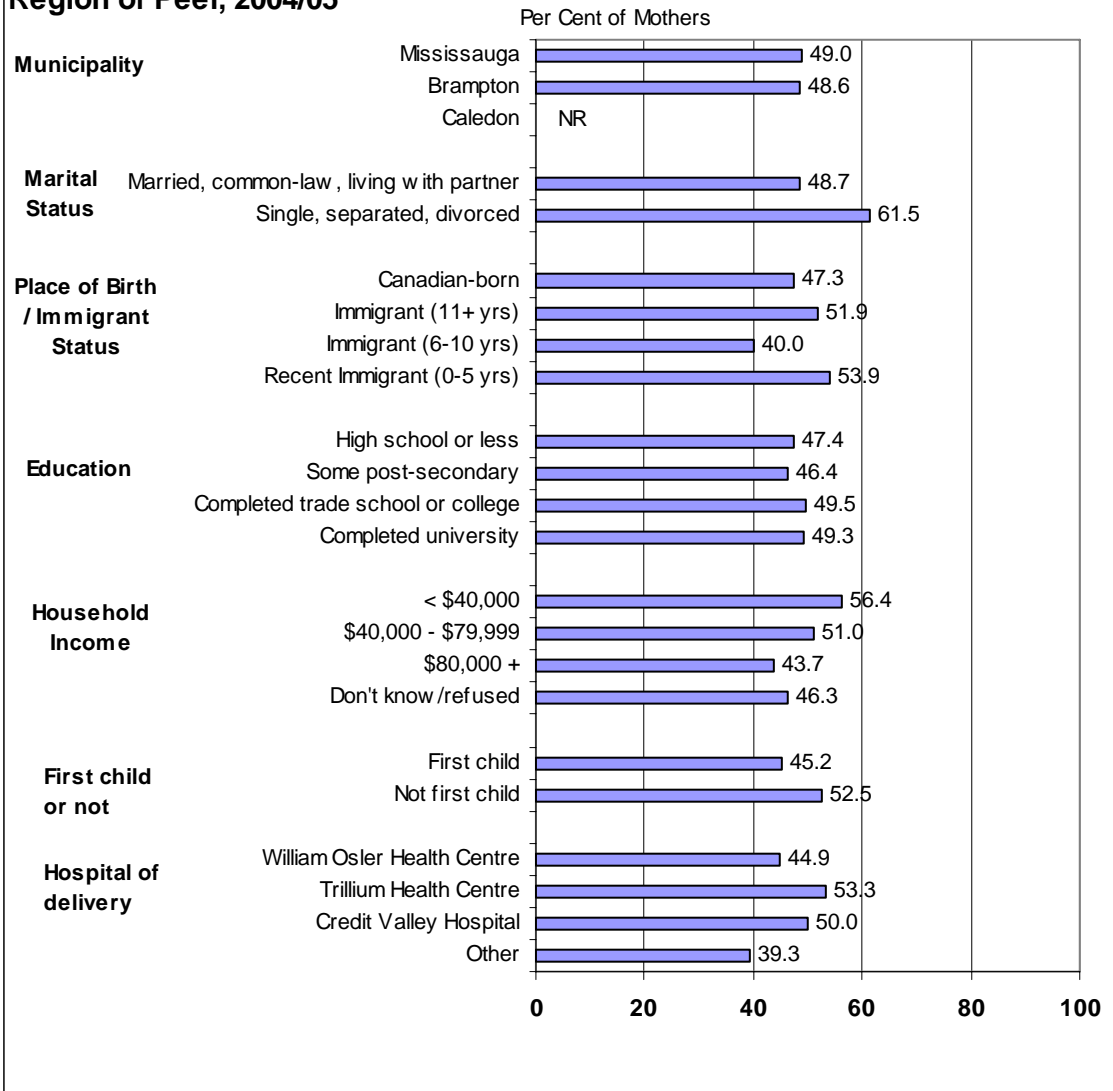
Mothers who had breastfed but stopped prior to the time of the survey, were asked how old their baby was when they stopped. In 2004/05 the duration of continued breastfeeding for mothers who breastfed to six-months post-partum was similarly distributed across the monthly intervals between six- and 11-months post-partum (*see Figure 18 on following page*).

Figure 18: Proportion of Mothers Still Breastfeeding at Six Months by Duration of Breastfeeding at 12-Months Post-Partum Survey Region of Peel, 2004/05



The 12-month breastfeeding duration rate for those mothers who were still breastfeeding at 6-months post-partum were similar within each demographic characteristic collected (see Figure 19 on following page). Any apparent differences depicted in Figure 19 are not statistically significant.

Figure 19
Proportion of Mothers Who Breastfed at Six Months Who
Continued to Breastfeed Their Babies Until at Least 12 Months
by Selected Characteristics of Mother,
Region of Peel, 2004/05

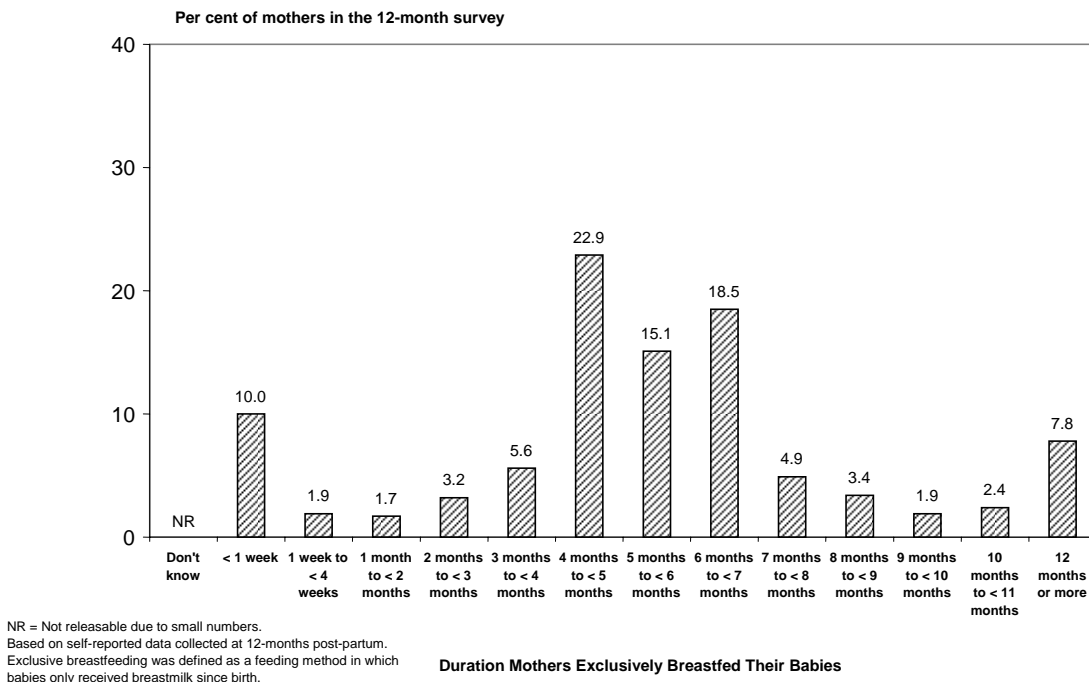


Duration of Exclusive Breastfeeding

Mothers who reported feeding breastmilk alone to their baby, as opposed to a combination of breastmilk and formula/cow's milk, were asked if their baby had received only breastmilk since birth. This was to determine breastfeeding exclusivity. Figure 20 (see below) shows the proportion of respondents by duration of exclusive breastfeeding. Of the mothers who were still breastfeeding at six-months post-partum, 8% were reportedly still exclusively breastfeeding at the time of the 12-month survey, although this is not recommended as infants require solid food to be introduced at the age of six months.¹³ Most mothers stopped exclusively breastfeeding between 4 months to less than 7 months. This appears to be the most common timeframe in which other foods or liquids are being introduced into the babies' diets, in addition to breastmilk.

All mothers who were exclusively breastfeeding at 12-month post-partum were either married/common-law or living with a partner; none were single, separated or divorced.

Figure 20: Proportion of Mothers Who Breastfed to At Least Six-Months Post-Partum by Duration of Exclusive Breastfeeding, Region of Peel, 2004/05

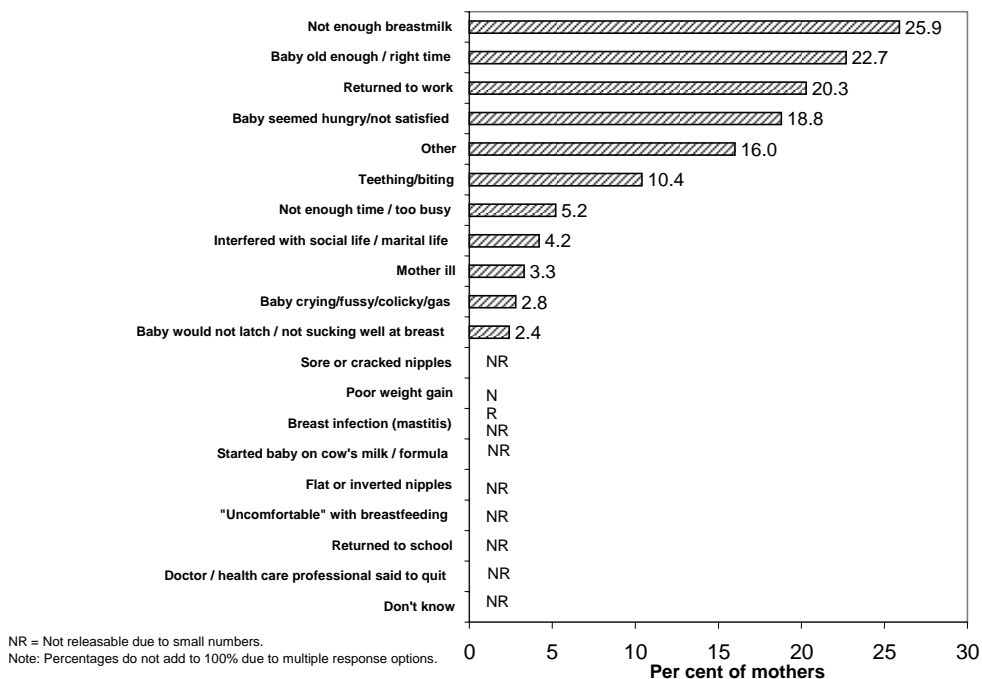


Reasons for Stopping Breastfeeding between Six- and 12-Months Post-Partum

Figure 21 (see below) states the reasons mothers gave for stopping breastfeeding. The single most commonly reported reason for stopping breastfeeding was 'not having enough breastmilk' (26%), followed by 'baby old enough / right time' (23%), 'returned to work' (20%), 'baby seemed hungry/not satisfied' (19%), and 'other' (16%).

Among respondents who indicated and specified 'other' reasons for stopping breastfeeding, the most common reason was 'baby weaned him or herself', which was reported by an estimated 7% of mothers and 'pregnant again' which was reported by about 5% of mothers who stopped. Less common 'other' reasons related to the mother being on medication or going for medical tests as well as frustration, depression, discomfort or fatigue of the mother.

Figure 21: Proportion of Mothers Who Breastfed by Reasons for Stopping Between Six-Months and Twelve-Months Post-Partum, Region of Peel, 2004/05

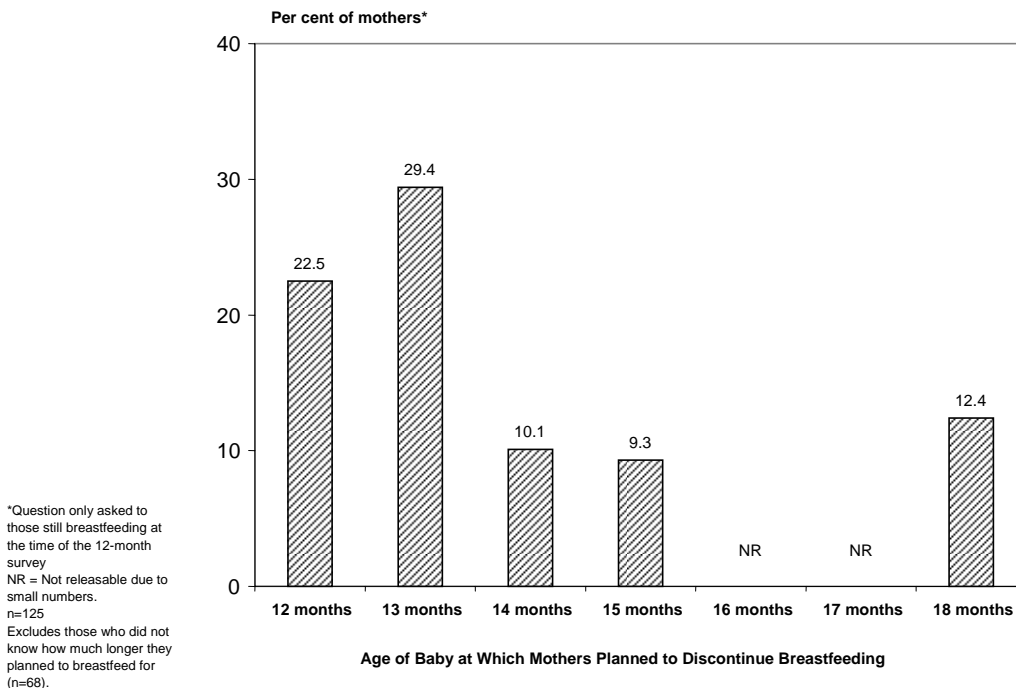


Plans to Continue Breastfeeding Beyond 12-Months Post-Partum

Mothers who were still breastfeeding at the time of the 12-month survey were asked to indicate when they planned to stop.

Almost nine in ten mothers planned to breastfeed their child until 12 to 18 months post-partum; most were planning to stop in the next few weeks or when their child was 13 months old. Fourteen per cent (14%) planned to continue to breastfeed their child until he or she was 24 months of age (see Figure 22 below).

Figure 22: Proportion of Mothers Breastfeeding at Time of 12-Month Survey by Planned Duration of Breastfeeding (Based on Age of Baby in Months), Region of Peel, 2004/05



Return to Work or School

Respondents who breastfed their babies for six to 12 months were also asked questions related to returning to work or school. When asked if they were planning to return (or go) to work or school in the next six months, 42% of these mothers indicated that they planned to return to work/school, 23% did not plan to, 31% had already returned to work/school and the remaining 5% did not know or provide a response.

The majority (93%) of respondents who had not yet returned to work/school, provided the age that their baby would be when they returned to work, while 7% did not know. Responses ranged from 11 months of age to 18 months of age with an average of 13.2 months. More than half (55%) of these mothers indicated that they planned to continue breastfeeding when they return to work or school, while 41% did not plan to and 4% did not know.

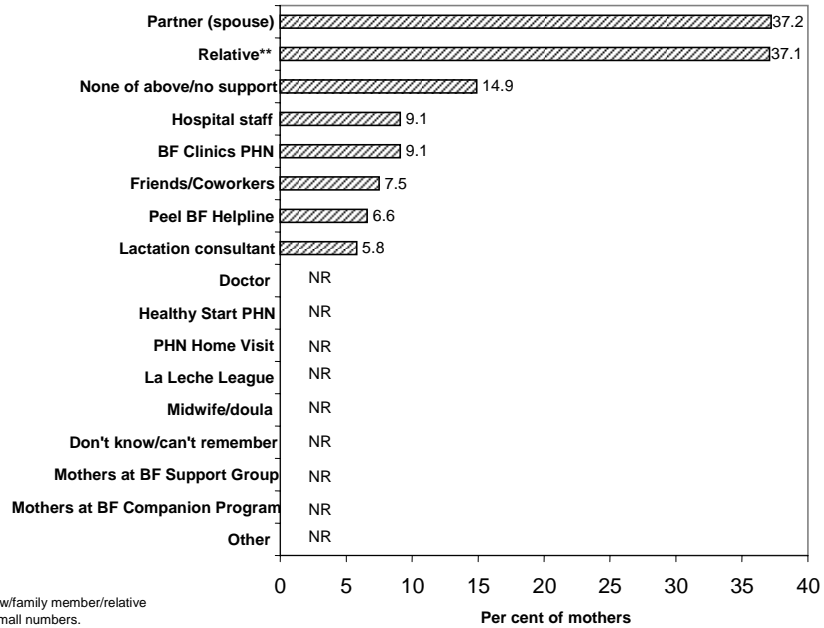
Mothers who had already returned to work at the time of the survey indicated that they returned to work when their baby was between one and 12 to 13 months old, with an average of 9.3 months. Approximately two-thirds (64%) of these mothers reportedly breastfed when they went back to work or school.

Breastfeeding Supports and Use of Breastfeeding Resources – 12-Month Survey

Whom or What Gave the Most Support with Breastfeeding

Respondents who reported that they planned to continue breastfeeding after they return to work or who had already returned to work and continued breastfeeding were asked to indicate who or what gave them the most support with breastfeeding. The most commonly reported supports were their partner/spouse (37%), relatives (37%) and hospital staff (15%) (see *Figure 23 on following page*).

Figure 23: Proportion of Mothers by Whom or What Gave Them the Most Support with Breastfeeding Between Six- and 12-Months Post-Partum, Region of Peel, 2004/05

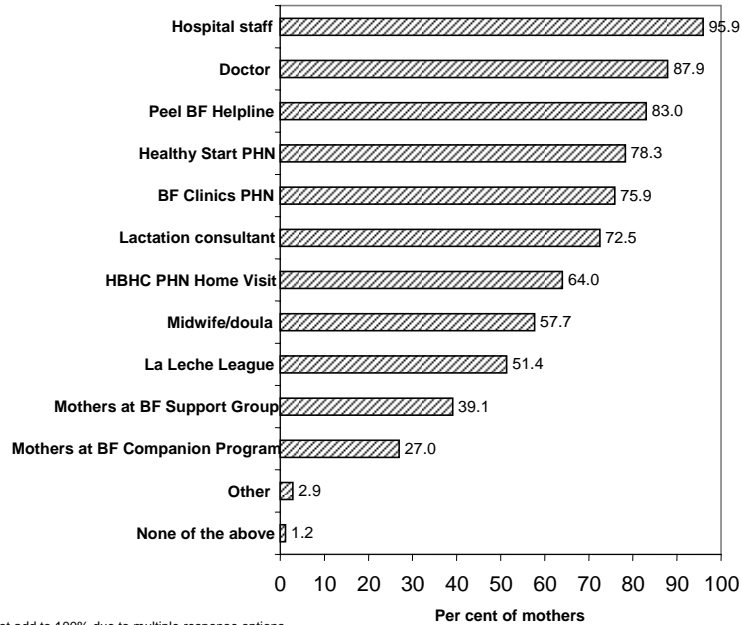


Differences in the proportion of mothers reporting that selected people or services gave them the most support with breastfeeding, by demographic characteristics, were not apparent due to the smaller sample of mothers participating in the 12-month survey.

Awareness of Breastfeeding Services – Among Mothers Who Breastfed to Between Six and 12 Months

Mothers who participated in the 12-month breastfeeding survey were asked if they were aware of selected breastfeeding services. Almost all mothers (96%) reported being aware of ‘hospital staff’, followed by ‘doctor’ (88%), Peel Breastfeeding Helpline (83%), Healthy Start Public Health Nurse (78%), Breastfeeding Clinics Public Health Nurse (76%), and ‘lactation consultant’ (73%) (see Figure 24 on following page). Most mothers were also aware of other services. Awareness was lowest for the ‘Mothers at Breastfeeding Support Group’ (39%) and the ‘Mothers at Breastfeeding Companion Program’ (27%).

Figure 24: Proportion of Mothers Who Breastfed to at Least Six-Months Post-Partum and Were Aware of Selected Breastfeeding Services, Region of Peel, 2004/05



The proportion of respondents who were aware of ‘hospital staff’, ‘doctor’, ‘Breastfeeding Clinic Public Health Nurse’, ‘Healthy Start Public Health Nurse’, ‘Lactation Consultant’, ‘HBHC PHN visit in home’, ‘midwife/doula’ and ‘La Leche League’ services varied with selected characteristics of the mother.

Hospital staff

- Awareness of hospital staff as a breastfeeding service was lowest among those with household incomes of less than \$40,000 (87%) compared to other income categories (97%-98%).

Doctor

- The proportion of respondents indicating that they were aware of ‘doctors’ as a breastfeeding service was significantly higher among Canadian-born respondents (92%) compared to those who were foreign-born (84%).
- Awareness of doctors as a breastfeeding service was lowest among those with household incomes of less than \$40,000 (73%) compared to the other income categories (88-93%).

Breastfeeding Clinic Public Health Nurse

- The proportion of respondents indicating that they were aware of 'Breastfeeding Clinic Public Health Nurses' as a breastfeeding service was significantly higher among Canadian-born respondents (85%) compared to those who were foreign-born (68%).
- Awareness of Breastfeeding Clinic PHNs as a breastfeeding service increased from 61% of those with household incomes of less than \$40,000 to 80% of those in households earning \$80,000 or more.

Healthy Start Public Health Nurse

- The proportion of respondents who indicated that they were aware of 'Breastfeeding Clinic PHN' as a breastfeeding service was significantly higher among Canadian-born respondents (85%) compared to those who were foreign-born (73%).
- Respondents with household incomes of less than \$40,000 (69%) were less likely than those with household incomes of \$80,000 and over (83%) to be aware of Health Start PHNs.

Lactation Consultant

- Awareness of lactation consultants as breastfeeding services at 12-months post-partum was significantly lower in mothers who completed high school or less (52%) compared to those who completed university (76%).
- The proportion of respondents indicating that they were aware of 'lactation consultant' as a breastfeeding service was significantly higher among Canadian-born respondents (90%) compared to those who were foreign-born (58%).
- Among foreign-born survey respondents, awareness of 'lactation consultants' as a breastfeeding service was highest in those who immigrated 11 or more years ago (80%) compared to more recent immigrants (46%-48%).
- Awareness of lactation consultants as a breastfeeding service increased across income categories from 52% of those with household incomes of less than \$40,000 to 85% of those with incomes of \$80,000 and over.
- Awareness of lactation consultants was higher among respondents who had previously had a child/children (79%) compared to those for whom this was their first child (66%).

HBHC PHN Home Visit

- Awareness of home visits by a HBHC Public Health Nurse as a breastfeeding service was higher among those who completed high school or less (55%) or some post-secondary schooling (37%) compared to those who completed trade school or college (64%) or those who completed university.
- Awareness of home visits by a HBHC PHNs as a breastfeeding service was higher among those who were Canadian-born (73%) compared to foreign-born respondents (56%).
- Awareness of HBHC PHN's as breastfeeding service increased from 48% of those with household incomes of less than \$40,000 to 77% of those in households earning \$80,000 or more.

Midwife/Doula

- The proportion of respondents indicating that they were aware of 'midwife/doula' as a breastfeeding service was significantly higher among Canadian-born respondents (69%) compared to those who were foreign-born (48%).
- Among foreign-born survey respondents, awareness of 'midwives/doulas' as a breastfeeding service increased significantly with time since immigration from 39% of those who immigrated 1 to 5 years ago to 61.0% of those who immigrated 11 or more years ago.
- Awareness of 'midwives/doulas' as breastfeeding service increased across income categories, from 31% of those with household incomes of less than \$40,000 to 70% of those with incomes of \$80,000 and over.
- Awareness of 'midwives/doulas' generally increased with increased level of educational attainment, from 45% of respondents who completed high school or less to 66% of those who completed university.

La Leche League

- The proportion of respondents indicating that they were aware of the 'La Leche League' as a breastfeeding service was significantly higher among Canadian-born respondents (78%) compared to those who were foreign-born (29.4%).
- Among foreign-born survey respondents, awareness of the 'La Leche League' as a breastfeeding service increased significantly with time since immigration, from 20% of those who immigrated 1 to 5 years ago to 42% of those who immigrated 11 or more years ago.

- Awareness of the 'La Leche League' as a breastfeeding service increased across income categories, from 18% of those with household incomes of less than \$40,000 to 73% of those with incomes of \$80,000 and over.
- Mothers who had completed university (60%) were more likely than mothers with other levels of education to be aware of the 'La Leche League'.

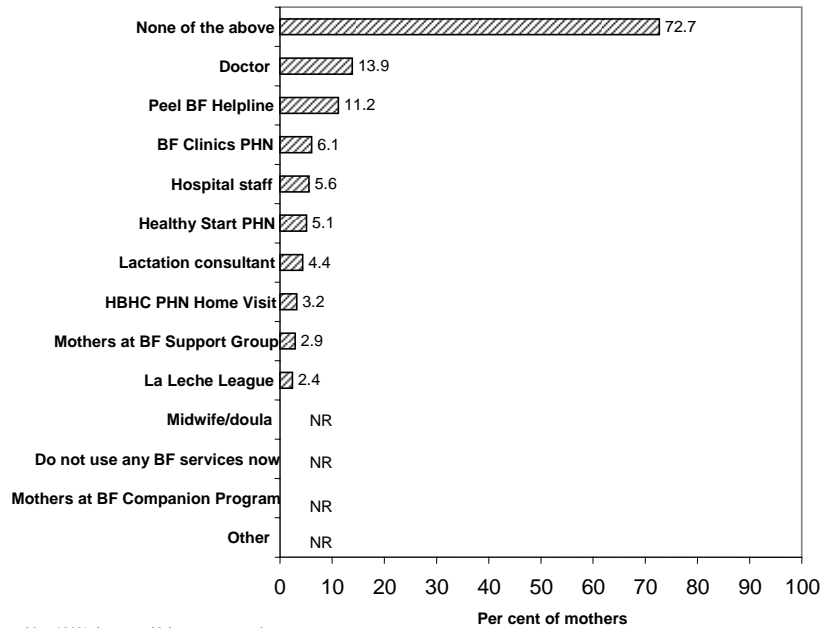
Use of Breastfeeding Resources/Services Among Mothers Who Breastfed

Respondents who had breastfed their babies at the time of the six-month survey and who consented to participate in the 12-month survey, were then asked to indicate which breastfeeding services they used within six-months prior to the survey and which they were currently using.

The majority of respondents (73%) reported that did not use any of the mentioned breastfeeding services during the previous six-months (see *Figure 25 on following page*). The second most common service reported was that of a 'doctor' (14%) followed by 'Peel Breastfeeding Helpline' (11%). The remaining services were less commonly used.

At the time of the survey, nine in ten respondents (90%) reported that they were using none of the mentioned services at that time.

Figure 25: Proportion of Mothers Who Used Selected Breastfeeding Services Between Six- and 12-Months Post-Partum, Region of Peel, 2004/05



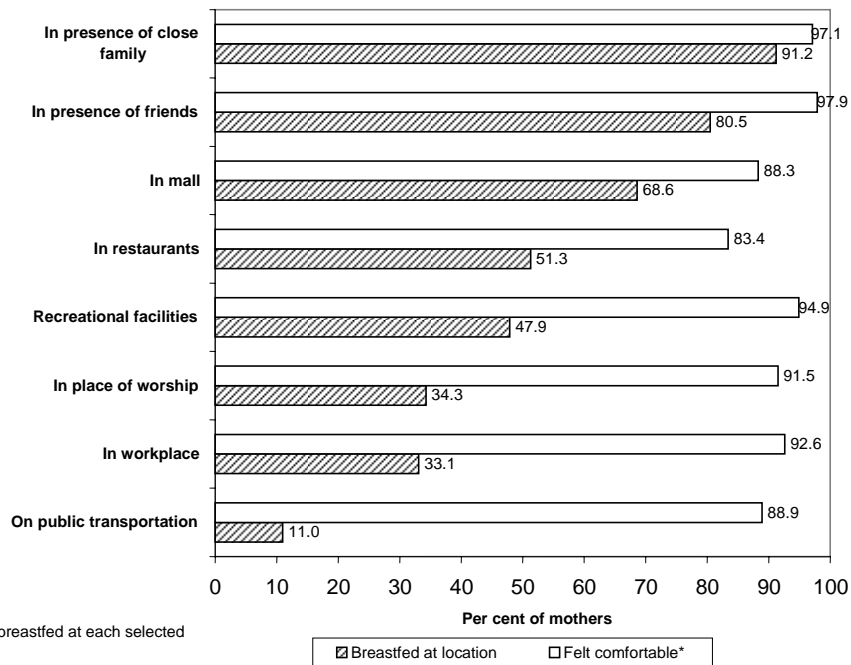
Note: Percentages do not add to 100% due to multiple response options.
NR = Not releasable due to small numbers.

Comfort with Breastfeeding in Selected Environments Between Six- and 12-Months Post Partum

Respondents to the 12-month survey were, once again asked to identify selected environments in which they breastfed their babies. Approximately nine out of 10 mothers (91%) reported having breastfed in the presence of close family. Of those who did, 97% felt comfortable doing so (see *Figure 26 on following page*). Although a smaller proportion of mothers (eight out of 10 mothers or 81%) breastfed in the presence of friends, the vast majority of them (98%) felt comfortable doing so.

The next most commonly reported places in which mothers breastfed were: malls (69%), restaurants (51%), recreational facilities (48%), places of worship (34%), workplace (33%) and public transportation (11%). For mothers who breastfed in these locations, comfort levels were relatively high ranging from 83% to 95%.

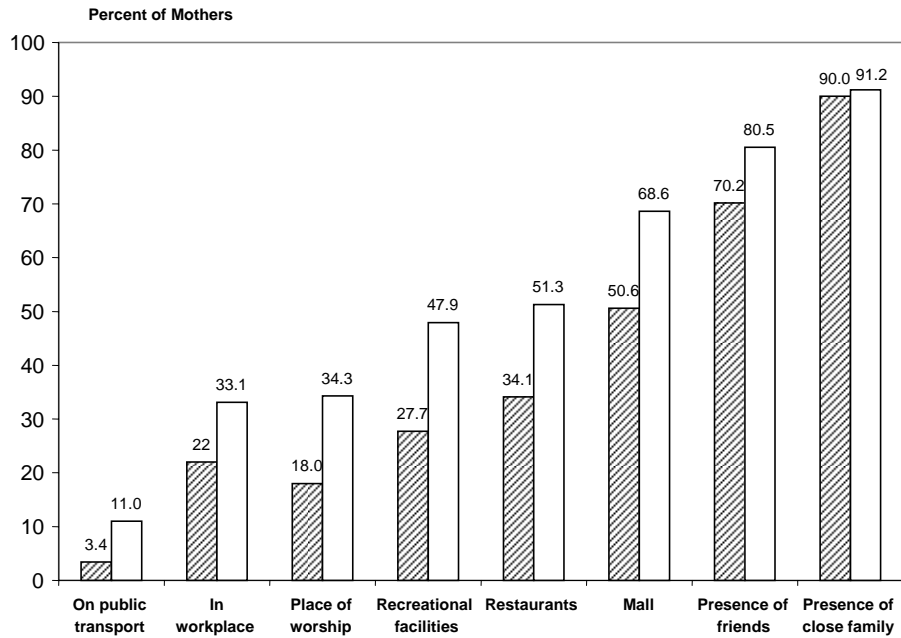
Figure 26: Proportion of Mothers Who Breastfed Between Six and 12 Months Who Breastfed in Selected Environments and Whether They Felt Comfortable, Region of Peel, 2004/05



Comfort Levels with Breastfeeding in Selected Places During First Six- Months Post-Partum Compared to Six- to 12-Months Post-Partum

The commonly reported places in which mothers breastfed were similar for both surveys. However, there was a significant increase in the proportion of women who reported breastfeeding in all of the selected public locations between the six-month and 12-month surveys (see Figure 27 on following page). The proportion of respondents who breastfed in the presence of their friends also increased significantly between the six-month survey (70%) and the 12-month survey (81%). However, there was no difference in the proportion of those who breastfed in front of their close family.

Figure 27: Proportion of Mothers Who Breastfed in Selected Environments by Time of Survey, Region of Peel, 2004/05



*Only asked of those who breastfed at each selected location.

▨ Six-Month Survey □ 12-Month Survey

SUMMARY

The 2004/05 study found an overall breastfeeding initiation rate of 94%, a six month duration rate of 58% and an exclusive breastfeeding rate at six months of about 10%. The factors impacting these rates are well explained in the body of the report. Of the women breastfeeding at six months, almost half of them (49%) were still breastfeeding at 12 months. When asked how long they planned to continue, many (29%) planned to stop at 13 months, some (12.4%) at 18 months and still others (14%) at 24 months (*see figure 22 on page 52*).

While this study was a follow-up to a 2000 breastfeeding survey, there are important methodological differences between the 2000 and 2004/05 surveys which limit the ability to make comparisons. As we continue to survey this population in the coming years we will be able to build on the foundation of the 2004/05 survey.

PROGRAM IMPLICATIONS AND RECOMMENDATIONS

There are a number of breastfeeding programs and community initiatives in the Region of Peel. These programs provide the full spectrum of breastfeeding promotion from direct service to advocacy and health education. While the last few years have seen an increase in the number of services available, this increase does not keep pace with the Region's large birth cohort and continued population growth. For example, between 2001 and 2005 Peel's population increased by 13.9 per cent.¹⁴ The following table lists some of these initiatives and the differences in program data since 2001.

Table 5
Availability and Use of Selected Breastfeeding Services,
Region of Peel, 2001 and 2005

Selected Breastfeeding Services	Number	
	2001	2005
Clinic visits available in Brampton	2,344	2,500
Clinic visits available in Mississauga	0	2,085
Mother's support groups available for infants > 6 months of age	0	3
Breastfeeding Companion volunteers available for telephone support	15	90
Breastfeeding Companion program 'users'	50	208

While we cannot directly attribute changes in the initiation and duration rates to these initiatives (*see Appendix C on page 93*), we believe that the increased

availability of supports likely contributed, in part, to the increased proportions of mothers choosing to initiate and maintain breastfeeding.

In 2000 many mothers expressed concern about their ability to provide enough milk to feed a growing baby during the two to six-month period of breastfeeding.⁸ Since that time, three Mother's groups specifically addressing duration in the post six-week period were formed. The Breastfeeding Companions program also addressed duration issues with peer telephone support provided by volunteers. Even so, the 2004/05 survey showed that the same concerns about milk supply and inability to satisfy a perceived hungry baby continue as the most common reason for stopping breastfeeding (see *Figure 10 on page 26 and Figure 21 on page 51*). It would be interesting and informative to further explore the underlying causes for these concerns. Work must then be done by the Health Department, in conjunction with community partners, to educate women and their support persons about milk supply and issues of satiety. Unfortunately, due to financial restraint, Peel is unable to provide the universal Healthy Babies Healthy Children post partum visit to all new mothers. This home visit by a public health nurse would provide an ideal opportunity to counsel and advise women about these common concerns.

The breastfeeding media campaigns over the last two to three years have been targeted to young mothers who worry about breastfeeding in public and returning to their pre-pregnancy weight. While these issues continue to be addressed, future campaigns need to include information about infant satiety, the mechanics of milk production and the dangers of supplementation.

Breastfeeding women most often cite hospital staff and physicians as key sources of information and support regarding breastfeeding (see *Figure 13 on page 32*). Therefore, the health department must continue to work with partners to find innovative ways of disseminating breastfeeding information to these key informants in order that breastfeeding women get comprehensive and reliable advice.

The decision for a mother to breastfeed continues to be influenced by previous experience with another child (21.8%) and her partner (20%). The majority of women (63.3%) consider how they would feed their baby prior to pregnancy (see *Figure 9 on page 24*). Normalization of breastfeeding in the culture will further influence these decisions. As more women breastfeed successfully, this will increase the likelihood that future babies will be breastfed. Also, the development of high school curriculum resources that emphasize the importance of breastfeeding can support young women to make early, informed choices for breastfeeding.

The following recommendations outline some avenues for further work in assisting, educating and supporting breastfeeding families in our community.

Recommendations:

It is recommended that:

- Current Peel Public Health breastfeeding service levels continue to expand to accommodate the increasing number of babies born each year in the Region.
- Education about perceived milk supply issues and improved public awareness messaging regarding the risks of unnecessary supplementation, be provided to prevent early discontinuation of breastfeeding due to 'not enough breast milk'.
- Breastfeeding Companions, which offers telephone support in approximately 15 languages, be maintained and expanded to support an increasingly diverse non-English speaking population.
- Peel Public Health continue to seek the Baby Friendly designation by 2008 to ensure implementation of best practices for the support and promotion of breastfeeding.
- Increased breastfeeding duration and promotion of exclusive breastfeeding be achieved with expansion of breastfeeding mothers' groups, through continued partnering with community agencies, such as the Ontario Early Years Centres, Peel District School Board Hubs and Readiness Centres and others as determined.
- Strengthening partnerships with the three Peel hospitals and the West Cluster Education group could positively impact breastfeeding initiation rates and referral rates to the clinics.
- Relationships with the Healthy Workplace team be further developed to increase access to the workplace population, to promote breastfeeding.
- Prenatal education curriculum content be revised to include more emphasis on the benefits of breastfeeding and the risks of formula feeding.

Implications for the next survey in 2009/10 include the following:

- Decision-making about methodology improvements needs to take into consideration the comparability of past survey methodologies in order to demonstrate improvement in breastfeeding rates.

- A multi-survey format to collect data from breastfeeding mothers at six months, 12 months and possibly at later intervals (e.g. 18 months), should be utilized for data collection for future surveys.
- Further explore differences in breastfeeding practices of foreign-born mothers versus Canadian-born mothers to better serve Peel's diverse population.
- Exclusive versus total breastfeeding definitions need to be evaluated prior to each survey to be consistent with the Breastfeeding Committee of Canada breastfeeding definitions.
- Assess the impact of formula marketing and free formula availability in hospitals on breastfeeding initiation, exclusivity and duration.

DATA SOURCES, METHODS AND LIMITATIONS

The methodology behind the Breastfeeding Survey 2005/06 is presented in the Methods Section of this report (see pages 2 through 4).

For the six-month survey, of the 928 telephone interviews that were completed, 536 (58%) were from Mississauga, 352 (38%) were from Brampton and 40 (4%) were from Caledon. Brampton was somewhat over-sampled and Mississauga, somewhat under-sampled, thus the overall results for Peel required “weighting” to eliminate any geographic bias. Results were weighted to reflect the average number of births by municipality over the five-year period 1997 to 2001. The weighting approach was a conservative method, such that the responses from each municipality were not weighted to reflect more than the actual survey responses from that geographic area. For example, Mississauga, which was proportionally undersampled, received a weight set to a value of 1. In contrast, Brampton, which was proportionally oversampled received a weight of less than one. The total number of weighted responses included in the results was 882, with 536 (60.8%) respondents from Mississauga, 306 (34.7%) from Brampton and 40 (4.5%) from Caledon (*see Table 1 below*). Because of rounding to whole numbers, there are times when the weighted responses sum to different totals depending on which respondents were included in a given analysis.

For the 12-month survey, of the 411 telephone interviews that were completed, 61% were from Mississauga, 35% were from Brampton and 4% were from Caledon. The overall results for Peel were also weighted for the same reasons and using the same methodology described above. The total number of weighted responses included in the results was 400, with 243 (60.7%) respondents from Mississauga, 139 (34.7%) from Brampton and 18 (4.5%) from Caledon.

Table 6: Derivation of Sample Weights for Six-Month Breastfeeding Survey, Region of Peel, 2004/05

Municipality	Actual Survey Total (n)	Actual Survey Percent	1997-2001 5-Year Average Live Births	Sample Weights	Weighted Survey Total (n)
Mississauga	536	57.80%	60.70%	1	536
Brampton	352	37.90%	34.70%	0.870488	306
Caledon	40	4.30%	4.50%	0.99341	40
Total	928	100%	100%		882

Source: Ontario Live Birth Databases 1997-2001, HELPS (Health Planning System), Ontario Ministry of Health and Long-Term Care).

Table 7: Derivation of Sample Weights for 12-Month Breastfeeding Survey, Region of Peel, 2004/05

Municipality	Actual Survey Total (n)	Actual Survey Percent	1997-2001 5-Year Average Live Births	Sample Weights	Weighted Survey Total (n)
Mississauga	249	60.60%	60.70%	0.975100402	243
Brampton	144	35.00%	34.70%	0.963888889	139
Caledon	18	4.40%	4.50%	1	18
Total	411	100%	100%		400

Source: Ontario Live Birth Databases 1997-2001, HELPS (Health Planning System), Ontario Ministry of Health and Long-Term Care).

There are important methodological differences between the 2000 and 2004/05 breastfeeding surveys which limit the ability to make comparisons, as described earlier in the report. For example, the 2004/05 surveys were administered at six-months post-partum and 12-months post-partum, while the 2000 survey was administered at 10 to 12 months post partum; the recent 2004/05 surveys were administered by an external survey house with the use of a third-party translation service when appropriate, while the 2000 survey was administered in multiple languages by volunteers; and 2004/05 survey data were weighted by municipality of residence of the survey respondent, while weights were not applied for the 2000 survey. For reasons such as these, as well as differences in the respondent characteristics between surveys, making direct comparisons between the 2000 and 2004/05 surveys is not recommended.

In addition, due to differences in classifications of breastfeeding initiation, duration and exclusive breastfeeding between the 2000 and 2004/05 breastfeeding surveys, as well as other existing surveys, it is difficult to compare Peel's rates related to breastfeeding with those of other geographic areas. Only a general sense of trends in duration rates is possible.

No other sources of information were available to verify the reported breastfeeding practices for mothers. While there is a possibility of recall bias, an assessment of breastfeeding studies suggest that the data are valid and reliable.^{15, 16}

Given the small sample size and accuracy levels for Caledon, this municipality has been excluded from the analyses showing municipal comparisons, but otherwise included in the results for the Region overall.

Differences in proportions between demographic groups have been highlighted. Words such as "more likely" or "less likely" are only used when those differences have been found to be statistically significant at the 95% confidence level. When multiple responses were allowed, percentages were based on the total number of respondents, thus percentages may total to more than 100%.

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Appendix A – Six-Month Breastfeeding Telephone Survey Script

Introduction

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

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

Goodbye.

I2. Hello, my name is ____ and I'm calling on behalf of the Peel Health Department. We are conducting a survey about feeding your baby. 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?

- a) IF YES GO TO Question I3
- b) IF NO GO TO Question I1b
- c) 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.

I1b. 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 GO TO I1d READ "SCRIPT FOR LETTER"
BELOW
- b) IF NO GO TO QUESTION 1c

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

- a) IF YES RECORD CALL BACK INFORMATION
- b) IF NO, STOP → THANK YOU VERY MUCH FOR YOUR TIME

I1d. SCRIPT FOR LETTER

It is important for the Peel Health Department to learn more about infant feeding in the Region of Peel. 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 voluntary and you are free not to answer any question.

If you have any concerns about the survey or wish to find out about the results, please contact Andrea Smith at the Peel Health Department at 905-791-7800 ext 2857. 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*

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

- a) IF YES *GO TO I4*
- b) IF NO -later *GO TO 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.

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?

- a) Yes Go to Q2
- b) No Go to Q1a
- c) Refused Go to Q1a

1a. Can we provide you with a number for the Peel Health Department? They can help direct your call to services that you may need.

- a) Yes Go to Q1b
- b) No Okay, thank you very much for your time.
- c) Refused Okay, thank you very much for your time.

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

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)

- a) Breastmilk (go to Q3)
- b) Combination of breastmilk and formula (Go to Question 3)
- c) Formula - (Go to Question 2i)
- d) Other, specify _____ go to Question 3
- e) Don't know go to Question 23
- f) Refused / no response go to Question 23

(Re-code Other if needed)

2i. Did you ever try to breastfeed?

- a) If **YES** Go to Question 3
- b) If **NO** Go to Question 3
- c) Refused/no response Go to Question 3

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

- a) Before you became pregnant
- b) During your pregnancy, or
- c) After your baby was born
- d) Don't know
- e) Refused / no response

4. Who or what helped you with your decision about feeding your baby?

(DO NOT READ - Check all that apply)

(Use one prompt: did anything or anyone else influence you?)

- a) Myself (no one)
- b) Partner
- c) Mother/mother-in-law
- d) Other relative
- e) Doctor
- f) Midwife
- g) Lactation consultant
- h) Nurse in doctor's office
- i) Public Health Nurse
- j) Previous experience with other child
- k) Books/magazines/media
- l) Friends/co-workers
- m) La Leche League (community group)
- n) Prenatal/breastfeeding class
- o) Other, specify _____
- p) None of the above
- q) Don't know
- r) Refused / No response

If Q2= a or b then continue to Q5

If Q2 = c then If 2i=1 then go to Q8

If 2i=2 then go to Q8

If Q2 = d then go to Q8

Use of Resources

5. Who or what gave you the most help or support with breastfeeding?
(DO NOT READ - Check all that apply.)

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

- a) Hospital staff
 - b) Healthy Start Public Health Nurse
 - c) Doctor
 - d) Public Health Nurse visit in home
 - e) Peel Breastfeeding Helpline telephone contact
 - f) Breastfeeding Clinics Public Health Nurse
 - g) Midwife / doula
 - h) Lactation consultant
 - i) Partner (spouse)
 - j) Mothers at Breastfeeding Companion Program
 - k) Mothers at Breastfeeding Support Group
 - l) Friends/Coworkers
 - m) Parent/mother/mother-in-law/family member/relative
 - n) La Leche League
 - o) Other (specify)
 - p) None of the above/no support
 - q) Don't know/ Can't remember
 - r) Refused / no response
6. 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 LIST - Check all that apply)
- a) Hospital staff
 - b) Healthy Start Public Health Nurse
 - c) Doctor
 - d) Healthy Babies Healthy Children Public Health Nurse visit in home
 - e) Peel Breastfeeding Helpline telephone contact
 - f) Breastfeeding Clinics Public Health Nurse
 - g) Midwife / doula
 - h) Lactation consultant
 - i) Mothers at Breastfeeding Companion Program
 - j) Mothers at Breastfeeding Support Group
 - k) La Leche League
 - l) Other (specify)
 - m) None of the above
 - n) Don't know/ Can't remember
 - o) Refused / no response

7. As I read through the following list, please indicate which breastfeeding services you used with your newborn, and which breastfeeding services you are still currently using: (this question will be divided into Q7a and Q7b for used and now)
(READ EACH OPTION – SPECIFY YES/NO FOR EACH– Check all that apply)

a) Used with newborn b) Use now

- a) Hospital staff
- b) Healthy Start Public Health Nurse
- c) Doctor
- d) Healthy Babies Healthy Children Public Health Nurse visit in home
- e) Peel Breastfeeding Helpline telephone contact
- f) Breastfeeding Clinics Public Health Nurse
- g) Midwife / doula
- h) Lactation consultant
- i) Mothers at Breastfeeding Companion Program
- j) Mothers at Breastfeeding Support Group
- k) La Leche League
- l) Any **Other?** (specify)
- m) None of the above
- n) Do not use any breastfeeding services now
- o) Don't know/ Can't remember
- p) Refused / no response

Breastfeeding Definitions

8. What kind of milk are you feeding your baby NOW?
(READ LIST - Check one)

- a) Formula (If Q2=a or b - go to Q10. If Q2=c or d- go to Q21)
- b) Cows milk (If Q2=a or b - go to Q10. If Q2=c or d- go to Q21)
- c) Combination of breastmilk and formula/cow's milk (go to Q10)
- d) Breastmilk (GO TO QUESTION 9; if Q2=b go to Q10))
- e) Other (specify) (Go to Q 21) _____
- f) Don't know (Go to Q21)
- g) Refused/no response (go to Q 21)

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

- a) Yes (Go to Q13)
- b) No (Go to Q10)
- c) Don't know (Go to Q13)
- d) 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, and cereals and thickeners or any other food.
(DO NOT READ LIST but prompt if necessary – Choose One)

- a) Less than 1 week
- b) 1 week to less than 4 weeks
- c) 1 month to less than 2 months
- d) 2 months to less than 3 months
- e) 3 months to less than 4 months
- f) 4 months to less than 5 months
- g) 5 months to less than 6 months
- h) 6 months to less than 7 months
- i) don't know
- j) refused / no response

If Q8=a or b then GO TO Question 11

If Q8=c then GO TO Question 13

If Q8=d then GO TO Question 13

Breastfeeding Duration

11. How old was your baby when you stopped feeding breastmilk?
(DO NOT READ LIST but prompt if necessary- Check one)

- a) Less than 1 week
- b) 1 week to less than 4 weeks
- c) 1 month to less than 2 months
- d) 2 months to less than 3 months
- e) 3 months to less than 4 months
- f) 4 months to less than 5 months
- g) 5 months to less than 6 months
- h) 6 months to less than 7 months
- i) don't know
- j) 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 - Check all that apply)

- a) Baby crying/fussy/colic/gas
- b) Poor weight gain
- c) Baby seemed hungry/ not satisfied
- d) Not enough breastmilk
- e) Flat or inverted nipples
- f) Sore or cracked nipples

- g) Breast infection (mastitis)
- h) Returned to work
- i) Returned to school
- j) "Uncomfortable" with breastfeeding
- k) Lack of support (specify) _____
- l) Doctor / health care professional said to quit
- m) Interfered with social life / marital life
- n) Started baby on cow's milk/formula
- o) Baby would latch/not sucking well at breast
- p) Baby old enough/right time
- q) Baby ill
- r) Mother ill
- s) Teething/biting
- t) Not enough time/too busy
- u) Other (specify) _____
- v) Don't know / can't remember
- w) Refused / No response

(Go to Q 14)

Decision Making

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

- a) 6 months to less than 9 months old
- b) 9 months to less than 12 months old
- c) 12 months
- d) more than 1 year to less than 2 years old
- e) 2 years old or more or
- f) Until baby weans self
- g) Don't know
- h) Refused / no response

Breastfeeding Support

14. The next question is about where you have breastfed your baby and whether you felt comfortable breastfeeding at that location: (Read responses)

Have you ever breastfeed your baby...

- a) In a mall
 - (1) Yes Go to Q14ai
 - (2) No

- (3) Don't know/Don't remember
- (4) Refused/no response

ai) Did you feel comfortable breastfeeding in a mall?

- 1) Yes
- 2) No
- 3) Don't know/Don't remember
- 4) Refused/no response

(use same format for b to h below)

- b) In restaurants
- c) Recreational facilities
- d) In place of worship
- e) In workplace
- f) On public transportation
- g) In presence of close family
- h) In presence of friends

(If Q14a=2(NO), Q14b=2, Q14c=2, Q14d=2, Q14e=2, then go to Q14i)

- 14i. Could you tell me why you did not breastfeed in a public place such as a mall, restaurant, recreational facility, in a place of worship, in the workplace or on public transportation?
- a) Situation never arose
 - b) Pumped milk into a bottle so did not breastfeed in public place
 - c) Didn't feel comfortable
 - d) Other (specify)
 - e) Don't know
 - f) Refused

Return to Work

15. During this most recent pregnancy, did you work outside the home or attend school?
- a) Yes (Go to Q16)
 - b) No (Go to Q 16)
 - c) Refused/no response (Go to Q23)
16. Are you planning to return [go to] work in the next six months or to school within the next school year?
- d) Yes (Go to Q17)
 - e) No (Go to Q23)
 - f) Already returned to work/school (Go to Q18)
 - g) Don't know (Go to Q23)
 - h) Refused / No response (Go to Q23)

17. How old will your baby be when you return to work/school?

_____ months

don't know

refused

After asked this question (i.e. Q17) Go to Q19

If Q8=2or3, go to Q23

18. How old was your baby when you returned to work/school?

_____ months

don't know

refused

After asked this questions (i.e. Q18) Go to Q20

19. Are you planning to continue breastfeeding when you go to work/school?

a) Yes (Go to Q 23)

b) No (Go to Q 23)

c) Don't know (Go to Q 23)

d) Refused / No response (Go to Q23)

20. Did you continue to breastfeed when you went back to work/school?

a) Yes (Go to Q 23)

b) No (Go to Q 23)

c) Don't know (Go to Q 23)

d) Refused/No response (Go to Q 23)

Questions for mothers who have never breastfed.

21. 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 – Check all that apply)

a) Hospital staff

b) Healthy Start Public Health Nurse

c) Doctor

d) Health Line Peel / Peel Breastfeeding Helpline Telephone Contact / 2nd Tier Breastfeeding Help Line

e) Healthy Babies Healthy Children Public Health Nurse visit in home

f) Breastfeeding Clinics Public Health Nurse

g) Midwife / doula

h) Lactation consultant

i) Mothers at Breastfeeding Companion Program

j) Mothers at Breastfeeding Support Group

k) La Leche League

l) Other (specify)

m) None of the above

- n) Don't know/ Can't remember
- o) Refused / no response

22. 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 – Check all that apply)

- a) Hospital staff
 - b) Public Health Nurse
 - c) Doctor
 - d) Health Line Peel
 - e) Midwife / doula
 - f) Other (specify)
 - g) None of the above
 - h) Don't know/ Can't remember
 - i) Refused / no response
- a) Used with newborn b) Use now

Demographics

Questions About Yourself

23. Is this your first child?

- a) Yes
- b) No
- c) Refused/no answer

24. Was this a single birth?

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

- a) Single
- b) Twins
- c) Triplets
- d) Other (specify)
- e) Refused/no answer

25. Were you born in Canada?

- a) Yes Go to Q26
- b) No Go to Q25a
- c) Refused/no answer Go to Q26

25a. How many years have you lived in Canada

- a) Answer
- b) Refused/no answer

- 25b. Where were you born?
- a) Answer
 - b) Refused/no answer _____
26. What is your date of birth? Yyyy/mmm/dd (insert separate field with calculated age) At end of surveying, make sure date is sent this way.
27. What is your highest level of education that you have ever completed?
(READ LIST - Check one)
- a) No schooling
 - b) Some schooling but less than high school diploma
 - c) Completed high school
 - d) Some trade school or college
 - e) Completed trade school or college
 - f) Some university
 - g) Completed university
 - h) Post graduate
 - i) Refused/no response
28. What is your marital status?
(READ LIST - Check one)
- a) Married (legally)
 - b) Common-law
 - c) Living with partner
 - d) Single (never married)
 - e) Widowed
 - f) Separated (not legally divorced)
 - g) Divorced
 - h) Refused/no response
29. I will now read you a list. Can you estimate in which of the following groups your household income falls? Is it...
(READ LIST - Check one)
- a) Less than \$10,000
 - b) \$10,000 to less than \$20,000
 - c) \$20,000 to less than \$30,000
 - d) \$30,000 to less than \$40,000
 - e) \$40,000 to less than \$50,000
 - f) \$50,000 to less than \$60,000
 - g) \$60,000 to less than \$70,000
 - h) \$70,000 to less than \$80,000
 - i) \$80,000 or more
 - j) Don't know
 - k) Refused/no response

Questions About Your Baby

30. Which hospital was your baby born in? (Can you recode the ‘other’ responses?)
- a) William Osler Center (Peel Memorial/Brampton Campus)
 - b) William Osler Health Center (Etobicoke Campus)
 - c) William Osler Health Center (Georgetown Campus)
 - d) Trillium Health Centre
 - e) Credit Valley Hospital
 - f) Other, specify
 - g) Don’t know
 - h) Refused/No response

CONSENT TO RECEIVE CONTACT INFORMATION FOR POSSIBLE INVITATION TO PARTICIPATE IN FOCUS GROUPS (only asked if mother is still breastfeeding at 6-

months)

31. The Peel Health Department 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 Health Department.

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

- a) Yes (Go to Q 32)
- b) No (Go to Q 33)
- c) Don’t know (Go to end)
- d) Refused (Go to end)

32. The Peel Health Department would also like to contact some new mothers again and invite them to participate in small focus group discussions in order to further improve our services. Would you be willing to be contacted again later within the next year?

- a) Yes (Go to Instructions for Interviewer – once complete, continue to Q 33)
- b) No (Go to end)
- c) Don’t know (Go to end)
- d) Refused (Go to end)

33. Peel Health will need to keep your phone number, to arrange to send you an invitation when the focus groups are being held. Are you willing to have Peel Health keep your telephone number and contact you for this purpose?

- 1 yes, gives consent
- 2 no, refuses (go to end)

Instructions for Interviewer (do if Q 31 = yes and also if Q 32 = yes)

34. 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>?

- (a) Correct Go to Q35
- (b) No Go to Q34a

34a. Could you please give me your correct name/phone number:

- a) Answer
- b) Refused/no response

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

- c) Mississauga
- d) Brampton
- e) Caledon
- f) Other (specify and still include in survey)
- g) Refused/no response

Qend. This brings us to the end of our survey.

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 Smith at 905-791-7800 x2857.

Appendix B – 12-Month Breastfeeding Telephone Survey Script

I1. 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.

I1a. 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.

I2. Hello, my name is _____ and I'm calling on behalf of the Peel Health Department. As part of the 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 is 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.

I1b. 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

I1c. 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 the Peel Health Department to learn more about infant feeding in the Region of Peel. Peel 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 voluntary and you are free not to answer any question.

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. If you have any concerns

about the survey or wish to find out about the results, please contact Andrea Smith at the Peel Health Department 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.

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 Health Department contacted you six months ago, you were still breastfeeding your baby. What kind of milk are you feeding your baby NOW?
 - a) Formula (breastfed initially) (go to Q3)
 - b) Cow's milk (breastfed initially) (go to Q3)
 - c) Combination of breastmilk and formula/cow's milk (go to Q3)
 - d) Breastmilk (go to Q2)
 - e) Other (specify) (go to Q3) _____
 - f) Don't know (go to Q14)
 - g) Refused/no response (go to Q14)

2. 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.
 - a) Yes (Go to Q6)
 - b) No (Go to Q3)
 - c) Don't know (go to Q14)
 - d) Refused /no response (go to Q14)

3. How old was your baby when he or she first received <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, and cereals and thickeners or any other food. (DO NOT READ LIST but prompt if necessary – Choose One)
 - a) Less than 1 week
 - b) 1 week to less than 4 weeks
 - c) 1 month to less than 2 months
 - d) 2 months to less than 3 months
 - e) 3 months to less than 4 months
 - f) 4 months to less than 5 months
 - g) 5 months to less than 6 months
 - h) 6 months to less than 7 months
 - i) 7 months to less than 8 months
 - j) 8 months to less than 9 months
 - k) 9 months to less than 10 months
 - l) 10 months to less than 11 months
 - m) 11 months to less than 12 months
 - n) 12 months or more
 - o) Don't know
 - p) Refused / no response

If Q1=a, b, or e then GOTO Q4

If Q1=c, then GOTO Q6

Only ask Q4 & Q5 if Q1=a or Q1=b or Q1=e

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

- a) 6 months to less than 7 months
- b) 7 months to less than 8 months
- c) 8 months to less than 9 months
- d) 9 months to less than 10 months
- e) 10 months to less than 11 months
- f) 11 months to less than 12 months
- g) 12 months or more
- h) Don't know
- i) Refused / no response

5. Mothers stop breastfeeding for a number of reasons. What were some of your reasons?(Do Not Read)

- a) Baby crying/fussy/colic/gas
- b) Poor weight gain
- c) Baby seemed hungry/ not satisfied
- d) Not enough breastmilk
- e) Flat or inverted nipples
- f) Sore or cracked nipples
- g) Breast infection (mastitis)
- h) Returned to work
- i) Returned to school
- j) "Uncomfortable" with breastfeeding
- k) Lack of support (specify) _____
- l) Doctor / health care professional said to quit
- m) Interfered with social life / marital life
- n) Started baby on cow's milk
- o) Baby would not latch/not sucking well at breast
- p) Baby old enough/right time
- q) Baby ill
- r) Mother ill
- s) Teething/biting
- t) Not enough time/too busy
- u) Other (specify) _____
- v) Don't know / can't remember
- w) Refused / No response

(Go to Q7)

Decision Making

Only ask Q6 if Q1=c or Q1=d

6. How long do you plan to continue to breastfeed your baby?
- a) Until he or she is _____ months olds
 - b) Don't know
 - c) Refused / no response

Breastfeeding Support

7. The next question is about where you have breastfed your baby and whether you felt comfortable breastfeeding at that location: (Read responses)

Have you ever breastfeed your baby...

g) In malls

- (5) Yes Go to Q14ai
- (6) No
- (7) Don't know/Don't remember
- (8) Refused/no response

ai) Did you feel comfortable breastfeeding in malls?

- 5) Yes
- 6) No
- 7) Don't know/Don't remember
- 8) Refused/no response
- 9)

(use same format and wording for b to h below)

- i) In restaurants (bi - comfort)
- j) Recreational facilities (ci - comfort)
- k) In place of worship (di - comfort)
- l) In workplace (ei - comfort)
- m) On public transportation (fi - comfort)
- n) In presence of close family (gi - comfort)
- o) In presence of friends (hi - comfort)

Return to Work

8. Are you planning to return [go to] work or school within the next six months?

- a) Yes (Go to Q9)
- b) No (Go to Q14)
- c) Already returned to work/school (Go to Q10)
- d) Don't know (go to Q14)
- e) Refused / No response (go to Q14)

9. How old will your baby be when you return to work/school?

- _____ months (Go to Q11)
- Don't know (go to Q14)
- refused (go to Q14)
- After asked this question (i.e. Q9) Go to Q11

10. How old was your baby when you returned to work/school?

- _____ months (Go to Q12)
- Don't know (go to Q14)
- Refused (go to Q14)
- After asked this questions (i.e. Q10) Go to Q12

11. Are you planning to continue breastfeeding when you go to work/school?

- a. Yes go to Q13
- b. No (go to Q14)
- c. Don't know (go to Q14)
- d. Refused / No response (go to Q14)

12. Did you continue to breastfeed when you went back to work/school?

- i) Yes (Go to Q13)
- j) No (go to Q14)
- k) Don't know (go to Q14)
- l) Refused/No response (go to Q14)

Usage of Resources

13. Mothers tell us they continue to breastfeed because of help or support they receive.

Who or what gave you the most help or support about breastfeeding?

(DO NOT READ - Check all that apply.)

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

- a) Hospital staff
- b) Healthy Start Public Health Nurse

- c) Doctor
- d) Public Health Nurse visit in home
- e) Peel Breastfeeding Helpline telephone contact
- f) Breastfeeding Clinics Public Health Nurse
- g) Midwife / doula
- h) Lactation consultant
- i) Partner (spouse)
- j) Mothers at Breastfeeding companion
- k) Mothers at Breastfeeding Support Group
- l) Friends/Coworkers
- m) Parent/mother/mother – in- law/family member/relative
- n) La Leche League
- o) Other (specify)
- p) None of the above/no support
- q) Don't know/can't remember
- r) Refused/no answer

14. 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)

- a) Hospital staff
- b) Healthy Start Public Health Nurse
- c) Doctor
- d) Healthy Babies Healthy Children Public Health Nurse visit in home
- e) Peel Breastfeeding Helpline telephone contact
- f) Breastfeeding Clinics Public Health Nurse
- g) Midwife / doula
- h) Lactation consultant
- i) Mothers at Breastfeeding Companion Program
- j) Mothers at Breastfeeding Support Group
- k) La Leche League
- l) Other (specify)
- m) None of the above
- n) Don't know/ Can't remember
- o) Refused / no response

15. a.) 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)

- a) Hospital staff
- b) Healthy Start Public Health Nurse
- c) Doctor
- d) Healthy Babies Healthy Children Public Health Nurse visit in home
- e) Peel Breastfeeding Helpline telephone contact
- f) Breastfeeding Clinics Public Health Nurse
- g) Midwife / doula

- h) Lactation consultant
- i) Mothers at Breastfeeding Companion Program
- j) Mothers at Breastfeeding Support Group
- k) La Leche League
- l) Other (specify)
- m) None of the above
- n) Don't know/ Can't remember
- o) Refused / no response

Ask 15B If Q1=c ,d

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

- a) Hospital staff
- b) Healthy Start Public Health Nurse
- c) Doctor
- d) Healthy Babies Healthy Children Public Health Nurse visit in home
- e) Peel Breastfeeding Helpline telephone contact
- f) Breastfeeding Clinics Public Health Nurse
- g) Midwife / doula
- h) Lactation consultant
- i) Mothers at Breastfeeding Companion Program
- j) Mothers at Breastfeeding Support Group
- k) La Leche League
- l) Other (specify)
- m) None of the above
- n) Don't know/ Can't remember
- o) Refused / no response

THIS BRINGS US TO THE END OF OUR SURVEY.

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 SMITH at 905-791-7800 X2857.

Appendix C – Breastfeeding Initiation and Six-Month Duration Rates, 2000 and 2004/05

Table 8. Proportion of Respondents Who Initiated Breastfeeding by Year of Survey, Region of Peel, 2000 and 2004/05

	Year of Survey		
	2000*	2004/05*	2004/05 [†]
% Initiating Breastfeeding	84.1	88.1	93.9

* Breastfeeding initiation excludes those who did not initially indicate that they fed their newborn breastmilk, but then indicated that they tried to breastfeed.

† Breastfeeding initiation definition includes those who did not initially indicate that they fed their newborn breastmilk and then indicated that they tried to breastfeed.

Table 9. Proportion of Respondents Who Breastfed Their Baby to Six-Months or Longer by Year of Survey, Region of Peel, 2000 and 2004/05

	Year of Survey	
	2000	2004/05 [†]
% Who Breastfed Their Babies to Six Months or Longer	42.7	58.2

Breastfeeding duration rate was calculated by comparing the number of women who breastfed their babies for six months or longer to the total number of women who participated in the survey.

† Breastfeeding duration rate excludes those who had tried to breastfeed but were not asked any of the subsequent questions about duration (n=50).

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