

Peel Infant Feeding Survey

2019 summary report
- at a glance

A Peel Public Health technical report



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Introduction

Infant feeding decisions and practices have immediate and lifelong effects on the health of mothers and their infants. In the first six months of life, breast milk is the only food an infant needs for healthy growth and development. Additionally, Peel Public Health recommends the provision of adequate Vitamin D for breastfed infants and infants who consume formula in smaller amounts.¹

Infants who are exclusively breastfed are less likely to develop otitis media (middle ear infection), gastrointestinal infections, and lower respiratory infections compared to infants who are partially or never breastfed.² Children who were ever breastfed have reduced odds of being overweight or obese compared to children who were never breastfed.²



There are risks of discontinuing breastfeeding and introducing solid foods too early. Early introduction of solids limits the benefits of exclusive breastfeeding for the infant.³

In 2015, Peel Public Health initiated the Peel Infant Feeding Survey (PIFS). From 2015 to 2019, the PIFS was an annual cross-sectional survey designed to support the collection, analysis, and dissemination of information regarding infant feeding practices of Peel mothers. Findings are used to inform public health programming around infant feeding and related community programs to support optimal infant feeding practices in Peel Region.

Definition of terms

In this report, **breastfeeding** is defined as any self-reported attempt to feed the infant at the breast, or feed breast milk by cup, tube, or bottle.

Breastfeeding initiation is measured by the question "Have you ever tried to feed your baby breast milk?"

Exclusive breastfeeding is defined as breastfeeding only, without additional food or liquid (e.g., water, sugar water or formula) excluding vitamins, minerals, or required medication. By this definition, an infant would no longer be classified as exclusively breastfeeding after consuming only a single sip of any other liquid.

Eligible mothers were six to eight months postpartum at the initiation of this survey, residing in one of Peel's municipalities, and 15 years of age or older. Those who had known involvement with the Children's Aid Society, or experienced a stillbirth or had a live born infant who died were not eligible to participate.

Key findings

Almost all mothers initiated breastfeeding in the hospital or after discharge.

Most mothers (98%) initiated breastfeeding either in the hospital or after discharge. Overall, 87% of mothers breastfed in the hospital. A small percentage of women who did not breastfeed while in the hospital, initiated breastfeeding after discharge (11%). Between 2015 and 2019, there continued to be high levels of breastfeeding initiation with two of the top reasons for not breastfeeding being 'did not consider breastfeeding' and 'breast milk not coming in'.

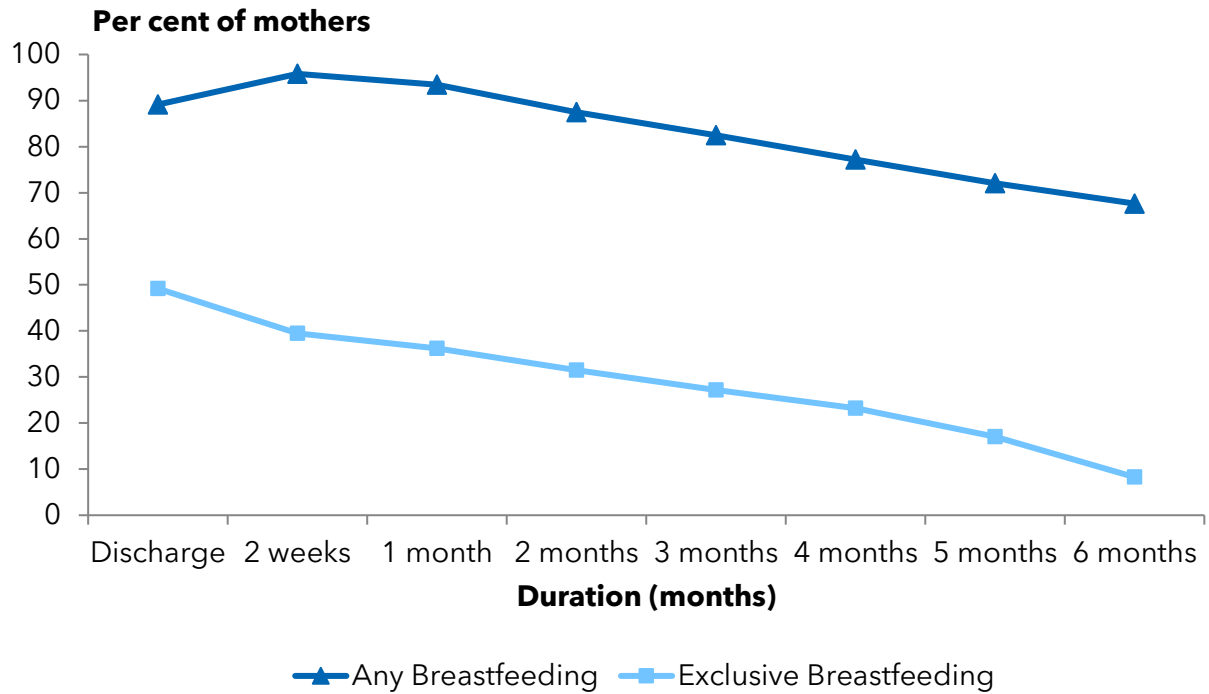
About half of mothers gave their infant liquids other than breast milk in the hospital.

Nearly half (46%) of mothers reported their infant was given liquids other than breast milk in the hospital. In addition, approximately one in five mothers were provided with formula prior to discharge from the hospital to take home. The proportion of mothers given formula to take home has significantly decreased over time (i.e., 32% in 2016, 21% in 2019). Although hospitals in Peel still provide free formula to mothers, this does not follow the recommendations of the World Health Organization's International Code of Marketing of Breast-milk.⁴

The proportion of mothers exclusively breastfeeding drops to below one in ten by six months postpartum.

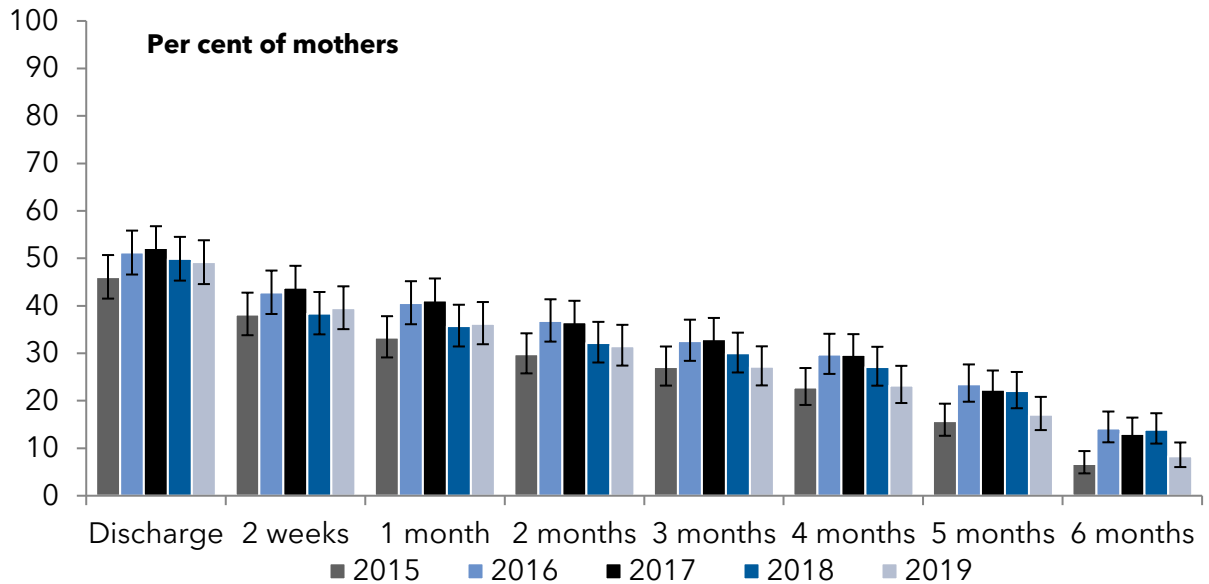
By the time mothers leave the hospital, only 49% of mothers reported exclusive breastfeeding. By six months, the percentage of mothers exclusively breastfeeding falls to 8% (Figure 1, Appendix B:Table 1). The largest decreases were between discharge from hospital and two weeks, and five months and six months (Figure 1; Appendix B: Table 1). The proportion of mothers exclusively breastfeeding between discharge and 5 months has remained generally consistent from 2015 and 2019 (Figure 2; Appendix B: Table 1). Exclusive breastfeeding has been shown to lead to many health benefits in infants.² National and international organizations recommend exclusive breastfeeding for the first six months of life.^{3,5}

Figure 1. Duration of Any and Exclusive Breastfeeding to Six Months Postpartum, Peel, 2019



Source: Peel Infant Feeding Survey 2019, Peel Public Health

Figure 2. Exclusive Breastfeeding Duration, Peel, 2015 to 2019

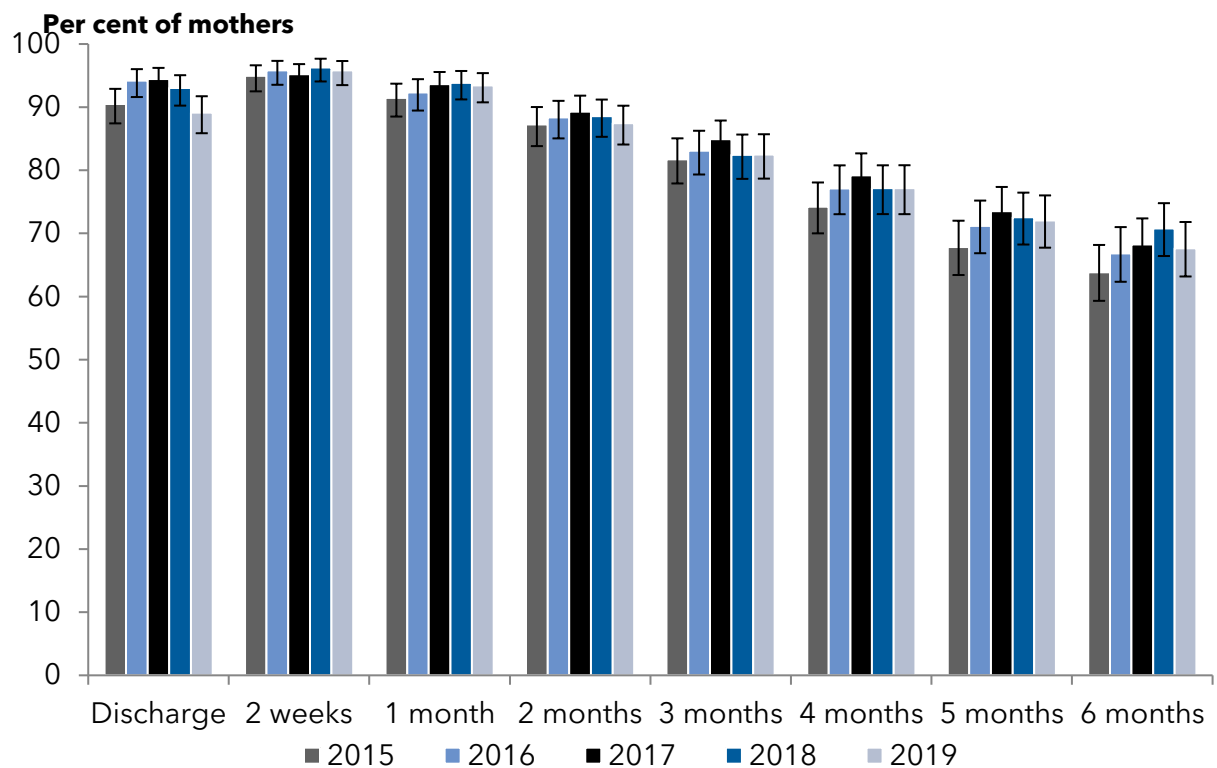


Source: Peel Infant Feeding Survey 2015 to 2019, Peel Public Health

The rates of any breastfeeding declined following hospital discharge.

Ninety-six per cent of mothers were breastfeeding at two weeks (Figure 1; Appendix B: Table 2). Almost half (47%) of those mothers introduced formula to their infant during this time. The rates of any breastfeeding declined following hospital discharge with 68% of mothers providing any breastfeeding at six months. The proportion of any breastfeeding at all time points remained generally consistent from 2015 to 2019 (Figure 3; Appendix B: Table 2). The most frequent reason for stopping breastfeeding was the perception of not having enough breast milk.

Figure 3. Any Breastfeeding Duration, Peel, 2015 to 2019



Source: Peel Infant Feeding Survey 2015 to 2019, Peel Public Health

Most Peel mothers who breastfeed provided their infants with Vitamin D supplements.

While breastfeeding, 89% of mothers gave their infant a Vitamin D supplement at least once. Most mothers (89%) who had given their infant a Vitamin D supplement report that they had done so every day or almost every day. These proportions have remained consistent through the PIFS cycles. Please see [getting started with breastfeeding](#)¹ to see Peel Public Health's recommendations for Vitamin D supplements from birth to two years of age.

Formula was the most common liquid provided to breastfed infants, other than breast milk.

Among mothers who breastfed their infant, 87% had ever introduced another liquid, with the most common liquid being formula. The proportion of mothers who introduced a liquid other than breast milk remained steady from 2015 to 2019. In total, 71% of breastfed infants who received formula and no other liquids were given it before the age of two weeks.

About one quarter of infants are offered solids either too early or too late.

Roughly three out of four infants were provided solid foods around the recommended age of six months. However, 23% of infants were offered solid foods either too early (less than five months) or too late (more than seven months). This has remained consistent throughout all cycles of PIFS. The most common reason for mothers starting to feed their baby solid food at any time point was advice from a health professional. Solid foods should be introduced to infants at around six months of age when the infant shows signs of readiness. Introducing solid foods too early can impact the duration of breastfeeding, and introducing solid foods too late can affect a child's growth and development associated with certain nutrient deficiencies, notably iron.³

Learnings from Five Years of the PIFS

Exclusive breastfeeding at hospital discharge tends to be higher among:

- Younger mothers;
- Mothers who delivered vaginally compared to those who delivered by Caesarean-section;
- Mothers whose baby was born at term compared to those whose baby was born preterm;
- Mothers with higher levels of household income; and
- Mothers born in Canada compared to those born outside of Canada.

Any breastfeeding at six months tends to be higher among:

- Older mothers;
- Mothers who delivered vaginally compared to those who delivered by Caesarean-section;
- Mothers whose baby was born at term compared to those whose baby was born preterm;
- Mothers with higher levels of household income;
- Married mothers compared to single mothers; and
- Mothers who finished post secondary education compared to those who completed high school or less.

The proportion of breastfeeding mothers providing formula before two weeks tends to be higher among:

- Older mothers;
- Married mothers compared to single mothers; and
- Mothers born outside of Canada compared to those born in Canada.

Acknowledgements

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Appendix A: Methods

Survey Sampling

Following the birth of an infant, consent is obtained by the hospital nurse or midwife for the mother to be contacted by Peel Public Health. Consent was documented using the Healthy Babies Healthy Children (HBHC) Screening Tool. Completed screening tools are faxed to Peel Public Health and entered into the provincial Integrated Services for Children Information System (ISCIS) database.

Mothers with infants between 26 and 33 weeks of age (about six to eight months) on the start date of the survey period (April 16, 2019) were selected from the ISCIS database for inclusion in the sampling frame. From the sampling frame, 1,130 mothers were selected. All teen mothers (aged 15 to 19 years) were selected, along with a random sample of adult mothers (20+ years), all who were residing within Peel.

Excluded from the sampling frames were:

- Mothers with known involvement of the Children's Aid Society
- Mothers of a stillborn infant or a live born infant who died

Survey Tool

The survey tool was comprised of 48 questions; eight of these questions were worded differently for mothers who delivered in the hospital compared to those who had a home birth. The survey was approximately 15 to 20 minutes in duration and completed using a Computer-Assisted Telephone Interview (CATI) system. Topics included in the survey and described in this report include:

- Birth and Baby
- Breastfeeding Initiation and Support
- Feeding in Hospital
- Feeding at Home (Breastfeeding)
- Hospital Births: Feeding at Home (Other liquids)
- Home Births: Feeding at Home (Other liquids)
- Feeding at Home (Solids)
- Vitamin D Supplementation
- Characteristics of the Mother

Data were collected through a telephone survey conducted by CCI Research Inc. The surveys were administered in the respondent's language of preference through the use of a professional language line. Calls were made

during the day and evening, on weekdays and weekends between April 16 and June 12, 2019. At the time the survey was taken, mothers were between six to nine months postpartum.

A standard script was used to describe the survey and to obtain consent to participate. Respondents were informed of their rights as a participant (e.g., to refuse to answer any question, to end their participation at any time).

Call disposition statistics were collected to capture the number of completed calls and the reasons for non-completion or refusal (where given). The majority of mothers (98%) in the sample were called until the list was exhausted according to the call specifications (i.e., at least 15 call attempts). The remaining 23 records that could not be exhausted requested a call-back that could not be resolved before the survey ended (e.g., asked to be called back after the survey period ended, answering machine, no answer and partially complete surveys).

Survey Development

Peel Public Health conducted a pre-pilot test of the 2015 survey questions and skip patterns in the Family Health Division in March 2015. Prior to each survey cycle, CCI Research Inc. tested the survey tool using the CATI System. Minor revisions to the survey instrument were considered following the results of these tests.

Analysis and Reporting

Descriptive statistics of estimates (proportions) and confidence intervals are presented in this report.

Analysis was computed using the svy procedure in Stata 17.0. Data presented in this report have been weighted using design weights based on age category of mothers (e.g., teen mothers, adult mothers). The weighting was done to account for the probability of selection for each respondent and was adjusted for non-response. The final design weight was the product of the probability of being sampled and the non-response adjustment factor (the proportion of respondents out of the eligible sample of respondents). Data describing respondent characteristics of the sample are unweighted.

Survey cycles were also combined to have sufficient power to produce estimates by stratifiers of interest. Methodology reported for combining cycles of the Canadian Community Health Survey (CCHS) was used to inform this analysis. The pooled approach was used to combine PIFS 2015 through 2019 cycle data. For each year, individual design weights were calculated for both the age categories of mothers listed above. Each age category in each year has a different weight to reflect probability of selection and non-response for that

respective year and age category before being combined into teenager and adult strata.⁶

In this report, data are presented where the numerator is 10 or more and the denominator is 20 or more. Any data with values less than this numerator or denominator were suppressed and labelled as not releasable due to small numbers. The coefficient of variation (CV) was also computed to determine the releasability of survey estimates. Estimates with a CV of 0.0-15.0 were releasable, estimates with CVs falling within 15.0-35.0 were released with caution and estimates with a CV greater than or equal to 35.1 were labelled not releasable due to small numbers. Additionally, if the proportion of missing responses for a question was five per cent or greater, cases with missing responses were kept in the analysis. If the proportion of missing responses for a question was less than five per cent, cases with missing responses were excluded from the analysis. Instances where the missing responses were included in the analysis are noted in the text, tables or figures.

Appendix B: Tabular representation of figures

Table 1. Per Cent Exclusive Breastfeeding Duration, Peel, 2015 to 2019

Breastfeeding duration	2015	2016	2017	2018	2019
Discharge	46.1	51.2	52.2	49.9	49.2
2 weeks	38.2	42.8	43.8	38.4	39.5
1 month	33.3	40.6	41.2	35.7	36.2
2 months	29.8	36.8	36.5	32.2	31.5
3 months	27.1	32.6	33.0	30.0	27.2
4 months	22.8	29.7	29.6	27.1	23.2
5 months	15.7	23.5	22.3	22.0	17.0
6 months	6.7*	14.2	13.0	13.9	8.3*

*Use estimate with caution

Source: Peel Infant Feeding Survey 2015 to 2019, Peel Public Health.

Table 2. Per Cent Any Breastfeeding Duration, Peel, 2015 to 2019

Breastfeeding duration	2015	2016	2017	2018	2019
Discharge	90.5	94.2	94.4	93.0	89.1
2 weeks	95.0	95.8	95.2	96.3	95.8
1 month	91.5	92.3	93.7	93.8	93.4
2 months	87.2	88.4	89.3	88.6	87.5
3 months	81.8	83.1	84.9	82.4	82.5
4 months	74.2	77.1	79.2	77.2	77.2
5 months	67.9	71.2	73.5	72.5	72.1
6 months	63.9	66.8	68.3	70.8	67.6

Source: Peel Infant Feeding Survey 2015 to 2019, Peel Public Health.

Appendix C: Text References

1. Getting started with breastfeeding [Internet]. Peel Region. [cited 2024 Nov 8]. Available from: <https://peelregion.ca/children-parenting/feeding-baby/getting-started-breastfeeding>
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6. Thomas S, Wannell B. Combining cycles of the Canadian Community Health Survey. Health Rep. 2009 Mar;20(1):53-8.