

# 2005 Breastfeeding Survey Report

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## Executive Summary

The Porcupine Health Unit Breastfeeding Survey is a telephone survey initiated in early 2005 and completed in the fall of 2005.

### **The objectives of the survey:**

1. To determine the initiation and duration rates of breastfeeding in the health unit area.
2. To determine the factors affecting these rates among mothers in our catchment area.
3. To provide direction to the Porcupine Health Unit and other local health care providers to plan programs and services that would promote and sustain breastfeeding, as recommended in Canada and worldwide (i.e., exclusive breastfeeding for the first six months with continued breastfeeding up to two years and beyond) [1].

Mothers who met the inclusion criteria were selected for a telephone survey. The survey was conducted in English or French, as required. Questions were related to demographics and maternal factors pertinent to the decision to breastfeed or formula feed. Data was also collected on extra-maternal factors related to initiation and/or breastfeeding duration such as perceived support from family and health care providers (family physicians, public health nurses and hospital staff). The Parkyn score calculated at the time of hospitalization, was used for statistical analysis.

The strength of association between breastfeeding, formula feeding and independent variables, was calculated using logistic regression. All statistical analyses were performed using STATA 9.1 software.

Out of 840 new mothers, 318 met the inclusion criteria and were surveyed. The remaining 522 were excluded due to inaccurate contact information, refusal to participate and failure to meet the inclusion criteria as outlined in the methodology. This sample size represented a 4.5 percent margin of error within a 95%

confidence level. Three groups were established based on how the respondents described their method of infant feeding at 48 hours postpartum:

- Breastfeeding mothers — 195
- Formula feeding mothers — 98
- Combination (breastfeeding and formula) feeding mothers — 25.

Resulting in:

- Mothers who left the hospital breastfeeding — 220 out of 318 — an initiation rate of 69% (220/318);
- Mothers who breastfed for more than five months for an overall six months (or more) — 107 out of 220 — a breastfeeding duration rate of 48.6% (107/220).

### ***Breastfeeding initiation***

The univariate analysis showed a strong association between breastfeeding initiation and maternal age, low Parkyn score, marital status, education level and timing of the decision of infant feeding practices; whereas, after adjusting for confounding factors, only marital status of the mothers maintained a strong association with breastfeeding initiation.

### ***Breastfeeding duration***

The breastfeeding duration rate to 6 months was 48.6%, which included those who breastfed exclusively and those who supplemented with formula. Among those who initiated and maintained exclusive breastfeeding, 18.6% were breastfeeding by the sixth month postpartum or longer, while the other 30% included all breastfeeding mothers who supplemented at any time up to six months.

A comparison of mothers who initiated breastfeeding exclusively with those who breastfed with early supplementation (combination feeding), showed a significant difference in duration. The median breastfeeding duration for combination feeding was 2 months, while the duration for exclusive breastfeeding was 6 months. In area hospitals, supplementation within the first 48 hours postpartum occurred in 53% of breastfed newborns. Formula supplementation was requested by the mother in 27% of the cases, while in the remaining 73% of cases, formula supplementation was done at the recommendation of a nurse or physician. Breastfeed-

ing duration was strongly associated with higher maternal age as opposed to younger mothers, low Parkyn score (below 9), marital status and higher level of education using univariate analysis (table 2). The determinants of breastfeeding duration to 6 months, once adjusting for confounders, were a low Parkyn score and marital status.

### ***Implications of the survey***

The results of the survey will be used to improve breastfeeding initiation and duration rates of women in the Porcupine Health Unit area catchment area.

Health promotion initiatives will focus on the obstacles and barriers identified with higher risk groups.

The health unit will continue to work in collaboration with health care professionals in the district including the hospitals that deliver babies, to improve supports for breastfeeding mothers.

By promoting ‘breastfeeding best practices’ the health unit will influence practices that adversely affect breastfeeding, such as formula supplementation in the hospital and in the community.

The authors also hope to influence curriculum content in nursing and medical educational institutions by endorsing the acceptance of enhanced curricula on breastfeeding.

### **Acknowledgement**

We thank the Porcupine Health Unit management committee for supporting the initiative by funding the survey and for other logistic supports. We would like to thank the staff of the health unit for helping to make this project successful. Thanks go to the mothers in the Porcupine Health Unit catchment area who participated in the survey. Special thanks to Ms. Michelle Haavaldsrud for bolstering the editing process amid her busy schedule. Great appreciation also goes to Mr. Gary Schelling and Ms. Bonnie Schultz for editing, formatting and publishing the document.

## Introduction

Breastfeeding is endorsed worldwide as the optimal method of infant feeding [1, 2, 3, 4] but not every new mother in Canada chooses to follow this practice. Breastfeeding initiation rates in Canada vary considerably, from a low rate of 53% in Atlantic Canada [5] to a high rate of 87% in British Columbia, while duration rates decline steeply in the initial 4 to 8 weeks postpartum [6, 7]. Data on breastfeeding initiation and duration rates for Northeastern Ontario is limited to a published study from the 1990s with initiation and duration rates of 65% and 40%, respectively [8] and a recent Northeastern Ontario survey, which demonstrated similar results [9].

To obtain information on breastfeeding practices in the District of Cochrane in Northeastern Ontario, the Porcupine Health Unit conducted a telephone survey on infant feeding practices during the summer of 2005. The purpose of this survey was to determine the initiation and duration rates of breastfeeding by mothers in our catchment area and the factors affecting these rates.

# Methodology

## Research Objective

1. To determine the initiation and duration rates of breastfeeding by mothers in the health unit area.
2. To determine the factors affecting these rates.
3. To provide direction to the Porcupine Health Unit and other local health care providers to plan programs and services that would promote and sustain breastfeeding, as recommended in Canada and worldwide (i.e. exclusive breastfeeding for the first six months with continued breastfeeding up to two years and beyond) [1].

The population cohort for this survey was comprised of mothers who delivered in the District of Cochrane, in the year 2004 and who met the inclusion criteria and consented to be surveyed.

Of the 2004 birth cohort, only those mothers who received postpartum contact by the Porcupine Health Unit were considered potential candidates for the study. Mothers who had experienced the loss of their child due to adoption, death or apprehension by Child Protection Services were excluded. The survey was conducted in English or French, as required. Questions were related to demographics and maternal factors pertinent to the decision to breastfeed or formula feed. Data was also collected on extra-maternal factors related to initiation and/or breastfeeding duration such as perceived support from family and health care providers (family physicians, public health nurses and hospital staff). The Parkyn score\* calculated at the time of hospitalization, was used for statistical analysis [10]. The Porcupine Health Unit Ethics Review Board approved the study.

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\* *Parkyn Tool*: A postpartum screening tool that screens mothers and babies before their discharge from the hospital according to 14 factors predictive of the risk of parenting problems, including presence of congenital or acquired health challenges, developmental factors and family interaction factors. The tool assigns a weight to each factor. When validated by the Healthy Babies Healthy Children program of the Ministry of Health and Long-term Care, Ontario, it was found that the tool is valid and effective when all the questions are completed.

The strength of association between breastfeeding, formula feeding and independent variables, was calculated using logistic regression. All statistical analyses were performed using STATA 9.1<sup>\*</sup> software.

## Results

Out of 840 new mothers, 318 met inclusion criteria and were surveyed. The remaining 522 mothers were excluded due to inaccurate contact information, refusal to participate and failure to meet inclusion criteria as outlined in the methodology. This sample size represented a 4.5% margin of error within a 95% confidence level. Three groups were established based on how the respondents described their method of infant feeding at 48 hours postpartum: breastfeeding mothers (195), formula feeding mothers (98), and combination feeding (breastfeeding and formula) mothers (25). Two hundred and twenty mothers left the hospital breastfeeding for an initiation rate of 69% (220/318); of these, 107 breastfed for more than five months for an overall six months (or more) breastfeeding duration<sup>†</sup> of 48.6% (107/220).

The age distribution for each subgroup is summarized in Table 1. A strong positive correlation between maternal age and breastfeeding was observed by univariate analysis. Older mothers tended to breastfeed more ( $p < 0.05$ ), while younger mothers decided more often to formula feed ( $p < 0.005$ ).

### *Breastfeeding initiation*

The univariate analysis showed a strong association between breastfeeding initiation and maternal age, Parkyn score, marital status, education level and timing of the decision of infant feeding practices (table 2); whereas, after adjusting for confounding factors, only marital status of the mothers maintained a strong association with breastfeeding initiation.

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\* Stata Statistical Software for Professionals, Texas, USA

† From the variable “how old was your baby when you stopped breastfeeding”, responses of more than 5,6 and 7 months were collapsed together to create the variable “Breastfeeding Duration”

*Table 1: Descriptive statistics along with the demographic characteristics*

	Breastfed	Formula fed	Combined fed
<b>Age of the study population</b>			
14-19	8 (40%)	12 (60%)	0
20-25	46 (58.2%)	30 (38%)	3 (3.8%)
26-30	84 (60.9%)	39 (28.2%)	15 (10.9%)
31-34	37 (67.3%)	13 (23.6%)	5 (9.1%)
>35	20 (76.9%)	4 (15.4%)	2 (7.7%)
<b>Marital status of the study population</b>			
Single	10 (33.3%)	18 (60%)	2 (6.7%)
Married	137 (70.6%)	41 (21.1%)	16 (8.2%)
Common-Law	46 (50.5%)	39 (42.9%)	6 (6.6%)
Unknown	2 (66.7%)	0	1 (33.3%)
<b>Educational status of the study participants</b>			
No School (less than grade 8)	1 (50%)	1 (50%)	0
Some secondary school	52 (50%)	47 (45.2%)	5 (4.8%)
Some post-secondary	131 (65.5%)	49 (24.5%)	20 (10%)
Post-graduate	10 (90.9%)	1 (9.1%)	0
<b>Parkyn score of the study participants</b>			
Less than 9	157 (64.3%)	68 (27.9%)	19 (7.8%)
More than or equal to 9	37 (50.7%)	30 (41.1%)	6 (8.2%)
Unknown	1	0	0

### *Breastfeeding duration*

The breastfeeding duration rate to 6 months was 48.6%, including those who breastfed exclusively and those who supplemented with formula. Among those who initiated and maintained exclusive breastfeeding, 18.6% were breastfeeding by the sixth month postpartum or longer, while the other 30% includes all breastfeeding mothers who supplemented at any time up to six months.

A comparison of mothers who initiated breastfeeding exclusively with those who breastfed with early supplementation (combination feeding), showed a significant difference in duration. The median breastfeeding duration for combination feeding was 2 months, while the duration for exclusive breastfeeding was 6

months. In area hospitals, supplementation within the first 48-hours postpartum occurred in 53% of breastfed newborns. Formula supplementation was requested by the mother in 27% of the cases, while, in the remaining 73% of cases, formula supplementation was done at the recommendation of a nurse or physician. Breast-feeding duration was strongly associated with higher maternal age, low Parkyn score (below 9), marital status and higher level of education using univariate analysis (table 2). The determinants of breastfeeding duration to 6 months, once adjusting for confounders, were a low Parkyn score and marital status.

Mothers who breastfed indicated that the most important sources of support and encouragement were family and/or husband (38%), followed by public health nursing (17%) and hospital nursing staff (12%). Other sources of support to breastfeed included the family physician, lactation consultant and self-help (15%). Both breastfeeding and formula feeding mothers reported receiving information on breastfeeding from their physicians (58% and 65%, respectively).

Other descriptive statistics along with the demographic characteristics are provided below.

**Table 2: Determinants of breastfeeding initiation and duration to 6 months:**

Variable	Initiation	Duration
	Odds Ratio (OR) 95% Confidence Interval	Odds Ratio (OR) 95% Confidence Interval
Older age	1.06 (1.009-1.110)	1.08 (1.026-1.128)
Parkyn < 9	0.85 (0.761-0.959)	0.83 (0.726-0.950)
Parkyn > 9	0.91 (0.838-0.997)	0.82 (0.689-0.970)
Marital status	0.45 (0.315-0.635)	0.36 (0.234-0.562)
High school diploma or less	0.29 (.0136-0.597)	0.30 (0.111-0.786)
Some college	0.91 (0.556-1.499)	0.48 (0.276-0.840)
Post grad/University	1.84 (1.160-2.911)	2.77 (1.660-4.631)
Decision to BF made before pregnancy	1.21 (0.975-1.506)	1.45 (1.158-1.822)

## Discussion

Our survey confirmed that mothers in the District of Cochrane had a breastfeeding initiation rate of 69% and a duration rate to 6 months of 48.6%. This breastfeeding initiation rate is lower than that for Canada as a whole (81.9%) [6, 7], and lower than the rates reported from other jurisdictions in Ontario [7, 11, 12]. Even though breastfeeding is one of the best natural forms of preventive medicine [11, 13], our district has not been able to overcome the obstacles and barriers that lead to high initiation and duration rates [14].

Breastfeeding is an outcome variable resulting from the interaction of several determinants. These independent predictors are, by nature of their interaction, highly correlated. In our study, other variables affecting initiation and duration rates were examined and after adjusting for confounders, only marital status was a significant breastfeeding *initiation* determinant whereas marital status and low Parkyn score were the significant determinants of breastfeeding *duration*. This result is counter-intuitive as other factors associated with breastfeeding found in the literature, such as maternal age, level of education and decision to breastfeed prior to pregnancy, did not withstand the adjustment for confounders [15].

Marital status and a low Parkyn score may indicate positive socio-demographic and bio-medical factors that favour breastfeeding, underscoring the complexity of human behaviour and the interplay of factors needed to create a supportive breastfeeding environment [11]. Dennis identified the women least likely to breastfeed included the young, the poor, those belonging to an ethnic minority, the unsupported, those who did not decide to breastfeed prior to pregnancy and those without maternity leave requiring attendance at a full-time job [11]. Northern Ontario has three times the rate of live births to teen mothers [16] than the provincial average, which suggests that many mothers fall into the categories Dennis describes, contributing to the decreased breastfeeding initiation rates in this area.

It was found from our survey that the younger the infant was exposed to formula supplementation, the shorter the duration of breastfeeding. Most mothers, whose

breastfed babies were supplemented in hospital, reported that the infant was supplemented at the nurse's or physician's recommendation, suggesting a practice of routine supplementation as opposed to supplementation only when medically indicated. A concern remains that routine supplementation is recommended to breastfeeding mothers without informing them of the potential risks to breastfeeding duration.

It is regrettable that only one of our hospitals providing maternity care has policies and practices consistent with the WHO/UNICEF Baby Friendly Hospital Initiative [17] and that formula supplementation may take place, at the recommendation of nurses and physicians, without informing the mother of its grave adverse potential effect on breastfeeding longevity. Levitt indicated that, although 58.4 percent of hospitals in Canada reported the existence of policies on breastfeeding, only 4.6 percent acknowledged having one that complied with all of the WHO/UNICEF steps. To make matters worse, the figure dropped to 1.3 percent when compliance with the WHO code (which forbids distribution of free samples of formula to formula feeding and breastfeeding mothers) was added [18].

## **Limitations**

The following limitations to this survey have been identified. First, a small number of births in the District of Cochrane led to a limited number of study sample size which impairs generalizability of the findings. Second, due to the period of time that elapsed between the births in 2004, and contact for this study in 2005, a potential for recall bias existed. Third, there seemed to be wide variability in the respondents' interpretation of some of the survey questions. This was ameliorated somewhat by the use of a single surveyor who provided consistent explanations to the respondents.

## **Conclusion**

Despite the limitations, we will use the results of our survey to improve the initiation and duration rates in our catchment area. Health promotion initiatives will focus on the obstacles and barriers identified with higher risk groups. The Porcupine Health Unit will also continue to work in collaboration with health

care professionals in our district, including the hospitals that deliver babies, to improve supports for breastfeeding mothers. By promoting “breastfeeding best practices” we are in a position to influence practices that adversely affect breastfeeding, such as formula supplementation in the hospital and in the community. We also hope to influence curriculum content in nursing and medical educational institutions by endorsing the acceptance of enhanced curricula on breastfeeding.

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**TELEPHONE INTRODUCTORY SCRIPT**

Use \*67 (call block feature) at all times!

1<sup>st</sup> Attempt: 2005/ / (mm/dd) Time: \_\_\_\_\_  
2<sup>nd</sup> Attempt: 2005/ / (mm/dd) Time: \_\_\_\_\_  
3<sup>rd</sup> Attempt: 2005/ / (mm/dd) Time: \_\_\_\_\_

**Introduction**

Hello, may I speak to \_\_\_\_\_?

**I am calling on behalf of the Porcupine Health Unit. We are doing a telephone survey about mothers and infant feeding. This survey will help the health unit give better service to new families. It will take about 10 minutes of your time.**

*(We are not selling or promoting any product.) Do not say this phrase unless client wants to know.*

**Is this a convenient time for you to talk to me?**

If **YES, Thank you**, (now proceed).

If not a convenient time, **When would be a better time to call back?**

Date: 2005/ / (mm/dd) Time: \_\_\_\_\_

If **NO**, they may give one or more excuses/reasons. If excuses/reasons given - reply as seems appropriate.

Document as much as you can about the reasons for not participating in the study:

Reasons:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Thank you for your time!**

\*\*\*\*\*

If it seems that the mother does not speak / understand English:

Ask, **Would you like me to speak in French?**

(If “yes”, conduct the rest of the survey in French.)

If mother is not at home:

**When would be a good time to call back in order to reach \_\_\_\_\_?**

Date: 2005/ / (mm/dd) Time: \_\_\_\_\_

If wrong number or the number is not in service:

Please document by describing the situation:

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**We're contacting all mothers public health nurses at the Porcupine Health Unit spoke to after their baby was born.**

**Your name will not be used and everything you tell us is kept private. We will be using information we obtained from your chart (such as your age, whether this was your first baby, etc) along with your answers to this survey. All of this information will be grouped together and no one person will be identified. Do you have any questions about this?**

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**Would you be willing to participate in this survey?**

(Please record the date and sign below depending on the response)

Verbal Consent:    G Yes                    G No

**If NO - say Thank you for your time and please be assured none of your personal information will be used in this survey.**

If, **YES**

Date: 2005/ / (mm/dd) Time: \_\_\_\_\_ Signature: \_\_\_\_\_

**We appreciate your help in answering this survey. If you are uncomfortable with any of the questions, you don't have to answer them. Not answering any of the questions will not have any effect on the services you and your family receive from the Porcupine Health Unit.**

(NOW PROCEED)

## SURVEY QUESTIONS

**We are interested in learning more about the reasons mothers choose to breastfeed or bottle feed their baby.**

**1. How were you feeding your baby in the first 48 hours after his/her birth?** (Check only one. Do not read options.)

If response is "bottle", ask **Did you put breast milk or formula in the bottle?**

- Breastmilk only (if "yes" GO TO QUESTION 5)
- Formula - Ask **Did you try to breastfeed this baby?**  
(If **YES** - GO TO QUESTION 5)  
(If **NO** - CONTINUE)
- Combination of breastmilk and formula (if **YES** GO TO QUESTION 5)
- Other (specify) \_\_\_\_\_
- Refused / no response – go to QUESTION 16

Question for mothers who did not breastfeed this baby

**2. We are interested in the reasons that women choose to bottle feed. Could you tell us why you chose to bottle feed?**

- Bottle-fed last baby
- Family / friends bottle-fed
- Easier to know baby getting enough milk
- Breastfeeding too time consuming
- Able to have a break from baby
- Father or others can feed baby (i.e. bond with baby)
- Don't have to worry what you eat or drink, or if you take medications
- Planned early return to work/school after baby born
- Avoid problems with breasts i.e. sore nipples, breast infection
- Breastfeeding difficulties with previous baby
- "Uncomfortable" with breastfeeding
- Breast surgery (i.e. reduction)
- Lack of support  
(specify) \_\_\_\_\_
- Other  
(specify) \_\_\_\_\_
- Don't know, can't remember
- Refused/no response – go to QUESTION 16

**3. Did you make the decision to bottle feed . . .**

- **before getting pregnant,**
- **during pregnancy, or,**

- after the baby was born?

**4. Do you feel you received enough information during your pregnancy to help you make this decision?**

- Yes
- No
- Don't know / can't remember

After question 4, go to QUESTION 16 - pink sheets - *“Follow up questions for moms who chose to bottle feed”*.

**5. Did you make the decision to breastfeed . . .**

- before getting pregnant
- during pregnancy, or,
- after the baby was born?

**6. How old was your baby when you stopped breastfeeding?** (Check only one response)

- Less than 1 week (less than 7 days)
- 1 week to less than 4 weeks
- 1 month to  $\leq$  2 months
- $>$  2 months to  $\leq$  3 months
- $>$  3 months to  $\leq$  4 months
- $>$  4 months to  $\leq$  5 months
- $>$  5 months to  $\leq$  6 months
- $>$  6 months to  $\leq$  7 months
- Over 7 months, specify \_\_\_\_\_
- Don't know / can't remember

**7. Did you supplement your baby with formula before you stopped breastfeeding?**

- Yes
- No
- Don't know / can't remember

If **YES**, continue. If **NO**, go to QUESTION 10.

**8. How old was your baby when you started to give him/her formula?**

- Less than 1 week (less than 7 days)
- 1 week to less than 4 weeks
- 1 month to  $\leq$  2 months
- $>$  2 months to  $\leq$  3 months
- $>$  3 months to  $\leq$  4 months
- $>$  4 months to  $\leq$  5 months
- $>$  5 months to  $\leq$  6 months

- >6 months to  $\leq$  7 months
- Don't know / can't remember

**9. Mothers supplement their babies with formula for a number of reasons. Could you tell us why you decided to supplement your baby? (Check all responses given)**

- Baby crying/fussy/colic/gas
- Poor weight gain
- Baby seemed hungry/not satisfied
- Not enough breastmilk
- Flat or inverted nipples
- Sore or cracked nipples
- Breast infection (mastitis)
- Returned to work/school
- "Uncomfortable" with breastfeeding
- Lack of support  
(specify) \_\_\_\_\_
- Interfered with social life/marital life
- Other  
(specify) \_\_\_\_\_
- Don't know, can't remember

**10. At what age did you start introducing solids to your baby?**

- Less than 1 week (less than 7 days)
- 1 week to less than 4 weeks
- 1 month to  $\leq$  2 months
- > 2 months to  $\leq$  3 months
- >3 months to  $\leq$  4 months
- >4 months to  $\leq$  5 months
- >5 months to  $\leq$  6 months
- >6 months to  $\leq$  7 months
- Don't know / can't remember

**11. Mothers tell us they continue to breastfeed because of help or support they receive. Who gave you help or support? (Check all responses given).**

If client gives 1 response only, ask: **Were there any other people who gave you help or support?** (if no Quest. 13)

- Hospital staff
- Doctor
- PHN visit in home
- Lactation consultant
- Partner (spouse)
- Family
- Other (specify) \_\_\_\_\_

**12. Who gave you the MOST HELP OR SUPPORT about breastfeeding?**

- Hospital staff
- Doctor

- PHN (nurse) visit in the home
- Lactation consultant
- Partner (spouse)
- Family
- Other (specify)\_\_\_\_\_
- Don't know / can't remember
- Refused / no response

**13. Mothers stop breastfeeding for a number of reasons. Could you tell us why you stopped breastfeeding?** (Check all responses given)

- Baby crying / fussy / colic / gas
- Poor weight gain
- Baby seemed hungry / not satisfied
- Not enough breastmilk
- Flat or inverted nipples
- Sore or cracked nipples
- Breast infection (mastitis)
- Returned to work
- Returned to school
- "Uncomfortable" with breastfeeding
- Lack of support (specify)\_\_\_\_\_
- Doctor / health care professional said to quit
- Interfered with social life / marital life
- Other (specify)\_\_\_\_\_
- Don't know, can't remember
- Refused/no response

**14. Were you able to continue breastfeeding for the length of time you intended?**

- Yes
- No
- Don't know / can't remember

**15. What would have helped you continue to breastfeed longer?**

- More info so could avoid breastfeeding problems
- Support from family and / or friends who breastfed
- Experience – next time I think it will be easier
- Absence of breastfeeding problems e.g. sore nipples, mastitis, thrush (specify)\_\_\_\_\_
- Other (specify)\_\_\_\_\_
- Don't know / can't remember

**We would like to ask you some questions about the services you received from the hospital and the community.**

**16. During your pregnancy, did your family doctor or obstetrician give you information about breastfeeding?**

- Yes
- No
- No family doctor, obstetrician visits only
- Don't know, can't remember

**17. When you visited your family doctor or obstetrician for prenatal check ups, did he/she complete the Breastfeeding Plan with you?**

- Yes
- No
- Don't know, can't remember

**18. After your baby was born, was your family doctor knowledgeable and supportive of breastfeeding?"**

- Yes
- No
- Don't know, can't remember

**19. Did you attend the Pre-Admission Clinic at the hospital?**

- Yes
- No
- Don't know, can't remember

If **YES**, continue with QUESTION 20. If **NO** go to QUESTION 21.

**20. During the Pre-Admission Clinic, were you given information about breastfeeding?**

- Yes
- No
- Don't know, can't remember

The following questions are about the hospital where your baby was born.

**21. Was the hospital staff knowledgeable and supportive of breastfeeding?**

- Yes
- No
- Don't know, can't remember

**22. Did you and your baby have skin-to-skin contact immediately following the birth?**

- Yes
- No
- Don't know, can't remember

**23. Were you given the opportunity to offer your baby the breast for the first time within ...**

- **30 minutes**
- **1 hour**
- **1 to 2 hours**
- **more than 2 hours after he or she was born**

**24. Did you have help latching your baby while in the hospital?**

- Yes (specify) \_\_\_\_\_
- No – help offered but not required
- No – help was not offered
- Don't know, can't remember

**25. If breastfeeding was delayed (for example, if your baby was not able to latch in hospital, or if you and your baby were separated), were you shown how to express your milk or given information about hand expression or pumping in the hospital?**

- Yes
- Offered – but information not needed - knew from previous children
- No
- Don't know, can't remember

**26. Did your baby receive only mother's milk in the hospital? (That is, NO other foods or drinks were given.)**

- Yes
- No
- Don't know, can't remember

If **YES** or *Don't know, can't remember*, go to question 28.  
If **NO**, go to question 27.

**27. Did you request the formula for your baby or was it recommended by the nurse or doctor?**

- Mother requested formula
- Nurse / doctor's recommendation to supplement
- Don't know, can't remember
- Other (specify) \_\_\_\_\_

**28. Did your baby remain with you at all times during your stay at the hospital, except for periods of up to one hour for hospital procedures?**

- Yes
- No
- Don't know, can't remember

**29. Were you instructed to breastfeed your baby whenever your baby wanted to feed and to wake him if he slept too long?**

- Yes
- No
- Don't know, can't remember

**30. Did your baby have a pacifier or soother, artificial nipple or baby bottle while in the hospital?**

- Yes
- No
- Don't know, can't remember

**31. Were you offered any formula or bottles (and nipples) when you left the hospital?**

- Yes
- No
- Don't know, can't remember

**32. Were you told how to contact a breastfeeding mothers' support group or other source of support when you were discharged from the hospital?**

- Yes
- No
- Don't know, can't remember

**33. Overall, do you believe your breastfeeding experience was improved by the hospital?**

- Yes

- No
- Neutral response (not improved nor hindered)
- Don't know, can't remember

**Now, we would like to ask you some questions about the service from the Porcupine Health Unit after your baby was born.**

**34. Did you attend prenatal classes by the Porcupine Health Unit?**

- Yes
- No
- No – attended during previous pregnancy
- Don't know, can't remember

If **YES**, go to QUESTION 35. If **NO**, go to QUESTION 38

**35. In Prenatal Classes, were given information about breastfeeding?**

- Yes
- No
- Don't know, can't remember

**36. In Prenatal Classes, were you taught how to breastfeed - how to get breastfeeding off to a good start?**

- Yes
- No
- Don't know, can't remember

**37. In Prenatal Classes, were you given enough information to make an informed decision about infant feeding?**

- Yes
- No
- Don't know, can't remember

**38. Do you remember receiving phone contact or a home visit from the Porcupine Health Unit after your baby was born?**

- Yes
- No
- Don't know, can't remember

If **YES**, go to QUESTION 39. If **NO**, go to QUESTION 47

**39. Was the public health nurse knowledgeable and supportive of breastfeeding?**

- Yes
- No

- Don't know, can't remember
40. **Did the nurse from the health unit give you information and help you breastfeed your baby, including how to manage any challenges you were facing?**
- Yes
  - No
  - Offered – information not needed or knew from previous children
  - Don't know, can't remember
41. **Were you instructed by the public health nurse to breastfeed your baby whenever your baby wanted to feed or nurse and to wake him if he slept too long?**
- Yes
  - No
  - Don't know, can't remember
42. **Did the nurse from the health unit teach you how to express your milk or give information about hand expression or pumping?**
- Yes
  - Offered – information not needed or knew from previous children
  - No
  - Don't know
43. **Did the nurse from the health unit tell you that most babies need only breastmilk for the first six months - that no other foods are necessary before 6 months?**
- Yes
  - No
  - Don't know
44. **Did she encourage you to continue to breastfeed your baby beyond 6 months**
- Yes
  - No
  - Don't know
45. **Were you told by the nurse from the health unit where to find breastfeeding information and support in the community?**
- Yes
  - No

- Don't know

46. Overall, do you believe your ability to **breastfeed** your baby was improved by contact with the Porcupine Health Unit?

(For mother who bottle fed, ask, Overall, do you believe your ability to **feed** your baby was improved by contact with the Porcupine Health Unit?)

- Yes
- No
- Neutral response (not improved nor hindered)
- Don't know

**Finally, we would like to ask you some questions about yourself.**

47. Were you born in Canada?

- Yes
- No
- Don't know

48. With what ethnic / cultural group do you belong?

- Anglophone
- Francophone
- First Nations / aboriginal
- Other  
(specify) \_\_\_\_\_

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

- No schooling
- Some schooling but less than high school diploma
- Completed high school (grade 12/13)
- Some trade school, college or university
- Completed trade school, college or university
- Post graduate
- Refused/no response

50. What town were you living in when your baby was born?

\_\_\_\_\_

51. I'd like to confirm the hospital where your baby was born?

- TDH
- Sensenbrenner

- Notre Dame
- Lady Minto
- Other  
(specify) \_\_\_\_\_

**52. How long did you stay in the hospital after your baby was born?**

- less than 24 hours
- 25-36 hours
- 37-48 hours
- 49-60 hours
- Other (specify) \_\_\_\_\_

**THANK YOU FOR YOUR TIME IN PARTICIPATING IN THIS SURVEY.**

(This information will be helpful in improving services the Porcupine Health Unit provides to families.)