Learning from Mothers, Grandmothers & Great-Grandmothers about Breastfeeding in the Northwest Territories

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Above are the partners in "Learning from Mothers, Grandmothers and Great-Grandmothers about Breastfeeding in the Northwest Territories." From left to right is Dr. Pertice Moffitt, (Principal Investigator), Dr. Kyla Wright (Maternal Child Health Promotion Officer), Florence Barnaby (Fort Good Hope), Annie Kaye (Fort McPherson), Sarah Krengnektak (Tuktoyaktuk), Nina Larsson (Senior Advisor, Early Childhood Development), Jane Dragon (Fort Smith) and Rosa Mantla (Behchoko).

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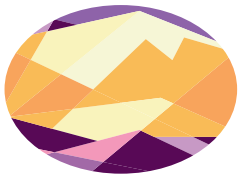

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EXECUTIVE SUMMARY

Breastfeeding is an ideal way to promote and protect health from infancy to adulthood. Human milk is made up of nutrients that protect against infection, help infant survival and boost healthy growth of babies. Human milk changes over time. The first milk, colostrum, becomes transitional milk, which eventually changes to mature milk as the baby gets older. This is because the milk the mother is producing supports many growth factors that are of benefit to different systems in the human body. This is the difference between mother's milk and formula. Formula cannot change to meet the growing baby's needs but is a substitute to human milk when breastfeeding is not an option. Mother's milk, rich in all of these nutrients, provides a healthy diet for an infant.

The World Health Organization (WHO) has recommended that mothers breastfeed their babies exclusively (meaning only breast milk with the exception of oral rehydration solution or drops/syrups of minerals, vitamins or medicines) for six months and continue to breastfeed for two years. There are very few studies in the Northwest Territories (NWT) that have described the infant feeding practices of mothers, so little is known about how many northern women are breastfeeding or bottle feeding. It is known that many women around the world do not meet the WHO recommended standard for exclusive breastfeeding. Because of this, the WHO created the 'Baby Friendly Initiative' (BFI), the purpose of which is to support women in their infant feeding decisions. The Department of Health and Social Services, the Northwest Territories Health and Social Services Authority and Administrators have been working on this initiative for many years.

The purpose of this study was to learn about breastfeeding from mothers and grandmothers in the Northwest Territories and to identify how mothers are feeding their babies by examining health records from the hospitals and community well-baby visits. The outcome is to describe the nature of breastfeeding in the territory, as well as establish and present traditional knowledge about breastfeeding alongside the most current information and evidence available to support new parents who are deciding how they will feed their babies.

The study was conducted from May 2017 to June 2018. Sharing circles were held with five groups of grandmothers (n=49) in four regions of the territory, and semi-structured interviews were conducted with mothers (n=24). In addition, a retrospective chart audit of the health records of babies born in 2016 (n=597), as well as an examination of infant feeding practices reported by mothers to Public Health Nurses or Community Health Nurses during their well-baby visits in five locations (Inuvik, Tulita, Fort Smith, Hay River, Yellowknife) were completed.

The knowledge informing the study's findings are from three sources: grandmothers, mothers and documentation from health care providers. The grandmothers were both Indigenous (80%) and non-Indigenous long-time northerners. The average age of the grandmothers was 66.8 with a range in age from 36 years to 91. They had one to twelve children with an average of 4.3 children. The grandmothers were asked whether they breastfed or bottle fed their infants and the researchers found that seventy-eight percent of the grandmothers breastfed one or more of their children. The key findings from the grandmothers were identified under five themes; *Feeding practices*, *Being resourceful*, *Surviving hardship*, *Rekindling the past*, and *Sharing wisdom*. Briefly, the following summary provides some context to grandmothers' stories.

- A few of the older grandmothers gave birth on the land or in their community with the help of another woman. Most of the grandmothers travelled to communities with hospitals to stay until they gave birth. Often, the baby was put on their chest right after birth for warmth and comfort. This is a recommended practice for today's BFI.
- Grandmothers described surviving hardships in the old days. For example, if a mother died in childbirth, there were often no other mothers present to feed the baby. Families were resourceful. They described the many ways they assisted the baby to survive. They boiled rice and gave the baby rice water from a spoon or thimble. They also gave the infant fish, caribou or moose broth and rabbit brains. Grandmothers said those babies grew up to be strong from the traditional food.
- Grandmothers reported that infectious diseases disrupted breastfeeding. One grandmother described that her father had been orphaned from the time of influenza and another grandmother had tuberculosis and could not breastfeed her baby.
- It was not easy travelling by dog team, preparing camp, assisting with the trapline, caring for older children and feeding their babies. There were traditional practices that helped them with their mothering. The grandmothers described collecting moss for diapers for the infants, often carrying their babies on their backs while they worked. Dene grandmothers put older babies in the swing, *their babysitters*, while they shared in the work of living on the land. Inuvialuit women carried their babies in an amauti on their back for ease of feeding and working. They described toilet training infants as young as three months so that care was taken not to soil the furs in the igloos.
- Grandmothers were sent away to residential schools where they suffered loss of language skills, cultural practices from their mothers, and traditional parenting skills. In terms of breastfeeding, the grandmothers talked about being made to feel ashamed of their bodies and learning that talking about their bodies was private information. This along with the separations from their mothers made them isolated struggling on their own to feed their babies.

- Some grandmothers did describe having Elders in their lives who advised them about eating traditional food, drinking water, keeping busy and breastfeeding their babies. Grandmothers who had this support in their lives breastfed most of their children. Grandmothers who felt isolated struggled with breastfeeding their baby and shared that they tried to breastfeed but found the pain unbearable so decided to bottle feed.
- Grandmothers recognize the supportive roles they have with their grandchildren and want to maintain this role in their communities.

The mothers in the study were self-identified as Indigenous (54%) and non-Indigenous (46%). The range of ages of the mothers was 19 to 40 with an average age of 30.5. Mothers had one to four children with an average of two children at the time of the interviews. The findings from mothers were identified under four themes; *Feeding babies*, *Social supports*, *Judgmental discourse,* and *Messages to new moms*.

- Of the participants interviewed, many women successfully breastfed several children.
- Many women described latching difficulties and nipple and breast pain during the first few weeks of breastfeeding. They described helpful interventions including professionals who were there in the hospital to demonstrate proper latch and positioning of their babies. Some women used a nipple shield with success. Many learned how to massage their breasts and pump off breast milk to soften their breasts and make it easier for the baby to latch. Two of the mothers in the study experienced mastitis and were given medication and were advised to continue to breastfeed their babies.
- Mothers described the important role of fathers in supporting them, feeding and burping babies and in caring for other children. They described significant support from their families and communities. For mothers in some regional centres, they feel supported in their communities where there are many programs that they engage in. Mothers in remote communities need home visits and advice during the early weeks of breastfeeding. Mothers use the internet and YouTube to answer their questions. They use the Facebook page and 1-800 number to connect with "Moms, Boobs and Babies," a territorial non-profit peer support group.
- Some mothers talked about alcohol use by family members that created a lack of support in their lives and a determinant in their decision to bottle feed.
- Some mothers experienced being excluded from normal life when they were asked to breastfeed in private or were criticized for breastfeeding in public.
- Mothers agree that new mothers need to hear encouraging and supportive words. They need information and support in a timely way particularly when they are just getting started in breastfeeding and when they are first home from the hospital. They shared encouraging words for new mothers.

It was determined from the health records that in 2016, 82% of mothers in the NWT initiated breastfeeding. When pregnant women go to the hospital to give birth, their decision to breastfeed or bottle feed their babies are recorded on the newborn record. As well, there is an indication whether they are breastfeeding or bottle feeding when discharged from the hospital. The initiation rate in the NWT is lower than the national rate of 89% reported in 2011/12 (Statistics Canada, 2013).

The exclusive breastfeeding rate for six months is as low as 17% to as high as 60% in selected 2016 communities in this study. In 2011/2012, the national rate of exclusive breastfeeding was reported as 26% (Statistics Canada, 2013). In some communities, the exclusive breastfeeding rate is above the national average.

This study generates new knowledge about infant feeding practices in the NWT and contributes to practice, policy, health promotion and research direction. Since there is an abundance of evidence supporting breastfeeding as the ideal way to feed babies, it is vital that formal (health care providers) and informal (families and communities) supports continue to promote breastfeeding. At the same time, mothers who choose to formula feeding for medical or other reasons need to be supported. A list of ways to move forward is found in this report but here in the executive summary are four key recommendations for infant feeding in the NWT:

- Apply traditional knowledge to perinatal and parenting programs to create culturally safe teachings and resources. Some of the ways this can be done as recommended by the Advisory Circle of Knowledge Keepers in this study are to incorporate a holistic approach to breastfeeding from a physical, mental, spiritual and emotional perspective; reinforce Indigenous law (i.e. respect, love, sharing); develop and/or adopt an Indigenous breastfeeding curriculum; revive, promote and preserve games, stories, songs and legends within programs; actively consult and include Elders in program development.
- Create and maintain a perinatal database in the NWT that can be accessed by researchers, epidemiologists and health planners. This will provide the statistics required to evaluate, improve and sustain health outcomes;
- Enhance education and training in all communities for frontline workers and all parents following the Ten Steps as outlined by the Canadian Breastfeeding Committee and within the BFI;
- Engage in a social justice approach to 'promote, protect and support' all parents which considers the context of their lives and the choices they make regarding feeding their babies. This approach recognizes the complexities of individual lives, considers gendered language, recognizes socio-economic determinants of infant feeding and furthers support of families with infants.

INTRODUCTION

Despite the fact that breast milk is considered the optimal source of nutrition for the first six months of an infant's life (Ballard & Morrow, 2013), there is a low uptake of this practice in Canada with 14.4 percent of women choosing to breast feed exclusively for six months (Chalmers et al., 2009). The rate of exclusive breastfeeding in the NWT, from this national survey, identified a rate of 19.7 percent, a slightly higher rate than the national exclusive breastfeeding rate.

There is very little published literature about infant feeding practices in the NWT. Our population is sparse in a large land mass and it is salient to consider the yearly birth rate. In some communities, there are less than 10 babies born and the mothers travel out of their communities to give birth (Moffitt & Vollman, 2006). Between a ten year period (2005-2014), the number of births shifted slightly from 698 births in 2005 to 665 births in 2014 with a mean for these ten years of 695 births (NT Bureau of Statistics, 2014). It would seem that with this relatively small sample of mothers and babies, the nature of infant feeding practices in our territory could be easily identified. Sadly, this is not the case.

The complexity of identifying feeding patterns can be viewed through the steps that have been taken by the health authorities and the Government of the Northwest Territories (GNWT) over the past ten to fifteen years to implement the Baby Friendly Initiative[1] in hospitals across the North. We have not yet achieved the designation of Baby Friendly, but we are getting closer. The problem is, in part, due to an inability to access the data that is needed and an inconsistency in the language used within health records. These problems have been compounded by the implementation of the electronic health record and the Health Information Act that was legislated in 2015. The goal is to have all health records electronic, but we are not yet at that point and currently have both paper and electronic records. The Health Information Act has been declared "complicated" and requires "simplifying" (Malbeuf, 2018) and is incomplete in addressing researcher access. For all of these reasons, the gathering of breastfeeding statistics, such as initiation and duration rates, are close to impossible in the current system.

Moffitt and Dickinson (2016) conducted a retrospective chart audit in the Tlicho region to establish infant feeding practices and explore factors that influence infant feeding. They found that the exclusive breastfeeding rate was less than 30% in the region. They developed knowledge translation tools to promote breastfeeding in the region. They accessed a

[1] Baby Friendly Hospital Initiative (BFHI)was introduced by the World Health Organization/UNICEF in 1991 and adopted in Canada in 2002 (Levitt et al, 2011). The Baby Friendly Initiative is a worldwide effort to promote, protect and support breastfeeding by engaging in "Ten Steps to Successful Breastfeeding" (Appendix A). Several authors have noted that there is an increase in breastfeeding practices when the ten step process is introduced (Barnes, Cox, Doyle& Reed, 2010; Pound & Unger, 2012). In Canada, the BFI is led by the Breastfeeding Committee of Canada.

Tlicho Elder realizing the benefits of the transmission of traditional knowledge to new mothers as well as discovering factors influencing mothers' infant feeding decisions. This study spurred the need for further research across the territory and this current study will help to generate knowledge about infant feeding across the territory.

The purpose of this study is to describe the current picture of infant feeding by sharing findings about initiation and duration rates of breastfeeding and to learn from mothers and grandmothers about past and contemporary infant feeding practices.

LITERATURE REVIEW

There is substantive literature about breastfeeding in the world. In a search of CINAHL, Cochrane Systematic Reviews, MEDLINE, Social Sciences Full Text with the search term "breastfeeding" and narrowed to the past ten years (2007 to 2017) there were 16, 867 hits. When narrowed to Canada, there were 719 hits. There is a wide variety of topics such as barriers to breastfeeding (attitudes, smoking, alcohol intake, medicalized), health promotion strategies for breastfeeding (benefits of breastfeeding, knowledge translation tools, prenatal care, social supports), policy direction (Baby-friendly or unfriendly hospitals, best practice guidelines, health literacy) and population specific (adolescents, university students, immigrants, First Nations). This review will begin by delving into Indigenous Canadians and breastfeeding, a context relevant place in consideration that 51 percent of the people in the Northwest Territories are Indigenous.

INDIGENOUS CANADIANS AND BREASTFEEDING

There is a dearth of literature on Indigenous Canadians and breastfeeding and what is known is captured below under breastfeeding as an intervention, Indigenous beliefs and practices, feeding patterns and weight, and breastfeeding self-efficacy.

Breastfeeding intervention: There is focused attention related to consideration of co-morbidities and health disparities with breastfeeding as an intervention for improved health status for mothers and children (Cidro, Zahayko, Lawrence, Folster, McGregor & Mckay, 2015; Martens et al., 2016; McIsaac, Moineddin & Matheson, 2015). Cidro et al. (2015) conducted a Baby Teeth Talk Study using grounded theory and Indigenous research methodologies with Norway House Cree Nation Health Division, Manitoba. Their findings, within a lens of healthy infant feeding coupled with good oral health, included three themes; *Breastfeeding attitudes*, *Social support for mothers*, and *Community programs that support healthy infant feeding*. These authors note the importance of learning about the benefits of cultural approaches to childrearing that can be gleaned through intergenerational teaching about traditional values and knowledge. As is the case in the NWT, the women of Norway House must leave the community for birth disrupting the breastfeeding experience. There is a need for

family and community support of the breastfeeding family at home. Some grandmothers felt that young mothers today did not want to hear about the best way to care for their babies since they were dealing with challenges related to "issues with spouses, addictions and poverty" (p.7). Moffitt (2008) and Moffitt and Dickinson (2016) found similar determinants of decisions to breastfeed in the NWT. Martens et al. (2016) reported that the initiation of breastfeeding reduces the incidence of diabetes in mothers and their children. This is an important consideration in the NWT where the prevalence rate for diabetes is 5.2% and with the full realization that Indigenous women experience diabetes at 4 times the rate of mainstream Canadians and experience gestational diabetes at a higher rate (Canadian Diabetes Association, n.d.). Martens et al. conducted a retrospective database study in Manitoba with 334,553 deliveries between the years 1987 to 2011. In this study, the researchers report that breastfeeding may alter the risk of diabetes in mothers and their children. McIsaac et al. (2015) used population survey data and three infectious outcomes (otitis media, gastrointestinal infection and sudden infant death) to establish that breastfeeding prevents the occurrences of these outcomes in a significant numbers of infants. These researchers conclude that breastfeeding is an intervention that prevents infant morbidity and mortality in Indigenous Canadians.

Beliefs and practices: Several studies look at Indigenous breastfeeding beliefs and practices (Banks, 2003; Moffitt, 2008; Vallianatos et al., 2006). From these studies, it is important to note the salience of cultural context and breastfeeding, the level of community engagement with breastfeeding, and the challenges pregnant women face in maintaining healthy body weight related to access to nutritious food (Vallianatos et al., 2006). Banks (2003) purports two influences on the decline of breastfeeding with Mohawk mothers in Kanesatake community in Quebec– industrialization and the changing Indigenous family structure. Banks and Moffitt also note the impact of residential schooling and colonial interference on childrearing practices generally. Infant feeding decisions were highly influenced by the maternal grandmothers (Banks). At the time of the study, the exclusive breastfeeding rate was 32% and supplements with solid foods provided as early as two weeks of age. The community implemented interventions to promote breastfeeding. For example, grandmothers held talking circles to share ideas on how to support their children with breastfeeding, provide educational strategies to help mothers address breastfeeding problems and encouragement for the whole family and community to collaborate with supportive solutions.

Feeding patterns and weight: Obesity of Indigenous populations is a multifactorial and complex issue in Canada (Willows, Hanley & Delormier, 2012) and Indigenous children experience obesity at high rates (Willows, 2005). In an Ontario study with Indigenous children, researchers discovered that although most mothers initiated breastfeeding (75%), at three months 40 % of mothers had stopped breastfeeding. As well, 51% of babies had solids before three months (Kuperberg & Evers, 2006). This practice contributes to obesity. It should be noted that this study is 11 years old, but relevant for the NWT where obesity in children is a concern. However, we do seem to be making headway in improving exclusive breastfeeding rate overall in the territory. In 2014, the exclusive breastfeeding rate was 41% in 2014 (NWT

Bureau of Statistics, 2016). The exclusive breastfeeding trend in the NWT does appear to be steadily rising from a low of 15.2 % in 2012 (ibid). Willows, Hanley and Delormier (2012) utilize a socioecological framework that includes "early life events, family feeding practices, food insecurity and colonization practices and policies" (p.2) to identify actions to improve the weight of children. According to these researchers, education and understanding of the historical context and its influence on current societal weight gain is required. In particular, they referenced two case studies (1) the Kahanawake Schools Diabetes Prevention Project and the Sandy Lake projects that are based on socio-ecological models. Education, healthy eating and physical activity are key to healthy weight outcomes. The effectiveness of the curriculum is enhanced by integrating Indigenous learning styles.

Self-efficacy: Finally, breastfeeding self-efficacy, explained as mother's confidence in her perceived ability to breastfeed (Dennis, 1999) is touted as a modifiable variable (McQueen, Montelpare & Dennis, 2013). In their prospective cohort study with Indigenous mothers (n=150) in Ontario and using a breastfeeding self-efficacy tool, they found that Indigenous women with low self-efficacy in the early postpartum period are at risk to stop breastfeeding. These researchers recommend enhancing traditional practices with mothers and grandmothers. Coaching and community support are integral to these approaches. This intervention aligns with the objectives of this study.

EXCLUSIVE BREASTFEEDING IN CANADA

Canada has adopted the BFI initiative recommended by the WHO but is at varying stages across the country of achieving the BFI designation in our facilities. As noted by Pound et al. (2016), there are barriers that need to be targeted in order to complete the 'ten steps to successful breastfeeding' and achieve the indicators for BFI. In their survey, staff rated their knowledge and skills as poor which means they would have difficulty implementing the steps. There is a tension that is created for health care providers when they are trying to support individual contexts and people with best practice directions.

Reasons mothers stop breastfeeding: Brown et al. (2014) plotted the reasons Nova Scotia mothers (n=500) stopped breastfeeding prior to the recommended 6 month exclusive duration. They found that 74% of women stopped breastfeeding in the first 6 weeks postpartum related to difficulty with breastfeeding. This finding is consistent with other research suggesting the first 6 weeks postpartum to be the most vulnerable time for risk of cessation (Dennis, 2002; Kronorg & Vaeth, 2004). The other reasons given are inconvenience, fatigue and insufficient supply. They recommend we focus support on this first six-week period.

Predictors of exclusive breastfeeding: In 2012, a retrospective cohort study in Ontario of live singleton and twin births (n=92,364) found that only 62% were exclusively breastfeeding at discharge form the hospital (McDonald et al., 2012). They uncovered predictors of exclusive breastfeeding- infants at 37 weeks of gestation and babies born by unplanned Caesarian section are less likely to be exclusively breastfed. The babies born by

unplanned C-section are less likely to have skin-to-skin contact or initiate breastfeeding in the first hour of birth and this may account for some of the discrepancy. Al-Sahab, Lanes, Feldman and Tamim (2010) conducted an analysis of the Maternity Experience survey and describe rates of exclusive breastfeeding in Canada at 6 months to be 13.8 %. These researchers found that; *higher years of education, residing in the Northern territories and western provinces, living with a partner, having had previous pregnancies, having lower pre-pregnancy body mass index, and giving birth at an older age* were associated with a higher likelihood that exclusive breastfeeding will occur. This is good news in respect to the location of the findings and previous pregnancies but in terms of the high rate of teen pregnancies in the NWT, and obesity within our population this may account for some of the formula feeding practices. In another study of first-time mothers in Montreal, researchers found that breastfeeding self-efficacy, in-hospital formula supplementation, prenatal class attendance and type of delivery all influences the duration of exclusive breastfeeding (Semenic, Loiselle and Gotlieb, 2008). Kim, Hoetmer and Vanenberg (2013) conducted surveys at 6 weeks, 6 months and 12 months postpartum in Ontario to ascertain if the intention to supplement with infant formula influenced the duration of breastfeeding. They found that mothers who intended to supplement were 2.6 times more apt to limit their breastfeeding duration.

Health promotion discourse: The way we talk about breastfeeding has a moralizing effect on mothers making them feel judged, ineffective or guilty for their choice in feeding their infants if it is not exclusive breastfeeding. The slogan "breast is best" is concerning for some groups of mothers (Greene et al., 2015) and the means of using health literacy to promote breast feeding needs to focus more on cultural literacy (Gillis, Gray & Murphy, 2012). Green et al. describe the pressure HIV positive mothers in Ontario felt through the inability to breastfeed their babies. In stories from these mothers, they felt they had to conceal the fact that they were not breastfeeding because of the recommended clinical guidelines because people would be convinced that they were HIV positive and that the absence of their breastfeeding would declare their diagnosis. These stories exemplify the way that women feel scrutinized by society. Within the discourse "breast is best", and the social, cultural and emotional context of infant feeding, we must acknowledge that the context of women's lives is central to their choices in infant feeding. This study is salient to our setting due to the cultural diversity, colonial practices and oppression of women.

Alcohol and smoking: Substance use is a concern through pregnancy and breastfeeding (Gilbert et al., 2014; Lange et al., 2016). Alcohol use during pregnancy was identified as 1 in 10 while alcohol use during breastfeeding was identified as 2 in every 10 breastfeeding Canadian women in secondary analysis of the Canadian Community Health Survey from 2003 to 2010 (Lange et al., 2016). Their recommendations are the education of childbearing women about the effects of alcohol, increase access to treatment programs, intervention with women who drink, and the implementation of a standard screening tool with high risk populations. In consideration of the findings, do women wo drink choose not to breastfeed?

HISTORICAL BREASTFEEDING PERSPECTIVES

There is not a great deal written about past infant feeding practices in the NWT but there are some accounts in the subarctic anthropological literature that are important to note (Hara, 1980; Helm, 1961, 1981; Petitot, 1971; Rabesca, Romie, Johnson & Ryan, 1993). Breastfeeding was initiated when milk came in and was continued for two to three years (Hara, Petitot). During the 40s and 50s, artificial teats and bottles were used when they were available in the community as well as the breast. Helm (1961) reported; *the toddler though still fed on demand, must step aside for the baby who has first place in the mother's attention and at her breast. The toddler is weaned at this time, being given pieces of bannock or bits of dried milk to pacify him.* (p.75)

Babies were the centre of attention in their families with care provided by all members of the family, although the mother was primary caregiver (Hara, 1980, p.267). Helm and Hara describe mothers using the moss bag for diapering. The bag was described then as black cloth that is filled with moss and then laced up to secure the baby. The moss is changed as needed and is returned to the land when soiled by the baby. Babies sleep with mothers or in a hammock and they are carried in a shawl on the mothers back by wrapping a shawl or blanket around the baby and then tying it around the mother's waist.

There is mention of breast milk as medicine from a quote from Mary Adele Moosenose, *"When a person had a rash and they didn't know what to do for that person than the mother would get some of her milk and smear it on the child's rash." (*Rabesca et al., 1993, p.318). Local people recognized a healing component of breast milk. As well, Indigenous informants in this study noted engorged breasts were treated by washing their breasts with hot water and tea. This natural massaging with heat helped to soften the breasts so that the baby could latch better. Then the baby breastfed to empty the breasts and this helped the engorgement. These traditional practices, from anecdotal accounts, are present today.

Figure 1:
Advisory Circle of Knowledge Keepers

- ✓ **Traditional role;**
- ✓ **Gatekeepers;**
- ✓ **Cultural decision-makers;**
- ✓ **Ceremonial roles;**
- ✓ **Knowledge translation;**
- ✓ **Wisdom.**

METHODOLOGY

ADVISORY COMMITTEE

There is developing evidence in the research literature that participatory processes are important to engagement with local people in Indigenous communities (Bird et al., 2009; Moffitt & Dickinson, 2016). Flicker et al. (2015) report the involvement of Indigenous Elders in the research process is research done in "a good way." The strengths of Indigenous Elders in research are many. The traditional role of Elders is as knowledge keepers. Elders act as knowledge brokers as well as gatekeepers for knowledge sharing. Elders provide cultural decision-making to guide the research process. Elders lead meetings with ceremony and prayers unique to their regions. Elders contribute to culturally congruent knowledge translation. Elders possess and share wisdom that grew through observation, experience and oral story telling.

"Feeding Our Babies Advisory Committee," an advisory circle of knowledge keepers from the NWT regions and a steering committee from the GNWT Department of Health and Social Services, guided this study. This action is not only important to fulfill the ethical guidelines for research conducted with First Nations, Métis and Inuit peoples in Canada (CIHR et al., 2014), but is a planned 'research in action' effort to engage both separately and together new mothers, grandmothers and great grandmothers. This group, which included researchers, elders, mothers and government decision makers, met three times over the year of the study (July, 2017 to June, 2018).

Together, the research team reviewed the terms of reference and created our working relationship (Appendix). The knowledge keepers (Elders) described their perspectives on the benefits and challenges to breastfeeding, their personal feeding practices and established important directions for the inclusion of questions within the interview tools. Benefits according to the knowledge keepers included the following: Breastfeeding is a means of *nurturing and connecting with your baby*; provides *bonding and nourishment for mom and baby*; is practical *when you live out on the land and have no access to formula*; *transmitting of Indigenous language during nursing* as you interact with the baby.

Some of the challenges shared included *pain and suffering with cracked nipples*; lack of support to help with breastfeeding; some *young mothers did not know how to ask for help*.

The knowledge keepers asked questions of each other and shared traditional and contemporary knowledge from their regions. A question arose about how to dispose of breastmilk that was leaking from engorged breasts and collected in a cup.

An Elder shared:

> *They [the mothers] let it [the breast milk] drip on to a piece of cloth. The mothers were advised not to put it in the garbage and not to put it in the fire. One of the family members takes it to the bush. It is said when you burn it, you are burning*

yourself...and you can suffer with this action as a mother. (Knowledge Keeper, July 2018)

This speaks to a relationship with the land, the practices of Indigenous mothers as they relate to mothering beliefs and health promotion practices involving breastfeeding, and the protocols that Indigenous people lived by for generations.

Another question was asked about personal experience with the promotion of breastfeeding. An Elder responded about her own breastfeeding experience and how today she extended her knowledge to new mothers:

...I had a daughter and I thought I would breastfeed. So, as soon as she was born, I told the doctors that I was going to breastfeed, so as soon as she was born they put her on the breast. And, I heard all these stories about, you know, first time breastfeeding mothers having all these complications. They put her on my breast and I thought "oh she's sucking, how easy can this be." And then maybe three days later she didn't latch on properly, and holy cow I was sitting there and my hands were like this [clenching], and I was lucky I had a nurse who took the time who showed me about a proper latch. It didn't happen right away but took about two months every time I would feed I would have my fists clenched. Then going through that, we had some young mothers who really wanted to breastfeed and were on the verge of quitting because of sore nipples. So, one day I said just feed your baby right here and let me see how you do it. And of course just watching her, I noticed that she wasn't latching, so I pulled out my little demos and stuff, my knitted boob, and showed her. (Knowledge Keeper, July 2018)

This story speaks to the support that new mother need when they are nursing their babies. The Elders agreed that support and guidance are required by new mothers and when they do not receive support they decide to bottle feed not only the baby they are currently feeding but subsequent babies.

Some of the young mothers have tried to breastfeed but when their breasts get sore and uncomfortable, they have no one to guide them...it was always the mother, like my mom or grandmother [who helped me]. So now, when the young mothers are alone, they need someone to guide them through it. Otherwise, they are going to give up. They are the ones that are suffering with pain...so if they experience that, the next baby they will not breastfeed.

The Elders discussed the importance of creating a safe place for grandmothers and mothers to share their stories. They identified the historical impact of Indian Residential School (IRS) experiences for themselves and for other grandmothers in the territory. They experience anger and sadness at times when they are sharing their stories. One knowledge keeper shared the

following abusive action experienced by girls attending IRS and a recommendation that counsellors be available in case it happens during the research process.

> *One morning the girls said "oh look at this." During the night the nuns sewed the end of the brassieres together, of the ones [girls] with the big breasts, and then put them back so that they would have flat chests. Stories like that come up when I talked with a few of the mothers. I know I was there but I didn't have big boobs so they didn't bother me, but for the rest of the girls, thing like that will come up. It is good to have a counsellor present.*

The knowledge keepers also advised on knowledge translation and ways to improve breastfeeding. One suggestion was role modelling positive mothering and was presented in this way:

> *I am thinking about how else we can promote breastfeeding...there is one mother in particular that I am thinking of who breastfed her kids and has the time with her kids outside of breastfeeding. She bonded with her kids...like pick someone from your community and do a little video or interview, so that other mothers in the community can see that...I'm sure if I saw [name] on a video talking about her family, having pictures of her family and I never breastfed and I am drinking alcohol and doing drugs and whatnot, I am going to want to be like [name] and look after my kids like that.*

Another Knowledge Keeper spoke about when breastfeeding education should occur – *"Young teens and women of childbearing age need to be educated on their health even before they decide to have a baby."*

RESEARCH AND RELATIONSHIP

Many researchers have described the research process itself as a relationship (Hopkins, 21012; Leeuw, Cameron & Greenwood, 2012; Chalmers, 2017; Wilson, 2008). Relationality is particular to the worldview of Indigenous groups in the NWT and to community life for Indigenous and non-Indigenous people alike. From a feminist perspective, creating community and relational practices forms the basis of my work (Chinn, 2013; Gilligan, 1982; hooks, 2009). In a study such as this, it is difficult to separate the researcher from the researched. It is salient to identify that I am a nurse with a thirty-year history of working in the NWT. One of my children was born in the Arctic, both of my children grew here, and the North is my home.

I was breast fed by my mother in the 50s for seven months (she did that with all six of her children) and we then went to the cup. I wanted to breastfeed like my mother, but also I knew about the benefits of breastfeeding from my nursing education and both of these experiences influenced my decision to breastfeed my children. I am passionate about the practice of breastfeeding and I breastfed both of my children exclusively for six months. I am

also a great proponent for women's choice, autonomy and decision-making about what they do and how they raise and mother their own children.

RESEARCH QUESTION

What is the nature of breastfeeding in the Northwest Territories?

RESEARCH AIMS

- Conduct retrospective chart audits to identify breastfeeding initiation and duration rates in the 2016 NWT birth cohort;
- Conduct sharing circles with grandmothers and great-grandmothers to learn about past infant feeding practices and traditional knowledge about caring for babies;
- Conduct semi-structured interviews to learn about the determinants of breastfeeding;
- Informed from the findings, create a health promotion video to encourage breastfeeding and enable knowledge translation.

STUDY DESIGN

The project included a series of retrospective chart audits, sharing circles in four regions of the NWT, semi-structured interviews with new mothers, and the creation of knowledge translation tools.

Figure 2: Study Design

RECRUITMENT AND SAMPLE

The participants in this study are mostly Indigenous mothers and grandmothers recruited in four regions of the NWT: Beaufort Delta, Sahtu, DehCho and South Slave regions. The grandmothers recruited to the sharing circles belonged to five cultural groups[2] Gwich'in, Inuvialuit, Métis, Shúhtaot'ine/Dehogao'tine and Kátł'odeeche, Mothers from Inuvik, Fort Smith, Hay River and Tulita participated in the study. Although the mothers and grandmothers are from unique and distinct cultural groups, there are similarities as well as differences in their mothering beliefs and practices.

In each of the five cultural groups, a knowledge broker recruited the grandmothers to the sharing circles. The researcher identified the knowledge broker in most cases by their formal positions within their Indigenous government or territorial government. For example, the knowledge brokers held positions of executive director, health support worker, community health representative and community advocate. These women belonged to the cultural group and set-up the meetings between the researcher and the participants. The participants were recruited into five sharing circle between September, 2017 to December, 2018.

Sole service agreements established between Aurora Research Institute and the Indigenous community group ensured that local caterers provided food and cultural organizations arranged rooms. Honorariums[3] for grandmothers came from this agreement as well. Utilizing service contracts offers a way to provide honorariums to the grandmothers at the time of the meeting. This gesture is respectful and meaningful to the participants.

Mothers feeding infants up to 12 months of age were selected using purposive and snowballing techniques. Posters were shared at the hospitals and public health offices. Public health nurses in some regions called mothers who attended well-baby clinics and told them about the opportunity to speak with the researchers. If they agreed to be interviewed, their names and contact information was given to the research team. In this study, seventy-three (n=73) mothers and grandmothers participated.

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[2] In some places in this report, Indigenous groups are referred to more specifically as Dene, Inuvialuit and Métis. At other times, groups are identified as Indigenous and non-Indigenous people and with the participants' cultural group, in an attempt to be specific and respectful.
There are two reasons for the difference in naming ethnicity. The population is small in the NWT and every attempt has been made to protect the anonymity of participants. For this reason, at times participants are grouped in broad classifications. Referring to the specific cultural groups that grandmothers are a part of was to demonstrate their distinctness in a respectful way.

[3] Providing honorariums to the Advisory Circle of Knowledge Keepers and the grandmothers attending the focus groups meets a research protocol when working with Indigenous Elders. The rate established is $250.00 for a full day and $125.00 for a half day. When a contract with the community is implemented, the community agency is able to provide a cheque the day of the meeting. The honorarium then holds meaning in keeping with the consultation that has just occurred.

To ascertain initiation and duration breastfeeding rates, a two phase process was conducted. Health records of the 2016 birth cohort (n = 597) were examined in the four birthing communities (Inuvik, Yellowknife, Fort Smith and Hay River) to ascertain initiation rates. The well-baby visits recorded in the Rourke[4] baby record at Public Health Units and the Community Health Centre were accessed to ascertain duration rates. Accessing health records requires application to the Custodian of the Health Record, Department of Health and Social Services, GNWT and it was ascertained by the DHSS that two separate research agreements were required.

DATA COLLECTION AND ANALYSIS

Retrospective chart audit: The retrospective chart audit is a design used to examine patient centered data to address specific research questions (Vassar & Holtzman, 2013). In this study, initiation and duration rates of breastfeeding are calculated through birth record data to establish initiation rates and well-baby records to establish duration rates. The birth records were accessed at the four locations of territorial births (Yellowknife, Inuvik, Fort Smith, Hay River). Public Health Nurses and Community Health Nurses collect infant feeding data during well baby visits in the territory. Data was accessed from five communities (Yellowknife, Inuvik, Fort Smith, Hay River, Tulita).

The NWT has been engaged in a twenty year process to digitalize the health record system. Despite the fact that Webster (2017) described the NWT as leading the implementation of one hundred percent integration of the electronic medical record in Canada, integration is still not achieved in the territory. For this study, paper and electronic records contained the infant feeding data required to ascertain initiation and duration rates.

A template of criteria for data abstraction was created following definition of the inclusion and exclusion criteria. It was decided that the most current data on infant feeding would be accessed. This meant including the 2016 birth cohort since we could trace the duration rate for 12 months following the births. As identified in the literature review, the World Health Organization (1989) identified exclusive breastfeeding for the first six months of life as best practice. We wanted to understand the infant feeding practices of mothers with babies born in 2016. This meant birth records from the four places of birth would be included; exclusion were any births that occurred outside of the territory (mothers who left the north to have their baby or those mothers who were medically evacuated to a larger center). In the well-child records, the chart was examined to identify if the mother was breastfeeding, formula feeding or feeding with human milk and artificial milk during the regular well baby visits (at 1, 2, 4, 6, 12 months).

[4] The Rourke Baby Record is used in the NWT. It provides a way to chart well-baby and well-child visits for infants and children from 1 week to 5 years of age (Rourke, Leduc & Rourke, 2017)

In developing the template for data extraction, factors affecting the health of the newborn were considered. These included mother's information (age, ethnicity, parity) and infant information (weight, APGAR[5] score, mode of delivery, skin to skin, initiation of feeding human milk, artificial supplements while hospitalized).

Data extraction occurred in two phases, by third parties, and in compliance with two research agreements obtained from the Data Custodian, Department of Health and Social Services. The researcher was not given direct access to health records for data extraction purposes.

The first phase is access to hospital birth records and began in Inuvik at Inuvik Regional Hospital. The birth records, which are documented in paper files, were photocopied by the Supervisor, Health Records. She gathered these 2016 documents for examination by the researchers in the health records office. Any identifiers on the patient record were removed. The records included the Admission Record, the Newborn Record, the Labour and Delivery Record, and the latching record tool. The researchers (Principal Investigator [PI] and Graduate Student Research Coordinator) transferred the data manually from the photocopied records to individual templates created by the PI. The research team assigned a number to each individual record. There were no identifiable variables on the template. The Supervisor Health Records planned to destroy the photocopied documents from the health records. The researcher incurred a fee of $1684.00 to access these records.

Hay River hospital was the second site of data extraction. Since this facility is not a part of the integrated HSS Authority, the research agreement is a separate process and requires consultation between administration and the researcher that is outside of the GNWT. A mutually agreed upon time to access the records was set between the research team and the midwives. Midwives assist in the delivery of babies born to mothers in Hay River and documentation occurs in an electronic medical record (EMR). Again, the PI was not given direct access, but was assisted by the midwife who had direct access to the health record. The midwife accessed each record in 2016 extracting the data required and verbally reported it to the PI. The PI recorded the data on the templates described above. There was no fee to access these records.

Fort Smith was the third site of data extraction. Chart records were pulled by the Health Records personnel that included the newborn record, labour and delivery record, discharge summary and admission record. The records were prepared and placed in an envelope for pick-up at the health centre. The data was transferred from the photocopied documents to the templates by the PI. The envelope, intact with the documents provided, was returned to

[5] APGAR scores are performed on the newborn at 1 minute and 5 minutes to evaluate the physiologic status of the newborn. The score is derived from five parameters including heart rate, respiratory effort, response to irritation stimulus and colour (Chow, Ateah, Scott, Scott Ricci & Kyle, 2013).

Health Records. Some of the data on the Admission Record was blackened and the ethnicity of the individual was difficult to ascertain. On the records where this difficulty was encountered, the Health Records Supervisor clarified the distinction. The fee to access these health records was $300.00.

The final site for data extraction was Yellowknife. Stanton Territorial Hospital is the largest facility in the territory and health records are in paper format. In conversation with the Health Records Supervisor and in light of the decision from DHSS that the researcher would not have direct access to the files, she felt that similar data is currently gathered for CIHI and could be accessed for this study. The researcher pointed out the important missing data is the initiation of breastfeeding, supplementation and APGAR score. At the same time, there was concern about the length of time it would take for health records staff to gather this data and the need to postpone the collection for a few weeks. The researcher agreed. Stanton territorial hospital staff then prepared data to meet the variables identified on the data collection tool. An excel spreadsheet compiled data from health records utilizing the CIHI data and data from a spreadsheet that is compiled on the maternity unit by nursing staff. The spreadsheet was emailed to the researcher using a secure and timed site. The fee for the preparation of this spreadsheet was $480.00.

Duration rates were compiled by nurses working either as Public Health Nurses or Community Health Nurses. The data was accessed again through these third parties after sharing the research agreement with them. Data were compiled either in excel spreadsheets or tables and hand delivered to the researcher when in the community or emailed to her.

Both initiation and duration rates were collapsed into excel spreadsheets by a Research Assistant and then descriptive analyses was completed using formulas within excel.

Focus Group/Sharing Circles: Focus group methodology (Breen, 2006; Liamputtong, 2011) was selected as the method to hear from grandmothers about traditional knowledge and past feeding practices. This is a method used to capture experiences from a group about a particular topic, in this case a group of Indigenous grandmothers gathered to share past feeding practices and traditional knowledge. Focus groups can be used alone or with other methods to complement data collection. This method originates from Western epistemologies (how we know what we know) and ontologies (what is known). As the meetings evolved with the grandmothers, an Indigenous epistemology and ontology naturally emerged in keeping with the context and participants.

Sharing circles, as described by Indigenous scholars, is a method more in keeping with the worldview of the Indigenous women participating in our five gatherings. Sharing circles are a way of "making space" (Green, 2007) for telling stories in a personal and mutual way. Everyone is treated as an equal in the circle with no one person being more important than the other. We began and ended each session with a prayer from one of the women in the group. Providing prayers at the sharing circle creates an environment where kind words are spoken and

each person's words are viewed as important and worthy of being heard. We shared food that was locally prepared in the community. As the rounds of questions advanced, questions were directed to each other (including to the researcher) for clarification. In some circles, participants asked the researcher to share her breastfeeding and birthing story along with the grandmothers. This was a gesture of reciprocity more in keeping with a sharing circle.

There was a researcher and a graduate student facilitating the sharing circle. All of the circles lasted the full afternoon or morning. We began each of the four afternoon meetings with lunch. When lunch was completed, we reviewed and received informed consent (Appendix), collected the demographic information (Appendix) and then set up the digital recorders and began the session. The recorded sessions lasted from one hour and fifty three minutes to two hours and 23 minutes. We stopped for breaks during the sessions. Focus groups and sharing circles are compared in table 1.

Semi-structured interviews: Semi-structured interviews conducted with mothers in their homes or the researcher's lodgings or by telephone lasted from 19 to 50 minutes. The mother made the choice of location. The questions were about their experiences of feeding their babies, the supports they had for breastfeeding and the advice they would share with new mothers.

Table 1: Focus Group Methodology / Sharing Circle Methodology (Adapted from Roth et al., 2009)

Criteria	Focus Group	Sharing Circle
Interview location	Central and neutral	Culturally Chosen
Length of Interview	Typically up to 2 hours	Range 3 to 8 hours
Opening	Facilitator welcomes and makes introductory remarks	Elder opens meeting with a prayer and shares hopes for day
Role of Interviewer	Trained facilitator	Respected members, cultural group
Reimbursement	Varies	Honorariums
Interpersonal processes	Led by facilitator	Co-learning and participating
Closing	Summary by facilitator	Prayer by Elder
Knowledge translation	Academic publication	Community meeting Presentation/KT tool

Knowledge mobilization: From the beginning of the research proposal, the research team and advisory group planned on ways to involve and return the findings of the research to the community. Knowledge mobilization is a process of activating the research in plain language and understandable formats to the communities with the anticipation that the actions will improve breastfeeding outcomes. As recognized by several researchers working with indigenous people, knowledge mobilization/knowledge translation is an important method when conducting health research (Estey, Kmetic and Reading, 2008; Jardine & Furgal, 2010; Moffitt & Dickinson, 2016; Morton, 2017; Smylie, Olding & Ziegler, 2014). As noted in the literature review, breastfeeding is identified as an intervention that can improve the health outcomes across the lifespan. How do we get the messages from this study transmitted to the diverse cultural groups that are found in the NWT? Knowledge translation tools need to take into account the cultural distinctness of residents, their beliefs, practices and values, the worldviews they hold and the languages they speak.

As well, Estey, Kmetic and Reading (2008) noted that there are two systems here that can work together – the western research world and the Indigenous world both with their own knowledges. I am reminded of my doctoral work where I learned the significance of 'strong like two people', the words of Chief Jimmy Bruneau as restated by Elder Elizabeth Mackenzie, as a policy direction, whereby both Western knowledge and Indigenous knowledge together assist in navigating the complexities inherent in knowledge translation and knowledge transfer. Estey et al. remind us that we need to tease out the difference between knowledge translation and knowledge transfer since they are not the same thing. Translation is to explain the knowledge in a way that it can be understood while transfer is moving it from one place to another. At one time, these processes were static and came at the end of a research study but now it is dynamic and should be planned and discussed at all levels of the community research process. These authors encourage us to create ethical space for productive dialogue that enhances communication and leads to improved health.

From the literature and personal experience from past research in the NWT, this includes engaging with the community of grandmothers to develop a meaningful and relevant tool; listening to and involving local people throughout the process; integrating the research findings into the tool; validating the tool with the grandmothers throughout its development; using translation and local languages for the targeted region or community; and, delivering the tool in plain language with a clear message.

Ethical Approval: Ethical approval was received for the Research Ethics Committee at Aurora College and a research license was obtained from Aurora Research Institute. Research agreements and approvals to access health records were authorized by the Research Custodian, Department of Health and Social Services, GNWT.

FINDINGS

Findings are organized under three overarching themes; *Knowledge of infant feeding*, *Infant feeding today*, *and Initiation and duration rates of breastfeeding in the NWT*. Each section begins with a description of the participants.

I TRADITIONAL KNOWLEDGE OF INFANT FEEDING

Grandmothers (n=49) were recruited into the study from four regions of the Northwest Territories (Beaufort-Delta, Sahtu, Deh Cho and South Slave). The majority of women (80%) self-identified as Indigenous [Dene (60%), Metis (5%) , Inuvialuit (30%), Inuit (1%)]and the remaining non-Indigenous grandmothers were long-term northerners (4%). They were between the ages of 36 to 91 with a mean of 66.8. They had 1 to 12 children with a mean of 4.3 and 78% identified that they breastfed one or more children, 14% tried to breast-feed and 65% bottlefed. Many of the grandmothers identified that their mothers breastfed them. Some of the grandmothers said "they could not remember, that was a long time ago."

The grandmothers (n=48) partook in community and regional sharing circles that were guided by semi-structured interview questions beginning with "Tell me about feeding your babies." A mother volunteered for the study and approached the researcher requesting that I conduct an interview with her grandmother at her grandmother's home. This accounts for the additional grandmother interviewed.

Table 2 : Demographic Summary of Elder Age & Number of Children by Region

	Participation		Age			Number of children		
	N	%	Mean	Range	SD	Mean	Range	SD
Total	49	100%	66.8	36-91	10.4	4.3	1-12	2.6
Beaufort Delta	**19**	**39%**	**66.3**	**36-91**	**12.1**	**5.2**	**2-12**	**2.6**
Inuvialuit	8	16%	64.9	36-91	14.8	4.6	2-12	3.2
Gwich'in	11	22%	67.4	53-80	9.4	5.6	2-8	2
Sahtu	**8**	**16%**	**74.4**	**61-81**	**6.1**	**6**	**1-10**	**3**
Tulita	8	16%	74.4	61-81	6.1	6	1-10	3
Deh Cho	**7**	**14%**	**65**	**56-75**	**6.3**	**3.9**	**2-7**	**1.7**
Hay River Reserve	7	14%	65	56-75	6.3	3.9	2-7	1.7
South Slave	**15**	**31%**	**64.2**	**44-77**	**9.7**	**2.6**	**1-6**	**1.3**
Fort Smith	15	31%	64.2	44-77	9.7	2.6	1-6	1.3

Notes: Number of children includes adopted children

Gwich'in Sharing Circle

The Gwich'in sharing circle took place on September 20, 2017 at the Jimmy Koe Cultural Centre. Eleven participants were present. They were from Fort McPherson, Inuvik, Tsiigichick and Alavik. A grandmother also was available to interpret. The informed consent was read in English and then translated to Gwich'in at the request of the participants. Most of the grandmothers stated they felt comfortable speaking in English.

Table 3: Themes and Sub-themes (Gwich'in)

Feeding Practices	Being Resourceful	Surviving Hardship	Rekindling the Past	Sharing Wisdom
Tried to breastfeed	Use of moss	Disruption of traditional knowledge	Moose hide/fat as soother	Messages for new mothers
Exclusive breastfeeding	Using the swing	Death of mother or baby	Fathering practices	Good health before and after the birth
Artificial feeding		Mothering in the bush	Interacting with the baby	

Feeding Practices

Grandmothers shared their mothering experiences of feeding their babies. As we went around the sharing circle, each grandmother reflected back to the time when she was raising her babies. We gained descriptions that all except one of the grandmothers at the time she had her babies planned to breastfeed. The one grandmother that did not try to breastfeed was adopting her baby. Another grandmother had a premature baby and said "she could not latch." The stories were unique to each grandmother, her hospital experience and the lack or prominence of knowledge transmitted from family and community Elders.

Tried to breastfeed: For example, the first grandmother began by stating:

> *I tried to breastfeed my first child ...it was like maybe I couldn't do it or it was when you first breastfed, there was nobody there to consult with and say 'look you do it this way' or 'maybe you do it this way'. Maybe, I wasn't doing it right, the teachings, I didn't get it. I never got anything [teachings] from anybody. I tried to do it on my own, but it didn't work, so I decided to switch [to bottle feed] because I was starting to get frustrated with it. (Gwich'in grandmother).*

This mother wished to breastfeed, in fact, she shared that she believed that she was breastfed as a young child because that was what their mothers did at the time. Breastfeeding was the traditional way of feeding their babies. This mother had decided to breastfeed and she explains that she tried and she became *frustrated.* She did not articulate why she could not breastfeed but she stopped because of the feelings of frustration that this was not working for her and her baby. Is it that she is concerned that her baby is not getting enough milk? Is it that the baby was crying and exhibiting signs that the baby is still hungry? Is it that the baby could not latch on? We do not know. We know that she is frustrated by the experience and with no one to help navigate her through the difficulties of establishing successful breastfeeding, she made the decision to switch to bottle feed her baby.

As each grandmother revealed their infant feeding practices, a picture did emerge of the difficulties they experienced as young mothers. As we went around the circle from one grandmother to the next, they added more detail to barriers they individually experienced the first time they tried to breastfeed. Another grandmother reported:

> *I knew that breastfeeding was healthy…I chose breastfeeding, but I couldn't relax so I maybe breastfed for three months something like that and I had problems too because my breasts were always sore, so finally I thought I suffered enough, good enough, so I switched to bottle, but I wanted to keep on…So I had a hard time with continuing so I stopped. Cause it is cheaper too to breastfeed…*

In this message, the mother shares the conflict she is experiencing as she expresses that she knew the benefits to breastfeeding, and this was the decision she had made to feed her baby, yet she is unable to be successful with breastfeeding because her "*breasts were always sore*." She acknowledges two benefits when she declares, it is healthy for the baby and it is an economical way to feed your baby. Her dilemma is that she is personally suffering with painful breasts. It seems that her breasts are engorged or that the baby is not latching correctly. The details of the problems are not in the reflection, but also captured is the sentiment of "*good enough*." Today, health care providers advise that any amount of breastfeeding is good and perhaps when this grandmother suggests that her attempt was good enough she means good enough for her and her baby. After all, she did breastfeed her baby three months. In the earliest days of this baby's life, the baby was sustained by her mother's milk. Indeed, this is good and by reinforcing in a positive way that this is good enough is to establish good mothering.

A third grandmother said she did not breastfeed any of her eight children. She explained; *"My babies couldn't suck and my breasts just got big and hard and under my arms just painful, so I never ever breastfed any of my children. I didn't want to go through that pain again. It was so painful. I tried the first one." (Gwich'in grandmother)*

This quote identifies another consideration of feeding practices that occurred with some of the grandmothers when they were mothering their own children. If they had an unsuccessful attempt to breastfeed their babies, they reverted to bottle feeding their subsequent children.

This was a learned experience that they were then confident with after successfully bottle feeding a first infant. They observed their hungry babies drinking and growing. These measurable outcomes in their eyes established that this feeding is good and as a mother they are meeting their babies' needs.

There is no doubt that an influence on bottle feeding at the time these mothers were having their babies was the supplementation that was occurring in all of the NWT hospitals. The Gwich'in grandmothers were receiving formula to take home with them upon discharge from the hospital. One grandmother noted the following:

> *Remember those short bottles in the hospital. I don't know why but they used to let us take them home...I used them to mix for night and morning...I used carnation milk. I used to buy twenty-four of them. It used to last me for a long time and in between I used to give her water too. I was over-feeding her I think. She was constantly eating. I think I overfed her. I used to prepare before nighttime. I used to put it in a pot to warm...You know when babies are born, they wake up every two hours or so. That is what I did. I didn't really get tired of it though. I just prepared myself for every four hours. (Gwich'in grandmother).*

This story tells about one mother bottle feeding her baby with carnation milk. Carnation milk was a common practice in Canada in the 1960s. In fact, many hospital nurses provided new mothers with instructions to make the formula. From this mother's story, she would buy a case of Carnation milk and it would last a long time. She describes preparing it ahead of time so that she is ready when the baby is hungry. She also warms the milk. Mothers believed that warm milk was more satisfying and comforting to the baby, that it would help them settle and sleep. She was fulfilling a "modern" practice of the day as was described by another grandmother. She did question though if feeding the baby in the manner she did, bottle feeding her hungry baby, was over-feeding the baby. Most importantly she is describing attentiveness to the needs of her baby and a caring and constant presence with the words "I didn't really get tired of it though."

Exclusive breastfeeding: There were grandmothers in the group who breastfed their own children as well as other children. One grandmother described the influence of Elders on decisions to breastfeed. She said the following:

> *First of all, I think when you are pregnant the Elders always talk to you and that was the way. I used to visit somebody across the river in [place] and then an Elder in [place] she said 'when are you going to have your baby' and she said 'when you have your baby you need to drink water and broth and soup', that nice broth, eh, and that way so that when the baby starts to take the breast its full eh? Your breasts are full so the baby has it easy to get on it and I did that... I breastfed seven [children] until they are two and a half years old...It's just because I talked with an Elder I was really comfortable with it, eh. (Gwich'in grandmother)*

The teachings from an Elder were considered valid, trusted and the knowledge gained gave her confidence to breastfeed her babies. She expressed this as "really comfortable." Also, she spoke of the watchfulness of the Elder. She describes the observation by the Elder that she was pregnant and then the Elder approached her and offered advice that as a new mother she found helpful. The Elder guided her in this new experience and she attributes her confidence and success to the teaching that was conveyed. As well, social support is offered by the Elder to the new mother as the young woman begins a new journey towards being a mother. The mother recognizes the significance of the Elder speaking to her and the role of Elder as knowledge keeper is cemented with the successful outcome of exclusive breastfeeding for many years.

Artificial feeding: Mothers chose to bottlefeed their babies based on their personal context. Several reasons for why they did not breast feed are included in this section. Some grandmothers suggested they chose to bottle feed when breastfeeding was not working for them.

Many of the grandmothers reflected that they did not have "teachings from Elders." Their decision to bottlefeed was based on a lack of support for breastfeeding. Many of the grandmothers gave birth in the hospital. They described a lack of helpful information about breastfeeding. They stated that the nurse asked them "*are you going to breastfeed or bottlefeed?*" They felt that they made their decision about how to feed their baby with limited knowledge about breastfeeding. They made the decision because they knew their mothers breastfed but they did not know how to troubleshoot if a problem arose.

Another grandmother shared that she adopted her first baby so never breastfed. With the subsequent babies, she was working and gave her children to her parents to raise. She described it like this:

> *For me, I never breastfed any of my children. My first one was adopted when I was still in the hospital so I never had anything to do with that one. Then, my second and then on I never fed any because I was always working. I just left them with my mom and dad and bottle fed them. (L218-224)*

Another grandmother described that she breastfed her baby for six months and then she introduced other northern food. *"My mom told me to give them broth, so it was either fish or meat and put in the bottle and they didn't like the bottle. Eventually, they got used to it. And after that I introduced solids"* (L471-475). Another grandmother shared that she chewed her food and then fed it to the baby. She said *"I gave them whatever I put in my mouth. I didn't just put it in. I kissed it in"* (L476-478).

Being Resourceful

Grandmothers described resourcefulness in terms of the past and the presence. In their mothering practices, they used broth from animals and fish to feed their babies, collected moss from the land to use with diapering, used a swing or packing to provide more flexibility to get their work done.

Traditional food for nourishment: As described above mothers fed their babies broth from fish and animals to keep them strong. A grandmother said

> *They soaked moose hide in the broth and let the baby suck on the moose hide. They used fat for a soother. They would put a stick through it. They would put the fat in their mouth and they would suck at that. They say a lot of babies were fed by the mothers or anybody. Even the rabbit bone was used. (L597-605)*

Use of moss:

> *They collected the moss in the summer and hung them on a tree and then they would make sure there was no insects in it. Then, they would make these bags that would absorb [baby poop and pee]. So, that is what they would use particularly in the winter when they travelled in the sled...Moss would take diaper rash all away. When people travelled they used the moss but when they were in town they used diapers. (L1163-1176)*

If a mother was unavailable to feed her baby, another mother fed the baby. This grandmother described both child care and wet nurse care for a mother incarcerated. She stated:

> *There was a lady who had to go to jail every weekend and so I would babysit her baby and feed the baby...they [correction's officer] gave her a breast pump and everything and she would pump and they would put it in the fridge and I would go and collect it. When I would go there, she would be allowed to breastfeed her baby like for 15 or 20 minutes. (L285-292)*

In this quote, there is breastfeeding support from the institution and from the community to support this mother to breastfeed her baby.

Surviving Hardship

Grandmothers described hardships with words like *survival*, *struggling*, and the *harsh cold* when on the land. Hardships survived were captured under three themes; *Disruption of traditional knowledge*, *Death of mother or baby*, and *Mothering in the bush*.

Disruption of traditional knowledge: Grandmothers related Indian Residential School impacted changes in the way embodied experiences, such as breastfeeding, are transmitted/communicated between generations. They revealed that they felt ashamed of their bodies. This affected their conversations with young mothers since personal information about

your body (including your breasts) is private according to their institutionalized learning experience. A grandmother stated "everything was behind closed doors" (L158) creating a communication gap between them and women in their own families. Another grandmother said:

> *You now in those days, I mean residential school. In those days, they never did talk about their body parts because I think they were too ashamed [of your body] to say to your kids. I never did hear it [breastfeeding] from my sisters or nobody in the family. They were so private. (L151-156)*

A distinction is created between a traditional life and institutional life, with the words "we were out on the land most of the time" contrasted with the words "and were just taken from there right into residential school." This was an assault on a way of life. When you consider land versus formal institution, there is a deep message conveyed in what she said. The land was a place of Dene lifeways and worldview, shared conversation and understandings, and a rugged freedom related to the land. It was known, respected and desired. Whereas, the harshness of what happened: "taken away" and "dragged us." These are words illustrating a forcefulness that was performed against their will. From the following quote, the grandmother tells us that there was not a shared language. *"We were out on the land most of the time and were just taken from there right into residential school. We didn't even speak English. We didn't even know what "no" or "yes" is and they dragged us into that place."*

A disruption in knowledge sharing from one generation to the next causes social isolation of a new mother. Mothers of the 60s and 70s are left to problem solve on their own. One grandmother described it this way:

> *It was like maybe I couldn't do it or it was when you first breastfeed there is nobody there to consult you and say look , you do it this way...maybe I wasn't doing it right, the teachings I didn't get it. I never got anything from anybody. I tried to do it on my own but it didn't work so I decided to switch because I was starting to get frustrated with it. I just thought, I will do it the other way because I couldn't do it that way. (L15-25)*

The aloneness of her experience is foreign to the descriptions of some grandmothers who relate a traditional role of elder as teacher. Without the support, she made a decision to bottle feed. The need for support is described by this grandmother:

> *I think if elders talk with younger women and tell them what to do, it would be so much easier than trying to do it all by yourself with no instructions. (L86-90)*

These thoughts were shared around the circle by other grandmothers:

> *I would have liked it if somebody told me about that and explained things…Since my mom passed on when I was young, there was nobody there so I was feeling on my own, did my own kind of thing. (L327-335)*

Grandmothers of this era described a time where there was a disruption of traditional knowledge. Birthing occurred away from their home communities in hospitals. They described inadequate supports in the health care system:

> *With breastfeeding people used to have lots of babies, but no support behind it. No health representatives. I know they had one there but that woman was just there to sign the form when you had kids. There was nobody there to help you. It was just - put the baby on the breast and that is it. How easy is that? …those days they tell us do whatever [no specific instructions] and send us home. I kept telling the nurse, I can't. I don't want to suffer and have pain and that is why people just gave up. (L171-180)*

Death of mom or baby: When a mother died, it was tragic for the family and the newborn. One grandmother said "there was one story that the mother had died. They even allowed the baby to go to the mother for a last latch on the mother and it became the name of the baby "a little bit of breast" and after that they started with broth" (L993-997). In another story, a grandmother shared her concerns when a young baby dies and the mother is breastfeeding. She said "*one thing about breastfeeding that I noticed is not addressed is when a child dies and the mother is still breastfeeding, it is an awkward time"* (L964-L967). She went on to describe her own personal loss in this way:

> *My granddaughter was breastfeeding and her baby died of SIDS and I never thought about the breasts and so I phoned a friend of mine and her baby had also died of SIDS and the first thing that she asked me, "Is she breastfeeding?" I said, yeah and she said, well you have to do this, this and this." (L970-976)*

When the baby is not sucking on the breast, they will become engorged and this causes pain. In this story, the grandmother is concerned because not only is her granddaughter grieving for the loss of her baby, she is struggling with painful breasts that will continue to leak each time another baby cries. This is also a story about resourcefulness that community women demonstrate when they are seeking help for a loved one. The knowledge sharing amongst friends led her to a mother who shared this experience and was able to advise the mother. Also, a story was told of a man whose wife had died and he returned to the community to find help for the baby. The grandmother recalled:

> *My mom told me a story. I don't know whether she made it up or if it is a real story. This guy was a way up in the mountains and his wife died. The little baby was how old. I don't know but could fit in his parkee and he wrapped that baby up and he*

started to go to town and the baby would suckle on him. His breasts started to get bigger, to get fluids. By the time he got to town he was kind of grateful to give the baby over to someone who could feed the baby. The baby would cry and cry until he found a little nipple [laughing]." (L1000-1011)

Mothering in the bush: In another story, a grandmother shares the reality of mothering in the bush in the winter. She speaks about the frigid temperatures of the Arctic and attempting to feed and care for your children with limited amenities. This context of bush life in the winter affected her decision to bottle feed rather than breastfeed.

I had three of my kids in a row. It wasn't easy, but you know I got married in 1961, 62, 63 and 64 [the babies were born].I had them and most of the time I was out on the land. I travelled around while it's cold. And I can't stop to feed my babies and I know it is not going to be easy so the easiest way was to bottlefeed. Because I was out there and sometimes it was cold when we travel honestly. I remember my breasts getting really cold and I was sitting on the sled and it was cold. Even putting a blanket around me, I couldn't warm up. That's the kind of stuff I had to go through. So if you live that kind of life, you think of the bottle. It's hard when you don't have everything with you. You know cleaning. I travelled with my little kids in the sled. All day we travelled and we took up tent at night, making lots of water and washing lots of diapers. Every day I was doing that. And it wasn't an easy life, you know, to say here's my breast. You can have it. You have to have bottles even though it cost a lot. I don't know how I did it. I don't know. It was really hard. And I remember my grandmother saying, even if you boil rice and juice of that, It is good for babies. So that is what I will share. (L366-392)

This story offers both a description of survivorship and resourcefulness. Life in the bush in the winter is not easy when the family is on the move hunting and trapping. They are only stopping to set up the tent and sleep. Mothers are melting ice to make water to wash the diapers. The family all needs to be fed. Women were resourceful and made decisions about how to feed babies based on their context of living in the bush in the winter. The temperature was a deterrent since she had to get the baby to the breast in the cold. Also, factoring into her decision was the traditional knowledge from her grandmother about feeding the children rice milk. This practice of giving babies broth or rice milk while on the trail was both practical and healthy.

Sharing Wisdom

There are three sub-themes under this theme of sharing wisdom. They include; *Messages for new mothers*, *Advice for good health of mothers and babies*, and *Messages for fathers*.

Messages for new mothers: A grandmother said that for mothers feeding their babies, *"The most important thing is that you hold your baby and show your baby that you love them"* (L355-356). There was agreement by all the grandmothers that although they know the benefits of

breastfeeding, it is the attentiveness to your baby and the interaction you show the infant that is the best practice. Another grandmother spoke about the need for support for breastfeeding from the Elders. As one grandmother stated:

> *I think it is really important that elders within the community encourage, not only elders but mothers too as well, really encourage breastfeeding because it is costly nowadays for mothers buying formula. That is way too much money. Breast is free. It is not going to cost a mother anything.*

Still another grandmother talked about feeling good about your pregnancy as a factor in a positive breastfeeding experience. She said *"I shared with a lot of women that when I first got pregnant, I was so proud. I thought I was a queen, I tell you, so everything worked out for me"* (L413-416). She went on to say that mothers need to be educated about breastfeeding both about how to nurse their babies and about the benefits:

> *You need the teachings. That has to happen. That is the most important part of the nurse's job- to teach them how to nurse their babies. And now we are going through hard times and so breastfeeding is needed to be encouraged and advised to the young people. It is so much cheaper and it is so much healthier. (L419-426)*

In this quote, the grandmother continues by making reference to teachings from the Elders and then continues to talk about the role of nurses.

Messages for fathers: The grandmothers recommend that there needs to be a book for fathers. There is a role for fathers with new babies and it is important that boys learn that role. One grandmother said:

> *And it has a lot to do with that young man saying he wants a healthy baby; and, he wants the baby breastfed; and, he has to change the baby afterward, carry the baby for walks. He has to do lots of work as well as mommy because mommy carried the baby all nine months and gave birth to this baby and now it is your turn to help. So if you let your sons and their friends know that is what little boys do they grow up to be daddies. (L880-889)*

Shúhtaot'ine/Dehogao'tine

The sharing circle took place at the Culture Centre in Tulita on November 7, 2017. There were eight grandmothers present and an interpreter. The grandmothers spoke in Slavey and English to share their stories.

Table 4: Themes and Subthemes (Shúhtaot'ine/Dehogao'tine)

Being Resourceful	Surviving Hardship	Rekindling the Past	Sharing Wisdom	Women and Community
Breastfeeding part of bush life	Struggling to raise children	Keep going	The benefits of breastfeeding	The power of mothering
Making Milk	Influence of disease	Exercise and moving	Care of the baby	The whole community
Mothering ways	Mothering on the land	Eating well	Custom Adoption	Sharing food
Use of moss		Language and song	Watchfulness	The role of the Elder
			Practices for pregnancy	

Five themes capture the findings from this sharing circle. They include; *Being resourceful*, *Surviving hardship*, *Sharing wisdom*, *Rekindling the past*, and *Women and community*. These themes are inter-related and woven to convey knowledge of breast feeding that the grandmothers wish to share in a booklet with young families.

Being Resourceful

Being resourceful in this community was doing a lot with very little, involved living in the bush in a cold climate, relying on what was available to you, your personal knowledge and problem-solving skills. These elements were captured by the grandmothers in sub-themes of *Breastfeeding as part of bush life*, *Making milk*, and *Mothering ways*.

Breastfeeding as part of bush life: In terms of bush life, the grandmothers described that there were small numbers of people moving about on the land. They were isolated in small groups. They supported each other for survival. One grandmother described it like this:

> *If you really think about it...they were out on the land...you can't really find groups of people because there weren't too many people, and not everyone was together, Everybody is all over the place at their bush camps... sometimes there is no other mother to feed [the baby]. They are all by themselves...I think it is just the family supporting each other. (L947-955)*

Breast feeding was what was available for women. It was status quo at that time and was conducted around their work on the land. Breastfeeding was a way of keeping their babies alive. They spoke about it as survival:

> *Because they [women] got to survive off the land...they never had milk [formula]. So the only thing they had to survive on the land was breastfeeding the baby*

when the babies were born. They had to survive on the land at the same time. (L. 229)

Making milk: Grandmothers described times when breast milk was not available —when mothers did not produce milk, had a premature baby, had tuberculosis, or a maternal death. When a mother was not able or available to breastfeed, they described "making milk." This involved boiling rice and using the water from the milky froth, caribou broth, rabbit brains, and fish broth for milk. This involved feeding a baby with a spoon or in the case of the premature baby, mothers said they used what they had and sometimes, this was a thimble. One grandmother told us:

They tried anything, any kind of broth. They tried to make milk, because you know there wasn't milk there to buy...When you are out on the land you or your baby would have died. They would do anything to [survive]. (L539-541; 549-553)

Grandmothers described this practice of making milk as a way to "raise" healthy children when breast milk was not available. They used whatever was available and the baby grew to become strong, independent adults. A grandmother stated; *"I know a lot of young people raised by broth, rabbit broth, fish broth and moose broth. Especially when you are out on the land where there is no contact of civilization and no stores"* (L644-647).

Another grandmother shared an experience with a premature baby and how they adapted a tool to feed the baby through a thimble. She said; *"She had a premie. The baby was only 7 months [when she was born]. Now they put you in an incubator. There was no bottle at that time so she was using a thimble"* (L518-521).

Mothering ways: The participants described mothering ways in the bush along with other aspects of their bush life such as carrying and cutting wood, working the trap line, preparing the food and getting water. To manage this busy way of life, breastfeeding was essential to the daily routine. Grandmothers shared that this workload was manageable through the use of swings and blankets. Small babies were placed in the swing or traditional hammock until they were six or seven months old and then they were carried on their back by wrapping them in a blanket.

Use of moss: The grandmothers also talked about the use of moss for diapers when they were in the bush. They shared that this practice was more with their mothers and aunties but still present if they were on the land. Especially, if they were short of water, the moss could be thrown to the land and they did not need to wash diapers. This is an efficient use of mother's time when there were many chores to do.

Surviving Hardship

Grandmother's strength and resiliency was reflected in hardships. When describing "hardships" they talked about "struggling." Women overcame obstacles of raising children on their own,

breastfeeding in the bush, not having amenities and their work was physically enduring. Yet at the same time, they talked about the benefits of being busy as good for women especially when pregnant. Women at that time (40s to 50s) had large families. They shared an experience of a mother raising four to five children on her own. She said *"...I remember she raised them all on her own. She had to get wood, water, every way to feed them"* (L978-980).

Another story was described about a mother whose partner left her with seven children in the bush. The grandmothers recognized the hardship that was experienced by this mother when she was left on her own to care for her children. They described the circumstance of the situation and emotionally framed it with anger. It is known that survival in this harsh climate warrants a certain expertise of staying alive on the land. This mother skills and intuitions were challenged and she responded by using all of her resources including her children. This story was shared like this: *"That story was so angry. That anger -no experience, no money, no house, and they are out on the land... They survived with rabbit. Her boys started to go out snaring rabbits, killing ptarmigan, and chickens. That's how they survived"* (L1051-1060).

Infants were dependent on caregivers to feed them. Their preference as they breastfeed becomes centered on their mother's breast milk. When something happened that breast milk was not available for the infant hardship occurs. One story was told of a mother requiring medical evacuation and her six to seven month old infant was left in the care of grandparents while she sought medical attention. The baby refused to eat for 4 days. The story goes as follows:

> *My mom got medivac'd...Me, my grandma and grandpa were trying to make him eat. He wouldn't take anything for days. And then we finally came up with this bottle but he won't take it because he is so used to the breast... finally about the fourth day my grandpa and grandma thought about rice...She boiled it and put the broth on top of it. And she sieved it all on top and then put it in the bowl and that's how he ate. That was his first spoon and grandpa and grandma were just dancing because he could eat. He never ate for 4 days and he is only seven months (L553-L568)*

Grandmothers talked about the effects of disease and sickness on their ability to breastfeed and the impacts on survival of infants. Babies were dependent on their mothers. The bond between mother and baby is strong so when that bond was severed or disrupted by illness, it was a devastating experience for the family and the baby. The following quote illustrates the strong connection between mother and child and the demand on others when breastfeeding was not an option:

> *Long time ago when sickness came around, mothers died when the babies were still young and breastfed...the mom died when he was small...they did not know what to do so they just cried for days and days and days. His mother died of sickness (L582-L587)*

The grief is palpable in this quote with the repetition of "cried and cried." The loss of a mother was significant to the community and family structure. Living in the bush creates a cohesive and dynamic social fabric with all the essential activities of daily living (preparing camp, hunting, hauling water). In the telling, it makes the participants reflective and there's a certain sadness.

Another grandmother present had tuberculosis and shared her story. The whole circle of Elders sighed as an expression of empathy for the series of hardships associated with tuberculosis. When the grandmother shared this story, she spoke in her own language. She talked for five minutes and then the group began to laugh. She started out talking about her experience breastfeeding and then began to reminisce about her story of bush life. The two constructs are connected. In English, she stated *"...I raised my kids with Carnation milk... I couldn't breastfeed my kids because I had TB"* (L174-L177).

Women and Community

The participants spoke about their role as women in helping each other. For example, two grandmothers in the room were present at the birth of each other's babies. One woman was the birth attendant and talked about tying the cord of her friend's baby. They were humble and matter of fact about this role that was created out of necessity. Some of the grandmothers present gave birth to babies in the community, which is very different than their children or grandchildren who travel outside of the community to give birth. In a similar way, the participants spoke about how birthing for them was much different than birthing for their mothers. One participant identified *"you see a lot of those [births] in the older days. Watch the delivery out in the bush."*(L354-355)

The collective efforts of the community are apparent in the grandmothers' stories in birthing and raising children. Support for one another is an effort by the whole community.

Rekindling the Past

Rekindling the past is maintaining the role of the elder, the relationship to the land, the history of breastfeeding as a way of being for centuries, with consistent messages to new mothers. The grandmothers spoke about the strength of the land in providing for them and their families. This has been their livelihood and sustains them. They describe their fortune in terms of living off the land and learning from the land and being able to transmit their knowledge to their children. This is valuable learning and teachings that were shared through their ancestors to protect them from sickness. When it comes to messaging for women about breastfeeding, the grandmothers began thinking about the benefits of breastfeeding in preventing illness and responding to the changing world. One participant shared:

> *...young mothers have to know that in order for their child to be strong and to survive whatever is coming our way, we don't know when or... what is happening on the other side of the world... but we still need to be strong and everything... because their grandmothers as well as great-grandmothers gave their support and their*

information... We love them and we want them to survive. (L2797-L2089; L2819-L2823)

Their sense of culture and value of family in multi-generational learning has allowed them to survive over many generations. There is a continuity of knowledge that is valued and respect for the knowledge that has kept them alive.

...when our kids were born and raised it was different. It was more or less educate your kids. You know? ...I guess it's just ongoing, like how you learn it from your parents and our parents learn it from their parents...(L2064-L2072)

Grandmothers believe their lifestyle has fostered their great appreciation for the land and their way of living recognizing that they are a part of their environment and they know how to use it. Their environment provides them an abundance of resources. It was shared in the following way:

We're really lucky uphere because we have fresh air, fresh water, animals and everything is provided to us, but down south they are struggling...they don't have fresh water. They don't have the ability to go out and shoot whatever and get whatever to provide for their family. Down there you have to pretty well fight to get what you need for your family. You have to be on top and hustle every day, but here it is like we are lucky. We are very fortunate. (L 2784-2794)

Grandmothers emphasize the need to promote the importance of their homeland and valuing past lifeways to ensure future sustainability. In relation to breastfeeding, the traditional food consumed by mothers is entrenched in their lifeways. The animals they eat informs their identity and their mothering practices.

...When I breastfed, my mother always said eat lots of traditional food because it is strong and not store bought meat, like pork chops and chicken...try to eat lots of traditional foods because this way then it produces that really rich milk ... that keeps your child from getting all that sickness and it helps to build up their immune system so that when they grow older they will be strong. (L902-L911)

The grandmothers use the word "strong" and "strength" in reference to the land and the food they eat from the land.

The grandmothers want to not only rekindle the past but they want teachings that they collected preserved for the future. One Elder said *"...well what I am interested in more is you carrying the message forward...so it gets to last a long time, its long term"* (L3043-3048). They want to find a means to translate their oral traditions. Grandmothers recognize that there is a gap in women's traditional knowledge of birthing and breastfeeding and how young mothers access this maternal information. They described it in the following way:

We[Elders] need to be used to provide whatever knowledge we have now because right now there are very few elders in our communities. When they are gone who is going to carry on? Whatever they have? Nobody. Their knowledge is all going to be with them when they are gone. And it is really important we preserve their knowledge and their stories. (L2824-L2831)

Furthermore, the participants feel that, *"We're being neglected or not noticed. We are not being put to our use with what information we have"* (L2814-L2817).

She went on to say:

I think we really have to promote...that breastfeeding is really important and that young mothers have to learn...I really think when it comes to training or giving information to young mothers...the Elders should be there to talk with them. (L2809-L2812)

There was a strong consensus of beliefs around the importance of being active and eating well during pregnancy and while feeding your baby. While breastfeeding, the grandmothers felt that their connection to the infant was enhanced through voice and language. All of the participants agreed that humming to one's baby was used to help the baby sleep and for soothing.

Sharing Wisdom

The grandmothers had a wealth of knowledge and teachings related to the themes that included benefits of breastfeeding, care of the baby, custom adoption, watchfulness (observing) and practices for pregnancy.

One of the greatest benefits of breastfeeding is the unreplaceable bond between the mother and child. Babies know their mothers from hearing and being with them in the womb and in knowing and recognizing their mothers from breast milk and feeding. A grandmother shared:

If you do breastfeed your kids, when they grow up they are really close to you, they know you. The baby knows you when they are inside you for nine months and when they come out and you breastfeed them, then they really know the mother. (L274-L280.

Grandmothers shared that babies were held immediately after birth. The familiarity between babies and mothers gained in the womb by hearing the heartbeat is continued when the baby is placed on the mother's chest. This interaction allows for the mother to soothe and comfort the babies on their arrival. A participant described:

"You put the baby on your chest because when they are in your stomach they'll hear your heartbeat anyway. When they are born [baby] you put them on your chest like

this so they can hear the heat beat so they can sleep better." [L341-L345)

A grandmother described the joy that a new mother experiences at birth. It was like *"seeing the stars"* and *"beautiful."* The grandmothers recognize the challenge and efforts when you carry a baby for nine months and then endure labour. There is something majestic about this event that makes the journey of childbearing all worth it, "stars for her." The story told:

> *She remembers the first time when the baby was born. She said she could hear the baby crying, like she was dreaming. Like it was so beautiful, the sound of it. She carried the baby for nine months and when she had the baby, it was just like stars for her. Because she was coming around in and out and she was so tired because she was in labour...You tire yourself out and then they put the baby on her. [she said] It was like she never experienced a baby for the first time. She never experienced because she lost all of her family. You know that strong feeling that she had was so beautiful she said. (L1063-1076)*

Every mother's experience is unique and the joy you have when you see your new baby is shared by all mothers. This mom described a poignant moment for her. She had lost her family and now she was starting a new family. When you have your own baby and you are a first time mother, it is like you have never held a baby before. The grandmother described this as a "strong feeling", a great deal of emotion.

Mothers are encouraged to eat good food. For example, one grandmother said, *"her mother tells her, you have to eat properly because whatever you eat, the baby eats when you breastfeed so you have to eat the right food for the baby. (L286-L288)*

To the grandmothers, good food is traditional food that comes from the land that contains all of the "vitamins." It includes *fish, rabbit, duck* and *vegetables, like carrots, cabbage, rhubarb, potatoes, carrots, turnip and lettuce.* They also suggested that there were foods that you should not eat, like sweets. A grandmother mentioned; *"You eat all that sweets and sometimes the baby will get diarrhea...when we were growing up, we didn't see candies and stuff like that" (L2055-L2064).*

When asked about stories to help educate new moms, the grandmothers had clear and repeated messages for mothers. The said, *"No drugs, no drinking...no drinking, no spicy food...no smoking...no smoking,...no pot"* (L2297-2305).

Kátł'odeeche Sharing Circle

The sharing circle took place at the Culture Centre, Hay River Reserve on November 29, 2017. There were seven grandmothers present and English was spoken throughout the circle.

Table 5: Themes and Subthemes (Kátł'odeeche)

Feeding Practices	Being Resourceful	Surviving Hardship	Rekindling the Past	Sharing Wisdom
Deciding how to feed	Beliefs about traditional mothering	Influenza and tuberculosis	Preserving words of Elders	Father's support
Breastfeeding exclusively	Picking moss	Loss of special items due to flooding	Remembering community birth	
Introducing other food and weaning	Resilience in the face of disease		Fathers and birth control	

Feeding Practices

Kátł'odeeche grandmothers described a variety of ways of feeding their babies that depended on their personal contexts and to some degree the help they did or did not receive in making a decision to breastfeed or bottle feed their baby. The subthemes under feeding babies are; *Deciding how to feed*, *Breastfeeding exclusively,* and *Introducing other food*. The grandmothers shared that in deciding how to feed their babies, sometimes they felt isolated without much information to make an informed decision about whether to breast feed or bottle feed their babies. A grandmother explained:

> *I breastfed only two of them, out of my five children. And I don't know, it was hard for me, well back then. I guess the nurses, after you have your child, the nurses ask you if want to breastfeed or bottle. But it was like, it wasn't, they didn't tell you that it was like, like they do now. The nurses tell you that breastfeeding your child is better than bottle feeding, right? But we didn't have that kind of support, like now, than we did a few years back. So, it wasn't a priority or , like it was what you should do and is best for your child, they would say "would you like to bottle feed or breast feed your baby?" and with breastfeeding I tried but then it didn't last too long. Cause I figured that my child wasn't getting good enough milk, but I probably breastfed three months at the most. I had to feed them in between breastfeeding and bottle feeding. (L65-80)*

There is a sense of aloneness in this story as the mother made her decision to breastfeed with limited knowledge about breastfeeding. The question was asked and she felt it was up to her with limited support as compared to what she sees today. She felt her baby was not getting enough so she supplemented her baby. Each story is unique. Another grandmother talked about how her decision to breastfeed was influenced by her mother-in-law, but despite her desire to breastfeed, there were medical reasons why she could not. She stated:

> *...When they first brought my baby to me, I wanted to breastfeed and because my husband's mom always talked to me about how important it is to breastfeed...My caesarian [incision] had to heal so the first one I stayed in the hospital 25 days. And I was trying to breastfeed at that time. They were teaching me and then after about going out a month, I ended up getting yellow jaundice and they took my baby away. And so, I had a hard time, like my breasts were swelling up and they were trying to help me but I couldn't feed my baby because I had yellow jaundice. They didn't want her to catch it. So, I just stayed like that and after that I decided no I want to go on a bottle because I already got sick and if it's going to be that way, I would rather just go feed her with a bottle. And so, that's what I did with a bottle. And then, I just decided to let the rest of my kids go on a bottle, so I went that way. (L381-398)*

She went on to share the support she had from her mother-in-law and the attachment she felt with her baby. She said:

> *It's a good feeling when you're breastfeeding, like I felt more connections, like with my baby, and sometimes I see it on TV and it still brings back the memories when they first put the baby on [the breast], the attachment was there. And I picked up a lot of stories from my mother-in-law though on how important, like I ask her a question about how important it is to breastfeed and after that I never drank and then I started and after that I got into parties so I decided to feed on the bottle. (L403—412)*

This mother was supported by her mother-in-law and the relationship supported her asking questions. She knew that alcohol was not good for her baby and while she abstained from using alcohol she breastfed but when she was drinking she bottle fed her baby. She is identifying that lifestyle influences your decision on infant feeding.

The introduction of the first food was traditional food from the land. This grandmother shared that *"my mother, before she passed away, used to tell me stories about these things. I used to ask a lot of questions."* Asking questions was a good way of stimulating stories from mothers as described by this grandmother. She continued with her mother's story like this:

> *My mother told me, she breastfed us until about one year and a half or two. Then she started giving us broths and wild meat, she was giving us this out of the bottle.*

Then, she started teaching us how to use silverware and starting eating ourselves. (L449-453)

The grandmothers shared that they let the babies self-wean. One grandmother said:

Just gradually, slowly. If you notice there's no milk in you in your breasts anymore, then slowly. Sometimes they just like to suckle to have that closeness. Eventually they will get to it, get the food but you just don't cut off the child, you let them do it themselves. (L1889-1897)

Being Resourceful

The grandmothers framed their mothering practices with traditional beliefs that supported what they did. Many talked about bundling the baby, carrying the baby in a shawl or blanket on your back, and putting the baby in the swing as a way of keeping children calm. The grandmothers referred to the Elder's words that they were told:

The elders used to say your kids are growing up, they get really wild and crazy at times, it's because you didn't bundle them up. They just do whatever they want, that's how they grow up, but if you bundle them up they're really quiet kids. (L764-768)

The grandmothers described using a blanket to tie around their waist and that supported the baby on their backs. This provided the moms with free hands to work but was also good for the baby to learn about women's work. This grandmother shared:

I used to have a blanket to tie the baby in. And [name] was telling me, his wife was doing that when the kids were small, they watch, they know everything that needs to be done when they grow up- dishes, cooking, cleaning. (L641-646)

Watchfulness and being attentive to the environment was very beneficial and reinforced in the stories of grandmothers. Here a grandmother explains both packing the baby on her back and the swing:

When the little babies were small, they used to pack them on their backs...When you are washing the dishes or doing something, the baby will be watching, and that's how they learn how to work...I remember an Elder saying that today when you put that baby in and you are carrying them [in the front] they do not know what is happening, haha. They are watching that and they are learning that behavior whatever they are watching. And also, swing ...when you have a baby in your stomach, its surrounded by water, so when you walk around and do things the baby is swinging because of all the water it is surrounded in...so when time goes for them to take a nap, you put them in the swing and you hum them a song. (L1562-1580)

The grandmothers were taught to bundle their babies. The belief was shared in this way *"when your child is asleep, they should not be too free. They learn discipline and if they are free they grow up to do whatever they want"* (L1608-1610). There was agreement about this among the grandmothers and they added to the story *"...they'll be sleeping and all of a sudden their hand is moving and they wake up, so they don't get a good night rest... And the old people, I remember my mother asked, say roll us up really good and put us in a swinger, sleep long."*

The swing allowed mothers to go about their work while the baby was snug in the swing. The same grandmother told a story about her children taking the baby out of the swing and hiding the baby to play a joke on their mother. She said:

> *One time when [name] was a baby, I bundled her up and everything and put her on a swing and I went outside for a little bit and I came back and [name} wasn't on the swing, holy Grace what did you do [name]. I could hear a noise in the dresser...the kids put her in there because I tied her up too much. Haha. I opened the drawer and her eyes were just big looking at me. Why do you do this to me? (L774-787)*

The grandmothers spoke about the flu epidemic and it is shared under both of these themes since the resilience of the survivors and the collective action of the community sustained families. A grandmother described how the community shared in raising the children:

> *There were six of them and our biological grandmother was pregnant with her seventh child when she died. The next day her husband died, three days later her brother died, so the kids were all left all orphaned. Her dad was looking after my dad, my dad was only six months. She was still breastfeeding him when she died...All of them got caught up in it, my biological grandmother's sister and her husband took four and another family took two because they couldn't take all of them...So, I asked my dad , 'How did grandpa and grandma feed you?' And he said his auntie told that story that when his grandpa took him, he went hunting for moose, a moose piss bag, and he made a little hole in that piss bag and dried that piss bag so any broth he had he made it into milk and that's how my dad was raised. Oh my gosh, did I just hug my dad and I just cried and I cried. From that day I obeyed my dad, not once did I ever talk back to my dad. I said you had a tough life. (L935-949)*

This story was emotional and brought a great deal of respect and awe from a daughter to her father on the hardship he endured but also the way he was helped by the community to overcome it. The grandpa was creative and resourceful when he went to the moose bladder as a tool to feed the baby. This story continued with the interviewer inquiring further about what kind of broth was given? The grandmother explained; *"It had rabbit, rabbit broth and brains...and made it into a cream like milk with the broth, and that's how my dad was raised."*

Another participant in the group said; *"I remember I always liked to eat that stuff. I remember when I was young, we used to always fight over who is going to eat it. It's ever good."*

Medicine from plants and animals were collected and used to help with sore nipples:

> *She [my mother] said that sometimes when your breastfeeding and its sore like, your first time, you start breastfeeding, you use some kind of oil like bear oil or some kind of tree oil. That kind of thing you put on, and then after a while it will go away, but just keep doing it. Don't stop breastfeeding they said. (L1292-1298)*

Grandmothers also described the past practice of collecting moss and that there were many community women involved in picking the moss and they did this for mothers in the community:

> *Those days, the elders in my mom's days, they leave about six in the morning to pick moss for the mothers, bags and bags of moss they pick, your granny [name] and my grandmother [name] and there was about six of them. They used to go and pick moss for mothers. (L.573-578)*

The grandmothers went on to say they made moss bags to put the babies in. They described elaborate sewing and decorating of the bags. They made laces and used moose hide and fur. Some women did beading on the bags. A grandmother drew a picture and said:

> *You put the lace on the bottom and really strong under. They can't just pack it around their neck and tuck the baby. And some of them will be made with the white moose hide, put beads all around it, then there's string. Then your baby is here, then you tie it like that. (L. 627-632)*

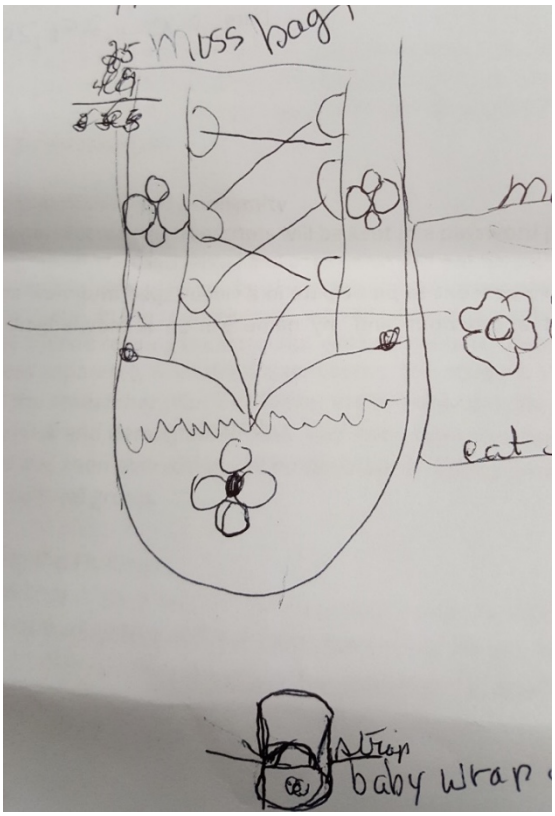


Figure 3: Drawing of moss bag

Surviving Hardships

When these grandmothers parents were young, they told them stories of diseases that wiped out many people in the community and also of being inflicted with tuberculosis. These hardships were retold by this grandmother and speak to the struggles of the past, but also of the resilience because her father was a good hunter and able to provide for his family:

> *My dad was telling me a story. He said he raised his brothers and sisters and grandpa, he was my dad's uncle [helped her dad]...the big flu passed through. He lost his family and his mom. He was about sixteen and he had two sisters and one brother, and the smaller ones passed on from the flu. And so, my dad said grandpapa took them in and took care of them. My dad was the older and so he took care of his sister and brothers went hunting and fishing at the age of sixteen to seventeen. So, he did all the hunting all of his life, no education, no nothing. So when my dad married my mother, that's how he fed us. With, mostly fish broth and moose meat, and drink lots, every day, put a cup in front of us with fish broth, drink it. (L969-983)*

She went on to describe her father and his sister's life. She said:

> *That's when I remember my dad, what he told - like being parents at a young age. And when my aunty turned 16, she got sick and had to go to the hospital, and she came out of the hospital when she was 72, that's how long she was [in the hospital]. They transplanted her lung...When she moved back here, she came and lived with us in the old town and she wasn't getting sick at all. Then she was with us for about a year and a half to two years and she got married to this guy and she started to do work like you are supposed to ad me and my old man went to visit her in the old village ...she was washing the floor. I said, "no way auntie you can't do this." I guess at that time a week after Christmas, she got sick so with my uncle and my auntie, they both passed away one after the other...such a sad time for me. She left me her memories by teaching me how to sew. My mom, my granny was telling me, there was a big flood coming through. I was still sitting trying to finish my little moccasins. Haha. (L987-1014)*

Again, this story is shared about hardship but also about recovery and survival. The story speaks to shared memories and retaining skills passed on from one generation to the next. She ends this story about another tragedy that occurred in this small community that sits on the river bank. The community has been flooded and this event caused hardship through the loss of many special items. A grandmother shared, *"She [my mother] had lots of the moss bags from newborn to older but we lost all of that in a flood 1962...we lost everything. All that she kept for us to look at when we grew older, she lost that all"* (L505-509).

Rekindling the Past

One of the grandmothers shared that she wanted to preserve stories from her dad. She said her dad was in the hospital and she invited him to tell her stories and she recorded them. She asked her dad to tell her about breastfeeding. She shared her Dad's story:

> *Number one, today you see all the young mothers that they have kids that all fed by the cow's milk, You might as well say that is not your kid, that is the cow's kid, because it is the one that raised your kids, not you. Breastfeeding, so I was kind of upset because I brought up my kids. So, my kids are cows, haha. He started laughing and said that's how come today when you see the kids, they have big feet. It's because of that milk. As well, they were never breastfed from their mom, and they don't have any sense of identity, it's because of this. And they lie on the couch they have got no ways of hunting, it's because of this. It's all going to the kids, that's how come there are no connections today, he said...I didn't want to believe it because my kids they are the same way too. So, I went into denial and I kept talking to him, kept talking to him until I was starting to feel what he was trying to tell me... From my dad, that there is no motivation and it because how a cow eats they have no motivation and our kids are like that. That's what he was talking about. So, he said, the mothers and grandmothers need to do something to go back to breastfeeding if they want the connection back. So, I thought well, it really did make sense when he told me that. Cause some kids have size 11, 12, 13 feet. (L1055-1084)*

This story from the grandmother tells us many things. Her father talks about observations about the use of cow's milk on children. He has noticed that children's behavior changed, they are not as motivated and are more inactive, they struggle with who they are, and children's feet are much bigger since they began to use cow's milk. When he points this out to his daughter, even though it is difficult to hear, she thinks it is a logical conclusion. He also speaks about identity as being a benefit of breastfeeding. It is traditional and connects the mother and baby. He posits that mothers and grandmothers need to support breastfeeding so that identity and connection are restored. This story was so meaningful to the grandmother that she repeated it so that we could all hear it. She is keeping the words of her father alive with the story.

The grandmothers remember when they were children and there was a community birth:

> *There are special, special women that deliver babies. They knew what to do. But when you are a small child, like they ask you not to take part in it, like to see...and so, there were a special maybe couple of women who knew how to deliver babies and they were very special at it. We were told to sit over there but I knew they boil water and I hang in but we didn't see what was going on...Every woman took part in helping out.*

And…anybody that wanted to learn took part in it, like a younger person, that way they keep it going. (L1198-1210)

This story speaks to the past tradition of Indigenous midwives with the words "special women that deliver babies." The grandmother speaks to a protocol for the way children were to behave when the baby was born. As well, she addresses that the community women helped with birthing. Everyone pitches in to help. Women self-identified if they wanted to learn about birth and helping other women to have their babies. She says "they keep it going." Women learn from each other about birth and these practices were maintained for generations. She is describing the transmission of birthing knowledge. She continued with her recollection of being there when an auntie's baby was born:

I guess they were just all ready. When a woman is going to have a baby, they knew what to do…Because I remember that one time, there was going to be my auntie [name] was going to have a baby and that house I remember her bed. We all ran over there because we wanted to see. [name] said you can't take part in it so we had to wait outside. They had the door closed and all of a sudden we heard the baby crying… We all ran to see the baby. They won't let us, because they had the door locked. They just say wait. And then I guess they were cleaning up the baby and the little baby [name] was born. And they showed us the baby after they cleaned him up. (L1220-1236)

The children were excited to see what was happening "they ran to see the baby" and then they waited outside as the midwives had instructed. They learned what was happening inside with the baby. They waited expectantly and then the baby was presented to the children. There is a sense of community in this birth. The grandmothers remember the details of this birth. There was a traditional knowledge of birth control described by a grandmother in this way:

…there's fifteen of us in the family. All of us are two years apart. In those days, there were no birth control pills but I remember I used to watch my father. He's always looking at the moon. He knew from how many days of full moon and when my mother was ovulating and when her menstrual cycle comes and so he knew that it was a half-moon when she had her menstrual cycle. So he knew by his mother teaching him those things; so he knew when my mother was ovulating and when she had her menstrual cycle…And so that was a way of knowing. Even when my mother was still alive, she was telling me…all the time you are breastfeeding, you won't have a baby until you are finished. I remember her mentioning that. So, all the time she was breastfeeding, she used to watch. (L1240-1253; L1274-1283)

The grandmother is speaking here about how traditional knowledge was accrued through observation and certain watchfulness. By being attentive to the natural cycles of menstruation and breastfeeding, details about birth control were generated and preserved.

The grandmothers spoke about the importance of their role. A grandmother said, *"There should be more talking …and have young people sit and listen"* (L1644-1686). Another grandmother said, "*Help young people see the old ways and maybe they will have a choice. You can have it this way or have it this way. They will have a choice on the ways they want to teach their children"* (L1692-1695).

They would like to see Elders in the prenatal program. A grandmother described it like this:

> *Even the methods nowadays, of how they're [new mothers] are taught prenatal; it is not Elders that are teaching the prenatal. When I go to the hospital, it's just some young person that's graduated from a school, that may not have any traditional knowledge so they are telling you what they've been taught or they are going to videos or whatever. It's not Elders in the program. (L1699-1707)*

Another grandmother gave an example of the type of information that Elders can share with young women. She recalls what her mother said:

> *Even I remember my mother when I was a young girl, she used to tell us. Don't have children until your body is full grown. If you have children when your body is still growing, you're going to get fat and it's going to stay that way your whole life. My mother never went to school and she knew all of that. When you have children when your body is developing and growing you're going to get obese. You are going to have a hard time. She said your bones are not as strong and sometimes your body because it is growing can't carry you. (L1719-1733)*

This is information that was important for her to hear as a young girl and she wants Elders today to be listened to with the same authority and recognition as she gave her mother.

Sharing Wisdom

The grandmothers shared that is important for fathers to recognize that they are in this parenting too. It is all about relationship and they are both responsible for the new baby. A grandmother shared the conversation she had with her son, *"I said you know you guys are going to have a baby. I said this child is going to expect love, food, shelter and a place to live and I said you have to provide that"* (L1967-1970). When fathers do not help out with this type of support, young girls are often trying to care for the children on their own and when this does not work out they are *"getting stuck in the system"* (L1978).

One grandmother said, *"I think that connection from the grandparents was cut off somewhere because grandparents helped raise these children at one time, but it's not like that anymore"* (L1980-1984).

Another grandmother described the complexity of trying to help raise children today:

> *Well you have to do this and you to have that. You have to make sure you can take care of these kids…it makes it harder for you to help raise other children, Like it is getting harder all the time. Now you have to have a criminal record check…*

Inuvialuit Sharing Circle

The sharing circle occurred at Ingamo Hall on November 16, 2017. There were seven grandmothers present. They represented the Inuvialuit communities. Many of the grandmothers/mothers in this circle have past formal experience as teachers or educators or in a health role; one participant was a mother currently breastfeeding; another grandmother was 91 years old, gave birth to 12 babies and her introductory comments were *"…I have my good memories. All of my friends have passed away, and I just feel so lonely, nobody is talking my language now"* (L 139-141). The sharing circle was an opportunity to share her many years of raising children, assisting other women give birth and living in the bush.

Table 6: Themes and sub-themes (Inuvialuit)

Feeding Practices	Being Resourceful	Surviving Hardship	Rekindling the Past	Sharing Wisdom
Exclusive from one child to next *four years	Learning to use a breast pump	Shamed while breastfeeding Baby in school	Eat traditional food	Benefits of breastfeeding
Traveling for birth	Adopted babies	Residential school-never speak about it	Learning to potty train early	Interacting with baby
Working so children raised by grandparents	Wet nurses and nipples from seal skin		Learning from our mothers about breastfeeding	Support of friends and other women
Initiation when leaking	Saturday wash day		Naming of baby	No drugs or alcohol

Feeding Practices

Grandmothers in the sharing circle mostly breastfed their babies, but there were external influences to the traditional practices of their mothers. One mother went to work six months after her babies were born and her parents raised her children. She said *"...I never raised my children, my parents raised them...like maybe after 6 months I was always working...my mother and dad took all five of them"* (L68-72; L82-83).

Another factor that influenced breastfeeding was the social context of birthing when they were young mothers. For example, the mandate of travelling to give birth, a hospital service that made formula readily available, and the introduction of formula to local communities made feeding formula feel like "the modern thing to do." A grandmother identified many of these influencing factors in the following story:

> *I have two children. My first child I didn't breastfeed, because at the time, bottle feeding was just getting introduced into the communities. And also, we didn't deliver our babies at home. We had to go away for delivery to Inuvik. And you know you are away for a month...I was young and I never really thought of you know preparation. We didn't have prenatal classes or nothing. You know we just had our mother, but like you were gone from your mother. Your last stage of pregnancy and you're in the hospital. And bottle feeding is cool, you know you want to be cool like everybody else, so I bottle fed. And I didn't go home until two weeks after my daughter was born...my mother looked at the baby and she says "poor child being raised by a cow"...but, it's too late, I was already dry ...at that time you gave your baby carnation...And then so my second child, I was pregnant and my husband bought me two books and they were on mothers and the other was "Please Breastfeed Me." And I read that book and I breastfed my baby and this [the book] was in the community around to all [the pregnant women]. (L283-312)*

Also in this story is the support and role of a father in influencing his wife's decision to breastfeed her baby. She speaks to learning more about breastfeeding from a book and also about sharing the book with other mothers in the community.

One grandmother recalled having an ill baby who had to stay in the hospital for two months. She stated:

> *They said I could go home if I really wanted to and then have a nurse escort her home when she's ready to go home. And I started to cry "what if I dry up'? so they taught me how to use a breast pump, so that I didn't dry up. But until the baby came home which was two or three months later, I was pumping every day and working on it, I didn't go dry...I was so happy. (L365-375)*

The grandmothers explained breastfeeding for many years from one child to the next:

> *I had four children, I breastfed every one of them. They are all two years a part. Think of it as breastfeeding that whole length of time. I breastfed until the next one was born. And to wean them off sometimes I had both of them feeding because the other one is just getting weaned off. (L341-350)*

Another grandmother shared her experience of weaning her child. She laughed at her reasoning for weaning at the time saying, *"Isn't that silly? You know my thought was that the baby wasn't going to be getting enough milk...so I convinced the older one to start using a bottle because she wasn't ready to be weaned" (L907-911).*

The grandmothers shared about the first food that babies were given as; *"And that is what they gave us first, right after the breast, like they gave us broth, fish broth, seal broth, caribou broth. You know before we were able to chew. Before they chewed food and gave it to us"* (L1261-1273). They also gave the babies "bones to suck on" (L1279), or a "piece of meat on a little stick" (L1314).

Being Resourceful

In the past there are many stories of resourcefulness out in the bush. For example, the grandmothers spoke about what would be done if there was a maternal death or for some reason a mother could not feed her baby:

> *My mom used to say, if they are in a camp with other mothers and they adopt the baby, the other mothers would help breastfeed the baby. And if they're not where there is another mother to breastfeed...like they used a little pouch and they heat up the broth and put it in there and let the baby have it. (L1164-1186)*

Another grandmother shared a similar story:

> *I know when I was born and raised out on the land, there's very few of us, like maybe four to five families. And I remember you know a woman that she couldn't produce milk, for some reason or another. So the other ladies in the village that can breastfeed help her, but because they have other children too, I remember the girl ...she had a ketchup bottle and she put the broth in and she made a nipple out of seal skin and that's what she grew up with. (L1219-1239)*

Getting water always involved melting snow and it was used for many things. One grandmother talked about using the scrub board to wash the clothes. She said, *"We scrub, scrub, scrub...you get snow, melt snow and wash"* (L2443-2451). Another grandmother told about Saturday wash times and how the water was used conservatively to get the most utility from it.

She explained:

> *So Saturdays, you know we had this great big metal tub. And every Saturday morning we used to put it on the stove, keep putting snow till it gets lots and then us kids used to wash our hair, and some of the little ones in the tub. The rest of us washing the laundry so the floor doesn't get wet. And then you wash up, everybody washes up, that same water, then the clothes go in, and then you scrub the clothes. And then you drip, ring them, drip until they finish dripping and then there's pools you know and then the clothes go up. And that same water washed the walls and the floors...every Saturday, you know that was the Saturday ritual because you know there's absolutely no sewing, no working on a Sunday. And then you're ready for the rest of the week. (L2457-2484)*

Custom adoption continues today. One grandmother described that her son adopted a little girl whose mother used drugs and alcohol. She said:

> *He took her in his arms and that's his. He never had children of his own. He adopted her. He sings to her from morning to night. He sings to her all different little songs. And he reads to her. She lays on him and just telling him stories. And she is starting to walk, she's very slow at it...she was poor when they first got her and he give her life you know. (L3410-3441)*

Surviving Hardship

Inuvialuit mothers have fed their babies wherever and whenever the babies needed to be fed without worry of judgment from their communities. There was a time though that one grandmother recalls when she was made to feel judged about breastfeeding her baby when she was helping out in the school. She said:

> *I had a little basket in the corner and the kids were really good...when they knew she was sleeping they were just so nice as quiet as they could be until the baby got up. And a few times when we're doing something I'm breastfeeding and this teacher used to come just to see...and when he saw me breastfeeding, for some of them it is not appropriate to do in public. And it bothered him...I said it doesn't bother the kids, it's natural. Then that bit- you know in some places or in some cultures, or some people- you know they think it has to be done in private. That's so strange you know because if the baby is hungry, feed the baby, you know; that's just our instinct. And that was one of my first experiences of you know breastfeeding in front of people. It even made me self-conscious after that. I mean you know the impact that person had on you know breastfeeding, in front of the kids, I'm reading the book, showing them pictures and breastfeeding at the same time...at least, he was good enough to wait until the kids got busy to get me out into the hall and tell me, not in front of the kids. But you know that was my very first negative experience. (L1686-1735)*

The grandmothers talked about many changes and effects on their traditional lifestyle. One grandmother spoke about the impact of residential school on her family. She said:

> *When we got home from residential school, we were never to speak about it. Both of our parents never wanted to hear about it, because there were five of us older ones that all ended up in residential school. The other younger ones they did not have to go through that...she said there was a big difference between the five that went and the others that didn't have to go...And the impact that it had, not only the impact that it had on those that went to residential school, but our parents. They were so badly impacted that we were never to speak of it or anything about it. (L3079-3093)*

And I asked this grandmother, "Did it affect how you talked to your babies?" And she responded; *"Yes, if you spoke your language. You were strapped. Punished. So when I relearned the language, I promised myself that I would never lose it again"* (3102-3104).

Rekindling the Past

The grandmothers talked about packing their babies on their back as a tradition from the past that was practical for feeding and carrying on with your work. One grandmother said:

> *The amauti or longer upper that women use for carrying, it's really easy to switch [the baby] from your back for women who are travelling with babies out on the land, long time ago, because you had to travel to follow the animals. It's very easy to just transfer from your back to your front as you travel in a dog team to breast feed your baby. It's not hard at all. (L1619-1627)*

The grandmothers spoke about the importance of interacting with your babies. One grandmother said "*hum to the babies, you know singing"* and another grandmother said *"I still have that special hum and lullaby, I still do that."*

Still another grandmother shared:

> *I think what you do with the baby has a really big impact. With my oldest one, I was always reading to her when I'm feeding her. From the books, she started reading at a very early age. Like she did kindergarten and grade one in a year...to this day, she has to read something. (L 1943-1954)*

The grandmothers talked about potty training their children at a very young age because of their limited access to water and the need to keep the furs clean. One grandmother stated:

> *I noticed children were potty trained at a very early age. Because you know , we didn't have water all the times. No washer. And there was so little rash and it's so easy to train a child. Within three months a child can learn like as soon as they get up you position them. You position them to pee as soon as they wake up... You do the same thing right after they eat- you position them again...it takes time and effort to do that...we didn't have water and we didn't have all that much bedding, you know. Like a lot of us had fur bags and you can't wash fur bags. So you know, you have to stay clean. And women know how to do that. (L2201-2223)*

The grandmothers also shared that you have to care for your breasts, *"make sure that they don't get cold. Make sure they stay warm all the time"* (L2624-2625). Another grandmother said, if you have cracked nipples, *"you use the breast milk instead of using all those creams...that's what's best for it"* (L2697-2699). One grandmother noted that breast milk is good for cleaning noses when a baby had a bad cold. She said, *"She was so stuffy that she couldn't breathe through her nose. My dad called me to pump milk and use it. So he tried it and it cleared her nose"* (L2706-2708). Another grandmother added, *"I used to see a lot of mothers doing that with their breast milk. Squirting milk into their nostrils"* (L2716-2117).

Naming the baby is important. One of the grandmothers explained that:

> *Naming in our culture is really strong. Because names are you know distant relatives, or our parents, grandparents, continue to go down the family line. So when my son was having his babies, you know they always thought of the cultural name and then which family line they put there. But what they have done is...our family first and then the next baby was from her family...they knew who they were going to name the baby after the [Inuvialuit] name, before they thought of the English name. (L2748-2769)*

Elders examined the babies, in this case her legs, and made predictions about their future and this grandmother describes how the prediction came true in her child's future. Her story was shared like this:

> *Another thing that the Elder's did traditionally, they did it to my daughter. There are some Elders in the community, I don't know depending on the name and the child or I don't know what it is but they do stuff to their body for their future...one of the Elders came to see my baby. Like he's a male and I was kind of shocked because usually men are men, they don't handle your babies unless they're women. So anyway, I gave the baby to him and he put her on the couch and he grabbed her legs. He said "You'll be a fast runner." And he grabs her legs and does this, "You'll be*

strong." And she is not a very big person but she's going to have [many years] service in the RCMP. So you know, she's very strong and a very fast runner. (L2827-2851)

This story prompted another story related to childbirth in the past and the role of the Elder who received the baby at birth. She reflected that this person who does those things is an important person. She said:

It's the main person. It's the person that when the baby is born, they cut the cord, wipe up the baby, and then you know prepare the baby to give it to the mother. Just put them straight on the breast you know, that is done with them and so when we're growing up, you know my dad if he gets a little bit annoyed, he would look at me and "You know who worked on you when you were born?" Um, how do you say – nurturing discipline. So, it was really important that we grew up knowing who our [name in language] was...especially our parents because they had no nursing stations, they had no hospitals you know. It was just done. Childbirth was just done naturally in home. You know it was really important in our time when we were kids that you knew [special person]...it was still strong in our culture where you bring your [special person]. When your dad comes home with a few geese, and your dad tells you to bring it to the person who worked on you. And it was still practiced quite a bit, I don't see it anymore because all the babies are being born in the hospital you know. (L2859-2900)

After hearing this story another grandmother clarified that although her baby was born in the hospital, there was still a cultural understanding that she should give certain things to the woman her delivered her baby. She explained:

I did that. My son was born here [community]. And the lady that delivered him, I used to send her all the first catch. The first catch we had to share with her because it's in our culture...I was made to give her stuff all the time, like my first everything, like my first fish, my first ptarmigan. You always have to give them. (L2902-2914)

The dialogue continued with one grandmother talking about gifting that was also done with the baby. She described:

And some of them are given [name in language] which is like an amulet or something like that they want them to be good with. My son was given a crane. When my dad started the drum dance group at home...he started bringing the drum dancing at home...I thought about it and said to my son "You know cranes really know how to dance." And I told him you know your name is a crane. And he just watched drum dancing. He never drum danced. And then my big sister made him a parka, shoes for drum dancing. I told him "Put them on and just give it a try"...he got on the dance floor and he could move, he knew the songs, danced, he didn't even

need to practice. So your amulet helps you in a certain area that they want you to be good at. (L2937-2965)

Sharing Wisdom

The Inuvialuit grandmothers shared many benefits of breastfeeding in terms of nurturing and being close to their babies which they said gives the children a *"sense of belonging"* (L408) and *"you have such a special bond with the child"* (L2558). One grandmother suggested:

Your babies are always close to you. You know, like you're packing them. They're always so attached to your skin. They're touching you and your breast is touching them, and they are attached to it. And they are so close to your body all the time that they feel that nurturing. You know, motherness and they're all happy. (L384-393)

This word "motherness" brings thoughts of being cared for and of being loved. A mother is someone special who is there for you, especially right from birth when the baby needs you to survive. And then, grandmothers talked about learning from their mothers. Mostly children learned from their mothers by "*watching*" and by "*showing*" (L842). Another grandmother said *"That's the way our culture is, right? We're a visual culture, not like I'm doing it this way and this is the way it's done. We just learn by observing"* (L865-868).

Another grandmother added; *"My mom said it'll be easier for me to breastfeed than bottle feed—less sickness and it'll build his immune system stronger. So I breastfed for about 2 years ...and it's cheaper for me too"* (L411-415). One of the grandmothers was involved with health promotion and she said; *"You know you try to convince them [mothers] how important it is – so good for the baby, so good for you. Even if you just did it for three months, it's good"* (L2573-2575).

The grandmothers also shared the importance of eating traditional food from the land to be healthy during your pregnancy and when you are breastfeeding. One grandmother said:

When I was pregnant and I was going for my monthly checkup...and the nurse said my blood was low. I told my husband and my dad and mom ...And then after that, my dad made sure he would bring me seal liver. But I went to the nurse again I said I'm getting really sick of seal liver my dad keeps bringing me...And she said that's really good, your blood has gone really up. (L2037-2063)

Another grandmother who teaches about healthy eating added:

Women didn't have to worry about their diet because we had such a good diet. You know everything was from the land. We had nothing from the stores. We had a really good diet. And then again teaching. I started teaching about a good diet and eating healthy. And one thing that I always address is you have traditional food, eat traditional food. (L2080-2085)

When asked about weaning the children from the breast, the grandmothers say, *"Let them quit on their own"* (L2515). This grandmother went on to explain it this way:

> *Only because if you take something away from a baby and they're not ready for it, you know, there's a lot of hurt there. A lot of change but if you do it gradually- because with the oldest one, I had to sort of bribe her and explain that we're going to keep the baby, she has to be the one [to stop]...Each child is a little different. The oldest one I had to bribe, the other ones I just learned to let them go on their own. (L2519-2528)*

The grandmothers say that mothers today need a lot of support. In their day of mothering, they had support from their spouses, their mom and dad along with community support. One grandmother said:

> *I think traditionally it was just natural that kind of [support]. I know for sure today, they need a lot of support, you know. Like a lot you have to support them right. When they're pregnant right until the babies are fully functionally on the breast, they need support. You know like from the community health representative...from their friends, other women. (L2333-2344)*

When asked about what messages they would like to give young mothers, one grandmother shared the following words:

> *I still encourage young mothers to breastfeed their babies. I always tell them you are the one that knows that has the best knowledge of your body, what it can do and what it can't do. When it is tired and that, but you know when you share your knowledge with the other young mothers that you know always tell them they are the best informants for each other. I always encourage them to share what they learn, what they find out and all that about breastfeeding...the ones that aren't breastfeeding are the mothers that just can't latch on or one mother she loves her work so much...she said it is easier for the baby to be with the babysitter and the bottle. They have different reasons, but whatever reasons they have, they share it and know that you know their thoughts and words count as well as the rest of the group. They all know that they belong...one of the things that was so deeply instilled in me, the sense of belonging , being part of the group or family...it takes a whole community to raise a child and just encourage each other and learn from each other. (L3578-3611)*

Fort Smith Sharing Circle

The sharing circle occurred at the Métis Healing Centre on December 14, 2017. There were 14 participants gathered.

Table 7: Themes and sub-themes (Fort Smith)

Feeding Practices	Being Resourceful	Surviving Hardship	Rekindling the Past	Sharing Wisdom
Breastfeeding with support	Buying a cow	Lack of support	Elders role in education	Benefits of breastfeeding and packing
Personal context and feeding methods	Breastfeeding adopted children	Residential school	Traditional parenting	Fathering support
Difficulties breastfeeding	Nipple Care			Education for girls and women
Fathers and artificial feeding	Breastfeeding each other's babies			Support for infant feeding no matter the choice

Feeding Practices

Many of the grandmothers in the sharing circle breastfed their babies some as little as two to four weeks and others extended periods up to two and a half years. When mothers, they breastfed as few as one baby or as many as nine babies. Many of the grandmothers described that each baby is different and although you may not have difficulties feeding one baby there sometimes was difficulty feeding another baby. A grandmother shared that, along with her six children that she breastfed, she also breastfed her adopted son at night because she "had lots of milk" and he slept better. Several mothers in the group identified perseverance to breastfeed and seek out supports when the health care system provided little support. For example, one grandmother said:

> *I would say there was absolute discouragement [to breastfeed]. There were less than supportive nurses at that place at that time...I really had to struggle to get the support I needed...And so, it wasn't really until we go home that the La Leche ladies could come and give all the support, but it was a struggle to re-establish a milk supply. (L146-150; L159-162)*

Not only was there lack of formal supports, mothers described that sometimes they felt judged when breastfeeding older children in the community and in their families. For one mother, this adversity that she was experiencing only increased her veracity to breastfeed as often and as long as she felt her baby needed it. For example, she shared:

> *You get a lot of odd looks from people who think 'What's this older baby doing on your boob'? And I can remember my dad saying to me when [name of child], because she was very verbal and talked early. I was breastfeeding her and we were at the cabin, and she said, "Other side please" and my dad said, "That's it. When they can say that, they are too old." It was so funny. He was actually like, "What did she say"?*

But anyway, I was completely unaffected by other people. I felt very strongly about what I was doing. (L208-219)

Mothers' decisions on how they will feed their babies are personal, familial and contextual. The grandmothers described a variety of factors that influenced their feeding practices and decisions including lifestyle practices, personal difficulties with breastfeeding, work-related reasons, and the health of their infants. One grandmother described that she was one of thirteen children and that she was the only one who was not breastfed:

...for the simple reason, my father was a fisherman. I was born in [name of place] and she [her mom] had to go out on the lake and help him fish, all the nets and that. So I was left home with my older sister and brother. The older ones said that they looked after me... (L293-300)

As well, this grandmother described why she did not breastfeed, *"Because I am a heavy smoker. And I thought I am passing that on in my breastmilk"* (L304-305). She instead fed them Carnation milk and in her words, *"They seemed to survive on that no problem...they kept growing"* (L310-312). She went on to describe her granddaughter's challenges with breastfeeding and her encouragement to continue. Here is the story she shared:

[My granddaughter] couldn't produce the right amount of milk or something, eh? She was kind of getting depressed, and I say don't give up, there are other things you can do. You know, just keep trying and if it won't work, you're going to have to bottle feed her because she is losing weight. But she had midwives and they showed her how to put that bottle around your neck and the tube on your nipple and the whole thing and she felt that she was breastfeeding. I think she wanted that bond...(L 322-331)

This story illustrates a difficulty with breastfeeding but also the supports that were there for her from her grandmother and from the community midwives. Community neighbours provided supports for another mother. She explained that she had inverted nipples and an elderly and motherly neighbor *"Told me how to massage it, my inverted nipple, so it came out, you know before I had the baby"* (L736-738). When she had a cracked nipple, she recalled:

This lady made a kind of poultice for me because my nipples were cracking. It was so painful. And it was just natural stuff. It was like butter. I don't know if it was cocoa butter, but I put that on them. After that you would go take water and wash up before you breastfed your baby. (L750-756)

One mother describes that her son was a noisy feeder, *"He used to squeal...like a pig"* (L397) and this would embarrass her to feed in public so she would seek out private places to nurse her baby. She talked about the differences with feeding babies. Two babies took a long time to nurse about twenty minutes to a few hours on each side and then her other baby would

nurse in five minutes and be full. When this happened her partner felt that the baby was not getting enough to eat, so they went for professional help. She said:

> *My son would feed twenty minutes on one side and then twenty minutes on the other…And then when I had my oldest daughter…And she was like a power eater, so she would be done in like five minutes and then that's it, so my husband would like freak out. And he's like she's starving. She's starving she only ate for five minutes, she's going to waste away, she's going to die. I'm like she's okay. So we ended up going back to the hospital a week after she was born and talking to the lactation nurses. And they are like okay show us, how does she eat? And so I fed her, and she's like gulp, gulp, like taking big gasps. And they are like, she's not starving. She's okay. Then, my other daughter, she ate slow. It was like three hours…So I just think that everybody is different. (L 394-418)*

Another mother explained that her baby was born a month early and she had to stay in the hospital. She stated, *"I would go back and feed her and then I would pump and then they would feed her when I wasn't there…So then when I got her home, it was a little bit rough to kind of get onto the breastfeeding properly"* (L433-438).

Sometimes mothers based their decisions to offer formula to accommodate their husband's wishes. A mother gave the following example:

> *My husband thought the kids should have Carnation too. The first time I left him alone with her, I came home, and he went and got all of the stuff and made bottles. There were like six bottles of carnation. She was totally overfed. But he liked to feed her, so we just did both… I nursed her until she was about 18 months. (L 441-450)*

Being Resourceful

One grandmother described that she could not breastfeed her baby, but she was able to give her baby expressed breast milk when her grandmother gave her a glass breast pump to use; *"It was all made of glass and there was a kind of bulb. And she would first heat it up and then she'd put it on your breast and then you'd pump it"* (L828-831). Her daughter took the breast milk from a bottle for three months. In her story, she describes that feeding her baby was very similar to the experience her mother had in feeding her. She begins; *"My first one was like me because my mom said she tried breastfeeding me and I was retching and I was doing all kinds of things. So my grandpa and grandma bought a cow from the mission, so I was fed cow's milk"* (L108-112).

This part of her story demonstrates the extent to which people would go to feed their children. In terms of economics, the purchase of the cow ensured that there was milk for the baby. This would have been prior to the carnation formula.

Women helped women by feeding each other's babies. One participant said, *"I have had two children but I have probably fed six."* Other women shared stories about women who had died in

childbirth or women who were not available to feed their babies. They were fed by family members. One grandmother said:

> *Well it was usually a sister who would have a child too. Then the aunt would be breastfeeding both of her babies. My mom did that. Her sister didn't die but my aunt shouldn't have had children because every time she had a child, she had five of them, one died, she just almost died herself. So, in those days they didn't take the baby with the mon. So my cousin stayed with my mom, and my sister they each shared a boob. She had so much breastmilk that she actually breastfed five other babies. She just, milk kept coming and she kept filling up bottles... That was her claim to fame during world war two, that she kept five babes, including her own, alive. (L1413-1475)*

Surviving Hardship

Grandmothers in the community spoke about the time when they were having their babies when there was little formal support for breastfeeding. This was shared by several participants in the sharing circle. There were several accounts from mothers in terms of lack of support from nurses at the time. One grandmother said:

> *I learned from my mother because I saw her breastfeeding the children. But when I was expecting my baby I knew I was going to breastfeed, it's just that I didn't get the support at the hospital. They really discouraged it, the nurses never talked to me, and they didn't bring the baby. The first time was very important. But you didn't even have a couple of chairs to sit on. You're just lying in bed and my back was so sore. And they are trying to say well it is time to take him back to the nursery. You know I should have had him with me, but I didn't. You know in those days you would just obey. Now, he would be right there in my bed. You know, but in those days, I was very naïve. And I don't know how I stuck it because I felt bullied and not only that. By my doctor when [name of child] was two months old, he said "get this child off, he's too fat, get him on two percent milk." You know, I felt really bad, but I still would not take him off the breast. But you know I didn't have any help there. As far as the nipples getting sore, that happened. I had a friend [from place] but I had known her since I was a girl. So, she got a breast milk for me and showed me what to do. Thank goodness I had her to take me through that...Yeah, it was a struggle but once that all passed after a few months, it was good. (L481-505; L508-510)*

This story exemplifies a time of struggle for a new mother who despite the fact that she had no support from the nurses was resilient and steadfast to her desire to breastfeed her baby. She gives voice to a time in health care when the babies were kept in a nursery and not with their mothers.

One grandmother talked about her mother being sent to residential school and the loss of mothering knowledge. She disclosed the following:

> *Well my mother was raised in residential school. She was an orphan when she was four years old. So, she knew nothing [about mothering]. But there was an old lady that we called granny [name of woman]...she was the one that taught my mom a lot. And also, my grandmother... I was the oldest child. My mom really didn't know too much about me. So, it was her mother-in-law and this old lady [who taught her]. (L721-729)*

Rekindling the Past

The grandmothers talked about the importance of their role in encouraging young parents in the care of their babies. There is a place for Elders to share stories and support for families. One grandmother reminisced in this way:

> *My mother breastfed her children, so it was just to me...it was what you did. And I was the second oldest...I was leaning on her knee while she was feeding you know and watching her and watching my siblings being fed. I enjoyed that you know. My kids used to come running in while I was feeding [name of baby]. And they would all crawl around me. You know, I liked feeding him. (L647-661)*

This story speaks to learning about feeding from your mother and the sense of joy that young children bring when they are around you, observing you and being a family. She connects the past with watching her mother feeding her siblings to her time as a mother with her children being all around her while she is feeding.

One grandmother shared a talk that she gives on traditional parenting. She said:

> *Young women and young boys before they become parents, like what their role will be and training them for that role. Like what do you need to be a mother, like there are lots of things you need to know. You need to know how to cook, how to clean, how to do laundry, all kinds of things, right? So they said that from the time this young girl has first period till she becomes a mom. That's all training time that you have to prepare for that role. And that's the perfect time to prepare them for that – how they are going to care for their babies; and babysitting is a big part of that right? Like we were raised by looking after our nieces and nephews, and stuff. So that's part of the work that we plan to do here at traditional parenting. Like getting an elder's or grandmother's circle that connects with younger people, to teach it through telling your story. (L805-826)*

Fathering is as important as mothering for the new baby. Grandmothers shared that their husbands were always involved with the children. Fathers spend time with the babies, play with the babies and like to feed the baby. She said:

I would go to bed as soon as I had that evening feeding. And he would look after our son until the next feeding. Because he is a night owl, and I am not. And now I see with my daughter-in-law, my son is very involved and if he could nurse, he would nurse! (L220-227)

Many grandmothers said that fathers want to feed their babies. This can be done with formula or with expressed breastmilk.

Sharing Wisdom

Many women in the sharing circle breastfed their babies and they believed that the good health of their children was because they were breastfed. One woman said, *"I'm glad now when I look back that I nursed all of my children because I found them as they were growing up to be fairly healthy."* Another grandmother said, *"I really believe in breastfeeding, you have that closeness."* Still another grandmother described how convenient breastfeeding is with these words, *"It was a snap, wasn't it? travelling, whatever. You have your milk. No sterilizing. Nothing. Just wipe yourself down and feed your baby."* One grandmother summed up the important message about breastfeeding like this:

They should really advertise the positive attributes, you know. There's temperatures already there, there's no weighing, no bottles to clean. And all of these positive things for breastfeeding should be emphasized more, to encourage young women to think , oh if I go to the store, I have to pay for this. There's no cost. You know I don't have to sterilize...and I could feed anytime, anyplace. (L1120-1128)

Whether you breastfeed or bottle feed, a grandmother shared, *"You just feel the closeness with your child when you are holding them and everything, you know you just get that motherly feeling. There is nothing like it"* (L820-823).

A participant stated that education is the most important things for young women as they prepare to be mothers. She explained that there should be education about a number of topics. Her thoughts were as follows:

I'm all for choice, but it is educated choice...we don't do enough educating young women, not only about breastfeeding but about parenting and making choices. I think we need to have more people sharing information and we don't do that enough. We think that read this pamphlet. Well nobody is going to tell you your feelings or hear your feelings. And it is too late when you have a screaming baby. It's got to happen way before that. I think we would have much more success if women saw it as natural, this is our role [to breastfeed]. We didn't get these just to put them in push-up bras, but I mean, that is why we have breasts. That's the purpose is to feed our babies. That is the reason we're mammals. (L570-586)

Another participant echoed similar words:

> *I think groups like this when you get women together, you know, that would be good for them [new mothers]. To just come here and talk about things. It's confidential, no one else is going to know, but the ladies that you talk to. I do think that women have to help one another. (L810-816)*

A message for all parents was spoken from one of the participants, a mother and breastfeeding advocate. She expounded:

> *...and I came to realize that it is also very successful to parent without breastfeeding, So, it's most important that we support women first as mothers and then breastfeeding as well...I have become less prescriptive. I more want to hear where that woman is at before I start in on them because there's lots of different ways and kids are healthy and that's the most important thing. (L248-252; L255-259)*

Many participants in the focus group described a lack of support for new mothers. They recognized from their own experiences that you need to persevere to be successful at breastfeeding. It takes the first month or two to be established in breast feeding. One grandmother provided these encouraging words for new mothers:

> *There's a good chance if you get through your first month, you are going to be good at it. But even then, you have those times that you are going to have challenges, when your kid goes through a growth spurt, and you won't have enough milk. You actually won't have enough milk. And you will be confident enough. One of my friends, who is a doctor, said to me, when you don't have enough milk, you have to think about it like a restaurant. The kid gets on your boob and they suck and suck and suck and there is nothing there, but that is putting your order in for the next meal. So, it is just a wonderful way to explain it to people. But even though, you know there's just a floppy boob there with nothing in it, you got to keep sucking, cause that'll bring it next time. (L690-705)*

As well, the grandmothers want moms to know that babies are all different. There is this idea that breastfeeding is natural and babies all respond in similar ways. They suggest that babies are all unique with unique personalities and feeding your baby is quite an adjustment. A grandmother shared:

> *Like babies are different. And you know, I think people have this idea that they are going to have this baby and it's going to be perfect. And everything is going to be great, and sometimes things are not great, you know. And, it's really a hard transition for people to make in their heads. It's like, I was expecting this normal healthy baby and it's not...But you know kids are different...you know my son rarely ever cried. My oldest daughter was up like every two hours at night. When I had my*

youngest daughter, my husband was like ...oh God, I can't do that again. I can't. And she like slept six, seven hours at a time. And, he was like "Oh, thank God!" (L1177-1200)

The participants are concerned about alcohol and addictions in the territory and the recommendation on a recent best practices book that recommends that you can drink a beer. A grandmother said, *"And if somebody has a problem with alcohol that's a bad thing. It's different if they can just have a beer today and not want another beer"* (L1640-1643). Another participant responded, *"A beer once a day that's the message I'm hearing. And I don't know, is that something the medical profession should be saying to people?"* The grandmothers recommend that it is best to be alcohol free while you are breastfeeding and that mothers need to "use their common sense." Instead of alcohol, the following suggestion was made: *"I wouldn't say have a beer, but maybe a cup of tea, you know. My grandma used to give me sweet tea...or even warm broth. Because it does make you feel good, you know?"* (L1793-1797).

Grandmothers recommend that good nutrition is vital for girls and childbearing women. One grandmother said, "*It's important to eat well while you are pregnant, it's important to eat well while you are breastfeeding, but if we valued women and girls, we would talk about eating well from the beginning...we need to think about nutrition a lot earlier"* (L 776-783).

The grandmothers believe that it is important for mothers to relax and feel cared for and loved when they have a new infant. Grandmothers suggest that just being with the baby connects and calms a new mother. It was suggested that it is not just feeding your baby, it is loving your baby with intention:

That's not just making sure the baby is fed. It's making sure you are actively loving and loving looks like holding your baby, looking at your baby. And that [act of loving] just peaces you out, you don't have to say relax, you say that is how you relax. You actually hold your baby and love it. And if we said that more, I think there would be a stronger connection for loving. And we name it, like don't forget to love. (L969-978P2)

Another grandmother said:

And we as grandmothers, I'm thinking ...maybe they just need a grandma, available to go and sit with them and say you know I used to go through what you're going through, you know. And ...we share our hearts with them, and say you're going to be okay. Affirm for them what they have done so far. (L997-1005 P2)

II. INFANT FEEDING TODAY

Mothers (n=24) of young infants were recruited into the study purposively through Public Health Nurse referral, posters circulated at hospitals, health centers and on Facebook. The mothers ranged in age from 19 to 40 and had a mean age of 30.5 years. Mothers had one to

four children with a mean number of children at 2. The majority of mothers in this study were Indigenous with 46% Non-Indigenous mothers.

Table 8: Demographic Summary of Mother Age and Number of Children by Ethnicity

	Participation		Age			Number of children		
	N	%	Mean	Range	SD	Mean	Range	SD
Total	**24**	**100%**	**30.5**	**19-40**	**5.9**	**2**	**1-4**	**0.9**
Dene	3	13%	31.7	21-39	7.7	1.7	1-3	0.9
Metis	4	17%	24.8	22-29	4.4	1.8	1-2	0.4
Non-Indigenous	11	46%	33.8	25-40	4.1	2	1-4	1
Inuit & Inuvialuit	6	25%	27.8	24-34	3.8	2.3	1-3	0.7

Four themes were identified from the data analysis: *Feeding your baby*, *Social supports*, *Judgemental discourse*, and *Messages to mothers*.

Table 9: Infant feeding today in the NWT

Theme	Sub-Themes
Feeding Babies	Considering the benefits Feeding experiences Overcoming the challenges Choosing what's best for you
Social Supports	Father's role as partner and parent Family and ongoing support Custom adoption Friends for advice Formal network of health care providers Resources available for mothers
Judgmental Discourse	Wagging the finger Failure as a mother Waiver if bottle feeding Scorn if feeding in public places Weight gain surveillance
Messages to New Moms	Persevere, it gets better Ask questions Fed is best

Feeding Babies

For mothers in this study, feeding your baby was mostly about breastfeeding, since that was an aim of the study, but several mothers described bottle feeding with expressed breast milk and/or formula and some mothers both breastfed and bottle fed their infants. There are four sub-themes under this theme including; considering the *Benefits of breastfeeding*, *Feeding experiences*, *Overcoming the challenges,* and *Choosing what is best for you and your family*.

Benefits of breastfeeding: Mothers in the study are aware of the benefits of breastfeeding. Some mothers in the NWT view breastfeeding as a "normal" and accepted practice. A mother said:

> *Breastfeeding was just something that you do…all my aunts breastfed and it was an open thing. I'd go to my aunt's house and she would be feeding maybe two of my cousins at the same time. She had an older one and a little one, and it's [breastfeeding] something that was natural.*

One mother shared that she decided to breastfeed because she wanted her child to grow up healthy. She said, *"Breastfeeding is healthy. So, I just want him to grow up healthy with no problems. So far he is doing good."* Several mothers noted that *what you eat, the baby eats*, so if you have a good diet your breast milk will provide that nourishment to the baby. One mother described it this away, *"You have a lot of traditional food whether it be fish, or caribou, you know, your babies getting all this nutrition from you so just your baby is having all that good food too you know."* The benefits are explained as multiple as shared by this mother:

> *I know how good that [breastfeeding] is for your immune system…And it's convenient because I love breastfeeding in the middle of the night because when I get up and feed him, I'm not fumbling around the dark with bottles and trying to heat it up while he is screaming his head off.*

Mothers described that when you breastfeed you lose weight so breastfeeding is good for mothers and babies. One mother summed up the benefits this way, *"Breastfeeding is good for the kids. You just should do it, and it costs nothing… there is going to be a good relation between the kids and mom. And the kid's going to be strong and healthy."* Many women referred to the bonding that can occur between mother and baby as a benefit.

Still other mothers felt empowered by the act of breastfeeding. One mother stated, *"Just the bond, the fact that my body could magically produce what the baby needs"* was supernatural for giving her confidence in her ability to feed her baby. Still another mother described:

> *It's just a different kind of bonding, when you like get to stare at them when they're feeding. It's really cute. You can just cuddle them and you feel like you're always wanted. You're the best person in the world. Right. That's the best feeling. Even*

though it hurts sometimes, especially when they bite, when they have a tooth coming out or they are teething.

It was stated that it is a selfless act that brings great joy. One mother explained it like this:

Knowing that I am giving him the best natural start, knowing that I am giving him something that he needs, it's not a want, it's a desire, it's something that he absolutely needs for survival...and it's just strengthening that bond.

Breastfeeding for some mothers gave them a sense of accomplishment in their achievement of feeding their baby in a way that is natural. One mother provided these comments:

I feel really good. I'm so happy I got to nurse. And I feel really, really proud that it worked...Just so happy that I was able to do that. I love it for the biological reasons. I know it's such a good food for him and it makes me so happy that he's getting that. He's never been sick...breastfeeding is so cool...such a nice thing. It's relaxing for both of us.

A mother who bottle fed expressed a similar sentiment in this way:

I think I have the same connection when I bottle feed him because he's staring at me, he's holding my hand, my finger just tightly, there's still a connection, you know, especially when you started off breastfeeding and then even though your bottle feeding there's still a connection.

Feeding experiences: Participants are both multiparas (more than one baby) and primiparas (first time mothers) but whether this was a first, second, third, etc. baby for the mother the experience each time felt new and different. Many of the multipara mothers described that each baby is different requiring a new learning experience. For example, one mother said:

You would think that by the fourth I would know what I'm doing, but it's always like she has to learn and then I have to learn what she does. And we did have some problems in the beginning and had to come in and get help again. She wasn't latching on right. She was just at the tip. You could feel the pain. I knew right away that something was off.

Many of the participants described that their baby was put to their chest soon after birth, a practice of skin to skin. Some mothers shared that skin to skin was part of their birth but for others it appears to be a routine practice of the birthing centre. A new mother shared, *"It was part of my birth plan that I wanted to have skin to skin right after she was born, so we could start feeding right away."* Another mother said:

Right after he was born pretty much...they put him on my chest and then he started crying. And then they cut the cord after a little while. And then they checked him over. And then they put him on the breast like right away.

Many mothers found this a rewarding moment soon after laboring, but depending upon the circumstance of the delivery mothers did not have this same experience. One mother who had a vacuum extraction to assist her baby to be born stated:

> *He was vacuumed out so he was crying a lot. It made me really upset because I thought maybe he was in pain, but they said it would stop in a few more minutes and gave him Tylenol. But he did not stop. He didn't really eat for a few hours.*

Another mother, who had an emergency Caesarian section to assist her baby to be born, described not seeing her baby for several hours. She explained:

> *And it was a really complicated birth, like I had an emergency C-section...I understand they had given him a bottle pretty quick. And he never wanted to breastfeed...my milk didn't come in till who knows how long. He absolutely would not latch. The only time he would scream is when I would start to put him into that position to breastfeed. Like he hated it...eventually he actually got diagnosed with breast refusal which I didn't know was a thing. And they said, yeah there's a certain percentage of children, they told me that no matter what you do will never breast feed.*

All of the participants spoke about the baby's latch describing how successful or unsuccessful they were with positioning their babies on the breast to begin nursing. Many mothers described being helped by the nursing staff or midwives. The experience of the latch varied for mothers. One mother said, *"She was just about to teach me about the latch...and he latched right on to me! Textbook. And she said 'That's exactly what it looks like'."* Another mom stated, *"It was just kind of hard to figure how to get him to latch on properly. And the nurses were really helpful with that and they coached me on all the different positions to feed him."* Still a third mom interpreted what was happening with these words:

> *He wasn't feeding well, I could tell he wasn't. The nurses were saying he's having a hard time latching and that I should keep trying. But on my part it was painful, and on his part it was like, it was as if he wasn't getting enough...because he wasn't like he wasn't getting a good latch all the time, he was really trying to feed and he would let go and cry and I could just tell, you know.*

The participants stayed in the birthing centres/hospitals two to three days so most often they did not experience their milk coming in prior to leaving. New mothers described this as a shocking experience that in many cases they did not feel prepared for the painful experience. One mother describes it this way, *"And engorgement, nobody warned me about engorgement and I was prepared the second time. But, the first time I thought it was more painful than childbirth."*

Another mother shared her story:

> *All of a sudden, I was leaking, like it was just dripping right out of me and my boobs, nobody ever told me that was going to happen. I had to call the midwife, I'm like "Oh my god" and then when I got back [to community] and then when I got back here , my friend...she picked me up and I'm like, "Touch my boobs! Is this normal?"...I didn't know it was going to be gushing all over the place.*

Other mothers described having difficulty to get the baby to latch when their milk came in. One mother shared her story of a few days of "struggle" to get through the engorgement and the interventions that helped her and her visiting mother to address this experience:

> *So we went home on a Friday and then Sunday was very difficult because my milk came in and I was just so engorged. And then, he couldn't latch anymore because my breasts were gigantic. And it wasn't soft anymore and so he couldn't attach the nipple and he was only eating on one side, so then that side went down enough that he could latch. So I actually wrote on Moms, Boobs and Babies support group on Facebook and asked because I was like I can't get him to nurse on the left and he was crying and my mom was trying to help out ...he just couldn't latch. But we just kept at it. So I think I must have nursed hours and hours that day. We would just keep trying every time he was awake. And then I didn't know how to use my pump yet.*
>
> *So that's what I told other younger women or other friends who are pregnant— just look at your directions for your pump and know how to sterilize it and what you're going to do...we're looking up the instructions online and we can't figure it out and we're like terrified we're not going to sterilize it properly, and like he's going to get sick...And then, there's you don't want to pump too much. So actually, I didn't. I did like hand expressions and showers and massage, and I think even like heat packs, and it was probably like two days of struggle. I was like, this is crazy.*

Overcoming challenges: Mothers participating in this study described differing challenges that included issues with latch, cracked nipples, inability to produce milk and oversupply of milk, lip ties and tongue-tied infants, and two mothers experienced mastitis. Along with these challenges were emotional tolls that included descriptions of pain and suffering, stress and anxiety and shyness and embarrassment. Despite these challenges, mothers were quick to describe what helped to alleviate the issue. The mothers described the pain and the cause of their pain. One mother noted, *"It was painful. The first probably couple of weeks it was quite painful. It was around my nipple, it was very localized, very tender pain, almost like when you're cold ...and it would hurt a bit. But I found that old wise tale of the cabbage leaves very helpful."*

Another mother described some blocked ducts on one side and the pain was intense. She said:

> *My boobs were like plugged, filling and filling and only one part this side would come out. And they [health centre staff] would say to put a warm pad on it to unplug*

them. I had so much pain, I was like so sore I cried, cried. I went to the health center cried, cried, cried, I think it was like the worst pain ...I used the pump and it was a big relief.

In the stories, the mothers share pain which seems central to the issue but each situation is unique. A third mother described her pain with the words "you really want to give up." The pain seems so severe, but what is important to note is that she did not give up. And as in the quotes above, there was a solution that seems to alleviate the pain. This mother says:

It's very painful. It's so painful that sometimes you really want to just give up and just give her the bottle. I remember I stayed at the hospital for three days because we were really trying to get the milk out. There was something coming out but it wasn't enough for her, so she'll cry for so long. Like if I try to feed her for thirty minutes, I put her down for like maybe ten minutes or a like a little bit longer, and then she'll cry again, and then I'll try to feed her again. Because it's hard to know how much she is drinking. But we always check her diaper, if she pees or poos. And she does. But it's overwhelming because you have pain going on in your body, you're trying to recover from it and then you have this baby crying, and I wasn't ready for that ...It's sore [in my breast] and also my nipple was bleeding so she can't suck properly, because her tongue is tied...they had to cut it a little bit so she can suck properly.

Mothers were provided helpful interventions that did relieve their pain. One mother who was experiencing engorgement said:

The nurse at [place] there is good to me because I think she gave me a cloth that she put in the freezer so it's cold, so she put it on my breasts, then she massage my breasts from armpit and pushing towards my nipple. Painful, but she said, "I don't want you coming back to the hospital. I don't want you seen. So, there is milk in here, all you have to do is sucking from your baby."

Another mother shared the following ways she relieved the pain while she was in the hospital:

I tried cream, lanolin and a cream that they gave me at the hospital. Sometimes I didn't want to wear clothes because it rubs on the nipple and it's painful too. So sometimes...I close the door, I just cover up with a robe or if no one's there I just let it out. To let it breathe. I massaged my breasts. If I take a bath, I put warm water [on my breasts], this helped.

Participants described useful items for breastfeeding that helped with personal comfort. Some women bought breast pads to use for leaking milk from let-down or leaking milk while other women make reusable ones from flannelette. As well many mothers spoke of using a pillow for support. A mother described it this way:

Breast pads are a big thing. Because you have disposable, reusable, and I use reusable obviously because if I didn't I'd have a wet shirt all day but breast pads... A good breastfeeding pillow. I remember when I had [daughter] I didn't have a pillow and my back hurt a lot. Whereas with [other baby] I had a fancy pillow that I had gotten from a friend and it was very supportive.

Some mothers suggest that if you are a young mother you may not have received any information about breastfeeding and you may feel shy to breastfeed or may be embarrassed. She shared:

I think there is just no knowledge behind it [breastfeeding] maybe a little bit of embarrassment to it for moms. I find that there is a lot of younger mothers that don't want to do it you know...there's a lot of families in [names the remote community where she is from] and they come up and have their babies and they're not educated about breastfeeding and I think they're a bit embarrassed about breastfeeding ...the majority of them are younger when they have babies...I would probably been embarrassed to breastfeed when I was 17 or 18.

The participants shared that stress and anxiety accompanied them particularly when they were first time mothers:

It took my milk about 5 days to come in. And I really did my best not to get stressed about it. I think towards the end I was getting a little nervous. But, I also kept saying to myself, that my mantra was, "He's not mad, he's not frustrated, he's not hungry, he's okay."

Some mothers were not ready for the time it took to feed the baby and how tired and fatigued they may be. One mother said, "*I breastfed her until she was six months and, with her, I cried a lot. I cried because I was tired. At one point it was sore. I was tired. She ate, ate, ate all the time."*

One mother talked about an unsupportive partner and the emotional toll that her situation took on her:

It was hard because I was raising her basically by myself...I was staying at my parent's place, they were kind of a help. It was kind of like my partner was out there though but he wasn't supportive...so I basically raised my baby by myself till now she's 8 months. Cause he's never around or anything. I wanted my baby to get used to him, but he wasn't really too sure if he wanted to be there. So it was kind of hard on me ...I had a really huge breakdown after I had [name of child]. People call it baby blues and I had it for three to five months.

As well, mothers spoke about the high use of alcohol in their communities in several ways. First of all, they are concerned about raising children when it is prevalent and believe that it is inevitable that their children will be experimenting with drugs and alcohol. A mother

shared that a group of mothers believe the way to address this is to move to the city where there are more opportunities for both them and their children. She said, *"Alcohol and drugs here [remote community] are insane. And we thought like our kids don't need that but either way it's going, they are going to get to it so, and once they get older. We thought you know just moving and getting out of the community. And just finishing ...our education."* Participants agreed that substance use affects their relationships with their children and their partners. One mother said, *"When I was in my pregnancy he [partner] was always turning to alcohol and drugs. So I kind of pushed myself away ... and I talked to him. I was just like you can't be drinking all the time."* This behaviour is stressful to mothers and they find new ways to help their situation by seeking out the help of their family and friends and increasing their support systems.

There is a big focus on weight gain and new babies that mothers in this study highlighted. Here are the words of an experienced mother:

> *...But with each one of my children it took a long time for them to get back to their birth weights. The first time it was very stressful because I thought that it was a really bad thing, but now that I've had my third child and they are in the same position as the other two, I think it is just something that happens. I don't know if there is a set timeline out there that everybody's trying to go by and you know if the baby doesn't gain back their weight within this timeline there's a problem. But my kids didn't fall within those parameters, they're all healthy they're all doing great. It's stressful to hear that you know, that it's not happening for your baby, it's not happening for them.*
>
> *I just wanted to shed light on that. Even with my third, even though I knew this exact same thing happened with my first two and they did alright, I knew it was going to be alright, it was still stressful to have them tell me that he's not meeting his weight.*

Choosing what's best for you and your baby: Mothers described knowing that breastfeeding is a healthy choice with many advantages but many times they have to consider their situation and what is best for them and their babies. One mother who was choosing to both breastfeed and bottle feed describes her practice and the rationale for this choice:

> *I'm doing half and half. I can tell a big difference in my demeanor, my stress levels have gone down. Because I do not feel that my daughter is starving. I do not feel like I am doing something wrong like when I was struggling to breastfeed and she would never be satisfied, I would be stressed out about it and I would feel like I was doing something wrong or I would get down on myself and think why can't I provide enough for my daughter? I've noticed a big change in my moods. I've noticed a big change in her sleeping patterns, her moods, her just having a bottle a day, we switch it up so that she will have a bottle just before going to bed, in the middle of the night*

I'll breastfeed her, when she wakes she will have a bottle, come nap time I will breastfeed her.

New mothers are travelling down a new road and they want to provide the baby with what they need. When breastfeeding is not going well, mothers feel like they are not doing the right thing. A mother expressed it this way:

That was hard. It's your first baby you know. And you know they're like "We really recommend mothers to breastfeed." It's stressful when you have people like coming in and out, like grabbing your baby, trying to mother [handle] your boob. And it's like "I'm trying, I'm really trying" but she [the baby] just I can tell like, "I don't want your boob." So, it's like, you know, if it's not gonna work, like I'm not gonna starve my baby here, like I need milk to give her.

Another mother felt unheard when she was felt her baby was not getting enough. She said:

Like I always felt that I was alone...like I didn't know who to reach out to... somebody being on board and not trying to push you to just strictly breastfeeding, especially as a mother and you just have that feeling you know that your baby is not getting enough...it just felt like nobody really listened to me. I just felt like I just wanted to give up breastfeeding and take the easy way out and straight bottle feed.

Other times, formula was given for medical reasons. One mother who had her babies early stated; *"The biggest challenge was—so with both kids they were born before 37 weeks—it was getting those blood sugars up right away in the hospital. So both, I wasn't able to get appropriate blood sugar readings in the hospital without the assistance of formula."*

Finally, a mother summed up that ultimately a mother makes the best choice of feeding her baby depending upon the situation. She believes that women should not feel a failure for the choice she made, since she and her family know their situation and can weigh in on what would work best for them. She stated:

There are a percentage of women out there who for one reason or other can't [breastfeed]. Does that mean, I'm a failure of a mother, does that mean and I really thought that was negative, it was too far the other way [message breast is best]. And I thought, really the decision, that you make as a mom with your baby and your partner is the best thing that you can do...What if you can't, or in the North we have a lot of alcohol and substance abuse issues and what if that's not best for the baby. Because mom is just not able at that moment to be able to control [the situation].

Social Supports

This theme has six sub-themes that includes; *Father's role as partner and parent*, *Family and ongoing support*, *Custom adoption*, F*riends for advice*, *Formal network of health care providers*, and *Resources available for mothers*.

Father's role as partner and parent: Mothers in this study described many ways their partners support them as both a partner and within a fathering role. Mothers described care and support while in labour, assistance with breastfeeding, active parents in feeding and researching and supporting their decisions. One mother describes support over time with changing roles:

> *He was helping me get things ready, like making sure baby, me and baby is comfortable when I was going to feed him, and as soon as I was done he would help with burping the baby. And now he feeds baby the bottle.*

One mother described the research into helpful strategies when she was having difficulty breastfeeding:

> *He [partner] was like seeing me stressed out, worried like. You know, I told him "I'm gonna breast feed! I'm gonna do this. I'm gonna do whatever I can!" So he was looking online and he talked to one of his sisters and she was like, "When I couldn't produce any milk I took fenugreek." So he went to the store, came back, I was sleeping, woke up and he was like, "You know I did research and I remember you saying you really wanted to breastfeed, and like my sister said this would help." And I took it and I was like, "Holy moly." At first I was literally all proud...and there was a point where I was getting almost like a full bottle.*

Mothers describe that their partners help out with the care of the children by playing with them, feeding them and interacting with them. They do housework and intervene to support their partner when they are tired:

> *When he is home, he takes [eldest daughter] and you know they're playing all the time and he does whatever. If the girls took bottles then he would definitely be feeding, but they don't take bottles so, he's like, "How can I help you?" And then he comes home and if I am tired you know and I'll feed this one and go and lay down, go to bed, take a nap for a few hours, you know. And then he will bring her in when she's hungry. He's amazing. I am so lucky to have a partner that helps.*

Family and ongoing support: Many mothers in the study described needing immediate help in the first few weeks following birth. This help was often provided by parents and/or in-laws or other family members. One mother described the salience of having her mother-in-law care for her and her baby:

> *I guess one of the best supports is when my mother-in-law came over after he was born to take care of everything after, for like a week, that really helped a lot, like she did everything. And it's good to rest for like at least a week in bed with your baby before going out and doing everything like walking, cooking and cleaning.*

Another mother shared how fortunate and supportive she feels when her mother comes to care for her when her babies are born:

But she [my mom] always comes when I have a baby. And she's always here for at least a month...she would do everything whenever the baby would wake up at night. She would go get the baby, change the baby, and then bring the baby to me...And then when I was done feeding the baby, she would take the baby, burp the baby. So she did everything except feed it. Oh yeah, she did everything. Like she did the laundry, she played with the kids, she did everything.

Participants described the comfort they received from their mothers when they had helpful conversations where their mothers described their experiences and offered advice. One mother shared the following:

And my mom said it took her a couple of months before she was finally able to properly nurse me without any problems. so, I mean, it was good to have that conversation with her about like you know any struggling I was having, I knew she had also gone through it too.

Another mother spoke about the encouraging words her mother provided that made her feel more confident in breastfeeding her baby. She said:

She kept saying you know that the baby is definitely getting enough. Your body knows what to do...she just really talked me through it and said it will last about a week and then your milk will come in and it'll be good and it'll be fine. You know and she just kept encouraging me to do it.

Another mother described defending breastfeeding with her mother when she suggested the baby was not getting enough and perhaps this determination in her decision to breastfeed strengthened her relationship with her mother when her mother praised her for the way she was feeding her baby:

My mom came back with us for a week. She's saying like "Give the baby the bottle, he's probably hungry", and I'm like "No Mom I'm not doing that." Like she said that a few times...when I was in a calm state, I said "Stop saying that Mom. I can do this without feeding him a bottle and I can make enough milk to feed him." And I said, "I know I wasn't breastfed, I said you're just going to have to stop with that." So she eventually stopped. But now she's like, every time I see her, "You know exactly what he wants, you're such a good mom."

Another Indigenous mother, who is an intergenerational residential school survivor added to this by describing a goal of restoring the traditional way that parenting is conducted. She shared her understandings:

I mean just knowing how some generations were raised with like residential school and some parents not being able to be there, be parents, because their kids were in residential school and kind of losing that parental role, I guess. I knew that I wanted

to take that back and raise my kids differently than the way I was raised or the way my parents were raised.

Mothers described having multiple family supports where resources were provided, kindness and love were given and words of encouragement were provided. These actions helped a first time mother sustain her breast feeding practice and overcome postpartum blues. She described the following support:

The key things are my aunt would talk, my grandma, my mom and my cousins and their kids. They would put words together because I was so close to giving up and so close to giving up on breastfeeding at a week. But I spent two weeks in community so that was good and they gave me books about breastfeeding and they talked to me when I was down and I thought I couldn't do it....

Some grandmother's reinforced the benefits of the traditional practice of breastfeeding with their grand-daughters and the new mothers found comfort in their words. One mother shared her grandmother's beliefs about breastfeeding. These words were an acknowledgement and an encouragement for the new mom with the feeding she was providing her baby. She said:

Like I know from my grandmother, said that when you breastfeed your baby there's you know a really strong connection. The love for your baby, your baby is with you all the time, the learning because your baby is always with you because you're always feeding and so you're always learning, teaching your baby, eating healthy, like having traditional food, you know your babies getting good nutritious food and I would say more so the connection you have with your baby.

Custom adoption: Two mothers described custom adoption within their families. One mother had been custom adopted and the other had two experiences of custom adoption within her family. One mother had adopted her oldest child and her parents had adopted her sister's baby. The reasons given for the two custom adoptions were that they were teenage mothers, one mother was described as being 14 or 15 while the other mother was 16 years of age. The other reason that the participant gave for adopting her child to her sister-in-law was that she was "*having complications with her ex-partner*." She explained that her sister-in-law "*took her baby*" and that her breastfeeding was "*a forced stop*."

The other participant had been adopted to her parents when she was five days old. She had no contact with her biological family until she was 16 years old. Here is her explanation:

I was adopted at 5 days old. My biological mom was like 14 or 15. Anyways there was a few couples that wanted me and my parents that got me, she just thought they were the best fit because my mom couldn't have children so they picked them...my biological parents are from [remote Dene community] and my parents are from [another remote Dene community]...when I was around 16 they started coming into my life and it was kind of confusing because my parents did not tell me about it.

Other people they were like "Your adopted mom, she's real sick and dying." And I was a teenager, so I didn't care who this lady is. Like they obviously didn't care about me, they just gave me away...But obviously now I'm older , I understand, like it was the best choice. I had a talk with my parents about when I was 16. It was quite emotional because they thought that I knew and that I was going to leave them. It was quite sad, but I never did, still to this day I don't really have too much of my biological side.

Friends for advice: Mothers described how important it is to have a network of friends to run ideas by, to compare their experiences and to troubleshoot when they need to with each other. Many moms are having babies within months of each other and they socialize with their children. One mother stated:

They [friends] are very supportive. Especially with the moms, because kind of comforting to know that you're not alone. Like they've been through this, they've been through the same thing and they were able to it so you can too. And some of them have more kids too, so that they have been an inspiration to continue breastfeeding. And even just to be there for your kid and to be able to raise the kid.

Formal network of health care providers: The mothers describe learning about breastfeeding from nurses and midwives. They attend programs in their communities both prenatal and postnatal. They describe having a home visit from the Public Health Nurse in the first week.

Resources available for mothers: Along with partners, family and friends, mothers talked about many resources they use to help them increase their knowledge of breastfeeding or to help them with issues that my present. Most of the mothers use the internet, Google and Facebook to help them. They reported how important it is to be able to reach someone when they need them which may be in the middle of the night. Many participants spoke about the territorial support group that has been set up by mothers for mothers, "Moms, Boobs and Babies." One mom described a question that she had and put forward to the group as follows:

People say you breast feed a baby and their teeth will get rotten because the milk is sitting in their mouth and its causing cavities and that might be a reason why some babies are losing their teeth really early and other people say that no that's not true, because the breast isn't continuously pushing out milk. If a baby were to fall asleep the only way the milk is coming out of the breast is with sucking. So the milk can't stay in the mouth, it wouldn't cause cavities. It is only because my daughter is allergic to dairy and egg whites that she's starting to get marks on her teeth.

So right now I am very curious. Is it the breast milk because I breastfed her throughout the night that its causing potential cavities? or is it a deficiency that she's having herself?...I put that question out there and they don't really have an answer to that one yet, a bunch of people have given me links to information about both

sides...it doesn't even have to be about breastfeeding, if there's a concern you have about a child, you just write about it, and you get other moms support you know saying " This is what I do with my kid, I wish you the best of luck" so it's nice to have, you know, it's a little community of parents that are all the same.

Judgmental Discourse

There are four subthemes that comprise judgmental discourse. They are; *Wagging the finger, Waiver if bottle feeding*, *Feeding in public places,* and *Weight gain surveillance*.

Wagging the finger: Some mothers feel refereed in the decisions they make about care of their baby and in the way they feed their baby. One mother described it as someone "wagging the finger" at them or being reprimanded for the practices they are undertaking with their babies. Others feel that breastfeeding is pushed on you and there is little attention or information provided to bottle feeding. A mother shared her perspective:

There's a lot of moms that just aren't interested in breastfeeding anyway. I feel like it's quite pushed on new mothers at the hospital. You know if I didn't want to breastfeed then I would have felt uncomfortable not breastfeeding because they really do push it on people at the hospital.

One mother described it as *stigma*. She indicated:

Because when you end up having to formula feed, I feel like now there's this crazy stigma. And even again, I mean, he's almost 6 [first baby] when I take him in and they ask for his medical history, the first thing they ask, "Well, was he breastfed?" and I have to be like "No" and then I feel like I owe them an explanation and I have to get into the big story instead of saying "No, he was formula fed and he's good."

Some mothers described that there has to be a better way to inform mothers of all of the options while still letting them know all of the benefits of breastfeeding. This mother feels that promoting breastfeeding is important but recognizes that receiving information on all options is equally salient:

I know it's hard because on the one hand I feel like all moms – like obviously we should be promoting breastfeeding, but I think providing moms with more knowledge of all of their options, whether that's pumping or formula or breastfeeding or a combination of all of them... I think moms need to know that it is work, and be prepared for that.

Sometimes mothers perceive nurse's attempt to promote breastfeeding to be a bias or to come across as a lack of understanding of the complicated lives of mothers particularly with several children. She purported:

I found their [health care providers] very biased with breastfeeding. God forbid you're goin' to mention that you're going to bottle feed because I have a lot of friends that bottle...if it is a woman's choice then don't be so judgmental and don't act like it is such a bad thing. Cause some women just can't, you don't know the story behind them, someone can't make milk, some women have five kids and they're busy, they don't have time to sit around and breastfeed because it is very time consuming...like this one lady is younger than me and she's got three and she loves breastfeeding but she said it's so time consuming, like you have to sit there and relax and feed your baby, and there's like two other toddlers running around screaming so hurry up...whereas with the first one you have all the time in the world.

Waiver if bottle feeding: The hospital has adopted a policy that is centered around making sure that every mother is informed of the benefits of breastfeeding. If a decision is made to bottle feed even after the explanation has been provided about the benefits of breastfeeding, the mothers are asked to sign a waiver to acknowledge they were informed about the benefits and are still going to bottle feed their babies:

...I had to sign a waiver that said "you will not give your child formula" or something like that. Unless it's been discussed and talked about and all this. And I thought that's really weird.

Feeding in public places: Mothers reported feeling scrutinized when they feed their babies in public. A mother said *"Some people kind of look at you funny but what are you going to do, your kid is hungry and he won't take a bottle."* Another mother described feeling that she should hide herself suggesting that exposing your breast to feed your baby creates discomfort for people around you. She said:

Even as I breastfed him at the school there were probably 30 parents in the room, and I knew what I was doing was for him, and still I had this feeling that I should hide myself. But I was like no, I'm feeding my baby and I'm not bothering anybody. Nothing's hanging out for everyone to see.

Sometimes family members openly criticize mothers for feeding in their presence and suggest that they should go somewhere else to feed their baby. A mother shared the following story:

My husband is from [southern province] and things are a lot different there so I find I am clashing with his family. My family are very different because ...whenever we go down and I have my 6 month old daughter I'm feeding in a room filled with his family members, I have gotten some comments on how they stopped feeding the baby at 2 months, that their baby's on bottle, and that they don't breastfeed in public and when I went to his dad's house, his dad told me if I needed to feed her I can go downstairs in the basement to feed her...I found it a little insulting, but I'm very understanding, they're raised differently. Whereas in my family, if I'm at my aunt's

house for a family gathering there might be four of us breastfeeding in the same room.

This pressure on mothers to take breastfeeding to a private place rather than a public place is accepted by some mothers and they try to accommodate by wearing a big shirt that covers their breasts or using a blanket. This is not necessarily appreciated by squirmy babies who like to look at their mothers and interact while they feed. As well, it is perceived by some mothers as promoting bottle feeding if you are in public. One mother wanting to comply with her husband's wishes that she cover up describes her preference to have designated private spaces in the public for women to go to feed their babies. She stated:

I think one thing I have really appreciated, kind of over the last six months, is public space to breastfeed. I have no problem. I will usually cover up with a blanket or something but [baby] doesn't like eating under a blanket. I mean of course he doesn't. It bothers my husband more than it bothers me. So if I am on my own I tend to be a little more liberal but if I'm with my husband I make more of an effort to be discreet.

Weight gain surveillance: Mothers feel that when they are breastfeeding and their babies are slow to gain weight they are somehow at fault. They feel that this measurement and focus on baby's weight is attributed to how well they are feeding their babies:

...When public health came and weighed her and they did their whole spiel, "Your baby's not gaining any weight." Like kind of you know "what's wrong with you" thing. And they made it really scary...and I was actually worried they were going to call a social worker on me...And I felt so horrible ...she's like "You're obviously not giving her enough" and I'm like "I'm feeding her all the time"...

Messages to New Mothers

The final theme emanates from the following interview question—*What would you advise new mothers about breastfeeding?* Mothers are very encouraging of other mothers. Many mothers shared that it is not easy to breastfeed and they support each other. The themes from the mothers responses included; *Persevere*, *It gets better*, *Get to know each other*, *Try to relax*, and *Fed is the best message*. Some mothers point out that women's bodies are made to breastfeed and if cues are taken from the baby their bodies will respond. This mother suggests the way to do that is to **Get to know each other**:

Just like go at your own pace. Even with my third child, you know all the information coming in from people, even though I've done it two times before, yeah, just listen to your intuition...what worked with my first two hasn't worked with him. You just got to get to know each other.

Asking for help is important when you are a new mother and there are many family and friends around who wish to help. This mother suggests that in her message but also describes the importance of getting sleep, paying attention to your diet and to drinking lots of fluids.

> *Accept all of the support and it really helps because being a new mom it's really tiring, and having all of the support that you need really helps a lot. Get enough sleep. It's a challenge but it's good to sleep when your baby's sleeping. Eating and drinking keeps your energy level up.*

Persevere, it gets better was a theme from the mother's messages. It takes time to learn to breastfeed but overtime a rhythm is developed in your feeding practice. A mother gave the following advice: *"Just stick to it. It's not always easy…it hurts at the beginning. And you are tired right, you're exhausted. And sometimes you think, oh how easier if I could just hand it to my husband and he could just feed her formula and I could just sleep you know, but you just stick to it."*

Try to relax is another piece of advice that mothers shared, along with trusting in your body as suggested above and seeking help. This quote captures generally the advice of mothers:

> *Relax like our bodies are designed to breastfeed…the more you stress out about it, the harder it gets… It's not going to be perfect. There's going to be bumps in the road and be days when you have less supply and you're feeding 24/7 and then there's gonna be days when you have oversupply. You kinda just have to go with the flow as much as you can and trust that your body and your baby knows what to do. But also not to be afraid to seek help if it is not going well. Even if baby's well and gaining weight but you're just mentally not doing well with it, with breastfeeding I think its ok to kind of find someone to talk to or seek help and not feel like you're being judged or failing.*

Fed is best: There are many mothers and health professionals who have recognized that the way that breastfeeding has been promoted has alienated some women who are bottle feeding their babies. A mother expressed this new message as follows:

> *I think the fed is best message kind of really clicks with me. That's the kind of message that you see a lot already. I think as long as moms know that their baby is healthy and thriving whether they do that on formula or on breastmilk or a combination or whatever, they are doing what's best for their baby.*

III. INITIATION AND DURATION RATES OF BREASTFEEDING

Health records (n=597) were examined from all birth locations in the NWT (Yellowknife, Inuvik, Fort Smith and Hay River) from January 1 to December 31, 2016. Babies born in Yellowknife and Inuvik were delivered with the assistance of physicians while those born in Hay River and Fort Smith were assisted in birth by midwives. The total number of mothers whom initiated breastfeeding was 82% while 49% were breastfeeding at the time of discharge. There was missing data on a number of records, particularly those breastfeeding on discharge. Babies were supplemented with Formula.

Other variables about the birth cohort included the mother's age, ethnicity, gestational age, method of delivery, baby's birthweight, and APGAR score. Mothers' ages ranged from 15 to 47 with a mean of 28.89 and SD of 5.992. The ethnicity of the cohort of mothers was Dene (37%), Inuvialuit (19%), Métis (2%) and non-Indigenous 250(42%). The number of Indigenous mothers was 58% while 42% were non-Indigenous. Most babies were full term with a mean gestational age of 39.08 and SD of 1.648. Most babies in the 2016 cohort were born by spontaneous vaginal delivery (77%) while the C-section rate was 19% and vacuum assisted delivery was 4%. There are a significant number of high birthweight babies (19%) that were equal to or greater than 4000 grams and (n=19) or 3% of babies were above 4500 grams. As well, 4% of babies were low birthweight babies equal to or less than 2500 grams. Figure 4 portrays gestational age and weight. From this graph, we can see that babies were mostly term babies (gestational age of 39.1 weeks) with a mean weight of 3549 grams.

Figure 4: Birthweight vs Gestational Age

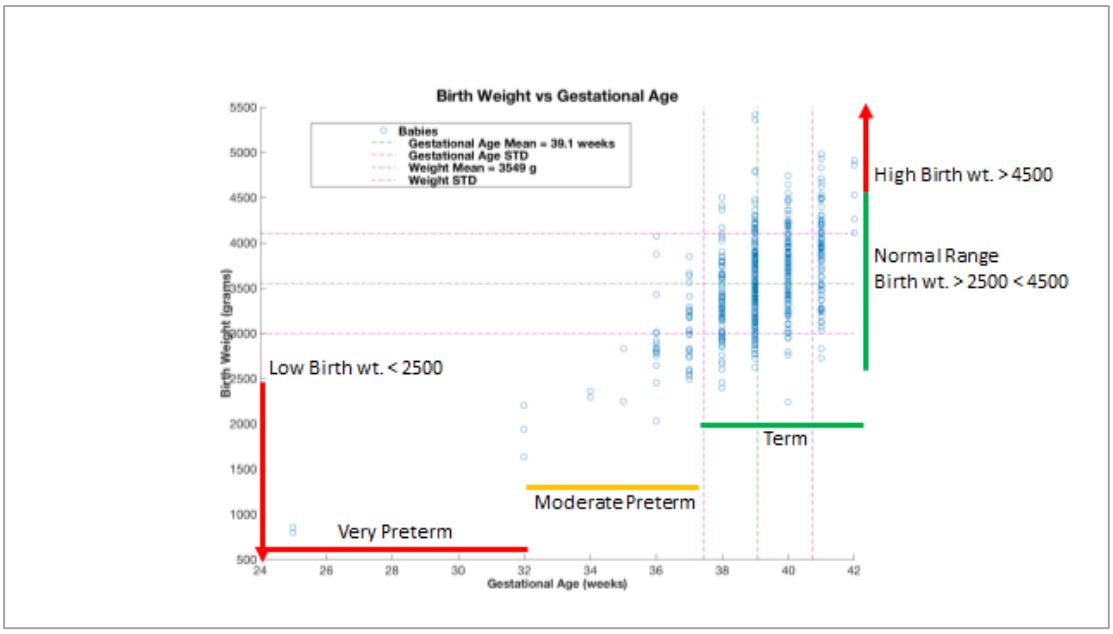
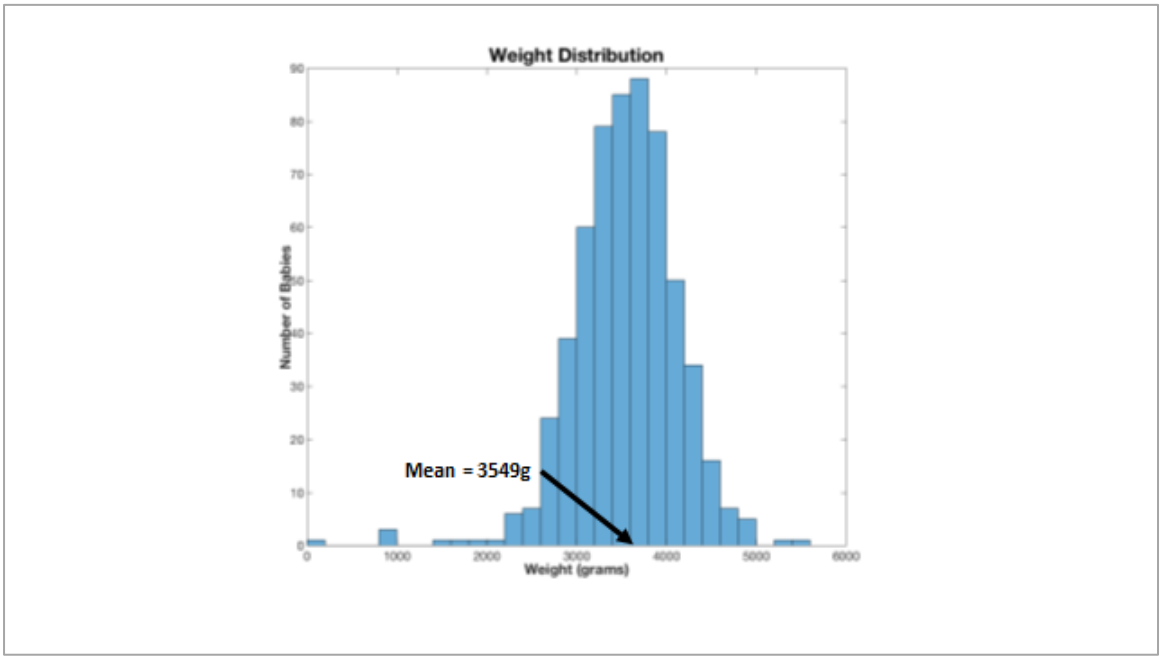


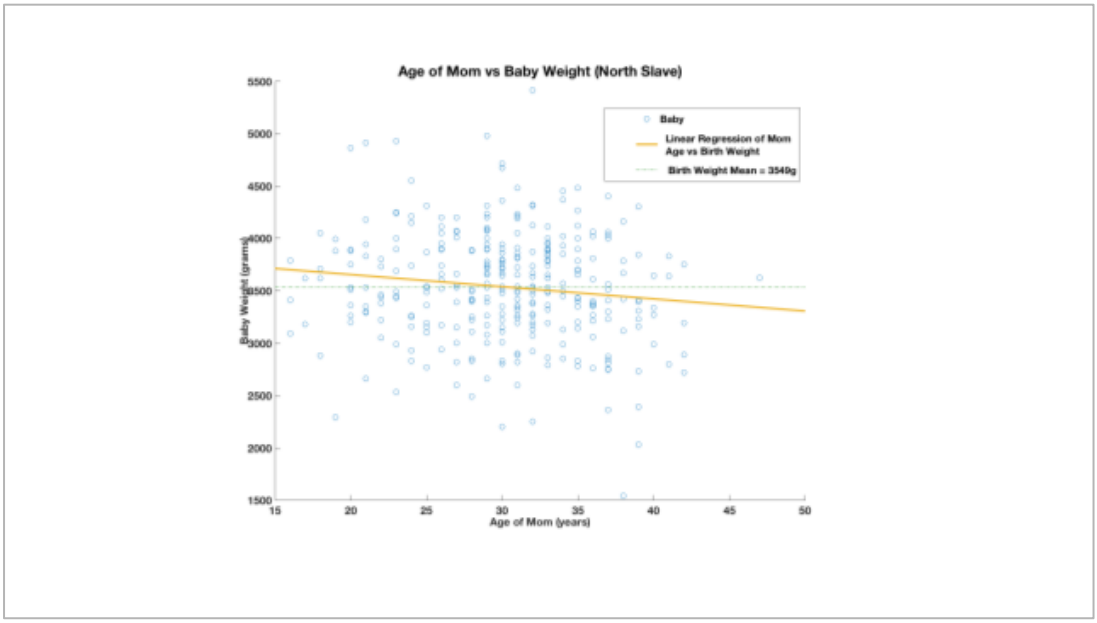
Diagram 5 provides another look at weight distribution where the high birthweight babies can be clearly depicted. Most of the babies are in the normal weight range and are term babies.

Figure 5: Weight Distribution



The mean age of mothers giving birth in the NWT is 28 but in the North Slave it is higher at 31 years old. Younger mothers are having larger babies.

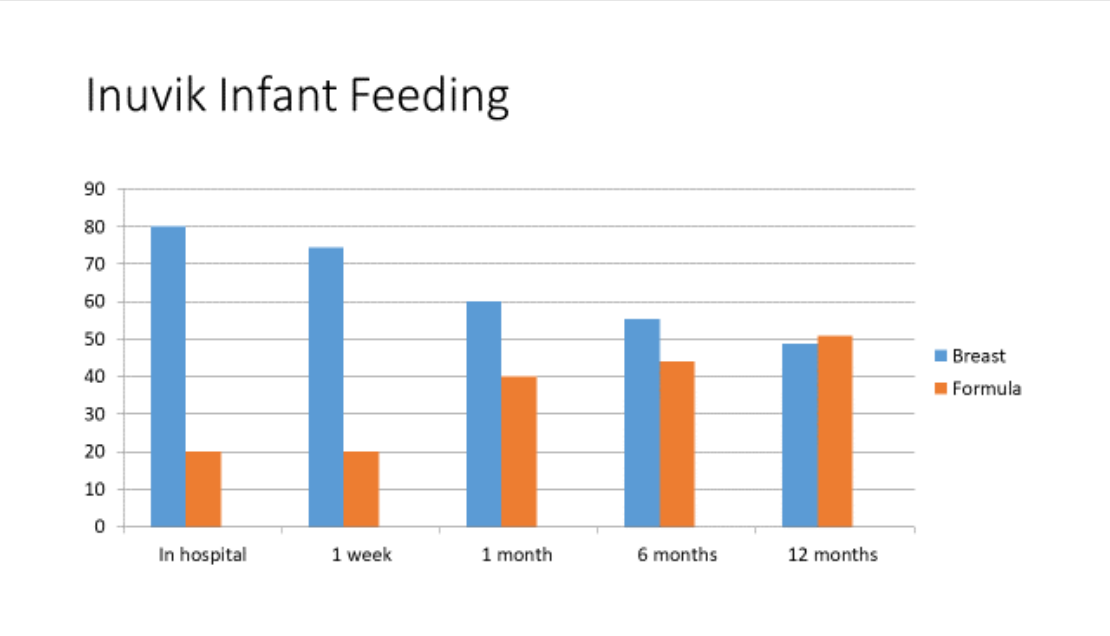
Figure 6: Age of Mom vs Baby Weight



Duration rates were estimated from the well-baby visits conducted and recorded by Public Health Nurses in four locations (Inuvik, Fort Smith, Hay River and Yellowknife) and by the Community Health Nurse in Tulita.

In 2016, the exclusive breastfeeding at six months was 57%. By 12 months, breastfeeding drops to 46%. Figure 7 demonstrates the trend of infant feeding over the first year. As the breastfeeding rates decline, bottle feeding increases, so at 12 months formula feeding is slightly higher than breastfeeding.

Figure 7: Inuvik Breastfeeding Rates



In Fort Smith, 68% of mothers were exclusively breastfeeding at 6 months with the breastfeeding dropping to 38% at 12 months. Figure 8 depicts breastfeeding as exclusive breastfeeding or breastfeeding and bottle feeding. In Hay River, exclusive breastfeeding at 6 months was 38% and at 12 months, the breastfeeding rate was 24%. In Tulita, a remote off road community, there were 9 births in 2016. Three women (33%) were exclusively breastfeeding at six months and one mother (11%) was breastfeeding at 12 months.

In Yellowknife, 209 mothers were followed on discharge from the hospital with 72% of those mothers breastfeeding. In conversation with a PHN, women from Nunavut are often included in the first visit after their hospitalization if they are still at the Boarding Home (Teresa Patzer, personal communication, April, 2018). The numbers of mothers accessing the well-baby program dwindled to 241 at two months and then 156 at 6 months. At the six month well-baby visit, the exclusive breastfeeding rate was 17%.

Figure 8: Fort Smith Breastfeeding Rates

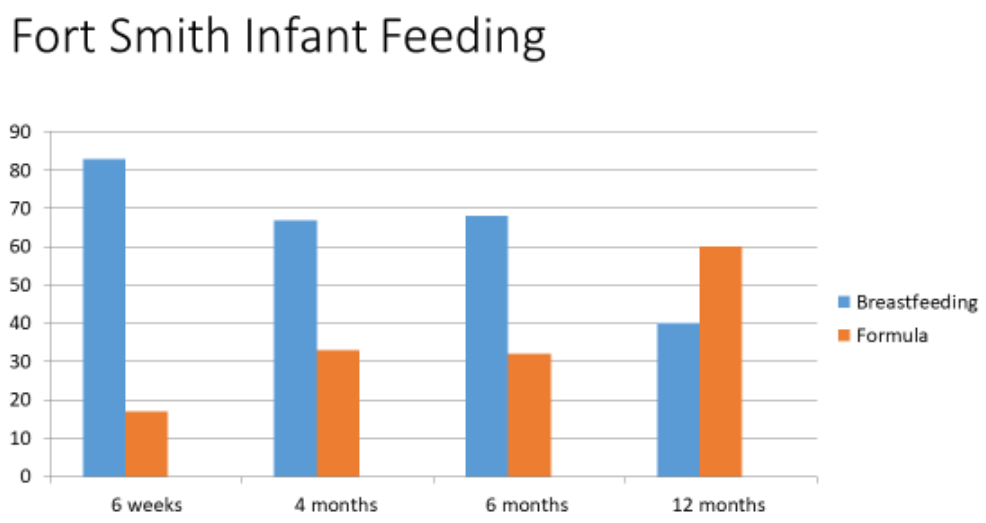
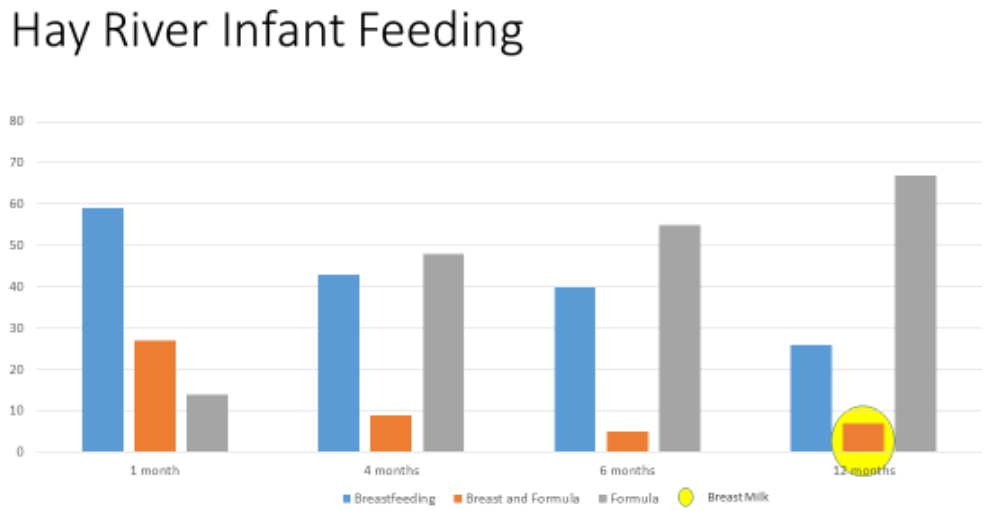


Figure 9: Hay River Breastfeeding Rates



IV KNOWLEDGE TRANSLATION TOOLS

As this report goes to press, the research team is working with Amos Scott, videographer, to finish a short video that was filmed primarily in Tulita. The video highlights the intergenerational transmission of breastfeeding knowledge from a great-grandmother to a grandmother to a daughter-in-law. The video demonstrates breastfeeding as a traditional practice and portrays a group of grandmothers revising a book of their stories to share with mothers in the community. By going back to the community with a draft of their highlighted stories, the researcher was able to validate the stories - making sure that the words of the grandmothers were captured correctly, the stories were assembled in the order the grandmothers preferred, and the drawings that accompany the stories depict messaging in a culturally congruent way. Equally important is finding an Indigenous translator from the community to translate the book. Along with the book's utility in providing historical accounts from the grandmothers about breastfeeding, it can act as a means of revitalizing language use if used as an education tool within children and young adults.

LIMITATIONS

The study is not representative of all cultural groups in the NWT. The majority of grandmothers in the sharing circles were from distinct cultural groups except in Fort Smith where they were both Indigenous and non-Indigenous with many of the non-Indigenous grandmothers long time northerners. A small number of mothers were interviewed and this does not represent all mothers in the NWT. Data from the health records was provided from representatives from the four hospitals rather than the researcher having direct access. There was missing data and inconsistent data provided.

DISCUSSION

This study enhances our knowledge of infant feeding in the NWT from three sources grandmothers, mothers and health records. The grandmothers shared traditional knowledge (captured under five themes; *Feeding babies*, *Being resourceful*, *Surviving hardship*, *Rekindling the past*, and *Sharing wisdom*) of infant feeding and mothering that was based around consistent themes across five Indigenous groups. They reported cultural distinctions but also described shared histories of northern life, capabilities and mothering practices, survivorship on the land, medicalization of childbirth, travel to give birth, and residential school experiences affecting perceptions of female bodies and transmission of infant feeding knowledge. Their stories provide an understanding of the strength and resilience of women, particularly their resourcefulness to use what they had at their disposal to feed, clothe, and care for their infants while caring for other children and work to sustain their family's livelihood.

The grandmothers, many of them Elders in their communities, were engaged and appreciative of an opportunity to share their stories and knowledge of breastfeeding. Their roles within the communities are vital to the transmission of knowledge, skills and values (Grassley & Eschita, 2008, 2011; Wilson, Rosenberg & Abonyi, 2011) and can have an influence on the rate of exclusive breastfeeding as reported in a systematic review (Negin et al., 2016). Grandmothers described that when mothers breastfeed they are enacting cultural beliefs and practices through interactions with their infants and this in turn reinforces their cultural identities. One grandmother talked about breastfeeding providing a sense of belonging.

Other studies have found that grandmothers have an important part to play in community development and education (Bruyere, 2012; Houghtaling, Byker Shanks, Ahmed & Rink, 2018). They can advocate for their grandchildren to be breastfed; they can provide encouraging words and emotional support; and, grandmothers in this study provided historical accounts about a way of life that is unique to their past and speaks to traditional practices of mothering. There is a study underway to identify how *social participation and intergenerational solidarity* has benefits for community wellness (Viscogliosi et al, 2017).

A few mothers describe times when their grandmothers were not supportive or informative about breastfeeding. Sometimes it was because they bottle fed their babies and felt they did not have the experience or the knowledge to advise about breastfeeding. Other times, the grandmothers advised mothers to bottle feed because they thought the baby was not getting enough breast milk or the mother needed her rest. This finding is supported by evidence from US researchers (Grassley & Eschiti, 2008). Even though grandmothers may have bottle fed their babies and do not have breastfeeding knowledge, mothers participating in their study still wanted their grandmothers as advocates. The researchers recommend that the inclusion of grandmothers by health educators providing advice to mothers is a way of increasing their knowledge and providing increased support for mothers.

Grandmothers in this study attended residential school and described negative influences on breastfeeding. The instruction they received in residential school made them feel ashamed of their bodies and personal information about their bodies, changes in their bodies and bodily experiences such as menstruation and size of breasts were to be hidden and not discussed. Stories like these are embedded in the reports prepared by the Truth and Reconciliation Commission (2015). When you add these colonized processes to other societal influences on mothers' infant feeding decisions, for example, living in a time when formula was provided and promoted by health care workers, valuing bottle feeding as a "modern" way of feeding their babies, and suggesting that bottle feeding is less time consuming for busy mothers (Thulier, 2009), women of the 50s, 60s and 70s were persuaded to formula feed their infants as the best choice.

Mothers, participating in the study, endorsed breastfeeding as best for their babies but they are concerned with the way breastfeeding is "pushed" on them with some mothers feeling

guilty if they choose to breastfeed or are unable to breastfeed. Wolf (2011) contests "breast is best" suggesting that the slogan was created from a society that perpetuates personal responsibility and perfect mothering. She suggests that the pressures to breastfeed come from society's risk discourse about infant health being optimized by total motherhood including exclusive breastfeeding. She describes several contradictions about breastfeeding and pumping breastmilk. On one side, breastfeeding puts mothers in control of feeding and caregiving as a natural process while at the same time it ties mothers to their homes and babies. Pumping also exhibits contradictions of freeing mothers to do other things while endorsing their bodies to milk producing machines. According to Wolf, these contradictions can be oppressive or empowering for women.

This leads into findings of judgmental discourse that surfaced in this study. Women described critique directed at them: if they were not breastfeeding or if they were breastfeeding but also giving their babies bottles or if they were not adhering to the timeframe of six months of exclusive breastfeeding or if they were giving solids too early. The lists of appraisal seem numerous and oppressive. These critiques that mothers experience affect their breastfeeding self-efficacy and they question whether they will continue. Dennis (1999) defined and described influences on breastfeeding self-efficacy that included previous breastfeeding, seeing other women breastfeed, verbal encouragement and support and physical conditions that may affect breastfeeding like depression and fatigue. In a recent systematic review, researchers found that breastfeeding self-efficacy is modifiable so when influences such as a supportive environment are enhanced breastfeeding rates improve (Brockway, Benzies & Hayden, 2017).

Many mothers in the study reported pain, often related to poor latch, and cracked and/or painful nipples in the first few weeks of breastfeeding. A few moms were told that their babies were tongue-tied (ankyloglossia) and this was or could be corrected by frenotomy. Emmerson (2018) conducted a literature review to identify if this procedure is successful in improving breastfeeding and reported that it may improve breastfeeding with a caveat that due to the complexities related to the interactions between mother and baby it may not be the sole intervention required. Some mothers and their family members were worried that they did not have sufficient milk to feed the baby. Many other studies report similar findings of pain, issues with latch, and questions regarding milk supply (Dennis, Jackson & Watson, 2015; Dietrich Leurer & Misskey, 2015; Douglas & Keough, 2017; Smith, 2016).

A few mothers in this study described unsupportive partners who were frequently using alcohol and drugs. Moffitt and Fikowski (2017) identified alcohol use as a factor associated with intimate partner violence (IPV) and reported on the silence and normalization that often accompanies this social issue. Considering the social context of violence and NWT's high IPV rates, there is a possibility that mothers are or have been exposed to violence preconception, during pregnancies or while breastfeeding. Wallenborn, Cha and Masho (2018) found an association between early breastfeeding cessation rates and preconception IPV. These

researchers recommend screening during prenatal and if women disclose violence in their lives that further breastfeeding support be provided and safety planning be discussed.

Mothers in this study talked about the importance of the role their partners played as a father in care of their infants. Many fathers wished to take an active role in feeding their babies as similarly described by de Montigny et al. (2018). Fathers in their study described three main roles "being a partner in decision-making, ensuring the family functioning, and providing emotional support for the mother" (de Montigny et al., 2018, p.10). The fathers often fed their babies expressed breast milk and wanted more information on bottle feeding to integrate this practice into their fathering role. The stories from mothers and grandmothers suggest many other ways fathers can be supportive, such as, change the baby, carry the baby, take baby for walks, do household work to support the mother and play with the older children. The intricacies of the role of fathers should be investigated further so that health professionals provide them with increased support.

The initiation of breastfeeding for babies born in 2016 was 82% which falls behind the national rate of 89% in 2011/12 (Statistics Canada, 2013). The good news is that it is above the 75% rate indicated as the standard required for the Baby Friendly Initiative (Breastfeeding Committee for Canada, 2012).

The exclusive breastfeeding rate at 6 months in four NWT communities (Inuvik, Fort Smith, Hay River and Tulita) was as low as 17% in Yellowknife and as high as 60% in Inuvik. This is an improvement over the national survey of 19.7%. As well, Bartsch et al. (2018) conducted a retrospective cohort study using the EMR in Ontario and found the exclusive breastfeeding rates to be 25% at 6 months. The study included 8815 newborns and it is significant to note that 1044 (11.8%) of the records had missing data and to them this suggested inconsistencies in completing the Rourke baby record. I found similar deficiencies in data provided from NWT health records.

There were 19 % of newborns equal to or greater than 4000 grams. This was an increase from 15% found in an earlier study conducted in the Tlicho region of the NWT by Moffitt and Dickinson (2016). As well, researchers have identified a correlation between obesity and diabetes in First Nations communities (Lix et al., 2009; Kuperberg & Evers, 2006). There is inconsistent evidence in the literature about the SGA and LGA infants, birthweight and gestational age and risk for diabetes (Kashan et al.,2015); their large population based study conducted in Sweden found "gestational age and type 1 diabetes may be related to insulin resistance due to early life growth restriction or altered microbiota in preterm babies" with only a small implication of birthweight as a risk for diabetes. In addition, there is an interesting doctoral study by Lesley Dawson with Tlicho women (personal communication, May 23, 2018) in regards to the intersection of colonial histories (particularly the history of starvation) and the maternal embodied response which compromises reproductive bodies and possibly this undernutrition leads to obesity and the risk for diabetes. A recently published population-based

study conducted in Australia in the early 2000s found that "LGA infants show positive long-term health, development and education outcomes" (Khambalia et al., 2017, p.876). These authors suggest that the greatest risk for these high weight babies is with birth injuries.

There is difficulty for researchers to obtain primary access to health records for the purpose of breastfeeding research. This appears to be occurring as a result of protectionism of health records from records gatekeepers. Wartenberg and Thompson (2013) report similar attitudes in other parts of Canada. They suggest that protectionism by service providers has developed in attempts to protect the privacy of individual records. The unintended consequence is that this appears to be at the expense of timely and effective access to records to monitor aspects of population health, such as breastfeeding rates. In this case, we need broader access to perinatal data and the way forward may be to develop a separate perinatal database that can be accessed annually to plot the breastfeeding trend in the territory. We can then consider the factors impacting the trend and develop effective and targeted health promotion strategies.

IMPLICATIONS AND RECOMMENDATIONS

Although there is dedicated work in the NWT to implement the BFI by some health care providers and administrators working in the larger centres, there are continued disparities in terms of infant feeding education throughout the perinatal period and breastfeeding support in the early weeks of mothers establishing breastfeeding. In addition, there is inadequate monitoring and surveillance of breastfeeding in the territory. Implications and recommendations to move forward are listed in key areas of *Research*, *Practice*, *Policy*, and *Health promotion*.

RESEARCH

Mothers and grandmothers were participants in this project. In the future, it is important to hear from frontline nursing, midwifery and physicians about infant feeding in hospital and community practices.

Fathers also have a key role in feeding and caring for their children and it is essential to learn from fathers about ways that they support their partners and information that would assist them in infant feeding and care. Grandmothers reported that there was a loss of the transmission of traditional parenting to current generations so it would be valuable to develop a best practice intervention with grandmothers and parents to test ways to effectively assist new parents in infant feeding decisions and knowledge.

Grandmothers have noted that the medical travel policy whereby mothers travel for birth to a larger centre disrupts the support and involvement of families for the breastfeeding

family at the community level. Investigating maternal services and a variety of models of delivery may yield improvements in the system so that women are closer to home for the birth of their babies and the continuous support of their families and communities.

There were a large percentage of high birthweight babies in the 2016 cohort of births. When considering the evidence of increased obesity and diabetes in the territory, a longitudinal study, following high birthweight infants, may assist in generating new knowledge about links between birthweight and diabetes or provide evidence about the relationship of high birthweight to other etiologies.

Knowledge mobilization and translation are key activities in community research in the North. An important step is to evaluate the effectiveness of tools as they are developed, so that insights are provided into those tools that demonstrate positive outcomes with our populations.

PRACTICE

Many mothers in this study reported pain when initiating breastfeeding, difficulty with latch and positioning and two mothers developed mastitis. Women in all communities of the NWT need lactation support through home visits and more close monitoring of their progress with feeding in the first weeks following birth. Grandmothers may assist with this process by visiting mothers in their homes. Traditional practices, of women helping women, are important. In the NWT almost all women experience a short hospital stay and are either at home or flying home when their milk first comes in. Although the baby was latching in the hospital, many women experienced difficulties and required help with ways to relieve the pain and get a good latch to relieve the breast engorgement they are experiencing. Fathers may be instrumental in being of assistance and/or getting help, but they have to know that this is most likely going to happen.

Through the application of traditional knowledge in both perinatal and parenting programs, culturally safe teachings and resources can be provided. Some of the ways this can be done as recommended by the Advisory Circle of Knowledge Keepers in this study are to incorporate a holistic approach to breastfeeding from a physical, mental, spiritual and emotional perspective; reinforce First Nations law (i.e. respect, love, sharing); develop and/or adopt a First Nations breastfeeding curriculum; revive, promote and preserve games, stories, songs and legends within programs; actively consult and include Elders in program development.

With the constant turnover of nursing staff, Community Health Representatives and/or wellness workers may offer more permanency for program support and could team up with local Elders to visit and guide mothers in getting established in their feeding practice. Elders and Elders support may be a route to increase mothers' breastfeeding self-efficacy and confidence. Ruffin and Renaud (2015) suggest telehealth may be a way of accessing formal supports for lactation in rural areas where resources are thin. Ultimately, the responsibility is

with the nurses for education of mothers during the well-baby visits. They need to have training in the ten steps and for problem-solving. There is potential in the territory for this training but often there is no backfill. There is a mandatory course offered through BFI and it is suggested that any nurse working with pregnant women and newborns should have this training. The backfill problem can be addressed at the policy level by providing relief for professional develop or a means of accommodating the staff so that they get the training without having to be away from their communities.

It is indicated that the in-hospital strategy of signing a waiver to acknowledge that the benefits of breastfeeding were explained is having a negative effect on mothers making them feel policed about their infant feeding decisions. Alternatives to the waiver are highlighted in this report from the grandmothers. They stressed the importance of an "educated choice." It is paramount that women are given information about all infant feeding so that their decisions are based on being informed along with what is best for them in their personal contexts. Grandmothers also said that pamphlets are not helpful because "Nobody is going to tell you your feelings or hear your feelings." They suggest that dialogue/discussion and observation are important means of transmitting information and enhancing learning.

In addition, another solution would be to create or in some cases update a current breastfeeding policy meeting the guidelines set by the Canadian Breastfeeding Committee promoting the Baby Friendly Initiative.

Early infant feeding education during the entire perinatal period (from preconception to postpartum) is needed to prepare new parents for infant feeding. Education should be embedded with traditional knowledge by Elders as suggested above.

Health care professionals need to enact the *Ten Steps to Successful Breastfeeding* (BFI Ten Steps, Appendix A) in hospitals and health centres to help mothers and babies with latch and positions and give them the support they need. There needs to be a plan in place for all new staff to be educated in the ten steps and continuing education for long-time staff to acquaint them with updates. When staff are educated about the ten steps to successful breastfeeding, they can take action in their practices to follow these guidelines and this action may have a positive influence on infant feeding outcomes.

Documentation in health records: There needs to be standardization of language used within the health records; there needs to be language added to the records to accommodate criteria within the Ten Step process of the BFI initiative across the territory. This means documenting when Skin to Skin occurred and how long it lasted; when the baby first went to the breast, the pattern of feeding including duration and frequency of breastfeeding upon discharge from the hospital. The charting of this information should be consistently completed using the same part of the Rourke and/or on the Newborn and Labour and Delivery records. This is important for continuity of care especially between the birthing centres/hospitals and the communities.

POLICY

Health Canada, Canadian Paediatric Society, Dieticians of Canada and Breastfeeding Committee for Canada (2012) issued a joint statement on nutrition for healthy term infants from birth to age six months. It is imperative that our policy direction adheres to the principles and recommendations made. In brief:

- *Exclusive breastfeeding for the first six months;*
- *Baby Friendly Initiatives for hospitals and community health services;*
- *A daily vitamin D supplement tor all breastfeeding babies;*
- *Meat, meat alternatives and fortified cereal as an infant's first complementary foods;*
- *WHO's growth charts for optimal monitoring of infant growth* (p.204)

Breastfeeding policies for all birthing centres, public health centres and community health centres need to be developed in accordance to the Canadian BFI. Calloway et al. (2016) recommend including parents in the development of policies, so that their experiences of breastfeeding and expressed needs can be addressed within the policy. They suggest that it is important to be creative in how parents are recruited into the policy development meetings since they may be reluctant to join because of "perceived expectations, level of education and socioeconomic status" (p.815).

Comprehensive prenatal education and postnatal home visits providing lactation support must be conducted in all communities of the territory to assist mothers to establish effective breastfeeding.

BFI initiatives in the territory would be greatly supported by a perinatal database maintained outside of the health record system to be accessed by researchers, epidemiologists and health planners.

There is a relationship between household food insecurity and breastfeeding in Canada described as a "paradox" because the lowest rates of breastfeeding are found in those with the least socioeconomic means (Frank, 2015; Orr, Dachner, Frank & Tarasuk, 2018; Venu et al., 2017). It is important that health care providers at all levels recognize the link between food security and breastfeeding and reinforce the evidence, support to the breastfeeding family and reinforcement of the Ten Steps process described by BFI. Salmon (2015) proposed adopting a food security approach to improve rates of breastfeeding. By doing this, more political attention is gained to bring responsiveness by health care providers and potentially increase rates of breastfeeding.

HEALTH PROMOTION

Since the breastfeeding rates in the NWT do appear to be increasing, it seems that health promotion efforts are effective and promising to increase exclusive breastfeeding rates to the recommended practice. The messages of the benefits of breastfeeding are known. This was evident from the conversations with grandmothers and mothers about feeding practices. Many participants acknowledged the benefits to mothers and babies when they breastfeed. Historically, breastfeeding was supported and information generated from traditional knowledge. Today, mothers said that the information about breastfeeding is mostly provided by the formal health care system. Moving forward, it is important that messages from health care providers be less prescriptive and instead be focused and tailored to new mothers whereby they start by "hearing where a woman is at."

Grandmothers would like to provide more breastfeeding support and have their personal knowledge updated. One of the ways this could be done as reported in the literature is a "Grandmothers' tea" as a way of increasing the knowledge of grandmothers. There is already developed curriculum that can be used to guide these sessions (Breastfeeding Committee for Canada and the Canada Prenatal Nutrition Program, 2014; Grassley, Spencer & Law, 2012).

Health promotion practices, that not only focus on the nutritional benefits of breastfeeding, but embrace relationality as part of infant feeding will provide consistent and ongoing support. Health promoters can utilize the messages from grandmothers and mothers in this report to create relevant and encouraging messages. Some suggestions were "hang in there it gets better, stick with it, it's worth it." These types of messaging may deliver the notion that it is a learned process that takes stick-to-it-ness rather than a natural process that each mother picks up with ease.

Abbass-Dick and Dennis (2018) have identified that both fathers and mothers should be provided breastfeeding information prenatally. They suggest co-parenting as a foundational intervention that supports breastfeeding.

Finally, health promotion efforts should involve a social justice approach to 'promote, protect and support' all parents considering the context of their lives rather than the mantra of 'breast is best' without realizing the many other influences and social determinants that influence the choices they make regarding feeding their babies. This approach recognizes the complexities of individual lives, considers gendered language, recognizes socio-economic determinants of infant feeding and furthers support of families with infants.

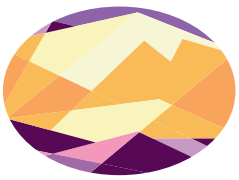
CONCLUSION

This study generates new knowledge about infant feeding practices in the NWT. Grandmothers provide a historical account of their infant feeding practices and share stories and traditional knowledge salient to the NWT. They established the important role of Elder direction and support in their lives as mothers and would like to revive this role in the lives of parents today. Traditional breastfeeding knowledge and practices are important and should be embedded in perinatal and parenting programs.

Mothers describe the benefits and challenges they experience with breastfeeding. They share the times when they feel unsettled because of societal judgment on the feeding decisions they make and some practices, such as feeding in public. This discourse can be changed to an accepted practice by swaying societal attitudes through education, dialogue and actions to make public spaces baby friendly places.

Statistics from health records can be used to identify trends occurring in the health status of a population. It is important for researchers to be able access records to monitor, analyze, evaluate, and plan programs and create policies to improve health. It is also important that breastfeeding rates be increased in the territory since there is strong evidence to support the lifelong health benefits of breastfeeding. For effective monitoring, analysis and health promotion efforts, the development of a perinatal database would assist with describing and responding to infant feeding status. Implementation and education of the BFI ten steps will assist and guide health care professionals with care and direction for NWT parents.

In this study, a great deal was learned from grandmothers and mothers about infant feeding and mothering. Armed with this new knowledge, practices, policies and health promotion efforts can be created to better meet the needs of infants, parents, families and communities.



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APPENDIX A
BFI TEN STEPS

1. Written infant feeding policy that is routinely communicated to all staff, health care providers (HCP) and volunteers.
2. Ensure all staff, HCPs and volunteers have the knowledge and skills necessary to implement the infant feeding policy.
3. Inform pregnant women and their families about the importance and process of breastfeeding.
4. Place babies in uninterrupted skin-to-skin contact with their mothers immediately following birth for at least an hour or until completion of the first feeding or as long as the mother wishes. Encourage mothers to recognize when their babies are ready to feed, offering help as needed.
5. Assist mothers to breastfeed and maintain lactation should they face challenges including separation from their infants.
6. Support mothers to exclusively breastfeed for the first six months unless supplements are medically indicated.
7. Facilitate 24 hour rooming-in for all mother-infant dyads; mothers and infants remain together.
8. Encourage responsive cue-based feeding. Encourage sustained breastfeeding beyond six months with appropriate introduction of complementary foods.
9. Support mothers to feed and care for their babies without the use of artificial teats or pacifiers (dummies or soothers).
10. Provide a seamless transition between the services provided by the hospital, community health services and peer support programs. Apply principles of Primary Health Care and Population Health to support the continuum of care and implement strategies that affect the broad determinants that will improve breastfeeding outcomes.

APPENDIX B
TERMS OF REFERENCE

ADVISORY CIRCLE OF KNOWLEDGE KEEPERS

Purpose:

The Advisory Circle of Knowledge Keepers will offer guidance, advice and wisdom to the breastfeeding research team and the Breastfeeding Our Babies Steering Committee for the duration of the study conducted by Dr. Pertice Moffitt and her team at the Aurora Research Institute (May 2017 to March 2018).

Accountability:

Aurora Research Institute/Aurora College

Membership:

The following knowledge users from communities in the regions where work is to be conducted include:

NAME	COMMUNITY/NATION
Rosa Mantla	Behchokǫ̀, Tłı̨chǫ Nation
Florence Barnaby	Fort Good Hope
Annie Kaye	Fort McPherson
Sarah Krengnektak	Tuktoyaktuk
Jane Dragon	Fort Smith

Meeting Times and Location:

- July 18, 2017 Yellowknife
- December 12, 2017 Yellowknife
- April 26, 2018 Yellowknife

Responsibilities:

- Provide advice and guidance on the research process and breastfeeding babies
- Provide ongoing support and recommendations to the research team and Breastfeeding Our Babies Steering Committee to ensure community-based participatory action research
- Share wisdom and stories about community engagement, community uptake, and knowledge translation
- Assist with the creation of indigenous research tools- for example, help with the interview questions, asking questions in a culturally safe manner and in a way the elders will understand. Also, offering spontaneous translation so that elders can express their thoughts in their own language.
- Assist with the recruitment of mothers and grandmothers to participate in the focus group and interviews;
- Attend focus groups in their regions and provide safe spaces and support for mothers and grandmothers sharing their stories;
- Guide the research and development of knowledge translation tools (e.g. video) so that a meaningful health promotion tool is created.


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