

**PERSPECTIVES OF ACCESSING AND PROVIDING PRENATAL NUTRITION CARE
IN A RURAL FIRST NATIONS COMMUNITY: A COLLABORATIVE, QUALITATIVE
CASE STUDY**

by

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Abstract

Women living in rural First Nations communities face challenges accessing adequate nutrition and nutrition care during pregnancy, creating a barrier to achieving optimal maternal, fetal and newborn health outcomes. Key policy documents have highlighted the importance of understanding and giving voice to First Nation women with regard to antenatal programming including nutrition care. First Nation communities are marked by low rates of recruitment and retention of health care providers, as these professionals are often required to provide a broader scope of practice and have a higher workload than their urban counterparts. Understanding both women and provider perspectives is a key step to improving efficacy of antenatal services.

This qualitative project is a collaboration between First Nations Health Authority, Haisla Nation, and The University of British Columbia. Using a community-centric, case study framework, we explored the experiences of the birthing population and care providers of accessing and providing nutrition care and programs within the Northern community of Kitimaat Village (Haisla Nation), British Columbia. Data collection consisted of open-ended interviews with 13 pregnant or recently pregnant women and 4 care providers within Haisla Nation. The lead researcher transcribed interview transcripts verbatim and textual data was analyzed using qualitative computer software (nVivo, QRS International Pty. Ltd). Transcripts underwent inductive coding and thematic analysis according to Braun and Clarke.

Main themes that resulted from analysis included the perceived value and experience of current antenatal nutrition programs; lack of nutrition advice provided within primary care setting; the

role for nutrition specialist within Haisla Nation; and the importance of traditional foods and practices during pregnancy.

By gaining insight on how nutrition care is accessed, perceived and provided within Haisla Nation using a community centric model we are able to use the knowledge gained to further the provision of nutrition care during the antenatal period for First Nation women. The success of current programs within this community, as well as the process developed to understand the on the ground experiences have potential to be adapted in other First Nation communities in British Columbia to tailor prenatal nutrition programming across the province.

Lay Abstract

Adequate nutrition during pregnancy is a key factor in achieving a health pregnancy for both the mother and the fetus. First Nations women living in rural communities across British Columbia face higher rates of nutrition related diseases and complications during birth. This project represents the first collaboration between First Nations Health Authority, Haisla Nation and the University of British Columbia and aims understanding the experiences of mothers accessing nutrition programs as well as the experience of the care providers providing nutrition care through qualitative interviewing. Four main themes resulted from this project; the perceived value and experience of current antenatal nutrition programs; lack of nutrition advice provided within primary care setting; the role for nutrition specialist within Haisla Nation; and the importance of traditional foods and practices during pregnancy.

Preface

This Master's thesis is an original, unpublished work performed by Rebecca Mercer. This project was approved by the University of British Columbia (UBC) Behaviour Research Ethics Board (BREB). The number of the BREB certificate of approval was H16-00037.

Ms. Mercer was the lead researcher who conducted this study under the supervision of Drs. Jude Kornelsen, Tim Green, Yvonne Lamers, Jennifer Black, and Patricia Janssen. Drs. Jude Kornelsen and Tim Green were the co-supervisors for this study.

This project was a partnership project that was co-created between First Nations Health Authority and the lead researcher/co-supervisors. This project originated while Ms. Mercer was working at the Centre of Rural Health Research at UBC's department of Family Practice under the supervision of Dr. Jude Kornelsen who works closely with First Nations Health Authority.

As part of this research, two trips to the community of Kitamaat Village were made and I was responsible for conducting all of the open-ended interviews. I created the open-ended interview guide in collaboration with Dr. Jude Kornelsen who has extensive experience in qualitative research as well as familiarity working with First Nations communities. I independently analyzed the interview transcripts and wrote this thesis, with guidance and feedback from co-supervisors and all supervisory committee members.

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List of Abbreviations

BC – British Columbia

FNHA – First Nations Health Authority

FNFNES – First Nations Food, Nutrition and Environment Study

GDM – Gestational diabetes mellitus

GFB – Good Food Box

NICU – Neonatal intensive care unit

MCH – Maternal child health

MOH – Ministry of Health

OCAP™ – Ownership, control, access and possession

PCF – Post colonial feminism

PNP – Prenatal nutrition program

PSHA – Provincial Health Services

TA – Thematic analysis

T2D – Type 2 diabetes

TCPS – Tri council Policy Statement

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Mom and Dad, this one is for you.

Chapter 1: Introduction

1.1 Background and rationale for study

Adequate and culturally appropriate maternal nutrient intake and nutrition care during pregnancy helps provide a pathway to a healthy birth and aids in the prevention of various diseases for both the mother and child later in life.(1) When compared to the Canadian population as a whole, First Nations¹ women experience disproportionately poorer maternal health, birth outcomes, and maternity experiences due a complicated interaction of factors.(2,3) This disparity is marked by higher rates of nutrition-related diseases such as gestational diabetes, type 2 diabetes mellitus and obesity, as well as socioeconomic factors including food insecurity² and limited access to appropriate nutritional support and resources such as access to a dietitian, or prenatal nutrition programs.(2) Inadequate dietary intake during pregnancy can have immediate and lasting impacts including impaired fetal development, birth complications and an increase in the risk of various chronic health problems for both the mother and the infant including diabetes, obesity, and cardiovascular disease.(1)(4)

First Nations women living in rural British Columbia have to travel further to access maternity care and have less prenatal nutrition services when compared to urban communities.(5) These rural communities are marked by low rates of recruitment and retention of nutrition and other health care providers. Contributing factors to low recruitment and retention include higher

¹ The Canadian Constitution recognizes three groups of Indigenous people within Canada, First Nations, Metis, and Inuit. The term First Nation came into common usage in the early 1980's to replace band or Indian. It should be noted, there is no legal definition for First Nation.(102)

² Food insecurity is defined as "the inability to acquire or consume an adequate diet or sufficient quality of food in socially acceptable ways, or the uncertainty that one will be able to do so".(103)

workloads, requirement of a broader scope of practice and personal life preferences.(6,7)

Furthermore, most communities with a population under 3000 do not have the population base to support a full time dietitian and therefore the prenatal nutrition care falls within the realm of other generalist providers including midwives, doulas and nurse practitioners. Given the breadth of clinical and administrative responsibilities, these practitioners feel under-resourced and time-constrained to provide and run prenatal nutrition programs due to other clinical responsibilities.

Government funded maternal infant nutrition programs have attempted to narrow the health gap between First Nations and non-First Nations women by providing funding for programs that aim to improve prenatal nutrition, most notably the Canadian Prenatal Nutrition Program, and Healthy Starts(8). Although quantitative measures have been published regarding the number of women accessing prenatal nutrition programs, funding allocated to each program and the number of communities served (8), there remains a gap regarding the lived experiences for both women and providers of prenatal nutrition in First Nations communities. This gap has been highlighted in the BC Centre of Excellence for Women's Health review of on-reserve maternal and infant programming, which recommends that moving forward, importance should be placed on "*giving voice to the concrete experience and perspectives of First Nation and Inuit women on maternal and infant programming.*"(8) Furthermore, research that has explored First Nations women's experience in accessing nutrition care in Canada is largely focused on communities in the Prairie Provinces(9,10) and has seldom included the perspectives of the care providers, a key aspect of in the holistic understanding of nutrition care in low-resource settings. Therefore understanding the experiences of providing and accessing nutrition programs and resources during pregnancy in First Nations communities across British Columbia is critical and timely.

1.2 Study purpose

This qualitative study represents the beginning of a dialogue between First Nations Health Authority, First Nation communities and the University of British Columbia regarding the experience of providing and accessing prenatal nutrition care in a rural First Nation community.

This thesis provides insights into current successful prenatal nutrition programs and the challenges of accessing and providing prenatal nutrition care in a rural, Northern community.

This study had two main research goals:

- 1. To understand the lived experiences of First Nations women accessing nutritional services during pregnancy, with a focus on defining the services available, which programs have been successful, and potential gaps in service; and**
- 2. To gain the perspective of nutritional care providers in each community to understand the challenges of providing nutritional counseling and support in low resource settings.**

This will contribute valuable insight to aid in informing rural First Nations prenatal nutrition program planning with the overall intention of improved maternal and newborn health outcomes through understanding how to best provide prenatal nutrition care.

Chapter 2: Literature review

In this literature review I will [1] explore the influence of colonization and the lasting effects on Indigenous health [2] summarize the importance of prenatal nutrition during the prenatal period and specific nutrition related conditions impacting First Nations mothers [3] explore evidence on current programs providing nutritional support in BC, Canada and internationally, and [4] investigate literature focusing on providers' experience and best practices for delivering nutrition services in Indigenous communities.

I will prioritize the intersection between Indigenous women accessing prenatal programs and providers supporting them while grounding these experiences in the overarching influence of colonization and its lasting effects on Indigenous health, including nutrition.

2.1 The context of colonialism to the research at hand

The marked health inequity between First Nations and non-First Nations Canadians is rooted in the historical and ongoing colonial and assimilatory practices such as the Indian Act of 1876, residential schools and the reserve system.(11) These federal colonial policies resulted in the disturbance of cultural practices as well as created geographic and political barriers to the access to health care.(12) These practices have had profound and lasting impacts on the health of Indigenous women and communities in Canada.(13) The influence of the Indian Act and residential schools on health, diet and eating practices will be discussed in detail below.

Indian Act of 1876

The Indian Act is the overarching federal document first passed in 1876 which amalgamated previous laws and policies relating to the Indigenous population of Canada (First Nation, Métis and Inuit).(14) This act described laws regarding land ownerships, whom is considered ‘Status Indian’ and made the federal government responsible for governing all Indigenous people.(14) Although the Indian Act has been amended numerous times since its inception 140 years ago, it still has significant impact on Indigenous people of Canada today. It is noted as the single most influential and controversial document that has shaped the lives of Indigenous people in Canada.(15) Although the implications of this policy are vast and complex they extend the scope of this review. They have, however, had a lasting impact on Indigenous women’s health, by disrupting complimentary and non-hierarchical gender roles that existed pre-European contact. Although the role of women varied between Nations, scholars argue that the patriarchal European value system such as designating males as the leaders of the household and denying women the right to possess land had a profound and lasting impact on women’s role within their community.(14,15)

Residential Schools

From mid-1800’s to 1996, an estimated 150,000 children were removed from their homes and forced to attend one of many residential schools dispersed across Canada.(16) The overarching goal of residential schools was to assimilate Indigenous children into Eurocentric culture by removing them from their culture, families and traditions.(17) This cultural genocide purposefully dismantled the interwoven web of all traditional practices, including those concerning food procurement such as hunting, gathering and trapping that sustained First

Nations communities in Canada for generations. Prior to colonization, traditional diets varied based on geographical location and seasonality, but the diets were generally high in animal protein, and rich in iron, B vitamins and omega-3 fatty acids.(18,19) The loss of cultural food practices resulting from colonial policies such as residential schools has had intergenerational implications as the intake of traditional foods has been reported to decrease with each generation.(20)

Aside from the dislocation of traditional practices, residential school caused a disruption in the transfer of knowledge from generation to generation and had a significant impact on the sociocultural connection to food. In addition to being disconnected from traditional food practices that had sustained Indigenous communities from both a nutritional and sociocultural perspective, children who were put in residential schools were also subjected to extremely unethical and inhumane treatment regarding food.(16) Abuse included subjecting children to nutrition related research studies without consent or any of the safe guards and ethics requirements we have in place nowadays to protect the rights and safety of research participants. Research done in the schools was a major contributing factor to a long history of unethical and inappropriate research that has tarnished the relationship between Indigenous communities and researchers. Some of this research included nutritional experiments. Dr. Ian Mosby has written about the unscrupulous nutritional testing that occurred in residential schools across Canada from 1942-1952 where children were unknowingly subjected to participating in testing that caused direct harm. These trials were led by Dr. Percy Moore, the Indian Affairs Branch Superintendent of Medical Services and Dr. Fredrick Tisdall, a pediatrician at the Hospital for Sick Children in Toronto, both working under the Department of Indian Affairs of Canada.(21) One example of

these experiments was at the residential school in Port Alberni, BC, where malnourished children were subjected to an experiment designed to determine the effects of increasing the milk ration of 8oz per day to 24oz per day on nutritional status. The children were kept at a daily milk intake 8oz, which was less than half the quantity recommended by the Canada's Food Rules, for a period of 2 years to provide 'baseline' measures. Although the results and outcomes from this study are not publicly available, Mosby's accounts of this experiment and others like it, highlight the lack of ethical safe guards and inhumane treatment that occurred at these schools. Although all residential schools were closed by 1996 and major strides have been made in terms of ethical research and engagement with Indigenous populations, the intergenerational trauma³ and cultural genocide from these practices impact the health status of First Nations today.(16,22,23)

Changing food practices and pregnancy

Although the diet of Indigenous people in Canada has changed drastically since colonization, traditional foods still hold spiritual and nutritional significance particularly for women during pregnancy.(24)(3) The First Nations Food, Nutrition and Environment Study (FNFNES) found that on the days when traditional foods were consumed they were major contributors to protein, vitamins A, D and C, and calcium intakes and increased overall diet quality.(25) The nourishment from traditional foods extends the physical nourishment of vitamins and nutrients and contributes to the connection to the land and community through gathering, preparing and

³ 'Intergenerational trauma' refers to the effects of a traumatic experience or experiences on generations following the one originally traumatized.(104)

sharing foods.(26) These foods have been highlighted as a critical physical and spiritual aspect of pregnancy. Greenwood and Kornelsen (2014) highlight this notion in a qualitative study in Haida Gwaii British Columbia. First Nations women describe the important role that traditional foods play in physical and sociocultural health and the role that family plays in attaining nourishment.(3)

Studies have suggested that Indigenous food preferences are changing and shifting towards a less traditional diet and more market foods⁴ based diet. Kuhleing et al's study of 44 artic First Nation, Métis and Inuit communities found that younger generations (age 20-40) for all three cultures consume significantly less traditional foods than the oldest generation samples (ages 61+)(27). Traditional foods are increasing being replaced with market foods that tend to be higher in calories, and fat. This multifaceted and complex change in the diet has resulted in increasing amounts of market foods being consumed by Indigenous populations in Canada.(18,20)

The loss of food practices is reflected in the physical health of Indigenous people of Canada and other colonized countries such as Australia, where nutrition-related conditions such as diabetes and cardiovascular disease are significantly higher in Indigenous than in non-Indigenous populations.(25) Inadequate diet and these chronic adverse health conditions have a lasting negative impact during pregnancy for both mother and child. The negative effects of loss of traditional practices are compounded for rural women by lack of affordable access to high quality Western foods, creating a nutritional maelstrom(28). The role of nutrition during

⁴ Market foods are foods that are intended for consumer markets, or in lay terms, food items purchased at a grocery store

pregnancy on a physical and spiritual level, as well relevant nutrition-related conditions affecting First Nations populations, will be discussed in the subsequent section.

2.2 Significance of nutrition during pregnancy

Adequate nutrition during pregnancy is essential to maternal, fetal, and newborn health, as nutrition-related conditions can significantly affect the immediate and long-term health of newborns and birthing women.(1) Although this relationship is extremely complex and influenced by many socioeconomic and biological factors, adequate micro and macronutrient intake during pregnancy is recognized as a means of improving birth outcomes, and health beyond pregnancy for both mother and child(29). When compared to the Canadian population as a whole, First Nations women experience disproportionately poorer maternal health, birth outcomes and maternity experiences due to a myriad of factors, including food insecurity, and limited access to appropriate foods and/or nutritional support and resources.(2,3) This increases the risk of malnutrition including both over- and undernutrition involving excess or inadequate intake of various nutrients, during a critical point in a women's life.(30) Section 2.2 explores the literature surrounding obesity and weight gain during pregnancy, gestational and type 2 diabetes, as well as food security in the context of First Nations health and the potential impact on pregnancy.

2.2.1 Obesity and weight gain during pregnancy

Obesity⁵ and excessive weight gain⁶ during pregnancy increases the risk of adverse pregnancy

⁵ Obesity is defined as a body mass index (BMI) over 30 (38)

outcomes including caesarean section(31), fetal death(32), wound infection(33), macrosomia(34), and neural tube defects(35). First Nation Canadians experience obesity rates much higher than the general population. According to the 2011 Canadian Community Health Survey, 20% of the total British Columbian population was obese whereas Foulds et al in 2011, reported that 56% of rural First Nations men and women in BC were obese with a further 30% overweight.(36,37) Both studies used the World Health Organization (WHO) principle cut-points as measures of overweight (BMI 25-29.99) and obesity (BMI ≥ 30).(38) Although the obesity rates are staggeringly higher for rural First Nations in BC, it should be noted that there is debate whether or not it is appropriate to use cut-points derived from mainly white, European decent for Indigenous populations given that there are often differences in the anatomical stature of various ethnicities.(39–41) Charbonneau-Roberts et al argue that for populations such as Inuit and Far East Asians that have relatively shorter legs and higher sitting heights compared to other populations, it is inappropriate to use standing height for BMI calculations. Including only standing height may in fact overestimate the prevalence of overweight or obesity(40). Whether this holds true for First Nations populations warrants further inquiry.

Given the staggering differences in the prevalence of obesity and overweight highlighted in quantitative studies, the value of understanding the sociocultural contributors and perspectives of pregnant women regarding weight gain during pregnancy is imperative when considering prenatal nutrition programming. A qualitative inquiry into Cree women's perceptions on weight gain during pregnancy and lactation highlights the value of traditional foods, beliefs surrounding

⁶ 'Excessive weight gain during pregnancy' is weight that is gained over the recommended weight gain according to pre-pregnancy BMI as defined by Health Canada which is adapted from the U.S. Institute of Medicine 2009 recommendations (105)

weight gain, and challenges to achieving or maintaining a healthy weight during gestation.(24) In this study, all of the participants were overweight (BMI > 25) and excessive weight gain during pregnancy was previously reported as nearly 50% for Cree living in the same geographical location(42). Women in the qualitative study often referred to the health benefits that traditional foods or activities like trapping had on their prenatal health. Interestingly, this was coupled with the Cree traditional belief described in this paper that any weight loss during lactation is unhealthy and the supply or quality of milk will be lower if the mother is losing weight gained during pregnancy.(24) Although this example may only apply to the study community, it highlights the importance of understanding perspectives and context of each community as well as what is considered important to the birthing women when considering prenatal nutrition programs.

2.2.2 Gestational and type 2 diabetes mellitus

First Nations women experience gestational diabetes mellitus (GDM) and type 2 diabetes mellitus (T2D) at rates higher than non-First Nation Canadians.(25)(36) Although both types of diabetes are caused by glucose intolerance, gestational diabetes presents during pregnancy and wanes after giving birth yet increases the risk of developing T2D later in life.(43) Both gestational and type 2 diabetes carry significant health risks during pregnancy which can lead to immediate and lasting health implication for both the mother and child.

Rates of GDM for First Nation women are 2-5 times higher than non-First Nation women, varying by province and region(2) and First Nation ancestry is considered to be an independent risk factor for GDM.(44) Women who experience GDM are at greater risk of developing preeclampsia, delivering a macrosomic infant, and are at an increased risk of type 2 diabetes

mellitus (T2D) later in life.(45,46) This risk of developing T2D from GDM has been suggested as a significant vector in the increases rates of T2D.(47,48) GDM increases the risk of perinatal complications such as shoulder dystocia, failure of labor, fetal distress, and cesarean section deliveries, thereby increasing risks to the mother and costs to the health care system due to a higher need for interventions during delivery and post-partum.(49)

The incidence of type 2 diabetes (T2D) in First Nations populations is growing rapidly, with earlier onset and increased rates of complications.(50) T2D rates are higher in women and more common in rural versus urban Aboriginal communities.(50) Women entering pregnancy with T2D are at a higher risk of hypertension, chronic kidney and cardiovascular disease, all of which can increase the risk of poor maternal and fetal outcomes.(51) Infants born from a mother with GDM or T2D are at increased risk of adverse health outcomes necessitating transfer to a neonatal intensive care unit (NICU), including respiratory distress syndrome and hypoglycemia, and outcomes which may have life-long consequences for the child (e.g. birth asphyxia).(45)

Along with the increased risk of complication during pregnancy, diabetes during pregnancy holds significant psychosocial implications for First Nation women. Oster, Mayan and Toth (2014) explore the experience of diabetes during pregnancy for Indigenous women living in urban Manitoba. Through unstructured interviews, and qualitative content analysis, the authors reported women that felt overwhelmed with the large amounts of information, physician visits and required medical tests related due to their diabetes.(10) Although many of the women highlighted the challenges experienced with gestational diabetes, some participants also described the positive lifestyle changes that they implemented for themselves as well as their

family because of their diabetes diagnosis. The women underlined the importance of support from family and health providers in enabling them to make positive changes, based on feeling respected and treated as a partner in their health care journey. On the contrary, some women reported experiencing fear-inducing, unsupportive, paternalistic health care and the consequent shame it led to. The support of more culturally relevant care through the involvement of Elders and traditional teachings was viewed as a way to fulfill the cultural and spiritual aspect of their health that was lacking from the Westernized health care model.(10)

These negative experiences paralleled findings from a similar qualitative study by Neufeld (2011) where Indigenous women in urban Manitoba were interviewed about their experience of gestational diabetes.(52) The participants in Neufeld's study stressed the challenges surrounding food and eating practices, as well as the anxiety that accompanied eating with GDM. Many of the participants were frustrated with the confusing nutrition education that they received and stressed the importance of listening to their bodies. The advice of family members was also highly regarded.(52)

A recent article published in June 2016 in *Advances in Nursing* by Whitty-Rodgers (2016) examines the experiences of women with GDM in rural First Nation community in Nova Scotia.(53) Some of the findings from the study were thematically similar to the Manitoba study including participants' recognition of the need to initiate a healthier lifestyle, expressions of their frustrations with food, and the importance of support from family and community to meet their nutritional goals. Access to healthcare was highlighted as a major theme, and women described difficulties having the means, either financially or time-wise, to access the necessary care.

Although this study added the component of rurality and physical isolation, the context and diversity of each First Nation makes it inappropriate to generalize to all rural First Nation communities.

2.2.3 Food security

Access to nutritious, affordable and culturally appropriate foods (i.e. traditional foods) during pregnancy is critical. The FNHS survey in 2011 highlighted the alarmingly high rates of food insecurity for BC First Nations, where 41% of households reported being food insecure. Food insecurity is defined as “the inability to acquire or consume an adequate diet quality or sufficient quantity of food in socially acceptable ways”.(54) Rural First Nations face geographical and financial barriers to accessing nutritious foods as well as threats to traditional foods due to contamination, westernization of the diet and pollution.(50) This is particularly critical during pregnancy because traditional foods such as salmon, halibut and moose are nutrient dense, high in protein and hold spiritual significance.(18,30)

The literature surrounding diabetes, obesity and food security for Indigenous populations in Canada clearly suggests that these issues do not occur in isolation of each other or without the sociopolitical or historical context of each community. By understanding the experience of First Nations women surrounding body weight and weight gain during pregnancy, food security and chronic conditions like diabetes, prevention, screening and nutrition support processes can be developed through culturally safe prenatal nutrition programming.

2.3 Current program structure of First Nations prenatal nutrition care in Canada

The current structure of prenatal nutrition care is community specific and there is no one blanket program or funding source within BC responsible for prenatal nutrition programming.

A review of on-reserve programming by Stout and Harp (2009) for the Prairie Women's Health Centre of Excellence and the BC Centre of Excellence for Women's Health provides an overview of the programs under the former First Nations and Inuit Health Branch of Health Canada, which has been assumed in BC by the FNHA. This quantitative review assessed which populations are under-served or un-served as well as the annual funding for each program, project sites, and communities served. The two programs which support prenatal nutrition are the Brighter Futures (BF) and Canada Prenatal Nutrition Program(8), now known in BC as Prenatal Nutrition Program (PNP). In 2006, 31.2 million dollars were allocated the Brighter Futures and 20 million to the PNP. In 2009, both CPNP and BF served approximately 600 reserve communities across the country, providing funding that communities can allocate as desired(8). One of the recommendations from this report was:

“That community-based focus groups/dialogues be held, alongside one-to-one interviews, in order to incorporate and give voice to the concrete experiences and perspectives of First Nations and Inuit women on current maternal and infant programming” (Pg v).

This recommendation highlights the relevance and necessity of this partnership project and justifies the value of qualitative data when assessing programming. There has not been a subsequent review of the programs in part due to the disparate way in which communities spend funds (that is, inter-jurisdictional comparison of programs would be difficult).

A recent realist review conducted by Smylie et al (2016) explores the current Indigenous prenatal and infant-toddler health promotion programs in Canada to understand what factors, context and characteristics contribute to positive health outcomes.(55) This recent review highlights the paucity of Indigenous maternal child programming. Through a realist review framework, 20 programs were evaluated according to program outcome using a scoring system described in detail in the article. This evaluation included qualitative and quantitative measures of community level assessment. Of the 20 programs evaluated, 11 programs demonstrated community investment, ownership and activation. Of these community-driven programs, eight were assessed to have a positive to moderate clinical impact and the remaining three were assessed to exhibit trends or have a minor clinical impact. Programs that did not demonstrate community investment were less likely to demonstrate positive program outcomes. These findings support Smylie's theory that community investment is a key component to successful maternal child programming. Further they call for researchers to provide explicit details as to how the community is involved, how Indigenous values are incorporated into the program through all stages, and the context in which this occurs.

2.4 Provider experience

First Nations communities, particularly those located in rural or remote areas of Canada, experiences low rates of health care providers recruitment and retention and experience high rates of turn over and burnout.(6) Understanding the challenges and perspectives of care providers working in First Nations communities is crucial to understanding how to best provide a holistic and sustainable model of all prenatal care, including nutrition.

There is little literature that captures the experience of health care providers delivering nutrition care in First Nations communities. One previously mentioned study on gestational diabetes by Neufeld (2014) included interviews with the care providers. Providers felt that women were marginalized and that often care providers made these women feel at fault for developing GDM. The providers also brought up their own frustrations with non-compliance but also stressed the importance of establishing trust and understanding with patients.(9)

A recent ethnographic, community-based participatory study by Oster in a large Cree First Nations in Alberta explored the perceptions of 12 prenatal nutrition providers. Three core themes resulted from the semi-structured interviews – building relationship and trust, cultural understanding and context-specific care.(56) Providers felt that taking time to build relationships with mothers within their community improved pregnancy outcomes, as women would be more likely to attend prenatal visits and be more receptive to messages/education. These relationships can reduce fear or mistrust of the healthcare system that may have been the result of previous experiences. Cultural understanding was highlighted by the health care providers as a means to foster positive relationships and deemed necessary to provide a welcoming and understanding environment for mothers. They stressed that understanding both the historical and current community context helps reduce patient stigmatization, develops compassion and helps reduce provider frustration.(56) Nested within the theme of cultural understanding was recognizing the historical and ongoing impacts of colonization. The theme of context-specific care signified to providers the necessity to move away from the one-size fits all approach to health care at both an individual and system level. Providing a more flexible, ‘open-door’ rather than a rigid appointment based approach was highlighted as a means to support pregnant women during

pregnancy. For each theme discussed – providers also discussed system barriers that made them feel as if their ‘hands were tied’ and prevented them from being able to provide what they felt to be the best and most appropriate care.(56)

2.5 Best practices, cultural humility and safety

Although there is little published surrounding the experience of care providers working in Indigenous communities, there is a large body of literature, resources and guidelines that highlight the best practices for working in Indigenous maternity care. This section will summarize and highlight the key policy, practice guidelines and influential pieces of literature surrounding best practices for working with Indigenous communities. I deemed literature as ‘influential’ if it was frequently referenced, produced by a professional society, or recently published.

The Society of Obstetricians and Gynaecologists of Canada published a clinical practice guideline consensus paper for health professionals working with First Nations, Inuit and Metis in 2013 that serves as a standard of care reference for health practitioners in Canada.(57) This document is composed of 24 recommendations made by reviewing relevant published literature since 2005. The evidence was summarized and rated according to the criteria described in the Report of the Canadian Task for on Preventative Health Care.(58) Although the document is not specific to maternity care, there is a large focus on women’s health and many of the recommendations are applicable to prenatal and maternity care. The document dedicates a chapter to the challenges and recommendations for the prenatal period. These include being mindful of risk factors for inadequate prenatal care, potential travel limitations, access to healthy

food, traditional values and beliefs (i.e. tobacco ceremony) health coverage, and high rates of obesity, smoking and depression.(57) Understanding how colonization has impacted birth is an important and key aspect to this chapter, providing a holistic historical and present depiction of the influences that Indigenous women face during the maternity period.

The recent Tripartite Maternal, Child and Family Health Report (2015) is a collaboration between FNHA, Ministry of Health (MOH), and Regional Health Authorities (RHAs). This report provides a summary from interviews and group discussions with health directors, and maternal child health program coordinators, health authority and government responsible for maternal and child health programs in BC.(59) Although most participants are not involved with the on the ground delivery of care, this report provides a snapshot into the concerns and experiences of the policy of maternal child programming. The report focuses on the experiences and perspectives of those involved with Indigenous maternal child health (MCH) in British Columbia and underlined the unacceptable health disparity between Indigenous and non-Indigenous women and children. The collaborative team commissioning this report highlights the importance of empowering and supporting women through pregnancy as the basis for appropriate provider interaction. Further, the attitudes of the providers involved with the programs can have a significant impact on the successfulness of a program.

Pregnancy is seen as a period of time where mothers and families “turn things around” and are more likely to partake in healthier behaviours, including diet. The report stresses the importance of the involvement of Elders in all aspects of MCH programming, frustrations with inconsistent funding and the importance of a supportive working environment. The notion that no one-size-

fits-all for every community and that programs must be flexible to suit the needs of the community rather than follow the “best practices” is also stressed. This notion is echoed through much of the Indigenous MCH literature.(8,60)

FNHA recently launched their cultural safety and humility campaign, #itstartswithme in the summer of 2016. Cultural safety is defined as

“outcome based on respectful engagement that recognizes and strives to address power imbalances inherent in the healthcare system. It results in an environment free of racism and discrimination, where people feel safe when receiving health care.” (pg 5).(61)

Cultural humility is defined as

“a process of self-reflection to understand personal and systemic biases and to develop and maintain respectful processes and relationships based on mutual trust. Cultural humility involves humbly acknowledging oneself as a learner when it comes to understanding another’s experience.” (pg 7).(61)

The need for this campaign comes out of the staggering health and social inequities and systemic racism that First Nations individuals in BC face. It calls for all those involved with health care to understand and demonstrate cultural humility and safety, a foundational aspect of providing appropriate and equitable health care.

In BC, steps are being taken on the provincial level to make cultural humility and safety a foundation of health care. Provincial Health Service Authority of BC (PSHA) of BC provides

Indigenous Cultural Safety (ICS) training free of charge for professionals working in the health care field; this includes practitioners providing prenatal and general nutrition counseling.

Initiatives like the ICS are examples of how to promote best practices and impact the on-going systemic racism that Indigenous people face.

Steps have also been taken on a federal level with regards to cultural safety and humility in nutrition care. In 2011 Dietitians of Canada held an Aboriginal Nutrition Network meeting where nutrition care providers from various regions in Canada gathered to create the second version of *Registered Dietitians in Aboriginal Communities: Feeding mind, body and spirit*.⁽³⁰⁾ This document highlights how dietitians can promote adequate nutrition in a culturally safe way as a means to prevent and manage diet related conditions that affect Indigenous populations.⁽³⁰⁾

Internationally, we see a similar trend toward the promotion of cultural humility and safety. A mixed methods study by Bar-Zee et al (2014) in Australia highlights the incongruous standards of care and actual practices when applied to Aboriginal communities.⁽⁶²⁾ The study investigates the prenatal care and the perspectives of care providers working with Indigenous women in two health centres and one regional hospital. Two of the main themes that emerged from the qualitative interviews included the lack of cross-cultural knowledge of the care providers as well as the negative attitudes and practices of the clinicians and the influences that they have on the provision of prenatal care for Indigenous women. More than half of the 27 care providers interviewed felt that their lack of cross-cultural knowledge and ability to communicate with Indigenous women negatively impact the care that they were able to provide. Many of the interview participants felt that hiring and including more Indigenous staff would have a positive

impact on the care provided. The attitudes and practices of care providers were reflected in both the qualitative and quantitative aspects of the project. Although women attended on average 9 prenatal visits, the quality of care appeared to be lacking as references and guidelines for care did not seem to be consistent. An example of this is the recommendation to provide smoking cessation counseling during prenatal visits. The quantitative report found that smoking cessation advice was only provided to 8% of the 120 women who reported smoking at the 1st prenatal visit. In the interviews, one of the care providers stated that “giving up smoking is not a priority for them... talking about quitting is not very useful.” Although this is likely not the opinion of all care providers, it does provide possible explanation as to why smoking cessation counseling was reported so low, even though it is highlighted as a key recommendation for health care providers working with Indigenous women in Australia. This provides insight into the realities of translating policy documents into practice and the importance of educating front line providers, including those providing nutritional counseling, in cultural competency and best practices.

2.6 Summary

Building on the knowledge and research assessed in this review, the need for the current project is illuminated. There is a gap in the literature surrounding First Nation women’s experiences with prenatal nutrition programs in British Columbia and this project represents the beginning of a dialogue surrounding prenatal nutrition in BC. This topic has been identified by FNHA as a key area to understand to improve the prenatal nutrition of First Nation women in BC. The resources and knowledge generated may be used in other communities extending the significance of this partnership project.

Chapter 3: Theoretical framework

The use of theory in health research can aid in understanding complex social systems and processes that are occurring, guide the development of research questions and data interpretation and help propose explanations of the phenomena being studied by providing a broad, explanatory framework.(63) Selecting an appropriate theory that emphasizes the relevant socio-political context is particularly critical to Indigenous research as it locates the perspective and approach taken by the researcher in a transparent way. The theory that will be guiding this project is postcolonial feminism which has been suggested as an effective theory for exploring factors that contribute to the health of Indigenous women as it provides a framework that honors the legacy of colonialism and the marginalization of Indigenous women.(64) Before theories can be effectively explored, it is critical to first understand the assumptions that shape my perspectives as a researcher.

3.1 Assumption shaping researcher's perspective

In qualitative research, the researcher acts as the research instrument – an instrument that cannot be calibrated after each use, or programmed to measure one specific variable with no bias. As humans we enter each research situation with a unique lens that is a reflection of our own culture, experiences and beliefs, all of which influence our motivations and engagement in the research process. Being explicit about my perspectives and relationship to the research process allows readers to contextually position the findings.

My approach is influenced by my philosophy on food, nutrition and wellness, which follows that of a structuralist epistemology where eating, health and food choices are not solely the choice of the individual. These ‘choices’ are influenced by a plethora of factors including but not limited

to socio-economic status, cultural practices and personal beliefs. To me, the act of eating is holistic - one that nourishes mind, body and spirit. It is through my connection to food and nourishment that I find significance in this project. Improving nutrition goes beyond the biological means of improving a specific nutrient status to understanding all factors that contribute to one's food choices. Ensuring good nutrition is achieved is essential during the prenatal period. Further, I believe that for a program to be successful, we must understand the choices individuals make within the context of their lives, communities and situations.

My interest in First Nations health was initiated by a presentation by Dr. Ian Mosby and Mi'kmaq survivors of the Shubenacadie Residential School. Hearing the first-hand experiences of residential schools and how it has affected the mental and physical health of the survivors and the subsequent generations was extremely powerful. I was disturbed by the account of nutritional testing and abuse regarding food as described on page 18 and was left wondering how these experiences of cultural genocide influence food choices today. Working with the Centre for Rural Health Research in BC I was educated on the context of First Nations health in BC, furthering my understanding of, and frustration with, the health disparity between non-Indigenous and Indigenous populations.

3.2 Conducting Indigenous research as a non-Indigenous researcher

The role of non-Indigenous researchers working with Indigenous communities has been highly debated as a history of Eurocentric, misguided and exploitative research that benefits only the interests of the researchers plagues many Indigenous communities around the world, including

the First Nations in Canada. As Smith states in her influential book *Decolonizing Methodologies* “The word itself, ‘research’, is probably one of the dirtiest words in the indigenous world’s vocabulary” (pg.1).

As a white, Euro-Canadian woman, I am confronted with the challenge of bearing the shame of the unjust treatment of Indigenous people of Canada by my ancestors. My heritage requires me to be extremely cognizant and reflexive of my interaction with First Nation communities and organizations. It is my responsibility as a researcher to be educated on the historical and current context of each community, ensure the project is moving according to the community’s terms, and that individuals and the community are benefiting from this research. This notion is highlighted by Regan (2005) where due to the history of unethical and inappropriate research engrained in Western research epistemologies, non-Indigenous researchers need to take time to assess and understand our own assumptions and “consider inadvertent undermining of Indigenous peoples’ worldviews or ways of knowing”(65).

How do I ensure that I am following a decolonizing methodology and am not inadvertently suppressing or misinterpreting the beliefs and ideas of the Indigenous women who participate in this project? This notion has been a challenging and evolving aspect of this project particularly as a novice researcher. I relate to Alfred, an Indigenous Governance Scholar, as stated in Regan’s dissertation, “there needs to be struggle in order to lay out a path to co-existence, and the process of being uncomfortable is essential for non-Indigenous people to move from being enemy to adversary to ally”.(65) By promoting involvement of the community to create meaningful and relevant research questions, as well as understanding the context of the community, both

historical and current, I strive to follow an appropriate methodology rooted in cultural humility. To this end, my approach to this project is that I will be a learner, and the emphasis will be on the knowledge that the participants and community hold.

3.3 Influencing theory: Postcolonial feminism

3.3.1 Defining postcolonial feminism

Postcolonial theories are a compilation of theories that related to the social, political and moral concerns about the legacy of colonialism and how it continues to impact health and wellness.(66) A main concept of postcolonialism is the importance of analyzing current issues through the lens of colonial experiences and its impact on current context.(64) As McConaghy (1998) highlights, the ‘post’ in postcolonialism does not suggest that we have moved past colonialism, rather postcolonialism represents “a place of multiple identities, interconnected histories – a place in which new racisms and oppressions are being formed”.(64) In Canada, often the most referenced colonialist document that has shaped the health of individuals and communities is the 1876 Indian Act (described on page 16).(67) Postcolonial theory is described by Smith et al 2006 as a theory that seeks to “expose, describe, and change ideological and social structures that maintain inequities between Aboriginal and non-Aboriginal populations”.(11) Postcolonial feminism is a branch under the postcolonial theory umbrella that further describes the oppression of colonialisms and patriarchy faced by women. These influences are highlighted in Quayson’s definition of postcolonial feminism: “postcolonial feminist epistemology not only focuses on patriarchy as a source of oppression, but also examines how social inequities are located and constructed within a political, historical, cultural and economic context as the facts cannot be studied outside of these realities.” (68)

This framework is contextually appropriate for this project as the barriers and challenges that women face in accessing adequate prenatal nutrition are rooted in our colonial history. The loss of traditional practices around birth and nutrition, westernization of the diet and limited access to affordable nutritious foods all have negatively impacted the ability to attain proper nutrition during the critical prenatal period.(3)

3.3.2 Relevance of postcolonial feminism to nutrition research

The act of nourishment is more than simply achieving the appropriate amount of micro and macronutrients. Eating is deeply rooted in our cultural and personal attitudes towards food, cultural practices and experiences. Recognizing the historical, cultural and economic factors that influence First Nations women's food choices during pregnancy underscores the appropriateness of the postcolonial feminist theory in which this project is rooted. Colonial practices, such as the Residential School System and the Reserve System in Canada have fueled a loss of traditional knowledge and practices including food practices. This remains a common theme in the current literature regarding food security and nutritional health in First Nation communities in Canada.(3,69–71) Although the loss or decline in traditional knowledge is not easily measured or quantified, qualitative studies highlight the concerns of this loss from communities. For example, in Socha's study on food security in a Northern First Nation in Ontario, Elders discussed the notion that "white-mans" food is leading to the deterioration of nutritional and dental health. They expressed concerns that amounts consumed were increasing among younger generations and discussed the importance of traditional teachings and eating practices. This theme is underscored in Kuhnlein's review of dietary change of Indigenous peoples around the globe, undoubtedly a results of colonization.(72) Postcolonial feminism can be used to

emphasize the past and present factors that are a result of colonialist practices in all aspects of prenatal care, including recommendations regarding prenatal nutrition.

3.3.3 Postcolonial feminism influence of project

The theory of postcolonial feminism has shaped the development of the research methods and questions. Having a general understanding of colonialism and the impacts it has had on Indigenous people in Canada was required prior to conceptualizing this project. Understanding this history, along with numerous frameworks that have been developed, including TCPS2, Chapter 9 and the First Nations Information Governance Centre's Ownership, Control, Access and Possessions™ (OCAP)(73) aid in laying the framework for an appropriate research approach. Through this lens we see, for example, that it would have been inappropriate for myself, as a researcher without an established relationship with the community, to make quick visits to the community and quantifying the prenatal dietary intake of women living in Haisla Nation. Although I intend this project to continue beyond the scope of my thesis work, we are still an outside research team, entering communities for a short duration of time. This requires that utmost attention be paid to the voice, direction and wisdom of the community. This highlights the significance of honoring local knowledge, member-checking findings to insure no inappropriate assumptions are made during data analysis, and following data governance values as described by First Nations Health Authority.(74)

The breakdown of the family and society structure that women supported women in Indigenous communities was a result of colonial and patriarchal practices such as residential schools and the Indian Act.(75,76) This has led to marginalization and silencing of Indigenous women's voices. This is of particular concern in health care where women commonly report feelings of

racism, discrimination and prejudice leading to avoidance of health care(9,37,77), furthering the health disparity between non-Indigenous and Indigenous women. This tarnished relationship between Westernized health care and Indigenous women highlights the importance for giving voice, rather than silencing women's ideas, thoughts and opinions around prenatal nutrition programming. By inviting women to participate in open-ended interviews within their community, we hope to allow free expression of opinion rather than coming in with a structured questionnaire and rigid study framework.

By taking a postcolonial feministic approach to the issue of prenatal nutrition, we are able to see the value in qualitative methodology. Using a case study methodology with open-ended interviews and a thematic analysis approach data analysis, I intended to create community centric and meaningful directives for each community regarding prenatal nutrition.

Chapter 4: Study Context

4.1 Haisla Nation

Haisla Nation is a rural First Nation located in the North West Coastal region of British Columbia. The majority of the 1700 Haisla band resides at the head of the Douglas channel in Kitamaat Village, which is located 12 kilometers from the municipality of Kitimat (pop. 8,335). The Haisla, meaning the “dwellers downriver”, have occupied this land for more than 9000 years.(78) Kitamaat Village is relatively concentrated and occupies approximately 2 square kilometers. A public transportation bus runs between Kitamaat Village and Kitimat 4 times per day. The infrequent bus makes travelling between Kitimat and Kitamaat Village difficult without a personal vehicle. The nearest airport is the Northwest Regional Airport Terrace-Kitimat, located 65 km North of Kitamaat Village. Resources in the community include a community school for children kindergarten to grade 7, Haisla Health Centre, Ci'mo'ca Childcare Centre, and Haisla Fisheries and Harbour Authority.

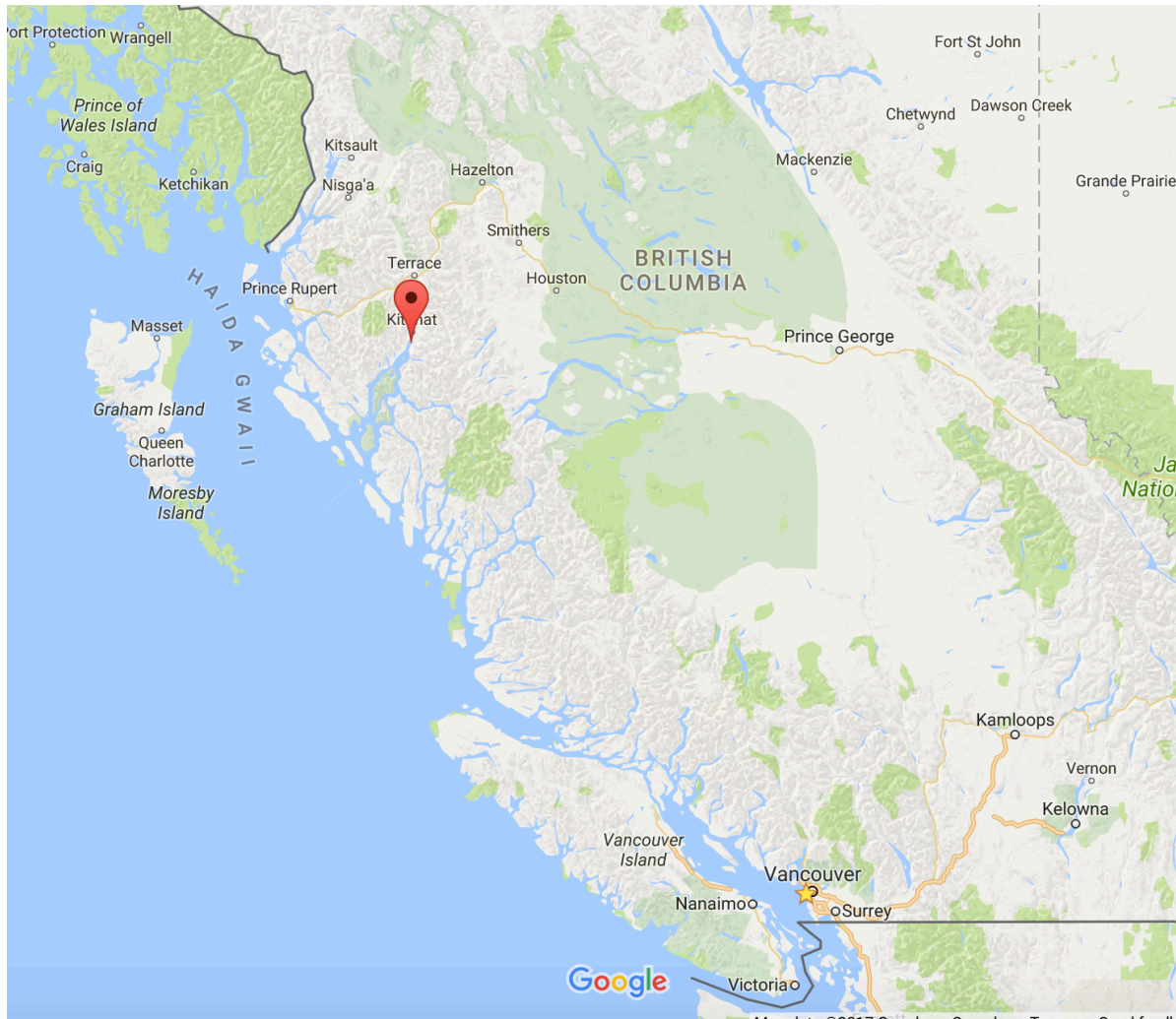


Figure 4.1 “Location of Kitimaat Village” Google Maps. Retrieved from: www.maps.google.ca

4.2 Health service structure

Within Kitimaat Village, health services are provided at the Community Health Centre where the Kitimaat Village Clinic runs out of as well as the Ci'mo'ca Childcare Centre. The community does not have a permanent family physician based within the community and for all hospital related health concern Kitimaat Village residents must travel to Kitimat or Terrace. Currently, there is one full-time community health nurse located in the village, and one Diabetes and Heart Health Care Nurse that visits the village twice a week. The Haisla Nation Council

supports a Patient Travel Clerk, Youth and Family coordinator, Youth Coaches, Elder Care Coordinators and Fitness and Recreation Coordinators.

Within a nutrition context, consistent programs and services that are provided within the community include The Good Food Box (GFB), access to the community health nurse, breakfast program within the schools, and various intermittent programs offered through the Ci'mo'ca Childcare Centre. Community members that have been diagnosed with any form of diabetes have access to the diabetes care nurse. The program that is tailored towards prenatal nutrition care and support for women in the community is the GFB program.

4.3 The Good Food Box (GFB)

The GFB is a program funded through Haisla Health that supports women throughout the antenatal period from conception until their child is one year of age. The program runs the second Monday of every month and includes either a prenatal or postnatal box. Prenatal boxes include seasonal produce and prenatal vitamins and postnatal boxes include seasonal produce, diapers and wipes, formula for formula fed infants and \$20 gift card as well as vitamin D drops for breast fed infants. Women are eligible for the program from the time of conception until their child is 1 year of age. The box is free of charge for women during this 21-month period and is delivered directly to their homes by community health care workers.

4.4 Food access

As with most First Nations in the province, traditional and market food contribute significantly to the diets of the Haisla. Given the coastal location, seafood plays a meaningful role in the diet and culture of the Haisla people, particularly oolichan, salmon and halibut. (78) The access to

market foods within the village is minimal as there is one grocery store within Kitamaat Village. This grocery store does not stock fresh fruits and vegetables and serves more as a convenience store than an actual grocery store. The nearest grocery store is located in Kitimat and is accessible only by vehicle. Another contributing factor to food access is the cost of food. According to the 2015 nutritious food basket costing measure, Northern region of the province face the highest prices of healthy food compared to the other regions in BC.(79)

Chapter 5: Methods and study design

The purpose of this chapter is to describe the qualitative study protocol, as well explain the justification behind and ethical decisions that guided those methodological choices. The first section is a description of the progression of engagement that occurred between the research team, FNHA and communities that were invited and involved in this project. The second section explains the study design, sampling as well as describes how data was collected and analyzed. The last section in this chapter discusses the methodological rigor of this study.

This research study was approved by the Supervisory Committee and UBC BREB (Certificate: H16-00037). An oral and written consent form was developed in English and both were approved by the BREB (Appendix D, E). BREB also approved the option to received oral consent in lieu of written consent. Prior to applying to ethics, approval for this project was granted by the Haisla Nation Health Manager.

5.1 Engagement process

Kowalsky et al builds off of Johnson (1984) and Hutchinsons (1985) theory that working with Indigenous populations passes through four theoretical stages: stopping, waiting, transition and entry (80–82). Figure 5.1 represents the “process of engagement” that occurred during all phases of this project. Behind the circle each stage as described by Kowalsky is shown. Stopping and waiting (red) are closely related and reflect meetings and teleconferences that occurred between FNHA and the research team regarding research question development, how the engagement with communities would transpire and ethical concerns. The transition stage (orange) represents a phase marked by an increasing level of trust from community health services based on the

growing relationship and marked by the research team being provided an official letter of support (Appendix A), and the enthusiasm of health care providers in assisting with the project. Entry phase (green) reflects the period when I, as the researcher, felt accepted into the community, marked by things such as being invited into participants homes, and having participants share meaningful and personal experiences of accessing or providing prenatal nutrition care.

The engagement path is in a circle to represent the non-linear progression of the research process and the continuous reflection and relationship between stages.

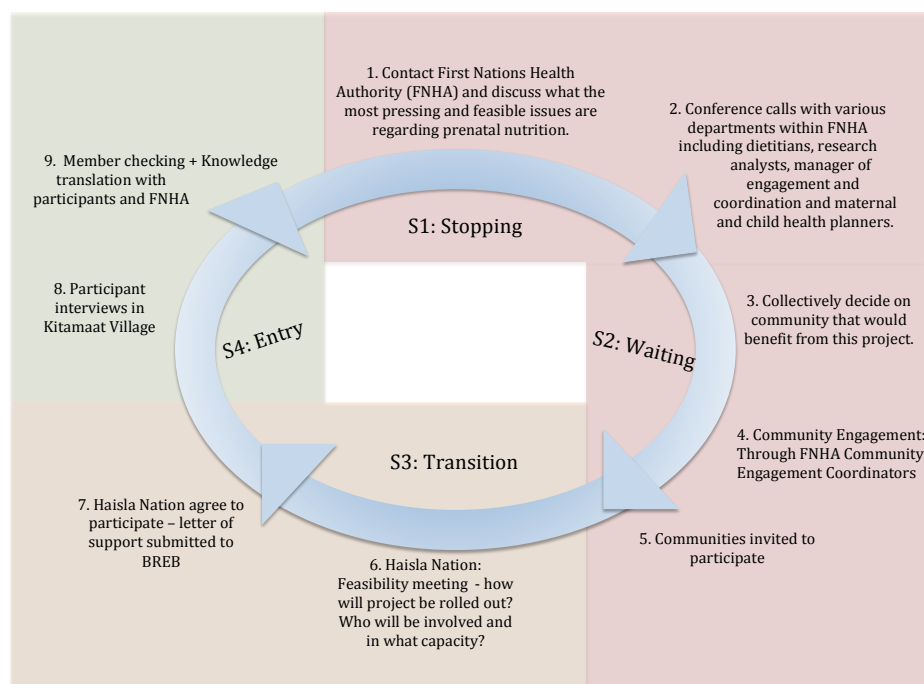


Figure 5.1. Process of project engagement with the four stages of working with Indigenous communities adapted from Kowalsky (1996).

Prior to being accepted into the Master's in Science in Human Nutrition program at the

University of British Columbia, I worked in partnership with FNHA to lay the framework of this project. Prior to acceptance, teleconference meetings were held between dietitians, research analysts, managers of engagement and coordination, and policy planners to develop a meaningful and specific research question that aligned with the goals and strategic plans of the health authority, this is in accordance with Tricouncil Policy Statement 2 (TCPS2) Chapter 9, article 9.4.(83)

Once a research question had been determined, discussions progressed regarding the communities that would be invited to participate. Determining factors that guided these conversations included which communities were perceived to have adequate resources and ability to take on extra work that is associated with a research project, trying to fulfill the desired community profiles of Northern, close to referral and water-bound, and remaining aware of travel costs associated with doing field work in these communities. Once a 'short list' of communities were chosen, an engagement plan was created for each potential community. These plans were unique to each community, but often included the introduction of myself to the Community Engagement Coordinator (CEC). In communities where there was no CEC, the introduction was most often to the Community Health Nurse or Health Director. Then, a formal letter of invitation along with an information sheet about the project and the research team was sent to the community contact. Examples of these letters can be found in Appendix B. Once the community of Haisla Nation had agreed to participate, feasibility meetings occurred via teleconference between community health planners, community health nurse, CEC and myself. In these meetings logistics of how the project would be rolled out was discussed including where data would be stored following OCAP® principles, recruitment, knowledge translation plans and

timelines. In accordance with TCPS 2 Chapter 9 – a formal letter from the Health Director of Haisla Health was required prior to moving forward with project logistics.(83) Discussions on how this project would benefit the participants and the community as a whole were determined prior to any data collection occurred.

Throughout the research process there was continual communication between the Haisla Health team and the research team checking to ensure that the project was aligning with the interests of the community and the women involved. The birthing women involved with the project were offered during each meeting the opportunity to ask questions pertaining to the project or findings, were provided with my contact information and offered numerous different forms of communication methods throughout the project (email, phone, in-person).

5.2 Research design: Qualitative case study

Research design is how researchers get from the initial questions and understanding gained - or the 'here' to the 'there'.(84) A case study design is used to understand phenomena of individuals, groups and organizations. A case-study design was used to gain an understanding of prenatal nutrition care within the case of Kitamaat Village. According to Yin, case study design is appropriate to answer “how” and “why” questions, when you cannot manipulate the behaviour of participants and when you want to understand contextual conditions of the phenomena of study. (84). This study aimed to understand the experiences of how prenatal nutrition care and programs were perceived by the birthing population and care providers as well as why it was perceived that way – or in other words, what are the experiences of the participants and why. The case study approach facilitates exploring phenomena in the context in which they occur, a critical factor to consider working with First Nations communities as the contributing factors to health

and nutrition are multifaceted.

5.3 Community selection

Collaboration between the Research, Knowledge Exchange, and Evaluation team at FNHA and the researcher led to a list of potential communities to invite to participate in the study. This list was presented to various departments within FNHA to receive feedback on the appropriateness and feasibility of including the communities. We intended to recruit communities across the province to ensure variation within our sample on the factors below. Community characteristics that we attempted to include were:

1. **Water bound community** to understand the challenges that weather and lack of road access to a referral centre can have on both women accessing prenatal nutrition care and providers of care.
2. **Northern community** to represent populations that experience inflated food prices, and limited access, resulting in a higher risk of food insecurity.
3. Community **within 2 hours of a referral center** to understand the impacts that an adjacent community with a higher level of care may have on services available.

Six communities were contacted through individualized engagement plans created with FNHA, and one community (Haisla Nation), agreed to participate. Although I was unable to fulfill the three intended community characteristics, I was able to recruit Haisla Nation, which fulfilled the Northern community profile.

Recruitment of other communities was unsuccessful for various reasons. First, some of the communities that were contacted were recently involved with other research projects a. Individuals who were contacted about participating expressed concerns of the community experiencing research fatigue. One of the communities contacted was unresponsive, and the others suggested that they did not have the time or resources to support the project. The inability to recruit three communities limits the ability to understand how different community demographics may impact available programs.

Although one of the goals was to understand how various geographical locations impacted the experience of accessing and providing prenatal nutrition programs, only including one community had benefits. First, the overall research costs were significantly reduced. Because this was not part of a larger pre-funded project, and no major grants were received, funding multiple trips to remote communities may have been unattainable. Secondly because only one community was included, I was able to stay in the community for longer than originally planned and thereby create a stronger relationship with individuals involved with the project. Further, working with one community allowed me to be more expansive in my understanding of the community and include more participants who would have been included in a collective case study design.

5.4 Participant selection

Purposive sampling methods were used to recruit two homogenous groups of participants. Patton definition of homogenous sampling “strategy of picking a small homogenous sample, the purpose of which is to describe some particular subgroup in-depth” (pg. 283).(85) The two homogenous groups recruited for this project were the birthing populations in Kitaamat Village,

and the providers who involved with the planning or delivery of prenatal nutrition programs or care within the community. Patton argues, purposive sampling is not convenience sampling. These groups were purposefully selected to represent both the health care providers perspectives and end users of prenatal nutrition programs within the community to gain a holistic understanding of the phenomena.

5.4.1 Recruitment – Care providers

Four providers were successfully recruited to participate in this study and represented various aspects and levels of prenatal nutrition care within Haisla Health. These individuals were involved with the delivery prenatal nutrition programs, or one on one counseling as well as one local health administrator who over sees the Haisla Health programs. Given the small size of the community, and the notion that rural health care providers are required to ‘wear many hats’, some of the providers that were involved in the original planning and organization of this project, were also the individuals that were interviewed. Although the providers were involved with the planning stages, they were not involved with the development of the open-ended interview guide, minimizing the ability to introduce bias. To ensure that any concerns or areas of inquiry were explored in the interviews, we asked the providers if there were any questions that we should include to provide them with meaningful data. Identifying which providers to initially contact regarding the participation of Haisla Health in this project was determined through established relationships between FNHA and the research team. After the initial providers were identified with the help of FNHA, snowball-sampling methods were used to identify any other individuals involved with providing prenatal nutrition care. After each interview, participants were asked if there was anyone involved with the direct provision or policy level oversight that

would be important to interview to gain the best understanding of prenatal nutrition care. Three out of the four provider interviews were completed over telephone due to scheduling challenges during the time spent within the community.

We recruited providers to participate in this study to understand the challenges and perspectives of working in a rural, low-resource setting. Understanding these challenges provided the opportunity to make tangible and realistic recommendations regarding future prenatal nutrition programming.

All providers involved with prenatal nutrition programming, planning and care were interviewed except for one individual, therefore the traditional method of recruiting until saturation was reached was not necessary.

5.4.2 Recruitment – Birthing population

Given that the researcher did not have established relationships with the birthing population of Kitamaat Village, health care providers and program directors were heavily involved with the recruitment of pregnant, or recently pregnant women. Recruitment posters were created by the research team and approved by the Haisla Health care team and distributed within the community (see Appendix C). Although posters were provided, Health care providers recruited women mainly through word of mouth and established connections at programs running out of Ci'mo'ca Child Care Centre and Haisla Health Centre. These providers briefly explained the project and provided contact information to the research team if the women had any further questions. Interviews were scheduled by providers and women were given the option of

completing the interview at Ci'mo'ca, or a location that was most convenient to them. All but one of the interviews were completed face-to-face in a private room at Ci'mo'ca or within the participants' home. One interview was completed over the telephone due to scheduling conflicts. The care provider who booked the interview provided women with an oral description of the project. The project was orally explained in more detail by the main researcher prior to the interview commencing. The University of British Columbia Behaviour Research Ethics Board (BREB) protocols were followed and women were provided opportunity to have the informed consent form read to them and provide oral consent, or given a written consent form in which they read and signed (Appendix D). Given the history of unethical engagement regarding consent that has tarnished relationships between First Nations and non-First Nations researchers, we felt that providing the opportunity for oral consent was necessary and respectful.

Although providers were in charge of the recruitment for this project, it was apparent that data saturation has occurred after the first 10 interviews as no novel ideas or experiences relating to prenatal nutrition care were brought up in the interview.

5.4.3 Inclusion/exclusion criteria

Care providers and planners

To participate in this project, care providers were required to have over 1 year of experience providing nutritional care within the community. This involvement could be at the patient/providers level where they were involved with providing a program or one-on-one nutrition counseling during pregnancy, or at a program/policy planning level. Participants were included regardless of gender or professional position, as nutrition care is provided by a variety of health professionals and planners.

Birthing Population

Self-identified First Nations women, over the age of 18 who have given birth within the past three years were recruited to participate in this project. We included both women who have accessed prenatal nutrition care as well as women in the community who are interested in discussing why they have not accessed the prenatal nutrition programs.

5.5 Data collection: Open-ended interview

During the development of this research project, I took great care in ensuring that the method as well as methodology was ethical sound, respectful and aligned with all stakeholders involved (research team, community and FNHA) and the Canadian Institute for Health Research Tri-council Policy Statement, Chapter 9 – research involving First Nations, Inuit and Métis Peoples of Canada. Given that I did not have an established relationship with the community, I relied heavily on the guidance of FNHA when contacting Haisla Nation. After numerous teleconference meetings with various providers and program coordinators within Haisla Health I summarized what these providers expressed as important to consider when developing the research question and questionnaire. When designing my questionnaire I took a multifaceted triangulated approach to developing questions and the format that would be used. An open-ended interview guide with 5-6 main questions with 1-4 probes for various reasons was followed for both providers and the birthing population (Appendix F). Although less structured, open-ended interviewing aligns closely with oral story telling traditions of First Nation culture and was seen as the most ethically appropriate form of data collection. This technique allowed participants to tell their stories and experiences around prenatal nutrition during pregnancy without having to

follow a rigid interview guide, thus encouraging narratives that the participants themselves felt were most important regarding prenatal nutritional programs and care. I purposefully did most of the interviews with the First Nation women in a face-to-face setting where they were able to choose the location that was most comfortable and convenient for them. One interview was completed over the telephone, but I was able to meet the participant face to face when delivering honorarium. The interviews were held in a private room where their children were able to play and interact freely during the interview. Coffee and healthy snacks were provided to both the women and their children who participated to help foster a comfortable and open environment.

5.6 Data analysis – Thematic analysis

Thematic analysis (TA) is a relatively straightforward but rigorous form of qualitative data analysis. TA was chosen as it is not theoretically bound to specific theoretical framework and therefore can appropriately be paired with post-colonial feminism. Further, the over-arching goal of this project is to understand the experiences of women and care providers to translate these experiences into planning and policy. Having a method of analysis that is not heavily embedded with theory and requirement of technical knowledge allows for a smoother knowledge translation process. (86) Therefore results generated are easier to share and convey to the public and key-stakeholders, which was a key component of the planning of this project.

Each interview transcript was transcribed verbatim and imported into NVivo 10 software for data analysis. As a solo researcher on this project, I chose to complete the transcriptions myself rather than sourcing a transcriptionist. This reinforced my understanding of the phenomenon by conducting all of the primary interviews and transcribing the narratives to capture additional

insights that may have been missed in the interview. This significantly improved my familiarity with the data.

The six steps of TA as described by Braun and Clarke were followed as a framework to data analysis.⁽⁸⁶⁾ Although immersion in the data was already occurring through the transcription and collection phase, transcripts were read and re-read and initial thoughts and ideas were noted to represent the first phase of formal analysis (Phase 1). My previous experience with qualitative coding using thematic analysis for over 50 in-depth interviews from a earlier project aided in the coding process and validity of the coding. One provider and two birthing women's interviews were coded using inductive coding to develop the initial codebook. These interviews were sent to a co-supervisor with experience in qualitative research to ensure that the codes generated were accurately reflecting the corresponding excerpts. By randomly selecting coded sections and ensuring that the supervisor felt that these codes were appropriate, the main researcher was able to ensure that coding was logical and thorough. Then, the entire data set was coded, adding codes that may not have appeared in the initial three interviews. 57 codes were produced from all interview transcripts and each code was defined within NVivo for reference during coding (Phase 2).

After all interview transcripts were coded, potential themes were explored by comparing and contrasting how codes could be organized or combined. Mind maps were used within NVivo software to aid in the organization and exploration of these themes. A theme would be placed in the centre of the maps with sub-themes and the subsequent codes to follow (Figure 4.1). (Phase 3)

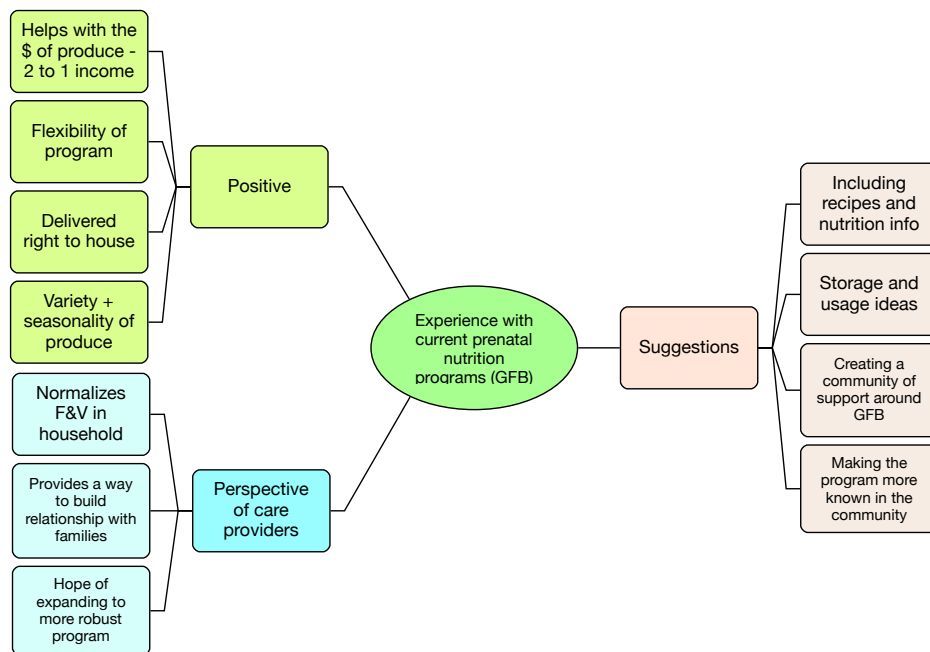


Figure 5.2 Thematic development using mind maps with NVivo 10

Potential themes were then refined, and all coded excerpts that corresponded with that theme were organized and read. For the example above, at this stage all of the coded text that corresponded with the 11 themes was read to ensure that the data cohered in a meaningful and logical way regarding the experience with the Good Food Box. Then the entire data set was read again to ensure that no codes were missing in the potential themes and that these themes hold validity in the context of the entire data set. At this stage, there was a clear impression of what the final themes would be, how they fit together and how they represent the overall data set. These potential themes were shared and discussed with a co-supervisor (Phase 4).

At this stage, identified themes were named, defined and solidified (Phase 5). Finally, the final stage of TA was the production of the report. These reports include this thesis and any following

academic publication, presentation to the participants (member-checking) and a presentation to First Nations Health Authority. Each means of communicating the created themes is tailored to the corresponding audience (Phase 6).

5.7 Methodological rigor – credibility, transferability, dependability and confirmability

Qualitative research goals are not to generalize a theory or concept to an entire population, but rather to explore the how and why questions of a particular phenomenon. Qualitative research is governed more by ‘should do’s’ and less by the systematic protocols that we see in quantitative research. This creates a greater challenge in ensuring rigor and trustworthiness of the qualitative research results. Further, qualitative researchers themselves act as the researcher instrument, an instrument that comes with preconceptions, assumptions and biases and cannot be calibrated after each use, or subjected to statistical analysis. I used the four terms described by Lincoln and Guba (1985) to help guide and inform the methodological rigor and trustworthiness of the data – credibility, transferability, dependability and confirmability.(87)

Credibility

Lincoln and Guba translate internal validity from conventional, positivist inquiry into credibility in the realm of naturalistic inquiry (87). Credibility represents having ‘truth’ in your data. That is your analysis accurately represents the story behind your data. In this study, a trip to Kitamaat Village after initial data analysis was dedicated to member-checking and knowledge translation. This trip was not only significant to ensure credibility in findings and enhance methodological rigor, but was also necessary to ensure ethical engagement with participants. Member checking was performed in separate groups for providers and the birthing population. Although there are

multiple ways to perform member checks, I chose to provide the participants with the main themes from the data rather than providing them with their transcript for review. I transcribed the interviews verbatim and did not correct grammar, false starts or 'um' as suggested by Polan staying true to the authenticity of the participant's voice.(88) As highlighted by Carlson, when a participant is given their written transcript that is often laden with grammatical errors, they may feel embarrassed or negatives feelings towards participating in the study. (89) Further it was inappropriate to assume that the level of reading skills for all participants was suitable to review and understand their transcript. A presentation was provided to the providers in a more formal setting where I delivered a 15-minute presentation that included history about myself, why I was interested in this topic, the evolution of the project and the main findings that resulted from the data. Following the presentation of the findings I held an open table conversation where I asked participants if they felt that their experiences were captured within the main themes and if there felt that all significant nuances of providing nutrition care within Haisla Health were accurately captured. I then provided an overview of how the data will be used and a discussion on how the data from this project can be effectively used to shape future prenatal nutrition programs.

For the birthing women who participated, the member checking activity was coupled with a nutrition education event where women and their children were invited to come learn how to cook a healthy meal as well as listen a presentation on the mains themes of the data. For this event, I cooked a healthy lunch that included market and traditional foods (salmon and wild rice salad). After explaining how the meal was made and providing women with a recipe and nutrition fact sheet, we shared the meal together and I presented the main themes from the study. I intended to create a more casual and open environment as compared to the more formal and structured conversation with the providers. Women were also provided an opportunity to speak

one on one to discuss the findings. Interestingly, no participants raised any concerns about the main themes, which was of concern as it may have meant that women did not feel comfortable adding to what I had presented.

Credibility was also built through familiarity with participant culture and face-to-face exposure and time spent within the community(90). Although the two trips made to the community were not considered ‘prolonged exposure’, the notion of physically being present, conducting interviews face-to-face and interacting with participants and their children in a non-research setting at Ci’mo’ca contributed to credibility of the research process.

Data triangulation refers to using different sources, methods or informants to of sources can also increase the credibility of findings.(91) In this study, the inclusion of both participants and providers perspectives was used as a way to triangulate the data and understand the phenomena of prenatal nutrition care from both perspectives.

Transferability

External validity within a positivist paradigm is the extent in which findings can be applied to the greater population, or other situations. In qualitative research, and particularly when working with First Nations communities, the contextual setting is extremely important as each community has unique cultures, practices and challenges. Lincoln and Guba argue by providing a thick description of the community context and culture, readers are able to assess the transferability of findings to other context, increasing the rigor of the data.(87) Since an extensive time was not spent in the community and a previous relationship did not exist between the community and the main researcher, the transferability of these findings can be determined by First Nations Health Authority. Given that FNHA governs the health services of each First Nations community, and

has a thorough understanding of the context of each community, they will be able to appropriate access how the findings from this project may or may not be transferable to other communities.

Dependability

This reflects the positivist notion of reliability, which in qualitative research, refers to the data analysis and resulting findings being consistent and repeatable. In this study it was achieved by documenting and auditing decisions regarding code and theme development, describing methods used and transparency regarding the process of analysis made throughout the research process. This was facilitated by taking notes during interviews, providing detailed information about how data analysis was performed, and keeping record of decisions made (i.e. how communities were selected).

Confirmability

Confirmability corresponds to the notion of objectivity in positivist research and is achieved by being reflexive about myself personally as a researcher as well as the decisions and methodology used. (92) A reflexive analysis of the methodology and overall impact that my perspectives as a research may have on the data was done throughout the research process through keeping a field journal where I documented personal reflections after each interview and day spent in the field. This was also accomplished by continually checking in with supervisory committee members to gain feedback about my own perspective that I might not have otherwise been able to see.

Chapter 6: Results

Four main themes were developed by combining the two perspectives of providers and the birthing population from the 17 interviews completed for this study. These themes were: the impact of current nutrition programs; the reality of nutrition care within the primary care setting; the potential role for nutrition specialists and the significance of traditional food practices. Each theme will be described independently in this thesis, but it should be noted that in reality these themes are interwoven and connected.

6.1 Theme 1: Impact of current prenatal nutrition programs

The main prenatal nutrition program that is run through Haisla Health is the Good Food Box (GFB). The GFB is available to all women within the community from conception, to the time that their child is one year of age. This program was discussed in all of the 17 interviews with both women and providers and two sub-themes emerged; positive components about the program of both women and providers, and possible suggestions to improve the GFB.

6.1.1 Women's perspectives of Good Food Box

The birthing population within Kitamaat Village spoke overwhelmingly positively about the GFB. When compared to the rest of the province, Northern British Columbia experiences the highest cost of healthy food(79). Women felt that this program helped offset the price of produce and made it more available to them and their family during and after pregnancy. This was important as three women noted that becoming pregnant resulted in them switching from a two, to a one income household, reducing the amount of income that could be spent on groceries. Women who were single parents also mentioned the financial benefit of participating in the

GFB. They found that the GFB helped offset this loss of income by providing free produce once a month.

Oh yea! Of course, there is so much of it [produce]. It is actually a blessing even more so because going from a two-income family, to one is very difficult. Very difficult. And being that I am diabetic, we have to! It is a necessity for me. So I need to get as much as we can afford. And sometimes with this little guy, it is, uh, he is growing so much and he eats a lot. (#107)

Further, the only store within Kitamaat Village does not stock produce and serves more as a convenience store stocking only basic or unhealthy food items – i.e. milk, fried foods, chips and pop. Therefore women have to travel Kitimat (~20 minutes drive) to get their produce. This is a challenge, as many of the women interviewed did not have access to a vehicle or transportation into the grocery store and would rely on family members or partners to drive them into Kitimat for groceries. The Good Food Box program allows fresh produce to be delivered to their door, without having the challenge of transportation into Kitimat.

Birthing women valued the flexibility and accessibility of the program. One mother who was required to leave the community to live near a tertiary care centre, described how the program was still provided to her, even though she was not actually living within Kitamaat Village. This provided a connection to the community, as well assisted financially as she did not have to purchase as much food during her stay. Another mother valued how the program coordinators were able to switch out the provided disposable diapers for cloth, highlighting the flexibility of

the program. Many women mentioned the benefit of having the GFB delivered right to their door, and felt that if it wasn't delivered, they may not have access to the program due to lack of transportation to pick up the boxes every month.

Yea that was nice [referring to boxes being delivered]. That was really helpful, especially when I got too big to move around easily (#112)

I had to move to Vancouver. But it [Good Food Box] still continued in [referral centre]! The ladies from [local hospital] corresponded with what I was receiving here, so they continued, found people within where I had to live and got a hold of their facility. (#107)

The adaptability of this program fostered feelings of support and connection in and out of their community.

Women discussed how the produce that came in the boxes was produce that they were familiar with, and had the necessary knowledge and cooking skills to prepare meals with. They spoke of how the GFB program benefitted their whole family beyond the nutritional value of the produce and it promoted the family to get involved with the preparation of family meals.

It was great, the kids loved when it was good food box day, especially my now 4 year old because she got to answer the door and help bring the food in and put it away and it was great to because they also helped with a package of wipes and a package of diapers each time. (#103)

6.1.2 Care provider's perspectives of GFB

Before discussing the main subthemes that resulted from the interview with providers, I would like to highlight their often-unacknowledged efforts in providing programs to women in the community. A significant amount of work is put into the planning and distribution of the Good Food Box all of which is done by Haisla Health staff and health care providers including the Community Health Nurse, Community Engagement Coordinator and Ci'mo'ca Childcare Centre staff. This program would not exist without the continuous efforts from the providers within this community. Each month providers plan, pick up, and delivery the GFB's to the women within the community. They are the backbone to this successful program and without them, it would not exist. Although this program is a significant amount of work for those involved, providers clearly saw value in the program – which was also reflected by the birthing women in all of the interviews conducted for this project.

The two main subthemes that emerged from the providers' discussions of current prenatal nutrition programs: the relationship that was built with the women during good food box delivery and normalizing fruits and vegetables within the homes.

As previously described, the providers drop off the GFB at the homes of the mothers each month. Providers spoke positively of this monthly interaction as a way to 'check-in' to see how things are going with the women and the families. This was particularly important postnatally to see how the family is adjusting to having the new child. Because the providers who drop off the produce are involved with the planning and delivery of health care within the community, as well as have an understanding of the context in which each woman is in, they can assess and suggest

potential programs or supports if they feel necessary. Although the time spent dropping off the box is short, it can often provide a snapshot of how things are going in the home. This is one of the reasons that the providers feel that it is important to continue to drop off the GFB.

And we think the good food box, it is getting in there, it is pre and post at least we have that contact right? You kind of get in the door a little bit to see how things are, you can have that conversation, you know you are outside and they are inside but at least you are having that conversation. (#203)

Another significant benefit of the GFB as perceived by the providers is that it helps normalize produce within the home. By providing produce that women may not have purchased otherwise, women are able to broaden their produce knowledge and exposure.

I think it has helped with normalizing vegetables and bringing awareness to vegetables and how to cook them. (#201)

Although when creating the boxes, the goal is to keep them simple and functional, there is still an element where women may be exposed to a new, healthy food item. There is hopes that if women are exposed to new produce during the 21 months that they are able to access the box, they will be more likely to continue to purchase that product after they are off the program.

6.1.3 Suggestions for improving GFB

Although there were few suggestions, one of the most common from the women accessing the program was to include different tips and tricks for preparing and storing produce as well as nutrition information about what was included (i.e. why is this vegetable important to eat during pregnancy, what benefits does it provide).

But there were times that I would get stuff kinda be like what I am going to do with this. How am I going to incorporate this into my meals this week? Can I freeze this? ... why is it good for you, what is it good for, what are the benefits for you baby. When my child ate at 6 months, what can I do with this box for my kid. (#106)

Other comments from women stated that they wish they would had known about the program earlier in their pregnancy. Although providers include information in the monthly newsletter, around the health centre and by contacting women through Facebook, it was apparent that some women were not aware of the program until later in their pregnancy or even after their child was born.

I wasn't aware of that until after I had my baby, and they saw me post the pictures on Facebook because they didn't know that I was pregnant. No one in my family really told me anything about that. (#102)

No just actually after she was born (referring to her last child). I didn't know that it was available to me. And then she was about two months old and [a relative] works here

[ci'mo'ca] said hey I put you on the list for it, I figured you probably should be on the list. But ah, yea it was great! (#103)

6.2 Prenatal nutrition care in primary care setting

6.2.1 Lack of advice and resources provided

Women often mentioned that there was little to no nutrition advice that was provided during prenatal visits with their family physician. For many women, physicians were the only health care provider they saw during their pregnancy. Women shared feelings of being rushed during their primary care visits and overwhelmed with the amount of information provided in a short period of time. They expressed that would have liked to have more time with their care provider to ask questions and be provided more information regarding nutrition and eating during pregnancy.

I mean it would have been nice to have more information. My doctor kind of got me mistaken for my sister, so a lot of the time they [physician] just assumed it was my second pregnancy because they [physician] thought I was my sister. So I don't know maybe they would have given me more information had she of realized who I was? (#102)

In terms of actual prenatal information from my doctor, I basically went and got checked up on, checked the baby's heart beat, yep it is good, and if I seemed in good health I was just sent on my way. (#105)

These quotes capture the very essence of the lack of resources available and provided to women living in Kitamaat Village. This reaches beyond the scope of nutrition and highlights the

challenges that birthing women living in low resource settings face. Feeling unsupported by the health care system underlined many of the interviews in various ways. From provider/patient interaction, to health planners addressing issues of funding and available resources, this theme underscored and highlighted the larger issues of the disparity of care provided between rural and urban communities. Interestingly the three women that left their community to give birth described positive experiences with the health care staff in the larger hospitals.

So when I first got pregnant my doctors office there are two rotating physicians so um, I asked to be referred to Terrace that way as my first pregnancy I would only have the one doctor so that's why I was referred to Terrace, and my doctor there was fantastic. (#108)

I had to go to [referral centre], the nurse were all on vacation...It was pretty nerve racking, I was kind of disappointed because I wanted my doctor there but in the end I really enjoyed my experience in Terrace and I feel that if I ever do get pregnant again, I am kind of hoping that I am in Terrace because they transferred us back here after the birth, because that is what we asked for and I just really did not like the nurses here. (#103)

6.2.2 Birthing women's experiences of seeking nutrition information during pregnancy

The participants in the study expressed difficulties in seeking out nutrition advice during and after their pregnancies. Although many family physicians working in rural areas are challenged with having to provide a broad scope of practice, this theme highlights the importance of having

prenatal nutrition resources available for women within the clinics, health centre and childcare centre.

I couldn't find one [referring to Canada's Food Guide]! I had one before and I couldn't find it again. I actually keep a lot of health information in my home and when I need to go look at something I can go look it up. And I had one, but I couldn't find it again. (#104).

I wish was given information about any sort of place that I can go to talk to people about what could maybe help with the nausea that I had. Stuff that would be a little bit easier on my stomach when I was pregnant, and also what I should and shouldn't have been eating while I was breastfeeding. Because a couple of times he would have a bit of an upset tummy because of stuff that I had eaten. But there was either nobody or I just didn't know about anyone to go to. (#108)

Some women who were interested in talking to a nutrition professional regarding dietary concerns were told by their physicians that they could be referred to the dietitian in Kitimat but currently this position is unfilled and the closest dietitian is in Terrace – a 40 minute drive.

Conflicting advice from various medical and non-medical care providers regarding what women should eat during pregnancy left women feeling confused. The most common food that this was referred to was fish consumption. Fish plays a large role in many coastal First Nation communities and this is true for the Haisla people. Some women stated that they avoided or

decreased their fish intake due to concerns regarding mercury or contamination as instructed by a health care provider, or in one case a family friend. The suggested fish intake is an important measure to be understood by providers and patients, particularly in this population where it serves as food that holds significant nutritional value that can benefit both mother and fetus during pregnancy, but also holds cultural significance.

No [physician] didn't [give dietary recommendations,] but [he] was away during one of check ups and his replacement told me that the only fish I would be able to have was tuna or canned salmon and I was like well I have canned salmon, can't stand tuna. They ran through it pretty quick and they didn't write it down and it was a list of fish and seafood to stay away from and I couldn't remember so I just stayed away from all seafood except for canned salmon. (#101)

It would have been insightful to interview the family physicians to understand their perspectives on providing nutritional care as many of the women felt like nutrition information should have been coming from their family physician. Physicians within Kitimat were sent an invitation to participate in the study, but unfortunately none responded to this request.

6.2.3 Provider opinion

Providers expressed concerns that women in the community are not receiving enough information or care regarding nutrition within the primary care setting. Given the context that the dietitians that the community used to have access to through Northern Health are no longer available, providers expressed that they are unsure of where mothers are getting their information

and highlighted that there is no current referral program or system for women with nutrition-related concerns.

I would hope so [referring to whether family physicians should be providing nutrition care] I know that, well even with my prenatal visits there wasn't a lot of nutrition chatting. It was... okay, are you taking your prenatal vitamins, yes or no. And kind of there wasn't a lot of questions asked of me. (#203)

I understand that they are super busy and they have a lot on their plate and they have a lot of responsibility. But is there some kind of thing that they could just – maybe they already see red flags with this patient, so is there some kind of program or process where they could you know refer them to something or is there some little screening that they could do that could be like yep for sure this person is at a nutritional risk... (#200)

Participant #200 highlights understanding that although rural physicians are busy, there should be a referral process or way to obtain credible nutrition information for those that are presenting with nutrition-related concerns or conditions during pregnancy to help better support women during this critical time.

6.3 Theme 3: Role for registered dietitian within Haisla Health

As noted above, First Nations women experience higher rates of nutrition-related obesity, gestational diabetes and T2D. These conditions can negatively impact birth outcomes and have lasting effects on both the mother and the infant later in life. This alone presents a strong

argument for providing access to dietitians to Indigenous communities. As previously mentioned, within the last two years Kitamaat Village lost access to a rotating dietitian who was hired through Northern Health. Further, within the last 6 months, the closest dietitian working within the Kitimat General Hospital was also lost. Therefore, for women to access a dietitian, they would have to travel to Terrace, which for many is either unfeasible or poses significant barriers that may outweigh the desire to access such care.

Women's feelings of being overwhelmed and seeking more information from theme two and three gave support to the need to have access to dietitian care. Many of the codes that were developed to form theme 2, also contributed and were related to theme 3. Numerous women mentioned that they wanted to talk to someone about nutrition but did not know where to go or who to contact. Those who had accessed dietitian services spoke positively about the experience and felt that women 'now a days' are more receptive to nutrition information from outside sources. When asked if they would have liked to utilize, or would utilize services of a dietitian in the future pregnancies, a majority of the women said yes.

The program that I did go to, there was a dietitian, she had her as a guest speaker and she showed us a couple of videos and I found that really helpful,.. It was nice to be in the group setting and so if someone had a question, you would be like oh yea that is a good question! So it was great to have that feedback. (#103)

I think it would be! [referring to whether or not seeing a dietitian would be helpful] But I don't know if I am like an odd one out that I find stuff like that really interesting (#106)

I am not sure if there is anyone to talk to about it [nutrition during pregnancy], but I think that it would be good. (#110)

6.3.1 Health provider's opinion on registered dietitian care

The care providers and health planner who participated in this study discussed how although it was beneficial to have access to the rotating Northern Health dietitian, the resource was spread too thin, and they were expected to service too many communities. This resulted in a small amount of time being spent in each community. Those involved with health service planning expressed that it would have been helpful to have the rotating dietitian around more often and for longer periods of time to build a relationship with the community and be able to make actionable change with not only the pregnant population, but also council others in the community that may be trying to manage nutrition-related conditions such as obesity or type 2 diabetes mellitus, both of which are experienced at a significantly higher rate in rural First Nations communities when compared to the general Canadian population.

Well the dietitian from the northern health is kind of not up to my satisfaction or expectation...But because her responsibility was so huge, I mean she covered the whole of the North West. And when I say the whole of the NW, it is bigger than some countries okay...and not that she did anything wrong but Northern health spread the resource so thinly that the person could not be effective. She wasn't coming here as often as we would have loved to have her in the community... would love to have the dietitian service back, but they could not give us enough of that person. (#204)

So it would be great to have someone there full time or at least on a regular basis, one day a week did not suffice. And with such limited hours because the travel was incorporated. No, it definitely would help to have someone because they run a lot of great programs around nutrition, like at Ci'mo'ca and at the school, the breakfast and the lunch club. (#201)

Many care provider participants expressed frustrations that women in their community have significantly less access to health services than women living in an urban setting. Haisla Health providers felt that telehealth could serve as an effective solution to the poor retention and high turnover rate of dietitians in the area.

Well I think telehealth would be good for nutrition because it is not, I mean it can be emotional, but it is not something you need a support person right across from you (#201).

I think like nutrition is such an important aspect of growing healthy babies. So it is something that I think should be available to every woman in the province, equally. Not just because you are up north and we have less supports, you are going to suffer. (#200)

So there was only one dietitian for the whole North West... it wasn't sufficient at all! It wasn't. So if we could get it on telehealth oh that would be awesome. That would take our services to the next level. (#204)

6.4 Theme 4: Traditional food and food practices

Traditional foods are defined as foods or food practices that originate from local plant or animal resources through gathering or harvesting and possess cultural meaning.(28) Given the coastal location of Kitamaat Village, much of the traditional foods of the Haisla people are sourced from the ocean and include oolichan and salmon as well as hunting and wild berries.(78)

Traditional foods or food practices was mentioned in the majority of the interviews with both women and providers. When asked about the role that traditional foods played in their diet during pregnancy, two main themes were discussed. First, traditional foods as physical nourishment or the way that the food made women feel after consumption and secondly, the socio-cultural link that traditional foods provides or provided during pregnancy.

6.4.1 Physical and spiritual nourishment

Most women noted that their intake of traditional foods in pregnancy did not increase or decrease dramatically; it was “just the way they ate”. Many women discussed that they experienced extreme nausea during pregnancy and traditional foods were one of the only foods that they were able to consume. Foods like canned salmon and halibut were the most referenced and appeared to play a significant role in pregnancy women’s diets. Women felt that traditional foods nourished their body by providing the necessary nutrients for proper growth and development of both themselves and their growing baby:

I think traditional foods definitely played a big role in nutrition during my pregnancy. There was some days ... when I found out I was pregnant with her, the only food I was able to eat was our traditional foods!... It saved me! I think it really gave me a lot more nutrients to push through that first little while where I couldn't eat anything. (#104)

Traditional wise, definitely [referring to eating advice from family]. Because of the fact that I was pregnant and this was my first pregnancy that had ever gone to that extent, so a lot of my family members yes. Especially with meats, like wild meats, our moose meat, fish, deer, you know. (#107)

6.4.2 Pregnancy, a time for healthy choices

Pregnancy represented a time of change for many women. This theme was re-iterated in numerous different aspects of living a healthier life style because of being pregnant including drug, alcohol, and smoking cessation, as well as change in diet to focus more on what they were putting into their bodies. Many women associated this change in healthy diet to focus on traditional foods like salmon and wild meats.

Because prior to [child], I would cheat a lot! I would be like oh I am going to get insulin I can get a few more units. I really had to think long and hard about [child] future. I don't want [child] to go through what I am going through, being diabetic and having to, having to... I had to... it is not a choice. He has that choice where I am able to give him. So I would rather him go down the healthier route than having him struggle obviously um

so making those decisions as soon as you know that you are pregnant is the main thing.
(#107)

6.4.3 Connection to family and community

From a socio-cultural perspective, traditional foods provided a connection and a form of expressing affection from family and community members. In a particularly complicated case where one mother had to leave the community and spend many months in a referral community before birth, traditional foods provided a way to stay connected with her family and loved ones back home. She felt that the food given to her from family members provided her with the physical and spiritual nourishment needed to get through the physically and emotionally exhausting time.

A lot of my relatives are much older obviously and a lot of them still believe in our old ways and, um, it was a couple of my cousins that when they knew the struggle I was going through... Yes I was given an abundance of monetary donations but again I would have to do take out... they would actually come to [referral centre] and bring traditional soup or whatever that could be non-perishable for decent amount of time. So I was given some soups, and some roasts, so that really tied me over. So a lot of the food that my family had brought, I could really feel the difference because of the shock, you know not eating properly and what not. And then when I finally did, it was smooth sailing. I could feel the love! (#107)

Women often spoke of the males in their families, both fathers and partners, providing traditional foods for them during their pregnancy. They discussed how they canned salmon with family and this salmon was able to last them through the whole year.

My boyfriend at the time would go out and harvest fish. So salmon, halibut, cockles and clams and then we would process that. The fish we usually smoked it, canned it and froze it. And then clams and cockles are usually during the winter months. (#108)

The babies daddy is a hunter. So we have a fridge full of fish, moose and deer, crabs and shrimp! I had to buy another freezer. I am beyond blessed! (#113)

From the interviews conducted, few women sought after traditional knowledge and food practices during pregnancy from Elders. When asked whether they would be interested in learning from Elders, most said they would. This notion should be considered in future programming which will be discussed in the subsequent implications for findings.

Yea. I would like that. I would like to sit, and it would be nice to even hear from elders what they did. You know I am so old school. I would do those things. I think what did they have 100 years ago. Nothing. You know. These people have been doing this for years. So to hear from elders I am interested in that. (#113)

It would be nice to have that cultural linkage too because I really didn't know... because I know historically there were birth traditions and things that pregnant women are not

allowed to do or allowed to do. Those types of things. We do not have very many elders left with that type of knowledge. So having someone in the community that has that type of direction would have been nice. (#108)

6.4.4 Provider's perspective – changing food practices

Providers also mentioned the significance of traditional foods during pregnancy and throughout the lifespan for their patients. The interview discussions were mainly focused around the changing Indigenous diet that is being seen globally and the physical health benefits of eating traditional foods during pregnancy. Providers expressed concerns that there has been a significant decline in the consumption of traditional foods in younger generations. Providers expressed the importance of bridging generations together to discuss all aspects of health including nutrition.

I sit on a lot of different committee's that are initiatives for the town of Kitimat and Haisla and it keeps getting talked about and talked about is we need to get the Elders with the youth, we need to get rediscovery happening, we need to connect people back to their culture because they are getting lost in their ways and that is what is causing the suicide and all of the mental health issues and I think that there would be a role for that [referring to nutrition programs] for sure. (#200)

Yea I mean I certainly do see the cooking support, you know because there is less and less traditional foods being served. Served and prepared. But I think we also need support whether this is from extended family or the fisheries department to provide that.

You know. It would be great if that council could have someone hunt so that they can have deer and elk and everything else than beef. They are not doing bad with halibut and salmon, but it doesn't go very far with what the fisheries provide. (#203)

Yea but I am finding that because there has been such a shift in buying food compared to preparing and eating cultural that there is not a lot of Elders that are around and that are well enough to pass on their knowledge and cooking skills. (#202)

Chapter 7: Discussion

7.1 Prenatal nutrition programs – Good Food Box

The alarming cost of produce and rates of food insecurity in Northern communities has received significant attention in media and academic literature.(70,79) In the most recent Food Costing Report by Provincial Health Services of BC, Northern Health experiences the highest cost of the nutritious food basket, a standardized measure of food prices across the province.(79) The experience of accessing healthy food and the associated cost was congruent with Greenwood and Kornelsen's (2014) findings regarding food access in a water-bound First Nations community in British Columbia.(3) The participants in this study viewed the Good Food Box as a means to offset this cost.

Although no published studies were located that provided a formal review of a similar healthy food box program in First Nations communities, the success of this program appeared to be having a positive impact on the birthing population of the community. A realist review by Smylie evaluated the effectiveness of prenatal and infant-toddler health programs in Indigenous communities and suggested that community investment is a key component in the success of programs.(55) With the Good Food Box program, there is a significant amount of community investment. This program has been running for over 10 years, and is funded through Haisla Health. Understanding the barriers that women face accessing fresh produce within the community, Haisla Health has prioritized this program year after year.

A major implication resulting from this theme is the importance of the Good Food Box and the importance of continuing to fund and run this program. I believe that being an outsider to the community and approaching the program with equipoise strengthens the validity of this finding.

Beyond the importance of continuing this program, this study helped articulate the gratitude of the women for the program providers. The effort that goes into the program felt unnoticed by the providers, but in reality the women within the community appreciate and value the efforts significantly. Presenting this finding to the providers was one the highlights of the study for me.

The providers who run the GFB have created a Facebook group for all of the women accessing the program. Building off of the suggestion to include tips and information for the produce provided, this could serve as a platform to distribute this information as well as other reputable sources of nutrition information. Social media platforms like Facebook have increasingly been recognized as a means of delivering health promotion and health information.(93) Rae et al 2013 highlights the positive impact that Facebook has on creating a community of conversation between pregnant Indigenous women and health care providers.(94)

In conclusion, the Good Food Box appears to be a successful and meaningful program that should continue to be funded and run, and holds promise of being implemented by other First Nations communities. It should be noted that to implement a program like the Good Food Box in other communities, would require significant financial and human resource support. This requirement may limit the transferability of the program to other communities.

7.2 Prenatal nutrition in the primary care setting

Both birthing women and providers within Kitamaat Village described a lack of access to nutrition advice and resources within the primary care setting. This is particularly concerning as many women's main primary health care provider during the prenatal period is their family

physician. Most of the participants in this study felt that more prenatal nutrition care should be provided by family physicians, however a study by Wynn highlights that physicians' in British Columbia felt that their nutrition training in school was inadequate and only 30% of physicians currently used any nutrition-related resource.(95) Interestingly Wynn found that rural physicians referred patients more frequently to dietitians than urban physicians. This is inconsistent with the experiences of women in this study and could be due to the lack of dietitians in Kitimat and Northern Health. This finding also gives us insight into the role of physicians providing nutritional care.

First Nation women's experiences of being rushed, and overwhelmed, aligned with other qualitative studies that documented First Nations women's experience in the primary care setting particularly with diabetes during pregnancy.(10,52) Women felt that in regular visits the amount of time with their care providers was not enough, and expressed that they wish they knew who to access for nutrition advice during pregnancy.

Increasing the accessibility – and acceptability –of nutritional resources within the primary care setting will help women feel more supported in accessing nutrition care. Examples of possible resources could include Eating Well with Canada's Guide – First Nations, Inuit and Metis version and Beginning Journey: First Nations Pregnancy Resource. Both resources are free, and available online or free to order paper copies. One potential issue with these and other print resources is they require women to be able to read and comprehend the information. This may not be feasible for all of the women, which highlights the need to contextualize audience-specific resources. Additionally, if the resources are available to primary care providers they can facilitate understanding of best evidence for nutrition in pregnancy. There is also the opportunity to send audience-appropriate nutrition resources through the Good Food Box program.

Understanding the level of nutrition knowledge of care providers and whose responsibility it is given that there is no nutrition professional available to the community should be a priority item for First Nation communities, including Haisla Nation.

7.3 Role for tele-dietetics in First Nations communities

As health care in Canada becomes increasingly centralized, poor provider recruitment and retention in rural communities remains a familiar and concerning trend. First Nations communities experiences disproportionate levels of provider turnover, hindering the continuity of care.(6,8) This is occurring in all aspects of health care, including nutrition.(96,97) The on the ground experience of what occurs when retention is low and turnover is high was captured in this study as care providers and health planners noted awareness of the implications of the attrition of health providers.

Theme three underlines the potential positive impact and perceived need of having dietetic services available to support women during pregnancy, and the community as a whole. Given that retention of dietitians around Kitimat and in Northern British Columbia is low, tele-health may be a viable solution. This aligns with the Dietitians of Canada's recommendation to the House of Commons Standing Committee on Finance 2016-2017 Budget Recommendation to provide telehealth services to all Canadians.(98) It is important to note that although First Nation women do have access to Health Services like HealthLinkBC's email a dietitian and dial a dietitian service, the individuals answering those phone calls are not familiar with the contextual background and situation in which women would be calling from. As the position statement from Society of Gynaecologists and Obstetricians Practice Guidelines suggests, all health

professionals working with First Nations women should have an understanding of the historical, cultural and intergenerational factors that impact health.(57) Understanding the importance of building respectful relationships and taking the time to understand the community context is essential to providing culturally safe and more effective care. If a single dietitian was able to work with the community, these relationships and trust could be built with a lower risk of turnover within the position and fostering continuity of care.

Although tele-dietetics appears to be relatively under-utilized for First Nations communities in Canada, it could provide dietetic services for numerous communities across Canada that would not otherwise have access to continuous nutrition services. The technology required to support telehealth is available, and the need is justified in Kitamaat Village through this project and in Canada through the staggering difference in nutrition-related conditions between First Nations and non-First Nation communities.

7.4 Traditional food and food practices

The significance of traditional food and food practices during pregnancy highlighted by participants in this study is congruent with the literature on the role of traditional foods in First Nation communities.(3,69,70) Birthing women discussed the sociocultural connection that traditional food provided to their community, as these foods were often provided by family or friends pre or postnatally. Participants discussed the health benefits as not only being nutritious, but also nourishing in a spiritual way. This appeared to be most significant for mothers that were forced to leave their communities to give birth in a tertiary centre. The notion of providing traditional foods providing connection to the community aligned with Earle's argument that

traditional foods and practices provide cultural and social benefit as well as contributed positively to the overall diet quality.(20) Women in this study associated traditional foods and food practices as more nutritious than market foods. A finding that parallels Vallianatos et al's finding with pregnant Cree women.(24)

The discussion of traditional foods with care providers was heavily focused on the diet shift from traditional to market foods. This phenomenon is referred to as the 'nutrition transition' and is documented in Indigenous communities in Canada(20,99,100), and internationally.(101) Providers stressed the importance of connecting the younger generation with the Elders and community members who hold traditional knowledge and skills to pass and reinvigorate traditional food practices.

In this study, pregnancy represented a time of change to a healthier lifestyle for most women. This is significant because pregnancy may represent an ideal time to bridge two generations together to pass on traditional knowledge and food practices. Re-invigorating a culture that has been suppressed through colonialism and residential schools has been a challenge for many First Nations and trying to re-invigorate cultural practices including food practices requires effort from multiple generations. This unique period of being open to healthier practices could help connect women to the Elders within their community, which could serve as a significant and important vector of passing knowledge through generations. What this may actually look like within the community is places more of an emphasis on Elder's involvement with prenatal programs. Building off of the recommendations made in theme 1 to include recipes and nutrition

information in the GFB, Haisla Health could incorporate stories, recipes or even videos on the Facebook group of Elder's sharing their stories around food, nutrition and/or pregnancy.

These findings support Power's argument that to truly conceptualize food security for Indigenous populations, we must consider both traditional and market food access.(69) Providers working within First Nations communities should be aware of their traditional foods that are commonly consumed within that region as it varies between Nations. Understanding the role that these foods play throughout the life span, including during pregnancy, can lead to being able to provide more culturally congruent care while working to re-invigorate cultural practices and norms.

7.5 Strengths and limitations

Several techniques were implemented to ensure credibility of the findings for this research. Multiple trips to Kitamaat Village, completing interviews in face-to-face at a location that women selected, and using open-ended interviewing that allowed participants to speak openly and un-interrupted about their experiences contributed to the methodological and ethical strengths of this study.

As the sole researcher I completed all interviews, transcription, member checking, and data analysis which allowed for consistency in how data was organized and analyzed. To try and reduce any inherit bias during analysis, time to time consultation with a co-supervisor with qualitative experience occurred.

Given that individuals who provide the programs are heavily involved with many other community and healthcare/childcare related programs, being an outsider to the community may have resulted in women being more likely to share their authentic opinions about prenatal nutrition programming. Given that the women are aware of who is involved with the programs and most health care workers know each other on a personal level, birthing women may have been less likely to share their opinions about negative experiences.

Many challenges and limitations arose during the project that should be discussed in context of the findings.

A consistent limitation throughout the study was recruitment. One of the original goals of the project was to recruit three First Nations communities with various characteristics to understand how different geographical factors can impact prenatal nutrition care for both providers and mothers. Given that significant time was dedicated to creating a unique engagement plan for each of the six potential communities, time did not allot for more communities to be contacted. The six communities that were contacted declined participation for various reasons including research fatigue, and not having adequate health human resources to support the project in the community.

Recruitment of participants within Kitamaat Village also should be addressed. Recruitment was done through third party recruitment by health care providers including the Community Health Nurse, Community Engagement Coordinator and the staff at Ci'mo'ca Childcare Centre. Although this was ethically appropriate, and the sample was large relative to the size of the

community and number of birthing women, the research team did not have control over how providers were recruiting, and whom they were recruiting.

Given the exploratory nature, lack of established relationship, and historical context of non-First Nations researchers working within a First Nations community, no demographic, or sensitive data was collected about the participants limiting the understanding of how various socioeconomic or other health factors may contribute to prenatal experience.

Attendance to the member-checking event was a shortcoming of this study as only 6 participants attended, therefore the majority of the participants did not 'check' the main themes.

Chapter 8: Conclusion

8.1 Contribution and significance

There is little known about the experience of providing and accessing prenatal nutrition care in rural First Nations communities in British Columbia. This is this the first exploratory case study that has been completed in partnership with First Nations Health Authority aiming to understand these experiences. One of the most significant contributions is that this project represents the beginning of a dialogue regarding prenatal nutrition care in First Nations communities in British Columbia. Although there were challenges with recruitment of communities, the framework has been established and key findings can be used to aid in the understanding of how to best support First Nation women and providers with regard to prenatal nutrition programming in British Columbia.

Two overarching recommendations arose from this project. First, to work collaboratively with communities and First Nations Health Authority towards providing appropriate models of nutrition care within rural Indigenous communities through education and innovative models of care. Secondly, to explore the feasibility and appropriateness of implementing successful programs like the Good Food Box in other communities.

This project highlighted the crack in the current health care system regarding prenatal nutrition care, as well as nutrition care in general for rural First Nations communities. This is particularly concerning as nutrition-related conditions during pregnancy as well as in general, are experienced at significantly higher rates in rural, and First Nation communities. Both groups of participants in this study highlighted the lack of nutrition care that is provided within a primary

care setting. Family physicians working in rural communities are required to be generalists, that is, providing a broader scope of practice when compared to their urban counterparts. Given that many rural First Nations communities like Kitamaat Village do not have regular access to a registered dietitian highlights the importance of basic nutrition education for family physicians working in these low resources settings. This is particularly significant during the prenatal period where the nutritional status of the mother has a direct and lasting impact on the birth outcomes and long-term health of their infant. Although it is not the responsibility of the family physician to be an expert in nutrition, they should have the necessary tools and resources to provide patients, particularly pregnant women with reputable and up to date nutrition advice. This should be done at a medical education, or continuous medical education (CME) level to provide rural physicians the tools that they need to support their patient population.

The providers interviewed in this project highlighted the challenge of recruiting and retaining registered dietitians in rural First Nations communities. In this data lies the indication that innovative models of nutrition care are needed to support communities that need it most. Tele-health and tele-dietetics may provide the ability to provide appropriate and continuous nutrition care for rural First Nations communities like Kitamaat Village. Providers and health planners within Haisla Health have expressed openness and interest in moving forward with a tele-dietetics model of care for the community and this project has highlighted that there is a perceived need from both providers and the birthing population. The findings from this project will contribute significantly to potential funding opportunities and justification for future research.

The second recommendation is to assess the implementation of successful programs like the Good Food Box in other rural First Nations communities across the province. Given the involvement of FNHA in this project, the ability to translate the success of this program from one community to another is significantly increased. Although this project was not a formal quantitative review that measured whether or not this program improved the nutrition status of women and children in Kitamaat Village, I believe that there is future opportunity to do so. This program could be adapted and implemented in another First Nation community measuring the change in nutrition knowledge, status, or exposure. Given that this project was supported by First Nations Health Authority and will be shared with the organization, there is opportunity to do so in a community based and ethically sound framework.

At a community level, simple and achievable recommendations have been shared with the health providers within Haisla Health to translate the findings from this project into actionable change, without requiring significant time investment on their behalf. I have committed to working with Haisla Health to increase the available of existing nutrition resources within the primary care setting so that women have access to reputable sources of nutrition information during pregnancy. Providers have agreed to also start including these resources in the Good Food Box Facebook group, as well as send them out with the first box that women receive.

8.2 Implications for future research

This study has laid the groundwork, and created a model for understanding current prenatal nutrition programming in rural First Nations communities. Given the initial involvement of First Nations Health Authority in this project, the framework can be adapted to understand how

geographic location and other factors may contribute to the experience of providing or receiving nutrition care in rural First Nations communities. By understanding how different factors may impact available services and provider/patient experiences we can understand how to provide the most robust and appropriate prenatal nutrition care for First Nations communities. Future research should focus on the education and ability of rural family physicians and nurse practitioners to provide both prenatal and general nutrition care in their communities. In addition, pilot projects and studies that include novel models of delivering nutrition care, such as tele-dietetics, are needed to understand how to best provide adequate and appropriate nutrition care in rural First Nations communities.

Bibliography

1. Procter SB, Campbell CG. Position of the academy of nutrition and dietetics: Nutrition and lifestyle for a healthy pregnancy outcome. *J Acad Nutr Diet*. 2014;114(7):1099–103.
2. Smylie J. Strong Women, Strong Nations: Aboriginal Maternal Health in British Columbia. *Child, Youth and Family Health* [Internet]. National Collaboration Centre for Aboriginal Health; 2010 [cited 2016 July]. 12 p. Available from: http://www.nccahccnsa.ca/Publications/Lists/Publications/Attachments/129/2014_07_09_FS_2421_MaternalHealth_EN_Web.pdf
3. Greenwood S, Kornelsen J. The Experiences of Pregnant Women Accessing Food in Remote Aboriginal Communities on Haida Gwaii. *Can J Midwifery Res Pract*. 2014;13(1):8–14.
4. Delisle H. Programming of chronic disease by impaired fetal nutrition: Evidence and implications for policy and intervention strategies [Internet]. World Health Organization; 2002 [cited 2017 July]. Available from: http://www.who.int/nutrition/publications/programming_chronicdisease.pdf
5. Kornelsen J, Kotaska A, Waterfall P, Willie L, Wilson D. The geography of belonging: The experience of birthing at home for First Nations women. *Heal Place*. 2010;16(4):638–45.
6. Evaluation Directorate Health Canada and Public Health Agency of Canada. Evaluation of the First Nations Clinical and Client Care Program 2005-2006 to 2011-2012 [Internet]. Government of Canada; 2013 [cited 2016 Jul]. 56 p. Available from: https://www.canada.ca/content/dam/hc-sc/migration/hc-sc/ahc-asc/alt_formats/pdf/performance/eval/fni-clinical-cliniques-pni-eng.pdf
7. Viscomi M, Larkins S. Recruitment and retention of general practitioners in rural Canada and Australia : a review of the literature. *Can J Rural Med*. 2013;18(1):13–24.
8. Stout R, Harp R. Aboriginal Maternal And Infant Health In Canada:Review Of On-Reserve Programming [Internet]; 2009 [cited 2016 Jul]. Available from:http://www.pwhce.ca/pdf/AborigMaternal_programmes.pdf
9. Tait Neufeld H. Patient and caregiver perspectives of health provision practices for First Nations and Métis women with gestational diabetes mellitus accessing care in Winnipeg, Manitoba. *BMC Health Serv Res*. 2014;14(1):440.

10. Oster RT, Mayan MJ, Toth EL. Diabetes in Pregnancy Among First Nations Women. *Qual Health Res.* 2014;24(11):1469–80.
11. Smith D, Edwards N, Varcoe C, Martens PJ, Davies B. Bringing safety and responsiveness into the forefront of care for pregnant and parenting aboriginal people. *ANS Adv Nurs Sci.* 2006;29(2):27-44.
12. Waldram J, Herring DA, Young TK. *Aboriginal health in Canada: historical, cultural and epidemiological perspectives.* 2nd ed. Toronto: University of Toronto Press; 2006. 352 p.
13. Health Council of Canada. *Understanding and Improving Aboriginal Maternal and Child Health in Canada* [Internet]. Health Canada; 2011 [cited 2016 Aug]. 28 p. Available from: http://publications.gc.ca/collections/collection_2011/ccs-hcc/H174-23-2011-eng.pdf
14. Harry K. *The Indian Act & Aboriginal Women's Empowerment: What Front Line Workers Need to Know* [Internet]. Battered Women's Support Services; 2009 [cited July 2016]. Available from: <http://www.bwss.org/wp-content/uploads/2010/06/theindianactaboriginalwomensempowerment.pdf>
15. Coates K. *The Indian Act and the Future of Aboriginal Governance in Canada* [Internet]. National Centre for First Nations Governance; 2008 [cited 2016 Sept]. Available from: http://fngovernance.org/publications/research_article/the_indian_act_and_the_future_of_a_boriginal_governance_in_canada
16. Truth and Reconciliation Commission of Canada. *Honouring the Truth, Reconciling for the Future: Summary of the Final Report of the Truth and Reconciliation Commission of Canada* [Internet]; 2015 [cited 2016 Aug]. 411 p. Available from: http://www.trc.ca/websites/trcinstitution/File/2015/Findings/Exec_Summary_2015_05_31_web_o.pdf
17. Partridge C. Residential schools: the intergenerational impacts on Aboriginal peoples. *Nativ Soc Work J.* 2010;7:33–62.
18. Earle L. *Traditional Aboriginal Diets and Health* [Internet]. National Collaborating Centre for Aboriginal Health; 2011 [cited 2016 Sept]. 8 p. Available from: http://www.nccahccnsa.ca/docs/nccahreports/1828_NCCAHA_mini_diets_health_web.pdf
19. First Nations Health Authority. *First Nations Traditional Foods Fact Sheet* [Internet]. 2014 [cited 2017 Aug]. Available from: http://www.fnha.ca/Documents/Traditional_Food_Fact_Sheets.pdf

20. Willows ND. Determinants of healthy eating in Aboriginal peoples in Canada the current state of knowledge and research gaps literature search. *Can J Public Health*. 2005;96(3):32–6. 2005;96(3):32–6.
21. Macdonald NE, Stanwick R, Lynk A, Mosby I. Canada’s shameful history of nutrition research on residential school children : The need for strong medical ethics in Aboriginal health research. *Paediatr Child Heal*. 2014;19(2):64.
22. Aguiar W, Halseth R. Aboriginal Peoples and Historical Trauma: The processes of intergenerational transmission [Internet]. National Collaboration Centre for Aboriginal Health; 2015 [cited 2016 Sept]. 30 p. Available from:
<http://www.nccahccnsa.ca/Publications/Lists/Publications/Attachments/142/2015-04-28-AguiarHalseth-RPT-IntergenTraumaHistory-EN-Web.pdf>
23. Smith D, Varcoe C, Edwards N. Turning Around the Intergenerational Impact of Residential Schools on Aboriginal People : Implications for Health Policy and Practice. *Can J Nurs Res*. 2005;37:38–60.
24. Vallianatos H, Brennand EA, Raine K, Stephen Q, Petawabano B, Dannenbaum D, et al. Beliefs and Practices of First Nation Women about Weight Gain during Pregnancy and Lactation : Implications for Women’s Health. *CJNR*. 2006;38:102–19.
25. Chan L, Receveur O, Sharp D, Schwartz H, Amy I, Constantine T. First Nations Food, Nutrition and Environment Study (FNFNES): Results from British Columbia (2008/2009) [Internet]. University of Northern British Columbia, Assembly of First Nations; 2011 [cited 2016 Oct]. 200 p. Available from:
http://www.fnfnes.ca/docs/FNFNES_Report_BC_FINAL_PRINT_v2-lo.pdf
26. Elliott B, Jayatilaka D, Brown C, Varley L, Corbett KK. “We are not being heard”: Aboriginal perspectives on traditional foods access and food security. *J Environ Public Health*. 2012.
27. Kuhnlein H V, Receveur O, Soueida R, England GM. Arctic Indigenous Peoples Experience the Nutrition Transition with Changing Dietary Patterns and Obesity. *J Nutr*. 2004;(January):1447–53.
28. Earle L. Traditional aboriginal diets and health [Internet]. National Collaborating Centre for Aboriginal Health; 2011. [cited 2017 Jan]. 8 p. Available from:
http://www.nccahccnsa.ca/docs/socialdeterminates/1828_NCCAHA_mini_diets_health_fina

[l.pdf](#)

29. Abu-saad K, Fraser D. Maternal Nutrition and Birth Outcomes. *Epidemiol Rev.* 2010;32:5–25.
30. Aboriginal Nutrition Network. Registered Dietitians in Aboriginal Communities: Feeding Mind, Body and Spirit. Role Paper of the Dietitians of Canada Aboriginal Nutrition Network [Internet]. Dietitians of Canada 2012 [cited Oct 2016] 40 p.
<https://www.dietitians.ca/Downloads/Public/ANN-Report-Final-2012.aspx>
31. Poobalan AS, Aucott LS, Gurung T, Smith WCS, Bhattacharya S. Obesity as an independent risk factor for elective and emergency caesarean delivery in nulliparous women - Systematic review and meta-analysis of cohort studies. *Obes Rev.* 2009;10(1):28–35.
32. Chu SY, Kim SY, Lau J, Schmid CH, Dietz PM, Callaghan WM, et al. Maternal obesity and risk of stillbirth: a metaanalysis. *Am J Obstet Gynecol.* 2007;197(3):223–8.
33. Yu C, Teoh T, Robinson S. Review article: Obesity in pregnancy. *BJOG.* 2006;113(10):1117-1125.
34. Best Starts Resource Centre. Obesity in Preconception and Pregnancy [Internet]. Best Starts Resource Centre; 2013 [cited 2016 Sept]. 59 p. Available from:
http://www.beststart.org/resources/preconception/BSRC_obesity_report_April2014.pdf
35. Rasmussen SA, Chu SY, Kim SY, Schmid CH, Lau J. Maternal obesity and risk of neural tube defects: a metaanalysis. *Am J Obstet Gynecol.* 2008;198(6):611–9.
36. Statistics Canada. Diabetes 2010 - Canadian Community Health Survey [Internet]. Statistics Canada; 2011 [cited 2016 Sept]. Available from:
<http://www.statcan.gc.ca/pub/82-625-x/2011001/article/11459-eng.htm>
37. Foulds HJ a, Bredin SSD, Warburton DER. The prevalence of overweight and obesity in British Columbian Aboriginal adults. *Obes Rev.* 2011;12(13):4–11.
38. World Health Organization. BMI Classification [Internet]. 2006 [cited 2017 Aug 1]. Available from: http://apps.who.int/bmi/index.jsp?introPage=intro_3.html
39. Lear SA, Humphries KH, Frohlich JJ, Birmingham CL. Appropriateness of current thresholds for obesity-related measures among Aboriginal people. *Cmaj.* 2007;177(12):1499–505.
40. Charbonneau-Roberts G, Saudny-Unterberger H, Kuhnlein H V., Egeland GM. Body

- mass index may overestimate the prevalence of overweight and obesity among the Inuit. *Int J Circumpolar Health*. 2005;64(2):163–9.
41. Young TK, Bjerregaard P, Dewailly E, Risica PM, Jorgensen ME, Ebbesson SEO. Prevalence of obesity and its metabolic correlates among the circumpolar Inuit in 3 countries. *Am J Public Health*. 2007;97(4):691–5.
 42. Brennand EA, Dannenbaum D, Willows ND. Pregnancy Outcomes of First Nations Women in Relation to Pregravid Weight and Pregnancy Weight Gain. *JOGC*. 2005;936–44.
 43. Catherine K. Gestational diabetes during and after pregnancy. Springer Science Business Media; 2010.
 44. Dyck R, Klomp H, Tan LK, Turnell RW, Boctor M a. A comparison of rates, risk factors, and outcomes of gestational diabetes between aboriginal and non-aboriginal women in the Saskatoon Health District. *Diabetes Care*. 2002;25(3):487–93.
 45. KC K, Shakya S, Zhang H. Gestational diabetes mellitus and macrosomia: A literature review. *Ann Nutr Metab*. 2015;66:14–20.
 46. Wendland EM, Torloni M, Falavigna M, Trujillo J, Dode M, Campos M, et al. Gestational diabetes and pregnancy outcomes - a systematic review of the World Health Organization (WHO) and the International Association of Diabetes in Pregnancy Study Groups (IADPSG) diagnostic criteria. *BMC Pregnancy Childbirth*. 2012;12(1):23.
 47. Osgood, R. D, W. G. Simulation model of the intra- and inter-generational impact of gestational diabetes on the diabetes epidemic in Saskatchewan First Nations people. *Can J Diabetes*. Elsevier Masson SAS; 2009;33(3):280.
 48. Dyck R, Osgood N, Lin TH, Gao A, Stang MR. Epidemiology of diabetes mellitus among First Nations and non-First Nations adults. *Can Med Assoc J*. 2010;182(3):249–56.
 49. Kolu P, Raitanen J, Rissanen P, Luoto R. Health care costs associated with gestational diabetes mellitus among high-risk women - results from a randomised trial. *BMC Pregnancy Childbirth*. 2012;12(71).
 50. First Nations Information Governance Centre (FNIGC). First Nations Regional Health Survey (RHS) 2008/10: National Report on Youth Living in First Nations Communities [Internet]. Ottawa: FNIGC; 2012. [cited 2017 Jan] 152 p. Available from: https://fnigc.ca/sites/default/files/docs/first_nations_regional_health_survey_rhs_2008-

51. Thompson D, Berger H, Fieg D, Gagnon R, Kader T, Keely E, et al. Diabetes and Pregnancy. *Can J Diabetes*. 2013;37:1–7.
52. Tait Neufeld H. Food perceptions and concerns of aboriginal women coping with gestational diabetes in Winnipeg, Manitoba. *J Nutr Educ Behav*. 2011;43(6):482–91.
53. Whitty-Rogers J, Caine V, Cameron B. Aboriginal Women’s Experiences With Gestational Diabetes Mellitus. *Adv Nurs Sci*. 2016;39(2):181–98.
54. Tarasuk V. Household Food Insecurity in Canada. *Top Clin Nutr*. 2005;20(4):299.
55. Smylie J, Kirst M, Mcshane K, Firestone M, Wolfe S, Campo PO. Understanding the role of Indigenous community participation in Indigenous prenatal and infant-toddler health promotion programs in Canada : A realist review. *Soc Sci Med*. 2016;150:128–43.
56. Oster RT, Bruno G, Montour M, Roasting M, Lightning R, Rain P, et al. Kikiskawâwasow - prenatal healthcare provider perceptions of effective care for First Nations women: an ethnographic community-based participatory research study. *BMC Pregnancy Childbirth*. 2016;16(1):216.
57. Wilson D, de la Ronde S, Brascoupé S, Apale AN, Barney L, Guthrie B, et al. Health professionals working with First Nations, Inuit, and Métis consensus guideline. *J Obstet Gynaecol Can*. 2013;35(6):550–8.
58. Canadian Task Force of Preventative Care. New grades for recommendations from the Canadian Task Force on Preventive Health Care. *CMAJ*. 2003;169(3):207–8.
59. BC Tripartite First Nations and Aboriginal Maternal Child Health Working Group. Promising Practices in First Nations and Aboriginal Maternal and Child Health Programs: Community Perspective on What Works [Internet]. First Nations Health Authority; 2015. [cited 2017 Jan] 61 p. Available from: <http://www.fnha.ca/wellnessContent/Wellness/MCH-Promising-Practices-Report-September-2015.pdf>
60. Ball J. Early childhood care and development programs as hook and hub for inter-sectoral service delivery in First Nations communities. *J Aborig Heal*. 2005;2(1):36–50.
61. First Nations Health Authority. Creating a Climate for Change [Internet] 2016. [cited 2016 Aug] Available from: <http://www.fnha.ca/documents/fnha-creating-a-climate-for-change-cultural-humility-resource-booklet.pdf>

62. Bar-Zeev S, Barclay L, Kruske S, Kildea S. Factors affecting the quality of antenatal care provided to remote dwelling Aboriginal women in northern Australia. *Midwifery* 2014;30(3):289–96.
63. Reeves S, Albert M, Kuper A, Hodges BD. Why use theories in qualitative research? *BMJ*. 2008;337:949.
64. Browne AJ, Smye VL, Varcoe C. The Relevance of Postcolonial Theoretical Perspectives to Research in Aboriginal Health. *CJNR*. 2005;37(4):16–37.
65. Regan P. Unsettling the Settler Within. Unsettling the Settler Within [dissertation]. Victoria, BC; University of Victoria; 2010. 313 p.
66. Young R. Postcolonialism: an historical introduction. Oxford,UK: Wiley-Blackwell; 2001.
67. National Collaboration Centre for Aboriginal Health. The Aboriginal Health Legislation and Policy Framework in Canada [Internet]. Public Health Agency of Canada; 2011. [cited 2017 Feb]. Available from: http://www.nccah-ccnsa.ca/docs/Health_Legislation_and_Policy_English.pdf
68. Quayson A. Postcolonialism: Theory, practice, or process? 1st ed. Polity; 2000.
69. Power EM. Conceptualizing food security for aboriginal people in Canada. *Can J Public Heal*. 2008;99(2):95–7.
70. Socha T, Zahaf M, Chambers L, Abraham R, Fiddler T. Food Security in a Northern First Nations Community: *J Aborig Heal*. 2012;5–15.
71. Lavalley, Lynn F. An Indigenous Approach to Diabetes Research: Don't Just Tell Us We're Fat. *Can J Diabetes*. 2011;35(4):324–5.
72. Kuhnlein H V. Dietary Change and Traditional Food Systems of Indigenous Peoples. *Annu Rev Nutr*. 1996;16(1):417–42.
73. First Nations Information Governance Centre (FNIGC). The First Nations Principles of OCAP® [Internet]. FNIGC; 2017. [cited 2017 Mar]. Available from: <http://www.fnigc.ca/ocap.html>
74. Phillips G. Data Governance Stories [Internet]. First Nations Health Authority; 2016. [cited 2017 Mar]. Available from: <http://www.fnha.ca/Documents/Data-Governance-Stories-Gwen-Phillips.pdf>
75. Boyer Y. Discussion Paper Series in Aboriginal Health: Legal Issues [Internet]. National Aboriginal Health Organization; 2003. [cited 2017 Jan]. Available from:

- http://www.naho.ca/documents/naho/english/publications/DP_crowns_obligation.pdf
76. Kurtz DLM, Nyberg JC, Van Den Tillaart S, Mills B, Okanagan Urban Aboriginal Health Research Collective T. Silencing of voice: An act of structural violence. *J Aborig Indig Heal*. 2008;53–63.
 77. Stout MD, Kipling GD, Stout R. Aboriginal Women's Health Research Synthesis Project: Final Report [Internet]. Centres of Excellence for Women's Health; 2001. [cited 2017 Jan] Available from: http://bccewh.bc.ca/wp-content/uploads/2012/05/2001_Aboriginal-Health-Research-Synthesis-Project-Final-Report.pdf
 78. Haisla Nation. About the Haisla [Internet]. Haisla Nation; 2015. [cited 2017 April] [file:///localhost/Available from/ http://haisla.ca/community-2/about-the-haisla:](file:///localhost/Available%20from/http://haisla.ca/community-2/about-the-haisla)
 79. Provincial Health Services Authority. Food Costing in BC 2015 [Internet]. Vancouver, BC; 2016. [cited 2017 April]. Available from: [http://www.phsa.ca/population-public-health-site/Documents/2015 Food Costing in BC - FINAL.pdf](http://www.phsa.ca/population-public-health-site/Documents/2015%20Food%20Costing%20in%20BC%20-%20FINAL.pdf)
 80. Kowalsky LO, Verhoef MJ, Thurston WE. Guidelines for entry into an Aboriginal community. *Can J Native Stud*. 1996;2(1996):267–82.
 81. Johnson N. Sex, Colour and Rites of Passage in Ethnographic Research. 1984;43(2):108–20.
 82. Hutchinson S. Perspectives: Field Research in Neonatal Intensive Care Unit. *Top Clin Nurs*. 1985;7(2):24–8.
 83. Canadian Institute for health research. Ethical Conduct for Research Involving Humans. 2014. 1-90 p.
 84. Yin RK. Case Study Design and Methods. 5th ed. SAGE; 2013.
 85. Patton MQ. Qualitative Research & Evaluation Methods Integrating Theory and Practice. 4th ed. Saint Paul, MN: SAGE Publications; 2014.
 86. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol*. 2006;3:77–101.
 87. Lincoln Y, Guba E. Naturalistic Inquiry. Newbury Park, CA: SAGE Publications; 1985.
 88. Poland BD. Transcription Quality as an Aspect of Rigor in Qualitative Research. *Qual Inq*. 1995;1(3):290–310.
 89. Carlson JA. Avoiding Traps in Member Checking. *Qual Rep*. 2010;15(5):1102–13.
 90. Shenton AK. Strategies for ensuring trustworthiness in qualitative research projects.

- 2004;22:63–75.
91. Guion LA, Diehl DC, McDonald D. Triangulation : Establishing the Validity of Qualitative [Internet]. University of Florida; 2011. [cited 2017 Mar]. Available from: http://www.ie.ufrj.br/intranet/ie/userintranet/hpp/arquivos/texto_7_-_aulas_6_e_7.pdf
 92. Finlay L. “ Rigour ”, “ Ethical Integrity ” or “ Artistry ”? Reflexively Reviewing Criteria for Evaluating Qualitative Research. *Br J Occup Ther*. 2006;69(July):319–26.
 93. Moorhead A, Hazlett D, Harrison L, Carroll J, Irwin A, Hoving C. A New Dimension of Health Care: Systematic Review of the Uses, Benefits, and Limitations of Social Media for Health Communication. *J Med Internet Res*. 2013;15(4).
 94. Rae K, Weatherall L, Hollebone K, Apen K, Mclean M, Blackwell C, et al. Developing research in partnership with Aboriginal communities – strategies for improving recruitment and retention. *Rural Remote Health*. 2013;1–8.
 95. Wynn K, Trudeau JD, Taunton K, Gowans M, Scott I. Nutrition in primary care. 2010;56:e109–16.
 96. Dietitians of Canada. Submission to the Select Standing Committee on Health [Internet]. Dietitians of Canada; 2016. [cited 2017 Mar]. Available from: <https://www.dietitians.ca/Downloads/Public/2016-07-DC-BC-Submission-to-Select-Standing-Commit.aspx>
 97. Dietitians of Canada. Moving Forward - Role of Registered Dietitian in Primary Health Care [Internet]. Dietitians of Canada; 2009. [cited 2017 Mar]. 29 p. Available from: <https://www.dietitians.ca/Downloads/Public/phc-position-paper.aspx>
 98. Dietitians of Canada. Submission to the House of Commons Standing Committee on Finance 2016-2017 Pre-Budget Recommendations [Internet]. Dietitians of Canada; 2016 [cited 2017 May]. Available from: <https://www.dietitians.ca/Downloads/Public/2016-02-19-Federal-Pre-Budget-Submission-FINAL.aspx>
 99. Johnson-Down L, Egeland G. How is nutrition transition affecting dietary adequacy in Eeyouch (Cree) adults of Northern Quebec, Canada? *Appl Physiol Nutr Metab*. 2013;38(3):300.
 100. Sheehy T, Kolahdooz F, Roache C, Sharma S, Sheehy T, Kolahdooz F, et al. Traditional food consumption is associated with better diet quality and adequacy among Inuit adults in Nunavut, Canada Traditional food consumption is associated with better diet quality

- and adequacy among Inuit adults in Nunavut, Canada. *Int J Food Sci Nutr*. 2017;66(4).
101. Popkin BM, Adair LS, Ng SW. Now and Then: The global nutrition transition: The pandemic of obesity in developing countries. *Nutr Rev*. 2013;70(1):3–21.
 102. NAHO. Terminology [Internet]. 2012 [cited 2017 Jul 1]. Available from: <http://www.naho.ca/publications/topics/terminology/>
 103. Davis B, Tarasuk V. Hunger in Canada. *Agric Human Values*. 1994;50–7.
 104. Bombay A, Matheson K, Anisman H. Intergenerational Trauma: Convergence of Multiple Processes among First Nations peoples in Canada. *Int J Indig Heal*. 2009;5(3):6–47.
 105. Health Canada. Prenatal Nutrition Guidelines for Health Professionals - gestational weight gain. 2010 [Internet]. 2014 [cited 2017 Aug]. Available from: <https://www.canada.ca/en/health-canada/services/food-nutrition/healthy-eating/prenatal-nutrition/eating-well-being-active-towards-healthy-weight-gain-pregnancy-2010.html>

Appendices

Appendix A Letter of Support from Haisla Health



Haisla Health Centre

Haisla PO Box 1041 Kitamaat Village, BC V0T 2B0
Telephone: (250) 632-3600 Fax: (250) 632-3686

12 September 2016

To Whom It May Concern:

Please accept this letter as confirmation of support for the FNHA and *Centre for Rural Health Research (CRHR)* collaborative research into nutrition during pregnancy with the goal of using community knowledge and relationship-building to guide future nutrition programming in First Nations communities.

We believe it is in our community's best interest to have this planned prenatal nutrition inquiry and research.

We support the research, to be undertaken by Rebecca Mercer, a graduate student at UBC in Vancouver, as it will:

- Have a positive impact on all the health of pregnant women and the children they carry.
- Provide opportunity to have qualitative and introspective inquiry into our prenatal and post-natal health care delivery system and thereby provide insights to improve upon program planning, implementation, and evaluation.
- Provide the atmosphere to dialogue with expectant mothers, elders and other community members and get their input into program design, implementation and evaluation.
- Provide opportunities for additional programs and services.

In conclusion, we fully support the efforts of *Centre for Rural Health Research and FNHA* as they seek expansion for their remarkable program, designed to educate, protect, serve and promote positive and healthy outcomes for especially young mothers in the community.

Appendix B Invitation letters and project description sent to communities



501 — 100 Park Royal South
Coast Salish Territory
West Vancouver, BC
Canada V7T 1A2
T 604.693.6500
F 604.913.2081
www.fnha.ca

Dear [REDACTED]

My name is Rebecca Mercer and I am a master student in nutrition at UBC in Vancouver. I am originally from Sylvan Lake, Alberta and completed my undergraduate degree in Wolfville, Nova Scotia.

Last year I had the opportunity to work with Dr. Jude Kornelsen (my current supervisor) at the Centre for Rural Health Research as a research assistant. Working at the CRHR emphasized the importance of adequate and culturally competent maternity care in all rural and remote communities and how supporting birthing mothers is critical to the health of the community. Appropriate community engagement and adhering to OCAP principles are values I have inherited from working with Dr. Kornelsen.

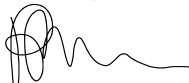
Previous partnership work between First Nations Health Authority and the Centre for Rural Health regarding numerous topics such as birthing close to home, midwifery care and system issues (Applied Policy Research Unit) and my understanding of the clinical and psychosocial importance of adequate nutrition during pregnancy, motivated me to contact FNHA in the spring of last year to see if there were matters regarding nutrition in pregnancy that may be appropriate for a master thesis project. After numerous meetings and discussions around the most pressing issues, we collectively decided that understanding the on the ground experiences of women accessing prenatal nutrition services as well as experiences of the providers would be a meaningful and community driven way to improve or expand existing prenatal nutrition programs. We believe that open-ended interviews with both the providers and the mothers would provide insight into potential gaps in services and novel ways to improve programs that stem from within the community.

We would like to invite the Haisla Nation to participate in this community based research project. A significant emphasis will be placed on working with the community to co-create a project that is meaningful and specific to the Haisla Nation. To this end, I would work with community members to articulate a specific question that would be of value to the community and be guided in a process of qualitative data gathering, analysis and presentation to the community.

Please see the attached document that was created in partnership with First Nations Health Authority summarizing the project.

I appreciate any feedback that you may have.

Sincerely,



Rebecca Mercer

Understanding Prenatal Nutrition: A Community Based Qualitative Inquiry

Aim: To create a community-driven conversation around prenatal nutrition programs within three First Nations across British Columbia, with the goal of using community knowledge and relationship-building to guide future nutrition programming.

Who is involved? This project is a collaboration between participating communities, the First Nations Health Authority (FNHA), and Rebecca Mercer, a University of British Columbia Graduate Student. Rebecca Mercer is the lead researcher, and many FNHA staff working in the areas of nutrition, maternal and child care, community engagement, and research have contributed to this proposal.

The FNHA has worked with Ms. Mercer to ensure that this project is culturally appropriate and will help transform programs and services. We would now like to invite your community to engage with us and discuss how this project can reflect community wishes.

Why was my community selected? This project intends to have long, in-depth conversations with three communities. We know that no three communities can represent the diversity that exists in BC's over 200 communities. However, we want to ensure that each of our three communities provides as unique a perspective as possible. That's why we want to select a water-bound community, a northern community, and a community that is close to a referral centre.

We want to select communities that have a relatively high number of recent births, and that we know we will be able to visit repeatedly in-person for a long period of time. This is why we feel your community is ideal for this project.

Why is this topic important? This project represents the beginning of a dialogue surrounding prenatal nutrition and other maternity care programs. Nourishment during the prenatal period is critical for the health of mothers and future generations. By understanding experiences and important community-level factors, we will find a meaningful way forward for nutrition programming. The first step in creating these programs is to understand what is important to expecting mothers, Elders and families, and their providers by listening and learning from knowledge within the community.

How will information be gathered and shared? Data collection will be face-to-face, unstructured interviews with Rebecca Mercer. Transparent data governance principles that are aligned with the values and needs of the community will be established prior to starting the project in each community. These initial discussions will include topics such as: with whom will the data be shared? At what stage of the project will data be presented to participants? Where and how will the data be stored?

Who will be invited to participate? Women who are currently pregnant or have recently given birth, providers of nutrition care or advice, and any community member who has input to this topic, like families and Elders. Dialogue will be held prior to any data collection to identify how the community would like the project to proceed. These conversations will address questions such as: where will data be stored? Who should be interviewed? How will findings be shared within and outside of the community?

In what ways will the community benefit from participation?

- Short term benefits: knowledge sharing within the community through a community meal or nutrition education event, per diems for interview participants.
- Long term benefits: a more robust and specific prenatal nutrition program that better supports birthing women and improves the birth outcomes for both mother and child, which leads to improved wellness for the community.



Rebecca Mercer, BSc (Nutrition)

Master of Human Nutrition Candidate, UBC

Appendix C Recruitment poster



Eating for Two... Tell us what you think!

We are Rebecca Mercer and Dr. Jude Kornelsen from UBC's Human Nutrition and Family Practice Department. We are conducting a collaborative project with First Nations Health Authority on prenatal nutrition care in your community and would like to hear from you!

Who can participate? If you are a woman, 18 years or older, who is currently pregnant or have been pregnant within the last three years and have lived in your community for at least a year, we would love to talk to you.

What is involved? You will be asked to participate in 30-60 minute interview with Rebecca and Jude about your experiences with prenatal nutrition care in your community. Snacks, refreshments and a gift certificate will be provided to acknowledge your participation in the interview.

If you are interested please contact Rebecca Mercer at

arrange your interview



Appendix D Written consent form – providers



a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA

Faculty of Medicine (Vancouver Campus)
Centre for Rural Health Research
Department of Family Practice
320 – 5950 University Blvd
Vancouver, BC V6T 1Z3
Phone: 604-827-2193 | Fax: 604-827-2396
www.crhr.ca

PARTICIPANT INFORMATION AND WRITTEN CONSENT FORM

TITLE: Prenatal Nutrition for First Nations Communities

Principal Investigator:

Co-Investigator:

Dear Research Participant,

Hello. Our names are Dr. Jude Kornelsen and Ms. Rebecca Mercer and we are researchers from the University of British Columbia's Centre for Rural Health Research and Human Nutrition Department. You are invited to participate in a community based research project to understand your experience providing prenatal nutrition programs/care in your community.

We are interviewing individuals involved with health and nutrition planning in the Haisla Nation. Thank you for taking the time to participate!

YOUR PARTICIPATION IS VOLUNTARY

Your participation is completely voluntary. You can decide to whether or not you would like to participate at ANY point. Before you decided, it is important that you understand what the research involves. This consent form will tell you why the research is being done, and talk about what is involved in participating.

If you wish to participate, you will be asked to sign this form, **OR** provide oral consent if the interview is completed over the telephone. If you do decide to participate, you can withdrawal from the study at any point without giving any reasons for your decision.

WHAT IS THE PURPOSE OF THE STUDY?

The purpose of this study is to learn about the experiences of access and providing prenatal nutrition within Haisla Nation. We believe that in order to create the most effective and enjoyable prenatal nutrition programs, we must understand the opinions and experience of both providers and women accessing the services as well as the large health system framework. You are being invited to participate in this study because as an individual involved with the planning or purveyance of nutrition programs, you have



experienced what has been successful and important to consider when moving forward and we would like to learn from your experiences.

WHAT THIS STUDY INVOLVES

If you wish to participate in this study, you will participate in one interview with the researcher team. The interview will take place at a time that is convenient for you, will be completed via telephone or teleconference and will last approximately 30-60 minutes. You are being asked to have your interview audio recorded, however you may ask to be interviewed without being audio recorded. You may also request to have the audio recorder turned off at any point during the interview. You are welcome to ask questions at anytime, and offer your opinion and information on issues not raised by the researchers. You are able to refuse to answer any specific questions during the interview.

POTENTIAL RISKS AND BENEFITS

We do not anticipate there to be any risks in participating in this study. You are free to withdraw from the interview or refuse to answer a question if you feel uncomfortable at any time.

By participating in this study and sharing your experiences and knowledge you will have a voice in shaping the future of prenatal nutrition programs in Haisla Nation. It is the researchers hope that your participation in this research will have a benefit in improving the wellbeing and health of mothers in your community as well as other Aboriginal communities in British Columbia.

POTENTIAL USE OF DATA

Data from this research project will be used in Rebecca Mercer's graduate thesis dissertation as well as generated themes may be published in review journals.

CONFIDENTIALITY

If you choose to participate in this study, your identity will be kept strictly confidential. The interview will be audio-recorded and transcribed into a written record. A participate number, or pseudonyms will be used in place of your real name and interviews will be completely de-identified. Any identifiable information names or organizations that are mentioned during your interview will be removed from written transcripts and final dissertation. All written transcripts will be stored on a password-locked computer and only be accessed by the research team. The only people who will see your information that connect your participant number to your interview are the two main researchers.



REMUNERATION

If you chose to participate in an interview you will be provided a \$20 gift card, as well as snacks and refreshments during the interview. You will be given the gift card regardless of whether or not you choose to withdrawal from the interview. All interview participants will be presented the findings from the interviews prior sharing the information with the larger community or publication.

CONTACT INFORMATION ABOUT THE STUDY

If you require any additional information, or have any further questions about this study, please contact Rebecca Mercer (graduate student) by email or phone at:

You may also contact Jude Kornelsen (Rebecca's supervisor) by email or phone at:

CONTACT FOR CONCERNS ABOUT THE RIGHTS OF RESEARCH SUBJECTS CONSENT

Contact for complaints: If you have any concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or if long distance e-mail RSIL@ors.ubc.ca or call toll free 1-877-822-8598

CONSENT

Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time without jeopardy to your employment. Your signature below indicates that you have received a copy of this consent form for your own records and that you agree to participate in this study.

Do you give permission to the researchers to audio-record this interview?

Yes ☐ No ☐

Signature of Participant

Date

Please print your name

Appendix E Written consent form – Birthing women



a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA

Faculty of Medicine (Vancouver Campus)
Centre for Rural Health Research
Department of Family Practice
320 – 5950 University Blvd
Vancouver, BC V6T 1Z3
Phone: 604-827-2193 | Fax: 604-827-2396
www.crhr.ca

PARTICIPANT INFORMATION AND WRITTEN CONSENT FORM

TITLE: Prenatal Nutrition for First Nations Communities

Principal Investigator: Jude Kornelsen, PhD

Co-Investigator: Rebecca Mercer, MSc Candidate

Dear Research Participant,

Hello. Our names are Dr. Jude Kornelsen and Ms. Rebecca Mercer and we are researchers from the University of British Columbia's Centre for Rural Health Research and Human Nutrition Department. You are invited to participate in a community based research project to understand your experience with prenatal nutrition in your community.

We are interviewing women in your community who are currently pregnant or have given birth within the past 3 years as well as the health care providers who provide nutrition information in your community. We are also conducting interviews with women and care providers in two other First Nations in British Columbia. Thank you for taking the time to participate!

YOUR PARTICIPATION IS VOLUNTARY

Your participation is completely voluntary. You can decide to whether or not you would like to participate at ANY point. Before you decided, it is important that you understand what the research involves. This consent form will tell you why the research is being done, and talk about what is involved in participating.

If you wish to participate, you will be asked to sign this form, **OR** provide oral consent. If you do decide to participate, you can withdrawal from the study at any point without giving any reasons for your decision.

WHAT IS THE PURPOSE OF THE STUDY?

The purpose of this study is to learn about the experiences of access and providing prenatal nutrition within your community. We believe that in order to create the most effective and enjoyable prenatal nutrition programs, we must learn what is important to the birthing women within your community. You are being invited to participate in this study because as a pregnant, or recently pregnant women, you have experienced

Written Consent Form – Women

Version: October 5th 2016

Page 1 of 3



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THE UNIVERSITY OF BRITISH COLUMBIA

Faculty of Medicine (Vancouver Campus)
Centre for Rural Health Research
Department of Family Practice
320 – 5950 University Blvd
Vancouver, BC V6T 1Z3
Phone: 604-827-2193 | Fax: 604-827-2396
www.crrh.ca

accessing prenatal nutrition care in your community and we would like to learn from your experiences.

WHAT THIS STUDY INVOLVES

If you wish to participate in this study, you will participate in one interview with the researcher team. The interview will take place at a time and a place that is convenient for you, and will last approximately 30-60 minutes. You are being asked to have your interview audio recorded, however you may ask to be interviewed without being audio recorded. You may also request to have the audio recorder turned off at any point during the interview. You are welcome to ask questions at anytime, and offer your opinion and information on issues not raised by the researchers. You are able to refuse to answer any specific questions during the interview.

POTENTIAL RISKS AND BENEFITS

We do not anticipate there to be any risks in participating in this study. You are free to withdraw from the interview or refuse to answer a question if you feel uncomfortable at any time.

By participating in this study and sharing your experiences and knowledge you will have a voice in shaping the future of prenatal nutrition programs in your community. It is the researchers hope that your participation in this research will have a benefit in improving the wellbeing and health of mothers in your community as well as other Aboriginal communities in British Columbia.

POTENTIAL USE OF DATA

Data from this research project will be used in Rebecca Mercer's graduate thesis dissertation as well as generated themes may be published in review journals.

CONFIDENTIALITY

If you choose to participate in this study, your identity will be kept strictly confidential. The interview will be audio-recorded and transcribed into a written record. A participate number, or pseudonyms will be used in place of your real name and interviews will be completely de-identified. Any identifiable information names or organizations that are mentioned during your interview will be removed from written transcripts and final dissertation. All written transcripts will be stored on a password-locked computer and only be accessed by the research team. The only people who will see your information that connect your participant number to your interview are the two main researchers.



REMUNERATION

If you chose to participate in an interview you will be provided a \$20 gift card, as well as snacks and refreshments during the interview. You will be given the gift card regardless of whether or not you choose to withdrawal from the interview. All interview participants will be presented the findings from the interviews prior sharing the information with the larger community or publication.

CONTACT INFORMATION ABOUT THE STUDY

If you require any additional information, or have any further questions about this study, please contact Rebecca Mercer (graduate student) by email or phone at:

You may also contact Jude Kornelsen (Rebecca's supervisor) by email or phone at:

CONTACT FOR CONCERNS ABOUT THE RIGHTS OF RESEARCH SUBJECTS CONSENT

If you have any concerns about your treatment or rights as a research subject, you may contact the Research Subject Information Line in the UBC Office of Research Services at 604-822-8598 or if long distance e-mail to RSIL@ors.ubc.ca.

CONSENT

Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time without jeopardy to your access to further services from the community health centre, day care. Your signature below indicates that you have received a copy of this consent form for your own records and that you agree to participate in this study.

Do you give permission to the researchers to audio-record this interview?

Yes ☐ **No** ☐

Signature of Participant

Date

Please print your name

Appendix F Open-ended interview guide

OPEN-ENDED INTERVIEW GUIDE WITH PROBES Title: Prenatal Nutrition for First Nation Communities

| Participant | Main Question | Possible Probes |
|---|---|--|
| Questions for First Nation Women | Q1. Are you aware of programs that exist in your community that help you with healthy eating during pregnancy? | <ul style="list-style-type: none"> How did you hear about these programs? |
| | Q2. Have you gone to any of these programs, if yes, can you tell us about your experience? If you have not attend, why not? | <ul style="list-style-type: none"> What worked well? Please elaborate. Is there anything that you would change about the program you attended? |
| | | <ul style="list-style-type: none"> Were there any barriers to accessing the program? |
| | | <ul style="list-style-type: none"> How many times did you attend a nutrition program? |
| | Q3. Can you think of anything that would help Moms have better nutrition during pregnancy? | <ul style="list-style-type: none"> Why do you think that ____ are important? How did ____ help you with your nutrition during pregnancy? |
| | Q4. Do you have anything else to add? | |

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| Questions for Care Providers | Q1. Do women in the prenatal period have access to prenatal advice? | <ul style="list-style-type: none"> If yes, can you describe this advice or programs? |
| | | <ul style="list-style-type: none"> If no, do you think that there is a need for these supports? |
| | | <ul style="list-style-type: none"> Why do you think they are important? |
| | | <ul style="list-style-type: none"> Do you think that these programs have or would be successful in your community? |

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| | Q2. In an ideal world what kinds of nutritional supports would be in place for women? | |
| | Q3. What do you see as the major barriers in achieving these supports? | <ul style="list-style-type: none"> How do you think this impacts the nutrition of women in your community? |
| | Q4. If you had a message for policy and decision makers regarding nutrition and health eating programs, what would it be? | <ul style="list-style-type: none"> Why do you think that ____ is important? |
| | Q5. Do you have anything else to add? | |

| Participant | Main Question | Possible Probes |
|--|---|--|
| Health Planners/ Key Stakeholders | Q1. Can you describe your realm of responsibility and your involved with Haisla Health? | <ul style="list-style-type: none"> How long have you held the position? What aspects of nutrition care do you oversee? |
| | Q2. Can you describe how nutrition care is prioritized in the larger picture of health services within the community? | <ul style="list-style-type: none"> Have there been any significant changes, if so can you describe these changes? Do you feel that the current system is working well? Is there anything you would change? |
| | Q3. Have you experienced any challenges insuring adequate prenatal nutrition care for the women within Haisla Nation? | <ul style="list-style-type: none"> What do you think that could be done to address these challenges? |
| | Q4. What are some of the innovative strategies you see for Haisla Nation? | |