Prenatal Connections Evaluation Report

September 16, 2016

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Prenatal Connections (PNC) Evaluation Report

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INTRODUCTION

Background

Many women in rural and remote communities are required to travel to Winnipeg to give birth. They often travel alone, due to First Nations and Inuit Health Branch's Medical Transportation Policy Framework (Health Canada, 2005) and spend two to eight weeks away from home. Recommendations outlined by the Maternal and Child Healthcare Services (MACHS) Task Force were aimed at ensuring these women were able to access a coordinated system of prenatal and social supports (MACHS Task Force, 2008). Guided by a Steering Committee, WRHA's Population and Public Health Program began offering services for women traveling for birth from the Kivalliq region of Nunavut in 2010. A needs assessment was completed (Struthers, Winters & Metge, 2014) and was used to further inform service delivery.

Evaluation Framework and Methods

The purpose of the evaluation was to describe the program as it was implemented, identify impacts, what worked well and areas for improvement, in order to improve service and to guide future expansion. The evaluation used the RE-AIM framework which is an acronym for Reach, Effectiveness, Adoption, Implementation and Maintenance (or, Sustainability), and the evaluation questions addressed each of these 5 domains. This mixed methods evaluation included retrospective analysis of secondary data sources from the time period June 1, 2013 – May 31, 2014, in addition to surveys, interviews, focus groups and reflective journals from stakeholders. Stakeholders included women traveling for birth, Prenatal Connections staff and steering committee members and other health care providers in Winnipeg and referral communities. This evaluation was approved by the WRHA Research Access and Approval Committee.

FINDINGS

REACH

Q1: Does Prenatal Connections (PNC) reach all women (from targeted communities) who travel to Winnipeg for childbirth?

In total, 237 women who traveled from Nunavut to Winnipeg to give birth were identified in the WRHA Hospital Abstract. PNC received referrals for 188/237 (79%) of these women and contacted 83% (156/188) of women for whom a referral was received. Women from Rankin Inlet were referred less often than women from other communities.

EFFECTIVENESS

Q2: What impacts of the service can be identified?

Health system stakeholders identified increased support and decreased social isolation as the most significant impact of PNC. This was supported by survey findings. Respondents (women traveling for birth) described feeling more happy and supported, and less scared after visiting with a PNC nurse. Other impacts identified included addressing health and social concerns, and linking women to resources and recreational opportunities.

ADOPTION

Q3: Do all women who travel to Winnipeg for birth from targeted communities receive a referral to public health?

Seventy-nine percent (79%) of women traveling for birth were referred to PNC. The percentage of women not referred to PNC was fairly consistent across communities with the exception of Rankin Inlet, indicating that HCPs in Rankin Inlet have not fully adopted PNC.

IMPLEMENTATION

Q4: Was the program implemented as planned and based on findings from the needs assessment?

PNC was intended to provide services to all women who travelled to Winnipeg for birth from Northern and remote communities. Currently service is only provided to women from Nunavut. The Phase 1 PNC budget was based on the assumption that service would be provided to 500 clients each year, with an average of 2.5 prenatal visits per client at 2 hours per visit for a total of 5 hours per client (including both direct and indirect service time; Conceptual Model dated May 31, 2011). During the evaluation period (June 1, 2013 – May 31, 2014), PNC contacted 156 clients prenatally (and at least 45 clients postpartum), with an average of 4.1 prenatal visits per client. The average time per prenatal visit was 0.42 hours (25 minutes of direct service), and approximately an additional 0.65 hours (39 minutes) of indirect time (based on WRHA Time Study Report that indicates that each minute of direct time requires 1.56 minutes of indirect time; WRHA, 2015). PNC Public Health Nurses spent on average 1.1 hours (64 minutes) per visit, or 4.4 hours (262 minutes) per client in the prenatal period compared to the original estimate of 5 hours per client.

The conceptual model that was proposed in May 2011 outlined additional services that would be available through PNC including a Families First Home Visitor, and commercial electric breast pumps available for loan (these are not currently available). Currently, a Nurse Practitioner provides services as part of PNC (this was not part of the original conceptual model).

Q5: What facilitators/barriers were encountered related to accessing the service/service provision?

Facilitators identified by health system stakeholders included support of partner organizations, relationship development, employing a culturally diverse workforce, using evidence to design and guide the program, using volunteers and employing a non-judgmental, client-centred, culturally responsive service delivery approach. Barriers included time spent documenting, limited staff resources, staff turn-over in referral communities, differing practice models and competing priorities, and lack of time for non-client care activities.

Q6: How do women describe their experience with PNC? What works well/does not work well?

Evaluation participants reconfirmed the findings from the needs assessment related to the challenges that women face when they relocate for child birth. Clients were positive about their experiences with PNC. Eighty-six percent (86%) of survey respondents would recommend PNC to a friend and 90% felt they could talk to a PNC nurse about things they were worried about. Overall, health system stakeholders thought that health assessment and education were working well, as well as the provision of support, recreational opportunities, empowerment and advocacy at the individual client level. Opportunities for improvement were identified related to the prenatal groups (offered by PNC), the role of PNC related to advocacy and empowerment within the broader system, vicarious trauma and clarifying the role of the steering committee.

Q7: What aspects of the referral form and communication processes work well/not well?

Approximately 20% of women who traveled to Winnipeg from Nunavut for birth did not receive a referral to PNC. Initially, referrals were primarily being generated in Winnipeg by Kivalliq Inuit Services. However,

throughout the evaluation period, this shifted towards most referrals being generated in the referral communities. Evaluation participants thought that further work could be done to standardize referral processes in order to reduce missed (and duplicate) referrals, and facilitate finding clients once they arrive in Winnipeg.

Q8: What suggestions do evaluation participants have for improvement?

Client suggestions for improvement focused on recreational opportunities. Health system stakeholder suggestions related to health education, staff education and support, creating a welcoming environment for clients, increasing recreational opportunities and contact with family, expansion of the program to other communities, increased human resources, and enhanced partnerships.

MAINTENANCE / SUSTAINABILITY

Q9: To what extent has this service become a part of routine practice (how well has the service integrated into the maternity care system)?

Although challenged by staff turnover, referrals to PNC appear to be becoming part of routine practice in Kivalliq health centres. Further effort could be made in this area, in particular in Rankin Inlet.

Q10: What is the total cost of delivering the services?

For the fiscal year 2015/2016, the operating cost for PNC was $456,130 . No countervailing benefits (in $s) are currently available.

DISCUSSION AND CONCLUSION

Health disparities between the Indigenous and non-Indigenous populations of Canada are well documented and linked to colonization (for e.g., Wright, 2015; Public Health Agency of Canada, 2015; Truth and Reconciliation Commission of Canada, 2015a). While efforts to return birth to northern communities continue, families need support to cope with the current process to reduce health inequities to women, newborns, families and communities. The intent of PNC is to offer this support and thereby improve outcomes for women and infants.

PNC reaches the majority of women who travel for birth from the Kivalliq region, demonstrates positive outcomes related to providing support, health assessment and referrals and receives positive feedback from service users. Further efforts should be made to streamline the service (for example, documentation, referrals, identifying women most in need) and advocate for the needs of women traveling for birth with the goal of expanding the service to all women traveling to Winnipeg for birth.

CHAPTER ONE: INTRODUCTION

Background

In September 2008 the Maternal and Child Healthcare Services (MACHS) Task Force released a document outlining their recommendations to the Minister of Health. The recommendations were in three areas: (1) supporting access to services closer to home; (2) addressing service gaps and support; and (3) promoting promising practices across Manitoba. One identified gap was services for women and children who are required to seek service outside their community or region, and specifically, women traveling for birth. Many women in rural and remote communities are required to travel to Winnipeg, or other centres, to give birth or obtain specialized obstetrical care. These women typically spend two to eight weeks away from home.

The Task Force made three (3) recommendations related to gaps in services for women who relocate for birth:

- Ensuring that expectant women who relocate from First Nations, Inuit, Métis and other rural/remote communities to give birth have access to a coordinated system of prenatal and social supports;
- Developing human resource capacity within Manitoba regions to provide support to women traveling for birth, including public health nursing positions to act as contacts and service coordinators; and
- Developing resources to inform women of the services available to them. (MACHS Task Force, 2008).

Guided by a Steering Committee, WRHA's Population and Public Health Program began offering services for women traveling for birth from the Kivalliq region of Nunavut in 2010, with the intention of expanding the service to all women traveling for birth in Manitoba. This program was named Prenatal Connections (PNC). In 2012, a needs assessment was initiated and the final report was tabled in January 2014. The needs assessment identified the challenges of traveling for birth, the coping strategies that women and families use and identified suggestions for services and supports (for further information, see Struthers, Winters & Metge, 2014). Centre for Healthcare Innovation's Evaluation Platform was asked by the PNC Steering Committee to lead an evaluation of the service. An evaluation framework was developed collaboratively with the committee.

Purpose of the evaluation

The purpose of the evaluation is to describe the program as it was implemented, to identify what works well and areas for improvement. In addition, program impacts are identified. The evaluation was to be used to improve the service to better meet the needs of women and families traveling for birth and to guide the expansion of the service to other communities and regional health authorities in the future.

Stakeholders

The primary stakeholders and users of this evaluation are the PNC Steering Committee and WRHA Population and Public Health Program. Secondary users are Manitoba Health, Seniors, and Healthy Living, rural health authorities in Manitoba and the communities from which women relocate.

Evaluation Framework

The evaluation used the RE-AIM framework which is commonly used to evaluate healthcare interventions. The five components of the RE-AIM framework used to describe program impacts are:

Reach – The target population reached or the number and representativeness of individuals who participate in an intervention.

Effectiveness - The impact of an intervention on important outcomes, including negative or unexpected effects.

Adoption – Organizational support for the intervention.

Implementation – The intervention's fidelity to the original plan and any adaptations made.

Maintenance (or sustainability) - The extent to which a program or policy becomes institutionalized or part of the routine organizational practices and policies. (*Glasgow R, Boles S, Vogt T., 2013*)

Evaluation Questions

The following questions were developed collaboratively with the PNC Steering Committee:

Reach:

1. Does Prenatal Connections reach all women (from targeted communities) who travel to Winnipeg for childbirth?
   a. What characteristics are associated with women who receive prenatal Public Health Nursing (PHN) services from PNC?
   b. What characteristics are associated with women who do not receive prenatal PHN services from PNC?

Effectiveness:

2. What impacts of the service can be identified?

Adoption:

3. Do all women who travel to Winnipeg for birth from targeted communities receive a referral to PNC?

Implementation:

4. Was the program implemented as planned and based on findings from the needs assessment?
5. What barriers and facilitators were encountered related to accessing the service (client), referring to the service (HCPs) and service provision? What was done to overcome these barriers?
6. How do women and families describe their experience with PNC? What aspects of the service work well/not well?
7. What aspects of the referral form, including the guidelines, work well/not well?
8. What suggestions do evaluation participants have for improvement?

Maintenance/Sustainability:

9. To what extent has this service become a part of routine practice (how well has the service integrated into the maternity care system)?
10. What is the total cost of delivering the service?

Methods

This was a mixed method evaluation and included the following methods:

Quantitative methods included retrospective analysis of data from the Prenatal Connections Prenatal Log, WRHA Hospital Abstracts and the historical Families First screening database (provided by Healthy Child Manitoba). Descriptive statistics are provided in order to answer the evaluation questions.

Qualitative and survey methods included the following:

- Engagement of women traveling for birth through:
  - Online and/or paper surveys; and
  - Interviews and/or focus groups with women who had contact with PNC.
- Interviews (in person or by phone) with the following groups of health system stakeholders:
  - Prenatal Connections staff, management and steering committee members;
  - Other Winnipeg-based health care providers/leadership; and
  - Nunavut-based HCPs/leadership.
- Reflective journals kept by the PNC Public Health Nurses (PHNs).

Ethics and approvals: This study was approved by the WRHA Research Access and Approval Committee. A data sharing agreement was signed between CHI's Evaluation Platform and WRHA's Population and Public Health Program.

Informed consent: Participation in all surveys and interviews was informed and voluntary. Oral consent was used with care providers and written consent was used for interviews/focus group with clients.

Privacy and confidentiality: WRHA's Population and Public Health Program provided Centre for Healthcare Innovation's (CHI) Evaluation Platform with the fields listed in Appendix 1 from the Prenatal Connections Prenatal Log including all women in the log who gave birth between June 1, 2013 and May 31, 2014. WRHA's Decision Support identified and created a file of all women with a Nunavut postal code who gave birth in Winnipeg during the same time period (see Appendix 1). This file was linked with the Prenatal Log (using mother's first and last name, mother's date of birth (DOB) and infant's DOB) by CHI's Evaluation Platform on a secure computer issued by Manitoba e-Health to the WRHA.

Client names and DOB were necessary to link the data to the hospital abstracts. However, once this was complete, each record was assigned a study ID. Identifying information was removed for analysis and participants were identified only by their study ID. Once analysis was complete, the data were transferred to a storage file on a computer in a locked room in a secure area. A log will be kept to monitor access to the file. The file will be kept for 5 years and then destroyed.

Surveys were identified only by initials and date of birth. All interview and focus group participants were assigned a study ID. The study ID was not linked to the administrative data. Transcripts were identified by study ID, not by name or other identifying information.

Limitations of this report

This evaluation report has several limitations. First, quantitative data were primarily from the Prenatal Connections Prenatal Log, which, like other similar data sources, is subject to errors in data entry and missing data. Recruitment for interviews with health system stakeholders was very successful, but recruitment for surveys, interviews and focus groups with women traveling for birth was more challenging. As such, it is important to keep in mind that the perspectives included in this report are of those who were willing to participate in evaluation activities.

CHAPTER TWO: FINDINGS

Introduction

The period of evaluation was June 1, 2013 – May 31, 2014 for retrospective program data. All other data (surveys, interviews and focus groups) were collected between July 2015 and March 2016.

Characteristics of survey respondents: All clients who were contacted by a PNC nurse between July 2015 and March 2016 were eligible to complete the survey. The survey could be completed online (n=19) or on paper (n=2). Survey respondents ranged in age from 17 to 40 with an average age of 24. Most survey respondents had 1 or 2 visits with a PNC nurse at the time of survey completion.

Characteristics of interview and focus group participants:

Clients: All clients who were contacted by a PNC nurse between July 2015 and January 2016 were eligible to participate in an interview or focus group; seven (7) women participated. Participants were residents of 2 of the 8 communities in the Kivalliq region of Nunavut. Almost all had been to Winnipeg on previous occasions, either to have a baby or for other reasons.

Health system stakeholders*:* Interview requests were sent to approximately 46 health care providers and health system leaders including:

- Prenatal Connections staff, management and steering committee members (n=13/16 individuals participated);
- Other Winnipeg-based HCPs and leadership (n=9/13 individuals participated); and
- Nunavut-based HCPs and leadership (n=7/17 individuals participated).

REACH

Evaluation Question 1: *Does Prenatal Connections reach all women (from targeted communities) who travel to Winnipeg for childbirth?*

Reach will be discussed both as the number of referrals received by Prenatal Connections and the number of women who were contacted prenatally by a PNC Public Health Nurse (PHN). Contact includes both in-person and phone communication.

To estimate the number of women who traveled for birth, we identified women who gave birth in a Winnipeg hospital during the evaluation period and who had a Nunavut postal code. In total, 237 women were identified in the WRHA Hospital Abstract. During the evaluation period, PNC received 202 referrals according to the Prenatal Log. Matching newborn data were not found for 14/202 (7%) individuals, suggesting they did not give birth in Winnipeg (information from the Prenatal Log supports this conclusion). We therefore estimate that PNC received referrals for 188/237 (79%) women who gave birth in Winnipeg. PNC contacted 66% (156/237) of women who traveled for birth from Nunavut or 83% (156/188) of women for whom a referral was received (see Figure 1).

Seventeen percent (17%; 32/188) of the women who were referred to PNC were not contacted. Most commonly this was because the client delivered prior to receipt of the referral or prior to contact (25/33; 76%). The only other reason provided was that the client not staying at Kivalliq Inuit Centre (address known or unknown).

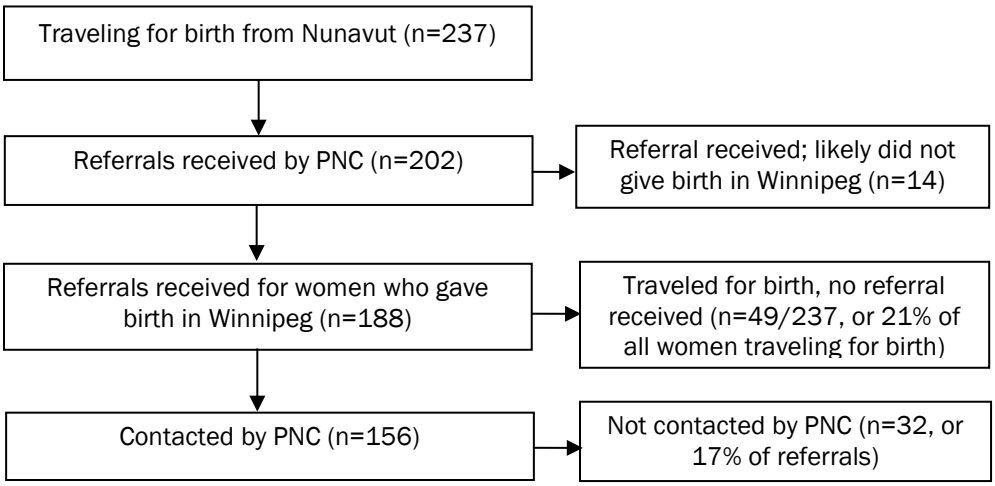

Figure 1. Reach of Prenatal Connections during evaluation period

What characteristics are associated with women referred to PNC and those who were not?

Community: Women traveling for birth to Winnipeg primarily came from the 8 communities within the Kivalliq region (see Figure 2). Fewer referrals came from Rankin Inlet than would be expected. Although this community accounted for 20% (48/237) of women traveling for birth from Nunavut to Winnipeg, it also accounted for about 43% (21/49) of women who were not referred to PNC (see Figure 3). Sixty-seven percent (67%; 32/48) of women from Rankin Inlet who travelled to Winnipeg for birth were not seen by PNC. This is much higher than the percentage of women from other larger referral communities who were not seen, for example, 30% (20/66) of women from Arviat were not seen (see Table 1). In addition, only 7% (2/27) of referrals for clients from Rankin Inlet were generated by midwives in the community (all other referrals were generated by Kivalliq Inuit Services at the Boarding Home, or PNC nurses).

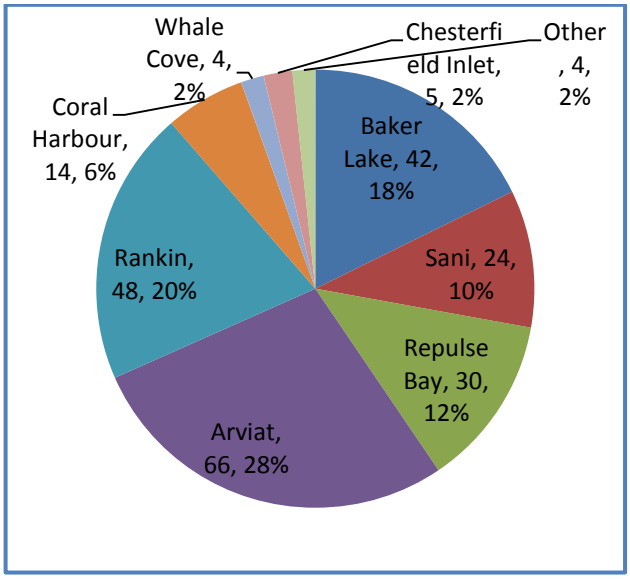

Figure 2: Community of residence, all women traveling for birth from Nunavut (n=237)

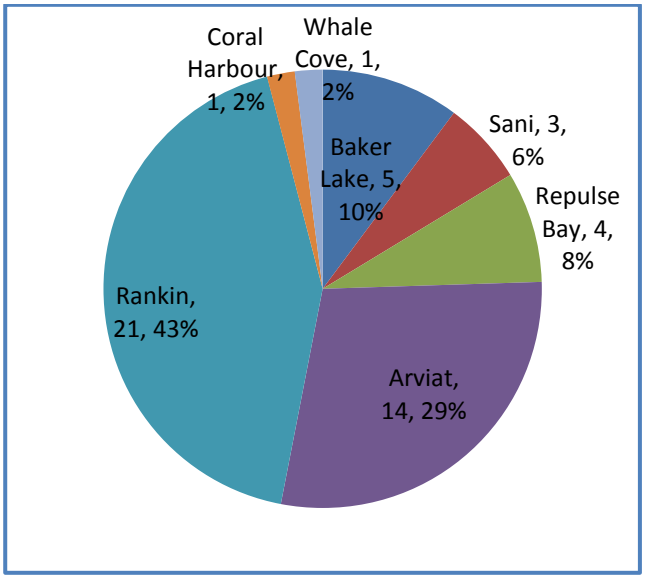

Figure 3: Community of residence, women with no referral (n=49)

Table 1: Number of women from each community who were "not referred" & "referred but not contacted" by PNC

Community	N=	Not referred	Referred but not contacted	Total (not referred or contacted)
Baker Lake	42	5 (12%)	6 (14%)	11 (26%)
Sanikiluaq	24	3 (13%)	1 (4%)	4 (17%)
Repulse Bay	30	4 (13%)	4 (13%)	8 (26%)
Arviat	66	14 (21%)	6 (9%)	20 (30%)
Rankin	48	21 (44%)	11 (23%)	32 (67%)
Coral Harbour	14	1 (7%)	2 (14%)	3 (21%)
Whale Cove	4	1 (25%)	1 (25%)	2 (50%)
Chesterfield Inlet	5	N/A	1 (20%)	1 (20%)
Clyde River, Churchill, Other	4	N/A	0	0

***Age**:* The average age of women contacted by PNC was 25 (range: 15-41 years). Average age was consistent across the various groups analyzed (all women traveling for birth, women not referred to PNC and women referred and contacted by PNC (see Table 2).

Table 2: Age of women referred and not referred to PNC

Women who were:	Age <20	Age 20-24	Age 25-29	Age 30-34	Age 35-39	Age 40+
Not referred to PNC (n=49)	8 (16%)	**18 (37%)**	15 (31%)	3 (6%)	3 (6%)	2 (4%)
Referred to PNC (n=188)	33 (18%)	**72 (38%)**	47 (25%)	20 (11%)	13 (6%)	2 (1%)
Contacted by PNC (n=156)	26 (16%)	**61 (39%)**	37 (24%)	18 (12%)	12 (8%)	2 (1%)

***Parity**:* Although first time mothers (parity=0) represented 25% (60/237) of all women traveling to Winnipeg for birth from Nunavut, they represented 35% (17/49) of women who did not receive a referral and 34% (11/32) of women who were referred but not contacted (see Table 3). Thirty-seven percent (37%; 22/60) of primips had a Rankin Inlet postal code, which suggests that the lower referral rate from Rankin Inlet likely impacts the referral rate for primiparous women.

Table 3. Parity of women not referred and referred to PNC

Women who were:		Parity					
		0	1	2	3	4	5+
Not referred to PNC (n=49)		**17 (35%)**	13 (27%)	8 (16%)	6 (12%)	2 (4%)	3 (6%)
Referred to PNC (n=188)							
	Total (n=188)	**43 (23%)**	37 (20%)	34 (18%)	26 (14%)	23 (12%)	25 (13%)
	Not contacted (n=32)	**11 (34%)**	6 (19%)	3 (9%)	2 (6%)	4 (13%)	6 (19%)
	Contacted (n=156)	**32 (21%)**	31 (20%)	31 (20%)	24 (15%)	19 (12%)	19 (12%)

Breastfeeding: According to available data, 65% (31/48) of women not referred to PNC were breastfeeding at discharge from hospital compared to approximately 57% (86/152) of women who were contacted (this difference is not significant at $p < .05$; see Table 4). These findings should be interpreted with caution for several reasons. First, they are lower than the breastfeeding initiation rates documented for Nunavut by Statistics Canada (70.9 in 2013 and 78.3 in 2014; Statistics Canada 2016). Second, traveling for birth, custom adoption and other factors may contribute to lower breastfeeding rates at discharge from hospital for women traveling for birth. This indicator does not tell us what happens once women leave hospital, and several evaluation participants suggested that some women from Nunavut choose to bottle feed in hospital to promote newborn weight gain in order to be discharged as quickly as possible from hospital, and may switch to breastfeeding following discharge. Third, lower rates among those referred to PNC may also indicate that the most vulnerable women are being referred to and seen by PNC.

Table 4. Breastfeeding rates

Women who were:		Breastfeeding at Discharge
Not referred to PNC (n=48)		**31 (65%)**
Referred to PNC (n=182)		104 (57%)
	Not contacted (n=30)	18 (60%)
	Contacted (n=152)	86 (57%)

Families First Screen: The Families First Screen is a validated tool used to screen for biological, social and demographic risk factors (Manitoba Center for Health Policy, 2010). A score of 3 or more risk factors indicates the family is experiencing disadvantage(s) and the infant may be at increased risk for a number of poor social and health outcomes. Of the 156 women who had at least one contact with a PNC nurse, 128 Families First Screen scores were documented (indicating a score was entered for 82% of women contacted). Of those for whom a score was entered, 45 families screened at risk (45/128; 35%). However, it is important to note that this is likely an underrepresentation of health inequity. Although scores were documented for 82% of women contacted, the screen cannot be completed prenatally, and scores were entered despite the screen being incomplete.

Additionally, this evaluation intended to examine 15 indicators from the Families First Screen in order to further describe the needs and characteristics of the population. The historical Families First screening database (provided by Healthy Child Manitoba) contained records for 104 women from Nunavut during the evaluation period, but almost all screens were incomplete (1 or more of the 15 selected data elements were left blank); on average 10 data elements were left blank for each client. For this reason, further analysis of the Families First Screening Data will not be included in this evaluation.

***Families First Parent Survey**:* The Families First Parent Survey is considered positive (indicating that a family would benefit from receiving additional services) if the score is 25 or greater. In total, a score was documented for 36 women who were contacted by PNC and 4 clients scored greater than or equal to 25. However, similar to the Families First screen, the Parent Survey cannot be completed prenatally, and scores were entered even if the survey was incomplete. More clients may have scored positive if the survey had been completed.

Length of Stay in Winnipeg (prenatal): Length of stay was estimated by using the client's arrival date in Winnipeg and the newborn date of birth. Although newborn date of birth was available for all women referred to PNC, date of arrival in Winnipeg was only available for 169/188 (90%). The average length of stay for all women referred to PNC was 20 days and 21 days for women contacted by PNC. Table 5 shows that on average women who had two or more contacts with a PNC nurse, stayed for just over 3 weeks in Winnipeg. Women with fewer visits, stayed less time in Winnipeg.

Table 5. Length of stay in Winnipeg (prenatal) for women referred to PNC

# of prenatal contacts:	Total number of women with data available	Length of Stay in Winnipeg (in days)		
		Average	Max	Min
No contact	20/32	11.3	35	<1
1 contact	14/18	13.6	40	1
2 or more contacts	135/138	**21.9**	66	7

EFFECTIVENESS

Evaluation Question 2: *What impacts of the service can be identified?*

Most significant impact of PNC – The question "What is the most significant impact of PNC?" was posed to all health system stakeholders and almost every response related to the support the women were receiving and decreased social isolation. Health system stakeholders thought the service decreased isolation through contact with the nurses and other services, and by connecting the women to each other.

This was supported by the survey findings. Respondents (women traveling for birth) were asked to select how they felt after visiting with a PNC nurse. Overall, respondents described more positive emotions following the visit (see Table 6). Most commonly, they felt more happy (10/21; 48%) and supported (14/21; 67%), and less scared (8/19; 42%).

Table 6. How did survey respondents feel after visiting with a prenatal nurse?

Feeling	After visiting with my prenatal nurse, I felt MORE: n=21	After visiting with my prenatal nurse, I felt LESS: n=19
Happy	10 (48%)	2 (11%)
Supported	14 (67%)	0
Sad	0	3 (16%)
Lonely	0	1 (5%)
Bored	0	5 (26%)
Scared	0	8 (42%)
Excited	1 (5%)	1 (5%)
Upset	0	4 (21%)
Homesick	0	3 (16%)

Other impacts of PNC: Aside from the provision of support and the reduction of social isolation, the following impacts were identified through the Prenatal Connections Log, the survey and interviews and focus groups with clients and health system stakeholders.

Addressing health and social concerns (including breastfeeding): After "providing support", this was the most common impact of PNC identified by health system stakeholders. Although this was only identified by a few clients during the focus group, the survey indicated that clients feel that PNC does help them to get their health needs met. All survey participants agreed or strongly agreed that the PNC nurse gave them information they wanted or needed about their health or their baby's health, and 81% agreed or strongly agreed that the PNC nurse helped them to get their health concerns looked after (see Table 7).

Table 7. Referrals made by PNC nurses to other resources

N= 21 women respondents	Strongly agree	Agree	Disagree	Strongly disagree	I don't know
My prenatal nurse gave me information I wanted/needed about my health and/or my baby's health.	**8 (38%)**	13 (62%)	0	0	0
My prenatal nurse helped me to get my health concerns looked after.	**5 (24%)**	12 (57%)	1 (5%)	0	3 (14%)
My prenatal nurse told me about activities in Winnipeg that I could go to.	**11 (52%)**	9 (43%)	0	0	1 (5%)

These survey findings are supported by the quantitative data. During the evaluation period, PNC nurses made at least one referral to other resources for 117/156 (75%) women contacted by PNC, 75 (48%) women had at least 2 referrals, and 27 (17%) had at least 3 referrals. In total there were 223 referrals made, most (n=122) were for health related concerns (see Table 8). Many women were referred to health promotion/prevention resources including Healthy Baby/Healthy Start groups (n=84), City of Winnipeg facilities for swimming (n=16), and for dental concerns (n=9). Only one referral was made for a mental health concern. Other referrals may have been for psychosocial and/or emotional support, but the reason for referral was not indicated.

Table 8. Referrals made by PNC nurses to other resources

Referral for referral:		Number of referrals (% of all referrals)
Health concerns	Obstetrician	75 (34%)
	Dentist	9 (4%)
	Triage	6 (3%)
	Nurse	16 (7%)
	Mental health	1 (0.4%)
	Klinic	4 (2%)
	Other Primary Care Provider	11 (5%)
	Total referrals for health concerns	***122 (55%)***
Healthy Baby/Healthy Start		84 (38%)
Swimming		16 (7%)
Employment Income Assistance (EIA)		1 (0.4%)
Total		**223**

Linking women to recreational opportunities: This was the primary impact identified by clients during the interview/focus group. They stated they appreciated the linkages PNC provided to recreational opportunities such as swimming, and bus tickets. This finding is supported by the survey in which 95% of participants agreed or strongly agreed that PNC nurses told them about activities they could attend in Winnipeg (see Table 7), and by the interviews with health system stakeholders who also identified this as a key impact of PNC.

Changes in demand for other services – It was theorized that contact with PNC prenatally may increase the likelihood of a woman accepting a postpartum public health referral (recognizing that once discharged from hospital women usually return very quickly to their home community). Data available in the Prenatal Log were not able to answer this question, in part because PNC was developed to provide prenatal services, and much of the postpartum service falls to the Downtown West Team (DTW), who are responsible for providing postpartum services. Services provided by the DTW team were not captured in the PNC Prenatal Log. Table 9 describes what is known about postpartum contacts. For almost one third of clients contacted by PNC, the Prenatal Log indicates there was no known postnatal contact with public health. The most commonly documented type of first postpartum contact (by PNC or weekend services) was by telephone and often this was followed by a second postpartum contact; however, the type of contact and the service provider for the 2nd and 3rd postpartum contacts were not documented.

Although quantitative data were not available to demonstrate the impact of PNC on demand for postnatal services, health system stakeholders thought that PNC had increased the workload of the Downtown West Team because more women were accepting postpartum services. They also thought PNC had decreased the demand on Kivalliq Inuit Services (KIS) nurses. Physicians did not feel an impact on demand for their services.

Improved communication and coordination of care – This was identified less frequently than the other impacts, but included communication with obstetricians and referral communities related to individual clients as well as sharing knowledge of Inuit culture, public health and health promotion strategies with other HCPs.

Table 9. Postnatal contact with Public Health

Postnatal		Women who were referred to PNC (n=188): No prenatal contact (n=32)	Women who were referred to PNC (n=188): Contacted prenatally (n=156)
No known postnatal transfer or contact		3 (9%)	**46 (29%)**
Transferred to DTW		**22 (69%)**	35 (22%)
1st postpartum contact (74% by phone)	**PNC**	4 (13%)	41 (26%)
	Weekend services	3 (9%)	33 (21%)
	Total PNC + weekend	7 (22%)	74 (47%)
2nd postpartum contact*		4 (13%)	49 (31%)
3rd postpartum contact[1]*		0	24 (15%)

ADOPTION

Evaluation Question 3: *Do all women who travel to Winnipeg for birth from targeted communities receive a referral to public health?*

As shown in Figure 1 (page 8), our data estimates that 21% (49/237) of women traveling for birth were not referred to PNC. Figure 3 and Table 1 also indicate that the percentage of women not referred to PNC is fairly consistent across communities with the exception of Rankin Inlet, where the percentage is higher. This indicates that HCPs in Rankin Inlet have not fully adopted PNC. This is supported by the qualitative findings. A few health system stakeholders stated that the midwives in Rankin Inlet did not automatically refer women to PNC, but offered PNC services to women through a process of informed consent. They thought that under these circumstances, most women declined the service. Explanations for this included the midwives having limited information about the program to provide women, concerns that the service would undermine the midwives efforts to support women to stay in Rankin Inlet and concerns about client confidentiality and the need for sharing personal health information. In addition, the evaluation found that staff turnover in all communities may impact awareness of the program.

> *Just as I said before, one more woman to have one more opportunity, something you get positive in Winnipeg, it's a conflict, another draw along with shopping. (Nunavut HCP)*

IMPLEMENTATION

Evaluation Question 4: *Was the program implemented as planned and based on findings from the needs assessment?*

Description of PNC: Evaluation participants described the following components of PNC and emphasized that the service was designed to be culturally responsive (for example, PNC is inclusive of traditional Inuit health practices, and incorporates resources from the Government of Nunavut, when possible):

1. *Providing support* and reducing social isolation;

* No provider was recorded for 2nd and 3rd postpartum visits.

2. *Conducting health assessments and providing health education* in accordance with the Clinical Practice Guidelines/social determinants of health to meet client needs and promote the development of healthy coping skills;
3. *Coordination of care and connection to other services* and recreation opportunities through enhanced communication with care providers in referral communities and Winnipeg and making referrals to connect women to other health, social and recreational opportunities; and
4. *Advocacy and empowerment* –The public health nurses advocate for women, empower them with information and build confidence to advocate for themselves. They would also like to play a role in advocating for social justice and healthy public policy.

A steering committee guided the development of the service. Services include one-to-one and group sessions provided by public health nurses and a nurse practitioner.

Does PNC address all recommendations from the MACHS taskforce? Prenatal Connections was developed in response to the Maternal and Child Health Services Taskforce report (see Figure 4 for recommendations from the report that have bearing on PNC). PNC directly addresses 11a and 12, leaving 11b & c unaddressed and 13 partially unaddressed.

Recommendations from the MACHS Taskforce

11. Ensure that expectant women who relocate from First Nations, Inuit and Métis communities and rural/remote communities for extended periods of time to give birth have access to a coordinated system of prenatal and social support as follows:

    a) Create a coordinated referral process between Federal and Provincial (RHAs) jurisdictions that includes consultation with First Nations, Inuit and Métis, a two-way communication between RHAs at all critical points of service provision from when women leave the community and return home to ensure a quality, seamless delivery of healthcare services and supports.

    b) Establish a program-level working group (government departments, service delivery staff and key stakeholders) to engage the community-owned boarding homes to create and formalize policies, provide a supportive environment, identify resources that will address the well-being of prenatal women including safety, nutrition, breastfeeding, physical and emotional needs of women.

    c) Provide training for peer support workers to provide pre and postnatal social support as well as labour support for delivery in a culturally appropriate manner including services in First Nations, Inuit and Métis languages.

12. Develop human resource capacity within regions that provide support to women who have temporarily relocated to access birth services outside their home communities, including Public Health Nurse positions (and support) in Winnipeg to act as contacts and service coordinators.

13. Develop resources to inform women of the services available to them (i.e. Healthy Baby Program, transportation costs to attend programming, room rental for gatherings, payment for other services such as Elder support, speaker honorarium, healthy food provision, etc) and support them to access these services (i.e. card with contact numbers).

Figure 4. Recommendations from the MACHS Taskforce

How does PNC differ from the plan? In May 2011, a conceptual model was developed for PNC. In addition to one-to-one PHN services and groups and administrative support to assist with managing the referrals, preparing charts and other administrative tasks, this model also included a Families First Home Visitor, and the loan of breast pumps. Neither of these services are currently available. Although not part of the original conceptual model, a nurse practitioner provides services through PNC.

The conceptual model (dated May 27, 2011) indicated that during Phase 1 (2011-2012) PNC would provide service to approximately 500 women/ year, and services would expand over the following 2 years to include all women traveling for birth (~1200). Currently service is only provided to women from Nunavut (n=237 during the evaluation year). Health system stakeholders thought that additional resources were required to expand the program (both geographically and in terms of services provided). Some PNC staff/steering committee

members thought that the MACHS recommendations were no longer a government priority and this would be a barrier to expanding the service.

The funding in the conceptual model was based on the assumption that women would arrive in Winnipeg at 38 weeks gestation, and receive 2.5 prenatal visits from PNC at 2 hours per visit for a total of 5 hours per client (including both direct and indirect service time; Conceptual Model dated May 31, 2011). For the 156 clients who were contacted by PNC, the average length of stay in Winnipeg prior to delivery was 3 weeks and there were 639 prenatal visits (average of 4.1 visits/client). The PNC Steering Committee was supportive of this increased number of visits per client out of recognition of the need to be client-centred, build trust and work at the clients' pace.

A time study of PHN services was conducted within the WRHA in 2015. It divided clients into survey positive and negative based on results of the Families First Parent Survey, and found that for survey positive clients, it took 1.56 minutes of indirect service time for each 1 minute of direct service time and for survey negative clients it took 1.31 minutes of indirect service time to support each minute of direct service time (WRHA, 2015). On average, PNC nurses spent 0.42 hours (25 minutes) direct service time per prenatal visit (data was available for 620/639 visits). Using the findings from the Time Study Report for survey positive families, we can estimate that on average a PNC prenatal visit takes 1.1 hours (64 minutes) in total (direct + indirect time). Based on this, PNC nurses spend 4.4 hours (262 minutes) per client in the prenatal period compared to the original estimate of 5 hours per client. Table 10 shows the average amount of direct time for each type of PNC visit, as well as the estimated total time (direct + indirect).

Table 10. Average direct and total (direct + indirect) time for each type of prenatal visit

Type of visit (prenatal)	Average direct time in minutes	Estimated total time/visit (direct + indirect[2]) (mins)	# of visits with data available
Community	19	49	7
Doorstop	16	41	167
Group	54	138	58
Home Visit	38	97	152
Telephone	16	41	233
Text message	15	38	3

Table 11 indicates the visits by type and contact number 1-10. Most commonly, initial contact (Contact 1) was via a doorstop visit. The second visit was most frequently a home visit and the third visit was most frequently by telephone. In addition, PNC provided services to approximately 45 of the 156 clients seen prenatally (29%) for the first postpartum visit, and as many as 77 additional postpartum visits. We were not able to determine exact numbers because although the service provider is recorded in the Prenatal Log for the first postpartum visit, they are not recorded for subsequent visits. Postpartum home visiting by the PNC Public Health Nurses was part of the original conceptual model, but it was not part of the original budget. However, it was provided by PNC Public Health Nurses when capacity was available to promote continuity of care.

[2] Indirect time was calculated with the assumption that PNC clients were most similar to survey positive clients in terms of indirect time needed as a result of need to travel for birth.

Table 11. Type of contact and length of contact by contact number

Contact Number	Type of visit (n=639)						Total visits
	Group	Telephone	Doorstop Visit	Home Visit	Text Message	Community	
Contact 1	15	49	**70**	22	0	0	156 (24%)
Contact 2	14	48	23	**50**	0	3	138 (22%)
Contact 3	10	**47**	17	29	0	1	104 (16%)
Contact 4	6	**30**	21	20	1	2	80 (13%)
Contact 5	8	**22**	10	15	1	0	56 (9%)
Contact 6	2	**20**	12	6	0	1	41 (6%)
Contact 7	1	9	**11**	8	0	0	29 (5%)
Contact 8	4	**5**	2	**5**	1	1	18 (3%)
Contact 9	1	**6**	2	1	1	0	11 (2%)
Contact 10	1	2	1	**2**	0	0	6 (1%)
Total	**62 (10%)**	**238 (37%)**	**169 (26%)**	**158 (25%)**	**4 (1%)**	**8 (1%)**	**639**

Are services being offered according to the Service Delivery Standards & Clinical Practice Guidelines? The draft Service Delivery Standards and Clinical Practice Guidelines state that clients must be contacted within 2 working days of referral and the Families First Screen should be initiated on the first contact. For PNC, referrals are often received far in advance of the client arriving in Winnipeg, and efforts are made to make contact within 2 working days of arrival in Winnipeg. Seventy percent (70%; 131/188) of women for whom a referral was received were contacted within 2 working days of arrival in Winnipeg. Of the 156 women who were contacted by PNC, 84% were contacted within 2 working days. Families First Screens were documented for 128/156 (82%) families contacted by PNC, and of those, 62% (79/127) were initiated at the first prenatal contact.

Evaluation Question 5: *What barriers and facilitators were encountered related to accessing the service (client) and service provision? What was done to overcome these barriers?*

All of the facilitators and barriers listed below were identified by health system stakeholders.

Facilitators to access and service provision:

- Support of partners: Several evaluation participants described the support of partners as key to the success of PNC, and in particular Kivalliq Inuit Centre (KIC) and Kivalliq Inuit Services. These organizations provide food, space for the group and storing equipment, advertise the group, provide transportation for the women to activities and outside groups and the nurses provide support to the PHNs. Partners described PNC as supportive and willing to share knowledge;

- Developing relationships: With the other service providers, both in partner organizations (e.g. Kivalliq Inuit Center, Kivalliq Inuit Services, Wolseley Family Place, Healthy Start for Mom and Me) and in referral communities;
- Employing a culturally diverse workforce;
- Using evidence to design and guide the program including best practice, professional knowledge and a needs assessment;
- Volunteers who assist in recruiting women to group, setting up for group and escorting women to group at Wolseley Family Place; and
- The approach to service delivery that is: 1) non-judgmental and flexible; 2) focused on the needs of the client and where the client is at; and 3) culturally responsive.

Barriers to access and service provision:

- Time spent documenting: This was a significant concern for the nurses providing care. The issue was twofold. First, without a care map, the documentation system was inefficient. Second, although it seemed evaluation participants thought the Families First Screen was a valuable and efficient tool, the nurses questioned the usefulness of the Parent Survey, especially considering the time spent documenting it, and that the information did not lead to the provision of Families First services as Families First is not available in Nunavut;
- Staff resources: Several evaluation participants identified limited staff resources as a barrier to providing service. The small staff complement (2.0EFT PHN) makes it difficult to provide continuity of care prenatal to postpartum, to provide coverage for vacation, conferences and sick time, and to engage in program development;
- Lack of familiarity with program staff and Winnipeg and "being shy" were identified as barriers to women accessing programs outside the boarding home. Volunteers were identified as facilitators to women attending these programs, but they were not always available;
- Turn-over of staff in referral communities was identified as a barrier to building and maintaining relationships with the referral sources;
- Differing practice models and competing priorities: This was the most commonly mentioned barrier or challenge to providing care. It was identified by both internal and external HCPs. Participants described competing priorities within their roles, and differing perspectives and priorities from other care providers. For example, the PNC team operates using the social determinants of health and equity based framework, whereas others may not. This leads to differences of opinion and conflicted feelings when others are perceived to be less client-centred, or to define the client more broadly than by their medical needs;
- Lack of time for non-client care activities: Program staff felt that an important aspect of their role should be to advocate for the needs of all women traveling for birth, develop partnerships to enhance comprehensive support for women and review evidence to ensure the program is delivered in an evidence informed way. However, they find it difficult to find time to engage in these non-direct care activities; and
- Other barriers identified included the continued challenge of seeing women postnatally when they return home quickly, limited knowledge of resources available in referral communities and finding private space to conduct assessments.

Evaluation Question 6: ***How do women and families describe their experience with PNC? What works well/does not work well?***

Although this evaluation question focused on experiences with PNC, during interviews with clients and health system stakeholders, participants described the *overall* experience of traveling for birth. Evaluation participants reconfirmed the findings from the needs assessment related to the challenges that women face when they relocate for child birth. They described:

- Limited social support (identified by clients and health system stakeholders): Women often travel alone and are separated from partners, children, family and community, with limited ability to connect with them while they are away. Children were sometimes weaned (i.e., breastfeeding was discontinued) when mom had to travel, and women were without their support network to help them cope with being away from home, make important decisions about labour, birth and care of the newborn and advocate on their behalf.

  I have talked to the ladies, "I am scared" is what they tell me. (Winnipeg HCP)

  First leaving their families and coming to birth alone without family. Leaving behind cultural supports and coming to southern ways, how is that any different, a lot of similarities with residential school. (PNC team member)

  They are forced to leave their children, husband and family. I know that there is lot of loneliness and isolation. (Nunavut HCP)

  Probably the biggest one is missing milestones in their other kids lives … doesn't want to go until sees her kids off to first day of Kindergarten. (Nunavut HCP)

  If they could bring my mother that would be good, she's going to adopt the baby, she's just waiting for approval, then she could come. She has to go to the health centre, and if they approve her she will come down. I'm just scared. I can't wait. (Client)

  When we're here for a very long time as pregnant women, especially without escort, or like when we have kids back home it gets very emotional and sometimes it's very stressful, thinking about our little ones back home. It's hard to leave them and having to wait here for so long. (Client)

  It's just stressful when you don't know if they're eating or not. (Client)

- Challenges managing daily life in Winnipeg (identified by clients and health system stakeholders): Although PNC clients described aspects of their experience in Winnipeg that they liked, such as shopping (in particular, that many things were less expensive), being able to access some recreational opportunities (e.g., swimming), the improved amenities at the boarding home (especially the free wifi), and having a break from household chores, both clients and health system stakeholders described challenges including navigating the city and the medical system (including FNIHB), fear due to being in an unfamiliar setting, living with roommates, adjusting to a different climate and food and having very little to do.

- Health and healthcare challenges (identified by health system stakeholders): Health challenges raised by evaluation participants included smoking and how FNIHB policies impact breastfeeding (e.g., mothers must travel without breastfeeding children, women are only allowed one breast pump in their lifetime, women are motivated to bottlefeed in hospital to ensure their newborn gains weight so they can be discharged). Healthcare providers also experienced challenges providing services to women traveling for birth, especially related to paperwork and communication. For example, although many agreed that KIS played an invaluable role in coordinating appointments, sometimes physicians' offices and hospitals do not

receive necessary paperwork, and Northern communities described challenges contacting physicians in a timely way. Missing appointments (without cancelling) was another challenge.

- Choice and power (identified by health system stakeholders): Some evaluation participants thought that women were subjected to patriarchal government policies. They thought this resulted in feeling disrespected by HCPs and a lack of trust in HCPs.

- Perceived consequences of traveling for birth (identified by health system stakeholders): Mentioned here were the negative health outcomes associated with the stress of traveling for birth and domestic violence issues. However, most comments in this area related to custom adoption and the challenge women face in caring for a newborn who will be custom adopted.

- Misunderstandings about language and culture (health system stakeholders): This included language barriers and misunderstandings about custom adoption.

Client perspectives about what is working well/not well

More specific to their experience with PNC, 86% (18/21) of survey respondents agreed or strongly agreed they would recommend PNC to a friend and 90% (19/21) agreed or strongly agreed that they could talk to a PNC nurse about things they were worried about (see Table 12). Several clients who participated in the focus group also commented that they appreciated the respectful care they received from PNC. Fourteen survey respondents answered the question asking what they liked best about visiting with a PNC nurse. Responses were categorized and indicate that women liked: Being able to talk about their concerns and get information (n=8); the support, caring and understanding they received (n=5); health assessment (n=2) and information about smoking cessation (n=2). Fifteen survey respondents completed the sentence "One thing that would make this service better is:". Most respondents indicated there was nothing that could make the service better (n=12), a couple commented that the service would be better if more women joined or there were more nurses and one commented it would be better if there were more outings accompanied by PNC staff.

Table 12. Survey responses

N=21 women respondents	Strongly agree	Agree	Disagree	Strongly disagree	I don't know
I would recommend visiting with a Winnipeg prenatal nurse to a friend.	8 (38%)	**10 (48%)**	0	0	3 (14%)
I can talk to my prenatal nurse about things I'm worried about.	**11 (52%)**	8 (38%)	0	0	2 (10%)

Health system stakeholders' perspectives about what is working well/not well

Health assessment and education: PNC provides health assessment to individual clients, and health education through both one-on-one and bi-weekly groups held at Kivalliq Inuit Centre (KIC).

Working well: Stakeholders thought that the role of the PHNs and NP in providing health assessment and education was valuable.

Challenges: The PHNs stated they try to address all areas of the Clinical Practice Guideline, but indicated the area related to personal safety was more difficult to address than other areas. Also, accessing interpreter services has been a challenge in some cases.

Groups: Feedback about the groups (lead by the NP) was mixed. During an eight month period following the end of the evaluation time period (November 2014-June 2015), seventeen (17) groups were scheduled, 2 were cancelled and 15 were held for an average of 1.9 groups/month. The total attendance at groups during this time was 49, or 3.3 participants per group. However, 3 groups (20%) had zero participants.

Working well: Evaluation participants thought some aspects of the group worked well, for example, being able to reach more women in an efficient way and opening the group up to others staying at Kivalliq Inuit Centre (KIC), such as elders, parents and grandparents. This was thought to be helpful for both the group participants and also the group leaders who had the opportunity to learn more about the culture.

Challenges: Some evaluation participants wondered whether the groups were a good use of Nurse Practitioner time, and whether they were effective.

Recreation: Prenatal Connections connects some women (see Table 7) to recreational opportunities outside of the Inuit Centre including the Cindy Klassen Recreational Center (where they can access swimming, library and computers).

Working well: Participants thought recreational opportunities provided both direct and indirect health benefits (relaxation, improved ability to cope) to women traveling for birth.

Challenges: A lack of volunteers to accompany women on outings.

Providing support: An essential purpose of PNC was to provide support for women traveling for birth.

Working well: Evaluation participants described many examples of how the PHNs build trusting relationships with clients and therefore provide support to women traveling for birth.

Challenges: There was some indication that some supports were missing, for example, after hours support, midwifery care and doulas.

Advocacy and empowerment of women traveling for birth:

Working well: Advocacy and empowerment were seen as key pieces of the service at an individual client level. Also, the PNC team has presented PNC at several conferences (e.g. Canadian Public Health Association (2013 & 2014), the Canadian Association of Community Health Nurses (2015), the Canadian Association of Occupational Therapists (2015), University of Manitoba Indigenous Health Symposium (2015)).

*Challenges: T*he degree to which the service should engage in advocacy within the broader system was less clear.

Vicarious Trauma, compassion fatigue and racial battle fatigue: Vicarious trauma has been defined as "the transformation that takes place within us as a result of exposure to the suffering of other living beings" (van Dernoot Lipsky & Burk, 2009). Compassion fatigue has been defined as "the natural, consequent behaviors and emotions resulting from knowledge about a traumatizing event experienced by a significant other. It is the stress resulting from helping or wanting to help a traumatized or suffering person" (Figley, 1995). Racial battle fatigue is described as "the depletion of mental and physical resources due to the constant engagement of stress response systems to cope with ongoing discrimination (Currie, et al., 2012) and is applicable to indigenous care providers.

Challenges: The situations PNC providers hear and help women cope with can be very challenging and upsetting. This was compounded for Indigenous care providers, who also had to cope with the stress of being part of a system that was seen to be lacking in cultural responsiveness. There was very little support available to staff to deal with either vicarious trauma or the challenges of being an Indigenous HCP within a western medical system and the value conflict that exists between the two thought paradigms. These concerns may have an impact on retention of staff.

The steering committee: The Steering Committee is made up of members of the Population and Public Health program and representatives from several partner organizations.

Challenges: At the time of the evaluation, many steering committee members felt there was a need to redefine the terms of the committee. Suggestions included recruiting someone of Inuit background, and redefining the role of the committee including their role in advocacy within the system. Advocacy may be supported by producing semi-regular reports that committee members could use to explain the service and advocate on its behalf.

Evaluation Question 7: *What aspects of the referral form and communication processes work well/not well?*

The PNC referral form is a two-way communication tool completed by the referral source and sent to central intake in Winnipeg. Ideally, all referrals would come from the client's home community. Once the client's course of care in Winnipeg is complete, the referral form is sent back to the referral community with a summary of the care provided including any recommended follow-up. The available data indicates that approximately 20% (49/237) of women who traveled to Winnipeg from Nunavut for birth did not receive a referral to PNC. Health system stakeholders described several reasons why these women may not have been referred including:

- They did not consent to the referral;
- The health centre did not make the referral; and
- They were not identified by PNC or Kivalliq Inuit Services upon arrival in Winnipeg.

Based on available data, during the evaluation period, 65/187 (35%) referrals were generated in Nunavut, 102/187 (55%) were generated by Kivalliq Inuit Services, and 17/187 (9%) were generated by Prenatal Connections (see Table 13).

Table 13. Number of referrals for each referral source

Referral source		Number of referrals N=188
Nunavut	Arviat	11 (6%)
	Baker Lake	27 (14%)
	Chesterfield Inlet	3 (2%)
	Rankin Inlet	3 (2%)
	Repulse Bay	14 (7%)
	Sanikiluaq	5 (3%)
	Other	2 (1%)
	Total Nunavut	***65 (35%)***
Kivalliq Inuit Centre/Services		102 (54%)
Prenatal Connections		17 (9%)
Other WRHA		3 (2%)
Missing data		1 (0.5%)
Total		**188**

Part way through the evaluation period (November 2013), PNC began sending weekly (and then biweekly) reminders to each community to encourage them to send referrals. This corresponds to an increase in referrals coming from the referral communities (14/78 [18%] were generated in Nunavut during the 1st half of the evaluation period, compared to 46/78 [59%] during the second half). Almost all referrals (96%; 181/188)

were generated by nurses. Physicians and midwives account for 2% of referrals and self-referrals and other referral sources account for the remaining 2%.

PNC team members identified several areas for improvement related to the referral forms:

- Missed (and duplicate) referrals: Several factors were thought to contribute to this phenomenon, including turnover in northern communities, lack of consistent processes for referral across the communities, and lack of awareness about the existence and purpose of PNC;
- Case finding: For much of the evaluation period, PNC PHNs were engaged in case finding, meaning they actively sought out clients who were staying at KIC. However, this was a time intensive process, and recently they have decreased the amount of case finding they do in favour of using the time for other tasks; and
- Finding clients: Once referrals are received, evaluation participants indicated that finding clients can be time consuming on the part of the PNC admin and PHNs, especially if the client is not at KIC.

Evaluation participants from the referral communities agreed they do not have consistent processes, and that referrals are missed. They appreciated the reminder faxes, although it was also pointed out that the fax machines can be unreliable, leading to challenges sending and receiving referrals.

Communication: The Prenatal Connections team communicates primarily with 4 groups; The Downtown West Public Health team, obstetricians, referral communities and other partners. Health system stakeholders thought that communication with the Downtown West team was supported by electronic systems (e.g., Momentum), shared access to public health charts, having an established process for managing postpartum referrals including discussing coverage needs when possible ahead of time and the familiarity and relationship that exists between the two teams. Although both teams agreed it would be best if PNC saw all clients postpartum, the reality was that with limited resources and a primary mandate to see clients prenatally, PNC does not have the capacity to visit many women postpartum. The referral of PNC clients to the Downtown West team for postpartum care can create confusion and tension between the teams because it requires time and effort to establish who is seeing the client, where the prenatal information is, and to send documentation to the other team. The two teams also have differing processes. For example, PNC always sends communication to the home community upon discharge of services whereas Downtown West does not, unless there is something significant to communicate.

The PNC PHNs communicate with the physicians and nurse practitioner via fax (client related) or email (program related). Overall, this seemed to be working well. However, one participant preferred that this communication be kept to medical concerns, and be short. The physicians also felt that some information they received from PNC was redundant (e.g. requests to prescribe prenatal vitamins, which they do already). Finding time for communication was generally challenging for the nurses, physicians and nurse practitioner.

There were also suggestions for improving communication with Healthy Start for Mom and Me, which included PNC communicating the number of women who would likely be attending group, the possibility of Healthy Start sending an outreach worker to KIC to explain the group and invite women to attend and ongoing communication related to the needs of the women.

Evaluation Question 8: *What suggestions do evaluation participants have for improvement?*

Client suggestions for improvement:

- Increase resources available at Kivalliq Inuit Centre (KIC) (e.g., van for pregnant women, sewing room, improved phone service);
- More recreational opportunities both in and out of the building (e.g. craft and sewing group, exercise group, cooking group); and
- Have a care provider available who you can call when you think you are in labour.

Health system stakeholder suggestions for improvement:

- Provide client education about: Nutrition, breastfeeding, breast pumps, formula, smoking cessation, parenting, SIDS;
- Staff education and support: Education about Inuit culture, support for vicarious trauma and cultural support;
- Making women feel welcome and familiar: Introduce PHNs to women prior to their arrival; Enable Healthy Start for Mom and Me staff to meet women prior to group;
- Increased recreational opportunities;
- Help women to connect with home through Skype™ or telehealth;
- The addition of other resources including a "coordinator" with experience in project management, partnership building, working across jurisdictions, an "outreach worker" or "peer support worker" to help with case finding, groups and connecting women with resources, and a midwife to assist with coordination of care between home community and Winnipeg;
- Expansion of the program to rural and remote Manitoba communities;
- Improved continuity of care pre and postnatal;
- If further funding is not available, develop a strategy to enhance program within current funding, including looking at the service delivery model (e.g. could women from other boarding homes come to groups? Are there opportunities for integration with Downtown West Team?), and redirection of NP and admin resources;
- Seek out partnerships and enhance partnerships with social services and family services, midwifery, and doulas;
- Improved communication among all partners: home communities, Wolseley Family Place, Healthy Start for Mom and Me, obstetrician, Kivalliq Inuit Services, Kivalliq Inuit Centre (KIC), Downtown West and others.
  - Provide more information about PNC to partners, and partners to PNC;
  - Shared electronic health record; and
  - Gather information about resources available in home communities.
- Improve referral process to identify women not staying at boarding home;
- Increased cultural responsiveness, for example hire Inuit staff, provide cultural foods for groups;
- Referral form: More information about vaccinations given and any follow up care required, and psychosocial concerns.

MAINTENANCE/SUSTAINABILITY

Evaluation Question 9: *To what extent has this service become a part of routine practice (how well has the service integrated into the maternity care system)?*

Answering this question draws on findings related to other evaluation questions, and will consider the various components of the maternity care system to be the health centres in the referral communities, obstetricians, hospitals and public health.

Referral communities/Kivalliq Inuit Services: Nurses in the referral communities are making referrals to PNC for most women traveling for birth, and numbers improved throughout the evaluation period, indicating it is becoming a part of routine practice. Rankin Inlet is an exception, where it appears that referral to PNC has not become a part of routine practice. Referral communities appreciate receiving the information that PNC provides back to the community on the referral form at the end of service. However, this information is not provided if the client is seen by the DTW team postpartum.

Obstetricians: Were positive about PNC and accepting of the service.

Hospitals: Although hospitals make the postpartum referral to public health, and receive patients referred by PNC to triage, direct interaction with PNC is minimal and they were not included in the evaluation.

Public health: It was noted that shared electronic systems support the integration of PNC into the broader public health team. The two teams must work together to provide postpartum services, and this can be challenging at times.

Evaluation Question 10: *What is the total cost of delivering the services?*

For the fiscal year 2015/2016, the operating cost for PNC is $456,130. No countervailing benefits (in $s) are currently available. Table 14 shows the breakdown of the budget.

Table 14. PNC budget April 1, 2015 –March 30, 2016

Operating Expense		April 1, 2015 – March 30, 2016 (Actual)
Compensation (salaries + benefits)	PNC: 2.0EFT PHN, 0.4EFT team manager, admin, nursing relief	$356,674
	Klinic: 0.2EFT nurse practitioner	$25,540
	HSC: 0.5EFT unit clerk	$24,972
Equipment & supplies		$1,427
Travel (Staff & Service recipient)		$1,853
Continuing education		$1,013
Software maintenance		$44,651
Total		**$456,130**

CHAPTER THREE: DISCUSSION AND RECOMMENDATIONS

DISCUSSION

Health disparities between the Indigenous and non-Indigenous populations of Canada are well documented and are linked to colonization (e.g. Wright, 2015; Public Health Agency of Canada, 2015; Truth and Reconciliation Commission of Canada, 2015a). Birth is one of the many aspects of Indigenous life that has been colonized. The colonization of birth is rooted in the Western medical model which prioritizes risk, and in particular risk to physical health, over other aspects of health and wellbeing (Kaufert & O'Neil, 1990). According to Kaufert & O'Neil (1990), in the far North, colonization of birth occurred throughout the latter half of the twentieth century. The Western medical model was introduced to the Arctic in the 1950s. By the 1960s the government began to insist that births take place within health centres in Indigenous communities. In the 1970s evacuation criteria were developed for women considered high-risk, but by the 1980s most women from rural and remote communities were expected to birth in tertiary hospitals outside their home community (Kaufert & O'Neil, 1990).

Despite growing knowledge about the negative outcomes of traveling for birth including family separation and strain, postpartum depression, loneliness, stress, isolation, and child care concerns (Dietsch et al., 2011; Kildea, 1999; Kornelsen & Grzybowski, 2004; Kornelsen et al., 2010; O'Driscoll et al., 2011; O'Neil et al., 1988; Phillips-Beck, 2010; Struthers, Winters & Metge, 2014; Watson, Hodson, Johnson, & Kemp, 2002; Watson, Hodson, Johnson, Kemp, & May, 2002; Wright, 2015) and some efforts to return birth to northern communities (for example, Rankin Inlet & Nunavik, Quebec), most women from rural and remote areas of Manitoba and the Kivalliq region of Nunavut continue to travel for birth. Although efforts to return birth to northern communities will hopefully succeed, it is important that women and families are supported throughout the current process of traveling for birth to reduce health inequities to women, newborns, families and communities. The intent of PNC is to provide this support and thereby improve outcomes for women who travel for birth, and for their infants.

With the initial funding provided, it was intended that PNC would be able to provide services to approximately 500 women who travelled to Winnipeg for birth from Northern and remote communities. Currently, services are only provided to women from the Kivalliq region of Nunavut, leaving the population of women in Manitoba who travel for birth without this service. PNC is able to reach the majority of women who travel for birth from the Kivalliq region. Overall, the referral system put in place (including the referral form and case finding in Winnipeg) appears to be working well and PNC is able to reach the majority of women from Nunavut who travel for birth. However, there are opportunities for improvement, in particular with the community of Rankin Inlet which accounts for fewer referrals than would be expected.

For the 156 clients who were contacted by PNC, each received an average of 4 prenatal visits and each visit took on average 0.42 hours (25 minutes). This is approximately double the number of visits per client anticipated in the conceptual model from May 2011, but less than the 1,250 total visits estimated (see Table 15). Table 15 also suggests that PNC spends less time/visit than estimated by the conceptual model. This is based on the PHN time study. However, these estimates are based on the time study, and may be lower than actual as the time study was based on postpartum visits, for which a care map is used to expedite documentation. In the time study, documentation accounted for 58% of indirect time. In addition, they likely underestimated the time needed to build trust with clients and did not include enough time for advocacy, community development/ capacity building, program development and healthy public policy.

Table 15. Comparing # of visits and time spent between original budget and evaluation period

	Estimated (April 2010)	Actual (evaluation)
# clients	500	156
# visits/client	2.5	4
Total visits/year	1,250	684[3]
Estimated time/visit	2 hours/visit[4]	1.1 hours/visit (likely an underestimate)[5]
Estimated total time/client	5 hours	4.5 hours

A more challenging question to answer is whether PNC reaches the women most in need of service. Women most in need of services may include women who are at risk according to the Families First Screen, first time mothers and women who experience barriers to breastfeeding. According to program data, about 35% of women with a documented Families First Screen scored positive, indicating risk. However, what is unknown is how this number compares to the overall Nunavut population, or the population of women from Nunavut who travel for birth. Due to several barriers (limited contact postpartum, screen not used in Nunavut), PHNs are frequently not able to complete the screen. Therefore, 35% likely underrepresents risk in this population.

First time mothers accounted for 25% of all women traveling for birth from Nunavut, 35% of women not referred to PNC and 34% of those who were referred and not contacted. Although this may be related to the lower referral pattern in Rankin Inlet, it may also indicate that this is a group that requires additional efforts to increase reach.

A third group of mothers who may benefit most from PNC are those who experience barriers to breastfeeding. Breastfeeding was not used as an outcome in the evaluation because of the limitations of this indicator (breastfeeding at discharge from hospital) for this population. The lack of traditional community support for breastfeeding that women experience in Winnipeg, custom adoption, which affects up to 30% of Inuit infants, concern about the quality of breast milk due to smoking or environmental contaminants, and lack of lactation consultants have been identified as factors that contribute to the lower breastfeeding rates for Inuit women (Asuri, Ryan & Arbour, 2011). Lower rates among those referred to PNC may indicate that women who face the greatest health inequities, are being seen by PNC. However, it may be more useful in future to look at breastfeeding rates among women not involved in custom adoption and/or rates once women return home.

Women described their experiences with PNC positively and most survey respondents said they would recommend PNC to a friend. Evaluation participants, women and care providers, reconfirmed the needs assessment findings related to the challenges that women face when they relocate for child birth. Table 16 describes each of the themes from the needs assessment and to what extent it is being addressed by PNC.

[3] This is approximate, it includes group visits and underestimates postpartum visits.
[4] Includes telephone contact, in-home visit, travel, follow-up and documentation time
[5] Estimate calculated based on WRHA PHN Time Study (WRHA, 2015).

Table 16. Is PNC addressing findings from Needs Assessment?

Themes identified by Needs Assessment and Evaluation	To what extent is this addressed by PNC?
Limited social support	Although PNC cannot fill the void created by the absence of family, friends and community, evaluation findings suggest that PNC is making a significant contribution to enhancing social support for women traveling for birth.
Managing daily life in Winnipeg	Although women were very thankful for bus tickets, which facilitated participation in leisure activities, they also continued to report challenges navigating the city, healthcare facilities and the healthcare system.
Health and healthcare challenges	Through assessment and referrals, PNC is able to help address health concerns for individual participants. The PNC referral form is one source of improved information sharing, but there appears to be communication challenges between hospitals, health centres, public health and physicians' offices.
Choice and power	PNC plays a role in empowering women to engage with HCPs in informed decisions about their needs and care. They also advocate for individual women to get their needs met within the health care system. PNC staff is accumulating a large amount of experience and knowledge that prime them for an advocacy role within the larger system. However, it is less clear to what extent this role will be accepted and how it should be enacted. Evaluation participants thought PNC's non-judgmental, client-centred, culturally responsive approach to service delivery was working well. This was thought to be key to developing trusting relationships with clients. In a study by Moller (2010), Inuit people described feeling "patronized, not respected, controlled, not informed, and not listened to or taken seriously" by HCPs. Therefore, the ability to develop trusting relationships is important to overcoming this barrier to seeking health care.
Misunderstandings about language and culture	PNC strives to take a client-centred, culturally responsive approach, and staff share their knowledge of public health and Inuit culture with other care providers. However, this was reported only by the PNC team, not outside care providers or women.
Perceived consequences of traveling for birth	Custom adoption and the trauma women may experience caring for a newborn who will be custom adopted was one identified consequence of traveling for birth. PNC nurses play a role in supporting women, but this may require further advocacy within the larger system. Also, lower breastfeeding initiation rates.

The creation of PNC was in response to three (3) recommendations from the MACHS Taskforce: (1) Ensure that expectant women who relocate from First Nations, Inuit and Métis communities and rural/remote communities for extended periods of time to give birth have access to a coordinated system of prenatal and social support; (2) Develop human resource capacity within regions that provide support to women who have temporarily relocated to access birth services outside their home communities, including Public Health Nurse positions (and support) in Winnipeg to act as contacts and service coordinators; and (3) Develop resources to inform women of the services available to them (i.e., Healthy Baby Program, transportation costs to attend

programming, room rental for gatherings, payment for other services such as Elder support, speaker honorarium, healthy food provision, etc.) and support them to access these services (i.e., card with contact numbers).

From the perspective of health system stakeholders, and more importantly, service users, PNC fulfills its role in providing support to women traveling for birth (Recommendation 1). Health system stakeholders overwhelmingly identified this as the *most significant* impact of PNC. Women who responded to the survey indicated that after visiting with a PNC nurse they felt more supported and happy and less scared, bored, and upset.

PNC provides health and social assessments that result in many referrals to other services including 122 referrals for health related concerns, and 100 referrals to other supports and services such as prenatal support groups and recreation and leisure opportunities (Recommendation 2). In addition, some stakeholders thought that PNC had improved communication and coordination of care. However, there were indications that communication between all stakeholders could use further improvement.

PNC also partially addresses Recommendation 3. It plays an important role in connecting women to other resources including Healthy Baby/Healthy Start programs and recreational opportunities. However, this seemed to be most effective with volunteer support to accompany clients, which was not always available, and clients clearly requested more recreational opportunities.

RECOMMENDATIONS

Prenatal Connections has the capacity to contribute to the process of reconciliation. One of the Truth and Reconciliation Commission's principles of reconciliation is that "reconciliation requires constructive action on addressing the ongoing legacies of colonialism that have had destructive impacts on Aboriginal peoples' education, cultures and languages, health, child welfare, the administration of justice, and economic opportunities and prosperity." (Truth and Reconciliation Commission of Canada, 2015b, p. 3). PNC is one such action. In addition, Canada has recently adopted the United Nations Declaration on the Rights of Indigenous Peoples which states that Indigenous people have a right to access health services including their traditional medicines and practices and a right to achieve the highest standard of physical and mental health." (United Nations, 2008, pg. 9). The following recommendations were developed to improve PNC, and to facilitate the expansion of PNC to other communities.

1. Organize an event to share and discuss the findings from this evaluation and the needs assessment with members of the Inuit community staying at the Kivalliq Inuit Centre and the Government of Nunavut.

2. Although the reach of PNC was very good during the evaluation period (almost 80% of women received a referral and 66% of women traveling for birth from Nunavut were contacted by PNC), PHNs are now doing less case finding. It will be important to continue monitoring the reach of the service.

3. In order to reach more women the following suggestions should be considered:
    a. Collaborate with the midwives in Rankin Inlet to build trust and develop their understanding of the service in order to help with the informed consent process. This could focus on women later in their pregnancy, once they have decided to give birth in Winnipeg.
    b. Consider developing a strategy to engage primiparous women (many of whom come from Rankin Inlet);
    c. Further collaboration with the Government of Nunavut;

d. Develop a binder that describes services available to women while they are in Winnipeg and includes pictures of the PNC care providers;

e. Establish a process to "meet" women through Telehealth, telephone contact, a DVD or a YouTube video before they arrive in Winnipeg; and

f. Develop stronger relationships through regular contact with the Nurse in Charge (NIC) in the communities.

4. Expand the service to include all Manitobans traveling for birth. Although additional resources will be required to expand, there may also be some opportunities to streamline services by:

   a. Developing a system to identify women most in need of service, and focusing more resources on them;

   b. Eliminating unnecessary documentation. Although it was generally agreed that the Families First screen was a useful tool, there was less agreement about the Parent Survey. Considering the time needed to administer and document the survey, thought should be given to whether this is the best use of PHN resources for this population;

   c. Streamlining charting processes to decrease documentation time (care map);

   d. Considering options for how to improve patient flow between the PNC team and the larger public health nursing team while keeping in mind the importance of continuity of care (with the same care provider) pre and post-partum;

   e. Consider options to redirect current financial resources to better meet client needs, including maximizing the use of volunteers;

   f. Determining the best approach for postpartum visits considering both client needs and staff resources;

5. Expansion could also be facilitated by partnership development, including the Manitoba Inuit Association and WRHA Aboriginal Health Programs. A communication strategy should be developed to use for engaging with each new partner. Continue to build relationships with new and existing partners using open communication and willingness to understanding different perspectives.Currently $45,000 of funding is being used for software maintenance. Explore whether there are other sources of funding for this purpose so that this money could be used for PNC.

6. Consider expanding service to include other providers and positions including doulas, a coordinator, an elder, a midwife and/or an outreach worker through hiring or partnerships. Work with Aboriginal Health Program (AHP) to develop a unique position. AHP could assist with putting together a job description, help to fill and support the position.

7. Having supports available after-hours would also be beneficial.

8. Expansion should take into account lessons learned regarding the referral process including:
   a. The importance of building relationships with referral sources, and in particular midwives; and

   b. The value of the biweekly reminders to send referrals.

9. In order to continue to improve the referral process and communication between the various care providers:
   a. Continue with the biweekly reminders to the referral communities;

b. Create a resource which includes photos of the PNC team;

c. Keep communication to physicians brief and focused on health needs.

10. Increasing opportunities to engage in social, recreational and traditional cultural opportunities was very important for clients. To achieve this:
    a. The role of the volunteer appears to be very important in facilitating women's access to resources and groups outside of the Kivalliq Inuit Centre. Consider ways to ensure that volunteers (or outreach workers) are available;
    b. Continue to work in partnership with the Kivalliq Inuit Centre to promote PNC and partner services and groups (including Healthy Start for Mom and Me) and increased recreational opportunities (swim passes, sewing room); and
    c. Develop new partnerships and collaboration with Indigenous and community resources to enhance recreational opportunities;
    d. Solicit feedback from the women after they participate in the activities to determine what women find most helpful; and
    e. Consider options for transportation (e.g. encourage walking, additional bus tickets or improved access to the KIC van for recreation).
11. Although positive feedback was received regarding the direct service provision, the evaluation presents some opportunities for continued improvement including:
    a. Continuing to assist women to connect with family at home through telehealth or Skype if desired and advocate for partners to come as appropriate;
    b. Women may benefit from increased support to navigate health care facilities;
    c. Ensure service is reflective of the Nunavut Breastfeeding Strategy and consider other Indigenous-based health knowledge to increase breastfeeding initiation.
    d. Increased support may be needed related to custom adoptions;
    e. Ideally, a private room would be available at the boarding homes for the PHNs and NP to use to conduct client interviews and assessments;
    f. Reassess the group and especially the role of the NP in the group. Determine if the community feels the group meets their needs;
    g. The TRC Call to Action #22 relates to the importance of recognizing "the value of Aboriginal healing practices and use them in the treatment of Aboriginal patients in collaboration with Aboriginal healers and Elders where requested by Aboriginal patients" (Truth and Reconciliation Commission of Canada, 2015a, p. 3). PNC should continue to expand its ability to advocate for and meet this recommendation.
12. In relation to advocacy:
    a. Establish role for frontline care providers and steering committee in terms of advocacy;
    b. Establishing a concise reporting framework and providing regular written reports to the Steering Committee may enhance their ability to engage in advocacy; and
    c. Many issues and policies appear to have an impact on breastfeeding, advocacy should continue in this and other areas.

13. In relation to staff resources and training:
    a. Ensure that new staff hired are provided with training related to indigenous cultures, culturally responsive care, and trauma informed care;
    b. Work towards preferential hiring of indigenous staff;
    c. Advocate for support for indigenous health care professionals; and
    d. Improve supports for staff related to vicarious trauma, racial battle fatigue and cultural healing.

14. Revisit steering committee's terms of reference and membership.

15. Consider forming an Advisory Committee to advise on program development that includes mothers and elders from Aboriginal and Inuit communities.

16. Little is known about the impact of PNC on postpartum contact. If this is a priority, further investigation will be needed.

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Appendix 1: Quantitative indicators by data source

1. **Hospital Abstracts:** All women who birthed in Winnipeg between June 1, 2013 and May 31, 2014 who had a Nunavut postal code? A Nunavut health number?

Indicator	Rationale
Name	To link to other data # of referrals received compared to # of women who travelled to Winnipeg
Mother's DOB	To link to other data; age at time of birth
Postal code (6 digits)	To identify community
Parity	To understand differences in program use by first time mom's and mothers of multiple children.
Breastfeeding initiation	To understand program outcomes

2. **Prenatal Log:** For all women who were referred to the program between June 1, 2013 and May 31, 2014.

Indicators on Prenatal Log	Rationale
Client last name	To link to other data (Hospital abstracts) # of referrals received compared to # of women who travelled to Winnipeg
Client First Name	To link to other data (Hospital abstracts) # of referrals received compared to # of women who travelled to Winnipeg
Mother's DOB	To link to other data (Hospital abstracts) Woman's age at time of birth (mean and range)
Date sent (referral)	# of cases found by PHNs
Date received (referral)	Average time referral forms are received in Winnipeg relative to estimated date of confinement Trend in referral forms being completed
Community area sent to/faxed to	Number of referrals from PHN back to communities of origin.
Referral site	# referral forms completed by home community # referral forms completed by nurses at Kivalliq Inuit Centre

Indicators on Prenatal Log	Rationale
Referring professional	# of referrals/type of care provider (nurse/PHN/physician/midwife/other)
EDD	Avg. gestational age when sent out for confinement
Date of arrival in Winnipeg	Avg. gestational age when sent out for confinement Length of stay in Winnipeg (prenatal)
Date of birth of newborn	Length of stay in Winnipeg (prenatal) Woman's age at time of birth (mean and range)
Contact type and date (for all contacts)	Prenatal: Total # telephone contacts Average # telephone contacts/woman Total number of home visits Average # home visits/woman
Number of hours (for all contacts)	Time/phone contact Time/home visit
If there is no contact with client, reason why	Reasons for not receiving services
Contacted within standard time frame?	# women contacted within 2 working days after referral OR after arrival
If not contacted within standard timeframe, why?	
Attempted contacts (telephone/text)	Attempted contacts (telephone/text)
Attempted contacts (Home visit)	Attempted contacts (home visit)
Date Families First Screen Started	Number and percentage of Families First Screens initiated at first visit.
Families First Screen completed	
Families First Prenatal Screening Score	# of prenatal women who screen at risk on the Families First Screen Number and percentage of Families First Screens completed
Parent survey started	
Parent survey completed	
Parent survey prenatal score	# of positive Families First Parent Surveys
Referral to (all)	Total # referrals for health related concerns

Indicators on Prenatal Log	Rationale
	# women referred to triage # and type of other referrals made i.e. CFS, dentist, healthy baby/starts
Postpartum visit done	
Postpartum contact (date , type, contacted by, hours)	# of prenatal clients who are seen postpartum by PNC

3. **Families First Data needed (historical Family First screening database):** Between July 1, 2013 and June 30, 2014.

Indicator on FF data	Rationale
# prenatal women who score yes on individual items on the Families First Screen (e.g. tobacco use, alcohol use, etc.)	