Development, Implementation and Evaluation of the Canadian Nurse-Family Partnership® Education: A Pilot Study

Final Report

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List of Abbreviations

ASQ:	Ages and Stages Questionnaires®
AVE:	Alternate Visit Encounter
BC:	British Columbia
BCHCP:	British Columbia Healthy Connections Project
CaNE:	Canadian Nurse-Family Partnership Education
CQI:	Continuous Quality Improvement
FNP:	Family Nurse Partnership
HBHC:	Healthy Babies Healthy Children
HVE:	Home Visit Encounter
IPV:	Intimate Partner Violence
NCAST:	Nursing Child Assessment Satellite Training
NFP:	Nurse-Family Partnership
NSO:	National Service Office
PHN:	Public Health Nurses
PIPE:	Partners in Parenting Education
RCT:	Randomized Controlled Trial
STAR:	Strengths and Risk Assessment Framework
TMEM:	Team Meeting Education Modules
TVIC:	Trauma-and-Violence Informed Care
US:	United States

Executive Summary

The overall goals of the Canadian Nurse-Family Partnership® Education (CaNE) pilot project were to: 1) ***develop*** a Canadian model of Nurse-Family Partnership (NFP) education for public health nurses (PHNs) and supervisors; 2) ***deliver*** this novel model of education to two cohorts of nurses and supervisors hired to implement NFP; and 3) ***evaluate*** the acceptability of this model of education and to ***explore*** how this training prepared NFP teams to implement this public health program of nurse home visitation, targeted to young, first-time mothers experiencing social and economic disadvantage, with fidelity to the program's core model elements.

Middlesex-London Health Unit, as the lead organization for this project, established a provincial governance structure to support the development of the curriculum and the implementation of the program in four Ontario public health units: Middlesex-London Health Unit, City of Toronto (Public Health Division), Regional Municipality of York, Public Health Branch, and Niagara Region Public Health. An experienced PHN from Hamilton Public Health Services was seconded for the duration of the project as the NFP Clinical Lead to contribute to curriculum development, deliver the CaNE education, and provide technical and nursing practice support to guide program implementation and delivery.

The purpose of the CaNE curriculum is to support the development of the following NFP PHN competencies:

a. Applies theories and principles integral to implementation of the NFP Model
b. Uses evidence from NFP randomized controlled trials and data systems to guide and improve practice
c. Delivers individualized client care across the six program domains
d. Establishes therapeutic relationships with clients
e. Utilizes reflective processes to improve practice

The CaNE curriculum developed consists of: 1) a three-phase approach to PHN education; and 2) NFP supervisor education. The three phases of the Canadian NFP PHN education are:

1) ***NFP Foundations***: Completion of online e-learning modules, augmented by independent reflection and team-based discussions, accessed through a web-based learning management system. This educational phase (40-50 hrs) is focused on increasing knowledge of: NFP history, evidence, program model elements, theories and visit-to-visit guidelines, client-centered principles, reflection, parenting, attachment, communication, recruitment and retention, intimate partner violence (IPV), and nursing assessment forms. Learners are introduced to a Canadian NFP program model, a nursing theory (Critical Caring Theory), and principles of trauma-and-violence informed care.
2) ***NFP Fundamentals***: Engagement in a five-day face-to-face, interactive learning environment, expertly facilitated by an NFP Educator. Includes an additional one-day face-to-face encounter (4-6 months later) to consolidate learning on IPV interventions. The focus is on the development of the advanced practice nursing skills required to deliver NFP. Learners have an opportunity to discuss, practice, and apply their knowledge of the NFP program through group reflection, role playing, and completion of NFP tool, resources, and assessment forms. The integration of new program innovations is highlighted, including use of the Strengths and Risk (STAR) framework.

3) ***NFP Consolidation and Integration***: Consolidation and application in practice of knowledge and skills acquired in the first two phases of education. Phased professional development completed at the local public health unit and coordinated by the NFP Supervisor. Learning strategies include: job shadowing with experienced NFP PHNs, completion of NFP team meeting education modules, guest speakers to provide additional content on priority topics, site visits to community partner agencies, and technical support/mentorship from NFP Nursing Practice Lead.

The CaNE Supervisor Education curriculum consisted of completion of the above three phases as well as specialized training following each phase to support the development of NFP supervisor competencies. Additional supervisor education consisted of: NFP Foundations (three additional e-learning modules on NFP supervision, reflective supervision, and client recruitment and referrals); NFP Fundamentals (additional four day in-person training focused on skill acquisition in the area of leadership, reflective supervision and coaching, addressing compassion fatigue and job stress, implementation and supervision of IPV pathway, continuous quality improvement, and facilitation of ongoing NFP training).

Implementation and Delivery of NFP in Four Ontario Public Health Units

Starting in January 2017 the first cohort of NFP PHNs and supervisors from three health units began their NFP education; in February 2018 a second cohort of learners (including a team from a newly added fourth public health unit) initiated their NFP training. Following initiation of NFP education, all teams returned to their local public health units to implement and deliver NFP.

Evaluation

A mixed methods case study was conducted to determine if Ontario PHNs and supervisors are able to implement and deliver the NFP program with fidelity to the program's core model elements, with a specific focus on the following fidelity indicators: 1) PHN and supervisor caseloads; 2) duration of the program; 3) service dosage to the program; 4) content of home visits; and 5) client eligibility. Secondary research questions focused on exploring and describing nurses', supervisors', and educators' experiences of completing the CaNE curriculum.

A purposeful sample of 22 participants (16 PHNs, four supervisors, two educators) from four public health units participated in this case study. Program implementation data were collected from supervisor summaries and de-identified record level data inputted from Intake and Referral forms, and Home Visit/Alternate Visit forms. Data were collected and analyzed for a period from January 2017-September 2018. An increased understanding of the overall acceptability of the CaNE education was reached through a series of focus groups and one-to-one interviews with all study participants, as well as checklists completed by learners during the education sessions.

Key Findings

Following completion of the CaNE curriculum, PHNs and supervisors from four Ontario public health units demonstrated the ability and capacity to implement and deliver NFP with a high degree of fidelity to 13 of the program's 14 core model elements. There was overall consensus among participating PHNs and supervisors, that the CaNE three-phase model of education was highly acceptable and supported them in developing the knowledge, skills, and confidence to implement the program model with fidelity to core model elements. Additionally, it supported them to be skilled in implementing interventions to support behaviour change among home-visited women. Three overarching themes emerged describing participants' *overall* level of

acceptability with the novel education curriculum: 1) the NFP model of education is purposefully and thoughtfully delivered; 2) the NFP model of education facilitates building relationships and supporting women in making changes; and 3) learning how to implement the NFP program is a process that takes time.

Metric	Findings
Eligibility criteria	All women (99.67%), with one exception, were identified as preparing to parent for the first time. Mean age of enrolled women: 18 years Majority of women, 98.1% enrolled prior to end of 28th week of gestation; 35% of women enrolled ≤ 16 weeks Mean gestational age at time of enrollment: 19.79 weeks
Prenatal Public Health Referrals	19% of all prenatal referrals to public health units were internally referred to the NFP program.
Conversion of eligible referrals to participant enrollment	Of women referred to the NFP team who met the eligibility criteria, PHNs enrolled 88% of them into the program.
Mean caseload size during prenatal period	14 NFP clients/PHN
Mean supervisor caseload size	3.6 PHNs/supervisor
Client retention	71% of home visited clients remained in program at time of analysis; 59.2% had received at least one visit in infancy.
Attrition	38% of women left the program due to non-addressable factors (e.g. infant death, move) 57% of women who left the program were either 'lost to follow-up' or 'client initiated' discharge
Mean number of prenatal home visits	7.4 home visits/client
Home visit content	PHNs generally apportioned time appropriately across 6 program domains

Key Recommendations

1. Ensure a full-time Ontario NFP Nursing Practice Lead is available to 1) support the four participating public health units that will continue to deliver NFP in Ontario beyond this pilot project, as well as the public health unit that had previously been and continues to implement the program; and 2) to educate any new PHNs and supervisors at these sites, until such time that the results from the BCHCP RCT are available (2021).
2. Deliver the Canadian model of NFP education through a three-phase process that includes NFP Foundations, NFP Fundamentals and NFP Consolidation and Integration to eligible PHNs and supervisors in Ontario, and use this model to provide NFP education to other future Canadian implementation agencies outside of Ontario and B.C. pending approval from the Canadian Collaborative for Nurse-Family Partnership®.
3. Collectively identify community development strategies to: 1) increase the number of eligible women enrolled early in pregnancy and 2) identify strategies for reducing the number of women who leave the program early.
4. Enhance existing data collection and reporting processes and practices for NFP-related indicators. The development of a province-wide database to collect and report on NFP-related data indicators, that links with existing public health databases such as ISCIS is strongly recommended, however, is not likely at this time and investment in such would be more appropriate upon completion of the RCT.

Background

The Canadian Nurse-Family Partnership Education (CaNE) pilot project had three unique phases:

Phase 1: Development of the Nurse-Family Partnership (NFP) public health nurse (PHN) and supervisor education curriculum (September-December 2016);

Phase 2: Delivery of the novel Canadian NFP model of education to two cohorts of PHNs and supervisors (January 2017-December 2018); and

Phase 3: Pilot study to evaluate and describe the process of delivering the education as well as an exploration of how this education supported NFP teams to implement this public health intervention of nurse home visitation with fidelity to NFP core model elements in the four participating public health units (September 2017-December 2018).

The NFP Core Model Elements are summarized in Appendix A.

Rationale for Developing a Canadian Nurse-Family Partnership Model of Education

From 2008-2012, a pilot study to evaluate the acceptability and feasibility of delivering the NFP home visitation program within a Canadian context was conducted through a partnership between Hamilton Public Health Services and McMaster University (Jack et al., 2012; Jack et al., 2015a). In 2012, funding was secured to initiate a randomized controlled trial (RCT) to evaluate the effectiveness of the NFP program compared to existing services for reducing childhood injuries and improving a range of maternal/infant health outcomes in the province of British Columbia (BC) (Catherine et al, 2016). This scientific evaluation is called the BC Healthy Connections Project (BCHCP). An adjunctive BCHCP process evaluation was also conducted (2014-2018) to describe how NFP was implemented and delivered across five unique BC Health Authorities (Jack et al., 2015b). Work to develop new, and adapt existing, NFP program materials for use in Canada has been ongoing and informed by these project findings.

In each of these studies, to prepare early cohorts of the PHN workforce to deliver the NFP program, educators from the NFP National Service Office (NSO) (Denver, Colorado) were contracted to provide the core education, using the curriculum developed to train nurse home visitors and supervisors in the United States (US). In some situations, Canadian PHNs and supervisors also attended US-based NFP education at the NSO. In BC, given the need to continually train new PHNs, both to deliver the program to women enrolled in the RCT, as well as to maintain a skilled workforce in the four BC Health Authorities who have continued to implement NFP as part of their regular public health programming, the BC NFP program has developed a team of local NFP educators to provide this training.

As part of the ongoing process to adapt existing NFP materials from other countries, as well as to develop new Canadian resources, there was an identified need for a program of education specific to the Canadian context; that is, to ensure that what is in the curriculum reflects what is needed and most relevant for public health nursing practice in Canada. Based on findings from the BCHCP process evaluation, as well as the expertise of the educators on the CaNE pilot project, it was identified that developing a Canadian-specific model of education meant the

opportunity to remove content from the existing US curriculum that was not relevant to Canada as well as to add content where differences existed in Canadian community health and public health nursing practices (Jack, Sheehan, & Van Borek, 2015; Sheehan, Jack, & Van Borek, 2015a; 2015b; 2015c).

Within this Canadian context, there was also a need to develop an education program that would be practical and sustainable for individual provinces to access and implement. A principle of the McMaster-based NFP team has been to focus on developing a central set of materials for all NFP license holders across Canada, which can then be further augmented with additional resources at the local level. In acknowledgment of the high costs being incurred to send nurses out of province or to the US to complete the education, one CaNE educator said, "*developing a curriculum and an education program in Canada and more local to this project was the best-case scenario for cost savings and future sustainability.*"

Further development and refinement of an education program also provided an opportunity to respond to previous feedback and nurse evaluations. One area specifically concerned the comprehensive workbook nurses typically complete in the first phase of education, where evaluations demonstrated experiences of information-overload and "*tuning out*." To a CaNE educator, this represented such a "*single way*" of providing that information, and she shared that, "*because it's a lot of information to take in, it required a more evidence-based approach to the teaching methods used to introduce the concepts.*"

Finally, another reason to develop this novel curriculum was that it provided an opportunity to introduce and integrate new NFP innovations seamlessly into one curriculum. According to CaNE educators, the innovations and updates [e.g. the Strengths and Risks (STAR) framework, Mental Health Innovation Modules, Intimate Partner Violence (IPV) clinical pathway] made to the US program had not yet been fully integrated into an updated Canadian education program. It also created an opportunity to integrate additional content, such as the principles of trauma-and-violence informed care (TVIC), to support nurses in better understanding how to work with, and support, pregnant women and infants living within situations of economic and social disadvantage. Additionally, among the international NFP clinical advisory group, there had been discussions about the value of including a nursing theory to underpin the NFP intervention, in addition to the existing foundational theories currently taught (e.g. self-efficacy, attachment, and ecology theories). Thus, the CaNE project created an opportunity to introduce a nursing theory within the education program.

CaNE Project Governance

The Middlesex-London Health Unit provided overall leadership and responsibility for the development, implementation and evaluation of the CaNE project, and actively engaged in the work and leadership of the CaNE Steering Committee. Leadership within this Health Unit were responsible for negotiating and signing the licensing contract to deliver NFP with the Prevention Research Center, University of Colorado Denver. Memorandums of Understanding were then developed between Middlesex-London and the other participating health units, permitting them to implement and deliver the program. A number of contracts were developed to facilitate CaNE project implementation. Middlesex-London Health Unit provided oversight of the pilot project

budget, and also seconded the NFP Clinical Lead to Middlesex-London from the City of Hamilton, Public Health Services in a part-time position for the duration of the project.

A governance structure to guide the CaNE project was established and included the following committees and workgroups:

1. CaNE Provincial Advisory Committee
2. CaNE Steering Committee
3. CaNE Education Workgroup
4. CaNE Implementation Workgroup
5. CaNE Evaluation Workgroup

Terms of Reference for each committee or workgroup were developed (See Appendix B).

A summary of meetings held by the Committees and Workgroups is provided in Appendix C.

CaNE Education Workgroup

The CaNE Education Workgroup was responsible for providing guidance and oversight to the curriculum development process. The primary function of the CaNE Education Workgroup was to provide expert practice advice related to the development and delivery of a Canadian NFP Nurse Education program. Recommendations and advice from this group was informed by members' practice expertise, current best evidence, and building upon NFP curriculum work completed internationally and in BC (Education Workgroup Terms of Reference 2017). The workgroup met monthly for one hour or at the direction of the membership.

The membership included the NFP International Consultant/Education Consultant (chair), NFP Clinical Lead, and NFP supervisors from CaNE participating health units. Ad hoc members included the BC Provincial Coordinator, the NFP Supervisor from the City of Hamilton and the CaNE lead researcher, McMaster School of Nursing. Draft curricular elements (e.g. each chapter of the online modules) were circulated to the workgroup for review, input and discussion. Final drafts of the curriculum used in the pilot were shaped by the feedback provided via email and during teleconference meetings.

The following group objectives were outlined in the Terms of Reference (2017):

1. To develop an integrated model of nurse and nurse supervisor education to promote learners' understanding of the interrelated components of the NFP model.
2. To prepare PHNs and supervisors to deliver the NFP program with the required level of competence to achieve positive client outcomes comparable to the three US trials.
3. To develop and sustain an effective workforce that achieves a high level of client outcomes through delivery of the NFP with fidelity to NFP principles and model elements.
4. To promote self-efficacy in NFP PHNs and supervisors in relation to their own continuing education and professional development.
5. To build strong nursing teams able to support their members in building/maintaining expertise, skills and confidence in delivery of the NFP program.
6. To support PHNs in becoming skilled in:

    - Developing and maintaining therapeutic relationships with each client
    - Using NFP program methods to enable necessary behaviour change, ensuring the mother is able to nurture, develop and protect her child from harm.
7. To ensure the NFP education aligns with principles as laid out in the public health nurse and supervisor NFP education curriculum.

CaNE Implementation Workgroup

An Implementation Workgroup, led and chaired by the NFP Clinical Lead, was established. This workgroup reported to the CaNE pilot Steering Committee and had the purpose of providing expert practice advice related to developing and implementing a plan to deliver the NFP program through the CaNE pilot project within the designated health units, while maintaining fidelity to the NFP model (Implementation Workgroup Terms of Reference 2016).

The workgroup met monthly for one hour or at the direction of the membership. The membership included the NFP Clinical Lead (chair) and the NFP supervisors from CaNE participating health units. Ad hoc members included the BC Provincial Coordinator, the NFP Supervisor from the City of Hamilton and the International NFP consultant.

The following group objectives were outlined in the Terms of Reference (2016):

1. To develop and support an implementation plan for the designated health units in the pilot.
2. To address administrative issues and track administrative costs.
3. To support public health nurses (PHNs) and supervisors to deliver the NFP program with the required level of competence to achieve positive client outcomes comparable to the three US trials.
4. To contribute to an effective workforce that achieves delivery of the NFP with fidelity to NFP principles and model elements.
5. To promote self-efficacy in NFP PHNs and supervisors in relation to integrating their acquired NFP program knowledge and skills with their daily practice within their designated health units.
6. To build strong nursing teams able to support their members in building/maintaining expertise, skills and confidence in delivery of the NFP program.
7. To support PHNs in becoming skilled in:
    - Developing and maintaining therapeutic relationships with each client.
    - Using NFP program methods to enable necessary behaviour change, ensuring the mother is able to nurture, develop and protect her child from harm.
    - Delivery of the NFP program within the required policies and procedures of their designated health units while maintaining fidelity to NFP principles and core model elements.

Curriculum Development Process

The development of the CaNE curriculum consisted of: curriculum planning, curriculum writing, development of the learning management system, and delivery of the first and second cohorts of education. A timeline of activities is summarized in Table 1.

Table 1. *Curriculum Development Timeline*

Timeline Dates	**Activity**
September-December 2016	Curriculum planning
October 2016-January 2017	Curriculum writing
October 2016-January 2017	Learning management system developed (Moodle platform used)
January 10, 2017	Learning management system launched
January 10, 2017-February 2017	Curriculum delivery: NFP Foundations (including Supervisor-only content) (1st cohort)
February 6-10, 2017	Curriculum delivery: NFP Fundamentals (1st cohort)
February 2017 onward	Curriculum delivery: NFP Consolidation and Integration (1st cohort)
March 6-9, 2017	Curriculum delivery: NFP Fundamentals Supervisor-only (1st cohort)
March 2017-April 2018	Curriculum refinement
January 2018-April 2018	Curriculum delivery: NFP Foundations (2nd cohort)
April 9-11, 23, 24, 2018	Curriculum delivery: NFP Fundamentals (2nd cohort)
April 2018 onward	Curriculum delivery: NFP Consolidation and Integration (2nd cohort)
December 10-13, 2018	Curriculum delivery: NFP Fundamentals Supervisor-only (2nd cohort)

Curriculum Development Team

The following human resources were required to support the development and delivery of the CaNE curriculum:

1. CaNE Curriculum Lead Consultant
2. NFP Clinical Lead
3. CaNE Curriculum Consultant
4. Instructional Designer
5. IT Consultant (Learning Management System/Website design)

The primary tasks and functions of each resource is summarized below in Table 2.

Table 2. *Curriculum Development Team and Responsibilities*

Role/Name/Credentials	**Curriculum Development Responsibilities**	**Curriculum Delivery Responsibilities**
CaNE Curriculum Lead/ NFP International Consultant: Debbie Sheehan, RN BScN MSW	• Ensured curriculum adherence to NFP core model elements, program guidance, competencies etc. • Oversight of development of NFP Foundations (Phase 1) online modules • Reviewed and guided decision-making around selection of learning management system • Provided consultation on the design of curriculum platform variables • Provided oversight of curriculum development process • Lead content writer for NFP Foundations	• Collaborated on development of NFP Fundamentals (Phase 2) learning agenda (1st cohort) • Mentored NFP Clinical Lead • Facilitated (~25%) NFP Fundamentals face-to-face education (1st cohort) • Facilitated NFP supervisor education • Chair, CaNE Education Workgroup
NFP Clinical Lead: Lindsay Croswell RN BScN MPH	• Oversight of development of NFP Fundamentals (Phase 2) in-person education • Oversight of education curriculum refinement • Maintenance of learning management system • Supporting PHN/supervisor access to learning management system • Curriculum content writer	• Coordinated all logistics for NFP Fundamentals • Lead NFP educator for PHN education • Co-lead NFP supervisor education • Chair, CaNE Implementation Workgroup
CaNE Curriculum Consultant: Susan Jack RN PhD	• Curriculum content writer	• NFP educator (IPV, TVIC content for PHN education & supervisor education) • Chair, Research Workgroup • Co-Chair, CaNE Steering Committee
Instructional Designer: Tara Shields, Instructional Design and Development Services, Tara Shields Design	• Oversight and execution of interactive learning module development and uploading • Provided consultation on the design of curriculum platform variables	• Provided consultation and troubleshooting for users during initial weeks after launch
IT Project Manager: James Dietrich, Computer Services Unit, McMaster University	• Oversight and execution of basic learning management system on Moodle platform	• Provided online tutorial for users during launch • Provided consultation and troubleshooting for users during initial weeks after launch

Curriculum Resources

The US core NFP education materials and England's Family Nurse Partnership (FNP) curriculum were used as foundational materials for the Canadian version. When appropriate, content experts were consulted during the development of new content areas for the Canadian curriculum. For example, project leads met with the developers of the Critical Caring Theory (Falk-Rafael, 2005) to gain a better understanding of the concepts underlying the theory and to discuss how it could be applied in practice. Additionally, two of the project leads (SJ, DS) travelled to the NFP NSO (Denver, CO) to meet with the Nursing Education Manager and an NFP Instructional Designer to discuss US curriculum updates, use of learning management systems for online delivery of the core education, and to explore strategies for integrating NFP innovations into the curriculum.

An important priority for the curriculum development team was to ensure that NFP PHN and supervisor feedback was considered and that key recommendations from the field were addressed. To achieve this goal, findings from the BCHCP process evaluation, that synthesized the experiences of both nurses and supervisors delivering NFP in five BC Health Authorities, were reviewed (Jack, Sheehan, & Van Borek, 2015; Sheehan, Jack, & Van Borek, 2015a; 2015b; 2015c). Insights from interviews conducted by Sheehan, with educators and clinical leads from all NFP/FNP international programs, were also considered. Finally, confidential feedback solicited from the first cohort of PHNs and supervisors to complete the CaNE education was then used to inform immediate revisions to the curriculum content and delivery.

Curriculum Workplan

A pilot workplan and curriculum outline guidance document were created to guide the curriculum development process (Fall 2016-Winter 2017). The curriculum was developed to reflect the International NFP nurse core competencies (NFP International Program, 2015) as set out by the NFP Core Model Elements (Appendix A) (NFP International Program, 2017). Key milestones within the workplan included the following:

1. Update Canadian Visit-to-Visit guidelines version 2.0, including revision of the NFP program model graphic (e.g. the NFP Garden)
2. Create an NFP Canada curriculum map and CaNE curriculum guidance document (See Table 3 below), outlining the principles and content of the Canadian approach to NFP education.
3. Select, establish, and develop an e-learning platform (Moodle)
4. Create online modules for Phase 1 Education (NFP Foundations)
5. Develop content and materials for Phase 2 Education (NFP Fundamentals)
6. Draft content and materials for Phase 3 Education (NFP Consolidation and Integration)

Table 3. *CaNE Curriculum Guidance Document*

Goals	**Principles**

• To prepare PHNs and supervisors to deliver the NFP program with the required level of competence to achieve positive client outcomes comparable to the three US trials.
• To develop and sustain an effective workforce that achieves a high level of client outcomes through delivery of the NFP with fidelity to NFP principles and model elements.
• To promote self-efficacy in NFP PHNs and supervisors in relation to their own continuing education and professional development.
• To build strong nursing teams able to support their members in building/maintaining expertise, skills and confidence in delivery of the NFP program.
• To support PHNs in becoming skilled in:
  o Developing and maintaining therapeutic relationships with each client
  o Using NFP program methods to enable necessary behaviour change, ensuring the mother is able to nurture, develop and protect her child from harm.
• To imbed a cultural safety and cultural competence model (to be determined) in the curriculum by the end of the pilot to ensure PHNs are competent to deliver NFP to First Nations, Inuit, Metis, and multicultural families.
	The following overarching principles (what is important to us) will guide NFP PHN and supervisor clinical practice in the Canadian NFP program. These overarching principles form the foundation and infrastructure of the Canadian model of NFP education.
	1. PHNs are supported to deliver NFP with fidelity to the program model elements, with a specific focus on embedding central components of self-efficacy, human ecology and attachment theories into all educational activities
	2. The STAR Framework, which incorporates the nursing process, is used as an organizing framework for all NFP education and clinical practice.
	3. A Canadian culture of learning and clinical service delivery is created that embodies the principles of Trauma- and Violence-Informed Care (TVIC) (Varcoe et al., 2016)
	4. A public health nursing theory, Critical Caring Theory (Falk-Rafael, 2005), will be imbedded in the Canadian NFP model in order to: Support NFP PHNs in working at their full scope of practice and prioritize the primacy of the therapeutic relationships that PHNs develop with NFP clients, families, organizations, and community partners.
	5. The principles of the Transtheoretical Model of Behaviour change are imbedded throughout the curriculum, so that PHNs become skilled in using motivational interviewing and other techniques to support clients to achieve their goals and necessary behaviour change.

Learning Platform

In order to maximize resources and design a training strategy that would be sustainable and appeal to various learning styles, it was important to the development team to incorporate a range of teaching and learning strategies to deliver the core NFP education. To ensure sustainability of the education, it was identified that a key priority would be to identify and develop e-learning modules on an NFP-specific learning management system, so that a significant amount of the education could be completed online by PHNs and supervisors at their local public health unit.

To inform the decision about the selection of an appropriate platform, the curriculum development team conducted an assessment of available learning management systems as well as consulted educators and clinical leads across the International NFP program about their experiences. Based on available financial and human resources, as well as consultation with

members of the McMaster University Computer Services Unit (CSU), the learning management system Moodle was selected as the platform to host the online learning modules.

McMaster CSU was contracted to build the structure for the pilot education website on Moodle.

Overview of the Canadian NFP Curriculum

Curriculum content and delivery.

The Canadian NFP curriculum consists of two components: 1) a three-phase approach to public health nurse (PHN) education (also completed by supervisors); and 2) NFP supervisor education.

The three phases of the Canadian NFP PHN education are:

1. NFP Foundations
2. NFP Fundamentals
3. NFP Consolidation and Integration

The mode of delivery, a summary of the content covered, and identification of unique resources required for program delivery, across each learning phase, are outlined in Table 4.

Table 4. *CaNE PHN Education: Curriculum Summary*

Mode of Delivery	Content	Additional Resources
Phase 1: NFP Foundations		
Online: Independent or team-based learning Estimated completion time: 40-50 hours	Completion of 18 modules 1) NFP History, Evidence, and Fidelity 2) NFP International Program 3) Excellence in NFP 4) Human Ecology Theory 5) Attachment Theory 6) Self-Efficacy 7) Critical Caring Theory 8) Client-Centered Principles 9) Reflection in Practice 10) Therapeutic Relationships and Boundaries 11) Maternal Role 12) PIPE 13) Communication Skills 14) Content Domains 15) Structure of the Home Visits + Using the Visit-to-Visit Guidelines 16) Strategies for Recruiting & Engaging Clients 17) Nursing Assessment Forms and Information Gathering 18) Intimate Partner Violence (4 sub-modules) Six chapter review modules are also available for learners	Instructional Designer Learning Platform (e.g. Moodle) Software to develop storyboards (e.g. Articulate) Computer Services/IT Expert Administrative assistant to provide access support
Phase 2: NFP Fundamentals		
In-person education provided over 5 days, plus an additional day for	The focus on NFP Fundamentals is to discuss and apply principles learned in NFP Foundations. Over the	Facility space with tables, Wi-Fi and AV capabilities

IPV follow-up (4-6 months after initial face-to-face content) (approximately 42 hours). In-class activities include small group learning, lectures, role playing	course of the week, content related to the following topics is reviewed: • NFP Model • STAR Framework • Communication Skills • Trauma-and-Violence Informed Care • Visit-to-Visit Guidelines • NFP Core Model Elements/Program Fidelity • Application of the four foundational theories: self-efficacy, human ecology, attachment, critical caring • NFP Client-Centered Principles of care • Cultural responsiveness • Reflection in Practice • Client retention • PIPE • Maternal Role • Safely recognizing and responding to IPV	Complete set of content on slide decks Laptop Large laminated version of NFP Model (new CaNE version) and core model elements Learner workbooks PIPE curriculum (full set for educator and 1 set per 3 participants ideal) Teaching doll (also required for each participant to bring) General office supplies Table supplies for participants: treats, fidget toys, craft supplies
Phase 3: NFP Consolidation and Integration		
Mentorship through observation of expert NFP PHN (job shadowing) Completion of Team Meeting Education Modules during NFP Team Meetings Completion of additional training	NFP Consolidation and Integration focuses on ongoing consolidation of clinical skills and professional development in areas of practice identified by teams. During this period of time, team will complete activities related to: • IPV/system navigation • PIPE Team Meeting Education Modules: • Achieving and Maintaining Caseload • Adjusting the Visit Schedule Using the STAR Coding • Administration and Scoring of the Danger Assessment • Building Referrals • Childhood injury Prevention • Child Maltreatment • Client-Centered Principles – Client is Expert on Her Life • Communication Styles • Conducting Case Conferences • Motivational Interviewing – How to Work with Discord • Motivational Interviewing – Sustain Talk • STAR Coding Practice • Reviewing the Revised STAR Framework Documentation • Supporting Clients to Quit Smoking • Using the Education Video Modules	Maintenance of learning platform Opportunities for job shadowing Keys to Caregiving (starter kit) ASQ materials NCAST materials

	• Using the NFP Home Visit Plan • Working with Clients Who Display Symptoms of Anxiety Disorders *Before clients enter infancy stage:* • Keys to Caregiving • ASQ • Dyadic Assessment: NCAST	

The curriculum was designed to be delivered within a Competency Model of Professional Development (Welcome to the Canadian Nurse Education Pilot 2016). Each chapter or session begins with a statement of purpose, the PHN and supervisor competency(s) addressed and the objectives for the learner. Supervisors were also responsible to carry out the PHN competencies. This model is a framework for assessing the extent to which NFP PHNs and supervisors perform their specified NFP roles as described in competency statements.

The overarching core competency for an NFP PHN, as stated by the NFP International Program and used for the pilot curriculum is: the ability to develop and maintain a therapeutic relationship with each client and use NFP program methods, to enable necessary behaviour change, ensuring the mother is able to nurture, develop and protect her child from harm (Guidance Document 2015).

The following competencies were developed for the pilot and informed by NFP International guidance documents:

NFP PHN Competencies:

a. Applies theories and principles integral to implementation of the NFP Model
b. Uses evidence from NFP RCTs and data systems to guide and improve practice
c. Delivers individualized client care across the six program domains
d. Establishes therapeutic relationships with clients
e. Utilizes reflective processes to improve practice

CaNE model of supervisor education.

To ensure that NFP supervisors are prepared to effectively implement the program within their organizations, and to provide support and supervision to the PHNs on their NFP teams, a comprehensive, structured approach to supervisor education was also delivered. The mode of delivery, content and resources required to deliver the supervisor education is outlined in Table 5 below.

Table 5. *CaNE Supervisor Education: Curriculum Summary*

Mode of Delivery	Content	Additional Resources
Phase 1: NFP Foundations		
Online: independent learning Estimated completion time: 40-50 hours	Completion of 3 modules/chapters 1) Introduction to Supervisor Role 2) Reflective Supervision 3) Client Recruitment and Referrals	Instructional Designer Learning Platform (e.g. Moodle) Software to develop storyboards (e.g. Articulate) Computer Services/IT Administrative assistant to provide access support
Phase 2: NFP Fundamentals		
In-person education provided over 4 days (approximately 28 hours). In-class activities include small group learning, lectures, role playing	The focus on NFP Fundamentals is to discuss and apply principles learned in NFP Foundations. Over the course of the 4 days, content related to the following topics is reviewed: • Leadership and the NFP Supervisor Role • Reflective Practice, Reflective Supervision and Coaching • Core Model Elements • Burnout, Compassion Fatigue, Job Stress and TVIC • Data Collection • Facilitating On-Going NFP Nurse Education • Implementation of the IPV clinical pathway and reflective supervision for nurses working with women experiencing abuse • Continuous Quality Improvement	Facility space with tables, Wi-Fi and AV capabilities Complete set of content on slide decks Laptop Learner workbooks General office supplies Table supplies for participants: treats, fidget toys, craft supplies
Phase 3: NFP Consolidation and Integration		
Mentorship through observation of expert NFP Supervisor (job shadowing) On-going support and consultation through regular communication with NFP Clinical Lead and community of other NFP Supervisors Completion of Team Meeting Education Modules during NFP Team Meetings	NFP Consolidation and Integration focuses on ongoing consolidation of clinical skills and professional development in areas of practice identified by teams and individuals. Although not completed as formal education during the pilot, topics identified for this phase include: • Nurse Retention • NFP Core Competencies	Maintenance of learning platform Opportunities for job shadowing Email and telephone communication with other NFP supervisors and NFP clinical lead (CaNE pilot Implementation Workgroup) Site visits and team meeting attendance by clinical lead

At the completion of the supervisor-specific education, the goal was to promote and develop the following NFP supervisor competencies:

1. Provides administrative leadership to the operation and sustainability of an NFP site
2. Applies principles of supervision that promote the clinical and professional development of all team members
3. Promotes public health nurses' development of competence to deliver the NFP home visiting intervention
4. Implements the NFP program with fidelity

Novel curriculum elements.

Interactive online structure.

As part of this pilot we were committed to developing an e-learning environment for the completion of NFP Foundations. As a strategy for organizing course content and interactivity (e.g., audio, video, quizzes, etc.), storyboards were developed that covered key concepts of several chapters, and that could be completed in a short time period (e.g., no more than one hour).

The online education is hosted on the learning management system platform, Moodle. Moodle is a free, open-source learning platform that can support the required volume of interactive content used for the pilot curriculum. The NFP Clinical Lead and CaNE Curriculum lead worked in collaboration with the contracted IT and Instructional designs services to create and customize the platform to act as the pilot's education website. After the initial development, the NFP Clinical Lead has been responsible for the on-going management and updating of the learning platform's content and user access. The password-protected website can be accessed by registered users only at: www.nfpeducation.mcmaster.ca

Content more deliberately integrated and embedded.

In the US, researchers at the Prevention Research Centre and key NSO stakeholders have been involved in developing, piloting and scaling up new innovations to augment the existing NFP program (Olds et al., 2013). Awareness of, and access to, these new innovations created an opportunity for the Canadian team to formally integrate them into the core education curriculum. As one of the CaNE educators identified, "*we've made concerted efforts to bring all the pieces of education and content together in a cohesive way,*" specifically referencing the very deliberate imbedding of both IPV and STAR innovations within the Canadian curriculum. As another CaNE educator said,

> *This project allowed us to integrate it [STAR] as part of the core education for nurses. So the way in which we're doing it is brand new. No one's done it like this before. But it was needed…So having that embedded throughout education is new and necessary absolutely.*

More meaningful naming was also chosen for the different phases of the education, renaming from numbered units to: NFP Foundations, NFP Fundamentals and NFP Consolidation and Integration.

New content to the NFP core education.

Deliberate decisions were made to augment the core NFP curriculum with some novel content. In comparison to core NFP education in other countries, the Canadian version now includes focused content on the following topics.

- Critical Caring Theory (Falk-Rafael, 2005)

The integration of this theory provides a foundation to describe how public health nurses organize and deliver their care to families experiencing social and economic disadvantage, and that the focus of their practice ranges from providing individualized care and support at the front-line level, as well as advocating for critical social and structural changes at the broader community and population levels.

The adoption of this theory was presented to the NFP International Clinical Advisory Group in 2017 and its inclusion into the curriculum was supported by Dr. David Olds, the program developer. One CaNE educator further commented that the NFP core nursing education, "*always felt incomplete from a theoretical perspective*" and she identified that Critical Caring Theory would further provide a framework for the integration of nursing assessment and specific nursing practices unique to public health nursing. The same educator also spoke about how Critical Caring Theory, "*resonates so completely with the work that public health nurses and specifically visiting public health nurses do*." Furthermore, she goes on to say that it, "*strengthens the resolve and the commitment and the support of nursing leaders in Canada for NFP when they see that we're championing the work that's being done at a nursing practice level in Canada*."

- Trauma-and-Violence Informed Care (TVIC)

A significant number of the young women enrolled in the NFP program will experience some form of developmental, interpersonal, structural or historical trauma over the course of their lifetime. There is increasing understanding that exposure to trauma, including child maltreatment and IPV, results in long-term mental and physical health effects. If nurses or other health care providers who work with individuals who have experienced trauma lack a deep understanding of the complexity of trauma and its effects, there is a risk that they will cause further harm to these individuals. Providing care through the lens of TVIC, ensures that providers understand the effects of trauma, and create safe spaces that limit the potential for future harm, it also takes into account the intersecting impacts of systematic and structural violence on a person's life (Varcoe et al., 2016).

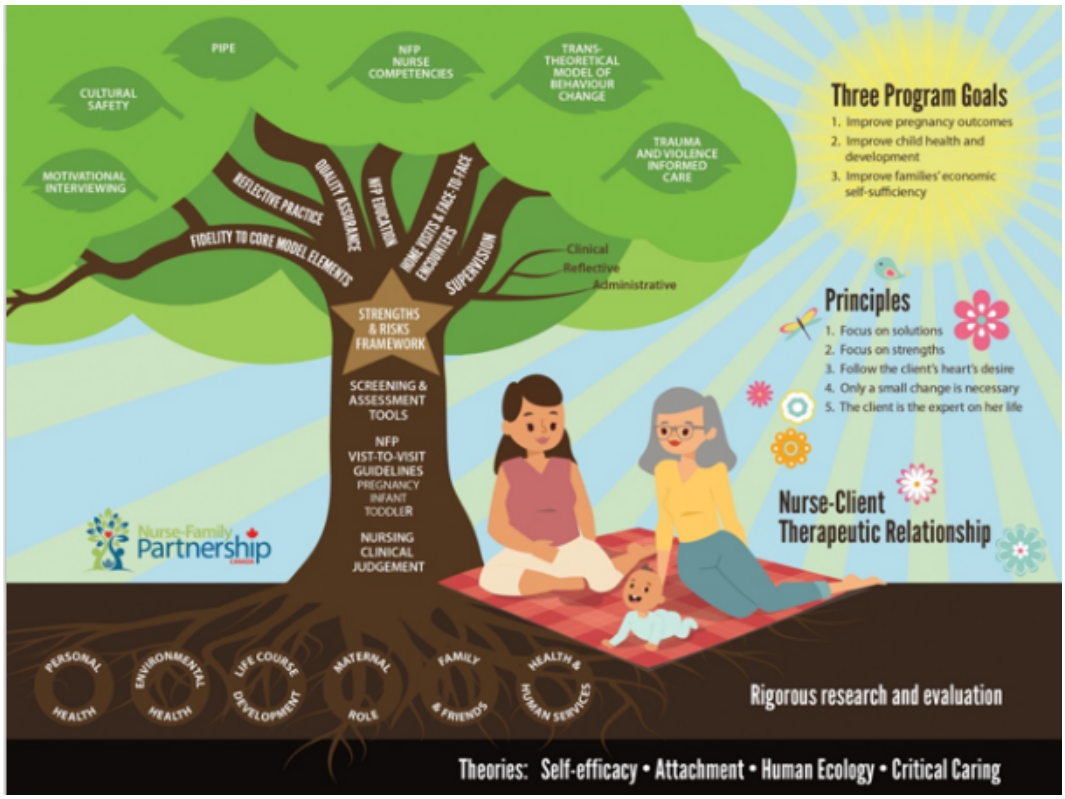
Within the CaNE curriculum, we have positioned TVIC as a universal approach to delivering the NFP program and that its principles provide a guide for all client interactions. These principles are also closely aligned with the program's client-centered principles of care.

- NFP Canada Program Model

The NFP Program model used in the US is depicted as a garden scene with the nurse tending to a garden symbolic of the client and their relationship. At the time of the pilot, the model had not been updated to reflect the most recent additions to the NFP program in the US. The pilot presented an opportunity to review the current US model and develop a proposed Canadian model that reflects the most recent US program additions (STAR, IPV), the pilot additions to the nursing curriculum being evaluated (TVIC and Critical Caring Theory) and ensure the visual representation of the NFP model most closely aligned with NFP nurses and supervisors in Canada.

The newly developed Canadian model (see Figure 1 below) was developed for the pilot with feedback from the nurses and supervisors in the Ontario and BC sites. Elements in the graphic include intentional representation of the following program elements: Three program goals, first-time mothers, foundational theories, content domains, rigorous research, the nurse-client therapeutic relationship, client-centered principles, nursing clinical judgement, visit-to-visit guidelines, screening and assessment tools, Strengths and Risks (STAR) framework, fidelity to Core Model Elements (CMEs), reflective practice, quality assurance, NFP education, home visits and face-to-face encounters (with clients), supervision, motivational interviewing, cultural safety, PIPE, NFP nurse competencies, Transtheoretical Model (TTM) of Behaviour Change, NFP Model, and Trauma-and-Violence Informed Care.

Figure 1. *NFP Canada Program Model*



- Chapter Reviews 'Putting it All Together'

Within the curriculum's first phase of education, the final chapter or storyboard in *NFP Foundations* is called 'Putting it All Together.' This unique module is intended to consolidate knowledge from all the previous chapters. The storyboard briefly reviews the key concepts from each chapter which are then used to 'build' the NFP program model described above. The storyboard then ends with a preview of the next components of the NFP education (IPV and STAR).

- Streamlining Content Delivery

In this pilot study, we made concerted efforts to imbed all the current curriculum components in a cohesive way (as previously mentioned, specifically embedding STAR and IPV throughout the core education). More meaningful naming was also chosen for the different phases of the education, renaming from numbered units to: NFP Foundations, NFP Fundamentals, and NFP Consolidation and Integration. The three phased approach incorporates intentional timing and use of different teaching and learning strategies, and each component within each phase is intended to build on previous concepts presented and knowledge gained. The decision was made to spend less time on PIPE during online and face-to-face training given that nurses participating in the pilot had previous PIPE training through their individual health units. In addition, there was more time spent on reviewing the Core Model Elements with PHNs and not just during supervisor-only education.

Implementation of NFP Nurse and Supervisor Education

Following the development of the first draft of the curriculum, all PHNs and supervisors from the three initial participating public health units were engaged in completing the education. A summary and timeline of the NFP education delivered during this project is summarized in Table 6 below.

Table 6. *Summary of Completed PHN and Supervisor Education*

Phase/Timeline	**Participants**
NFP Foundations: January 2017	12 PHNs, 3 supervisors
NFP Fundamentals: February 6-10, 2017	12 PHNs, 3 supervisors, CaNE Research Coordinator (observer)
NFP Fundamental Supervisor Education: March 6-9, 2017	3 supervisors; CaNE Provincial Clinical Lead
NFP Consolidation and Integration: March 2017-December 2018 Additional 1-day IPV sessions: July-August 2017	All; Job shadowing completed by 2 supervisors, 6 PHNs
NFP Foundations: February 2018	1 supervisor and 5 PHNs from CaNE pilot site; 2 Hamilton PHNs, 1 Hamilton supervisor
NFP Fundamentals: April 9-11, 23, 24 2018	1 supervisor and 5 PHNs from CaNE pilot sites 2 Hamilton PHNs, 1 Hamilton supervisor
NFP Fundamentals Supervisor Education: December 10,13, 2018	1 supervisor
NFP Consolidation and Integration activities: May-December 2018 Additional 1-day IPV session: July 19, 2018	All

Formative evaluation and curriculum refinement.

Through formative evaluation, refinements were made to the NFP Fundamentals curriculum before the second cohort of face-to-face education. The NFP Clinical Lead (and educator) reviewed notes taken by the educators during the first cohort of education, and the feedback provided through the daily evaluations completed by participants, and made adjustments to the agenda, content and workbook for the second planned cohort of education. A summary of recommendations (See Table 7 below), elicited from the PHNs during their research interviews, was provided to the educator to inform ongoing curriculum refinements. This information was valuable and timely, as the educator stated in her research interview:

> *...[the feedback] was so incredibly helpful, so I had already started making changes to the schedule of what sessions were going to be when, the length of them, and some of the content of them, and then even whether we were keeping a few of them or needing additional that weren't there. So I created an updated version of the workbook and the slides and the schedule based on the feedback I had and the feedback I received.*

Table 7. *PHN Feedback and Recommendations for Curriculum Revision (Cohort 1)*

Summary of PHN Recommendations

• High value placed on having educators who are knowledgeable about the NFP program, skilled in group management and facilitation, and who bring passion to their discussion of the program
• Recommended continued use of a variety of teaching methods
• Highly valued discussion around how to implement the following principles in practice: IPV, TVIC principles, NFP-specific information, application of the NFP client-centered principles, and discussion of NFP core model elements
• Identified that when certain concepts were covered in-depth in the online modules during NFP Foundations, that an in-depth review in NFP Fundamentals was not necessary, including sessions on the Visit-to-Visit guidelines, STAR, and PIPE.
• During NFP Fundamentals, requested:
  o More practice on how to apply PIPE in a home visit
  o An increased number of "*hands-on*" activities
  o Less review of theory
  o Consolidation of STAR sessions
  o Increased number of examples/activities to review how to apply motivational interviewing in practice
  o Deliver content that is more emotionally laden earlier in the NFP Fundamentals agenda (compared to last day)
  o Arrange for a second day of IPV training during NFP Consolidation and Integration phase
• Create opportunities to hear from experienced NFP PHNs discuss their practice and how to apply content in home visits

Based on the feedback received, the NFP Clinical Lead refined the CaNE curriculum. A summary of key refinements is provided below.

- Maternal Role & Culture: PHNs identified that this content was a core component of health unit orientation/professional development and was thus perceived as repetitive. This content was removed.

- STAR: The STAR innovation provides an organizing framework to program delivery. As such, delivery of this content was moved to be provided on the first day of NFP Fundamentals and scheduled earlier in the day. As one PHN commented, STAR, "*laid the groundwork for referring back to STAR throughout and there was less confusion.*"

  How this curriculum change was perceived by the NFP Educator:

  I got a sense they were open to looking at what is the usefulness of [STAR], what it could be, the potential. You know there's still some resistance like, 'wow, this seems like a lot or here's some suggestions or critiques around the tool.' But it wasn't, 'why am I doing this, I have no idea and I don't have any idea how.' And even though the content of the session was not that different instead of the why and I don't understand, it was ok even if I don't agree I understand and I can see why this is being asked or what are the potential uses of it and the potential benefits, and they were able to, to express that back which was definitely different from the first time around.

- Visit-to-Visit Guidelines: The educator ensured that the PHNs had the opportunity to go online and access the website during the NFP Fundamentals education sessions. This made a huge difference observed by educator in learners being able to navigate the website on their own device; here the content didn't change, but how the learners were able to interact with the content changed dramatically.

- Motivational Interviewing: The educator combined the two sessions and used new video content that was very well received and very engaging; made the session more interactive by having participants write and share responses to client statements in the video.

  How change was perceived by the NFP Educator*: "It was very interactive…we shared those responses around the table and I think it...I think that was one of the highlights of the communication session and I would say there wasn't a highlight the first time around for me with communication."*

- PIPE: PIPE session was modified to include more time practicing using resources (hands-on) and less time on overall theory/concept learning.

- Boundaries & Therapeutic Relationships: Sessions were combined; As the NFP Clinical Lead described, "*We took out the, the majority of formal therapeutic relationship content because that is one of the things that was you know part of the feedback that they already had. So instead we called it therapeutic relationships and boundaries but it was really talking about boundaries and then we added some of the proponents of healthy*

therapeutic... and how to build therapeutic relationships, we didn't concentrate on them individually. So that one we could've had lots more time."

- Client Retention: Content was improved, with the curriculum change perceived by the NFP Clinical Lead as follows:

  Retention session didn't have enough information in the slide decks the first time around and I got questions that I wasn't really sure because the content I was using I didn't have enough detail around it, so I was able to get some additional article…there was one specific retention study article ahead of time, I was able to ask more questions about it before the session, so I felt like it went a lot better and it was understood whereas the first time people kind of thought, 'oh, why are you telling me any of this? What is that number? What do you mean by this?' I didn't get any of that this time, it felt like ok, this is how it should have gone the first time around.

- IPV: to provide a full day of IPV training during NFP Fundamentals and then to add an additional opportunity for face-to-face training (1/2 to full day) 5-6 months following the original training. The second face-to-face training would focus on strategies for planning and delivering a tailored approach to care to women who had disclosed IPV and an opportunity to reflect and address issues PHNs were experiencing in the early stages

- Guest Panel: Hamilton NFP nurses and supervisor invited to share about their experiences (5 attended), Q&A format used, questions recorded in advance.

Implementation of NFP in Four Ontario Public Health Units

How public health units were selected.

At the time of the initial proposal written for the Local Poverty Reduction Fund (LPRF), six Ontario public health units expressed interest and support to participate in the initiative (Middlesex-London Health Unit, City of Toronto (Public Health Division), Regional Municipality of York, Public Health Branch, Peel Public Health, Ottawa Public Health, and Northwestern Health Unit). Given their experience and expertise in implementing NFP in Ontario, Hamilton Public Health Services committed to partnering with McMaster University to facilitate the provision of the nursing education.

Once the CaNE pilot project was funded and initiated, three public health units (City of Toronto (Public Health Branch), Middlesex-London Health Unit, and Regional Municipality of York, Public Health Branch) were able to commit to participating. A fourth public health unit, Niagara Region, joined the project in 2018. Most health units funded their PHN positions with Healthy Babies Healthy Children staffing budgets, with approval to do so from the Ministry of Children, Community, and Social Services.

Development and implementation of NFP provincial clinical lead role.

The CaNE Steering Committee confirmed a plan to create the position of NFP Clinical Lead in the fourth quarter of 2015. After approval for this from the Middlesex-London Health Unit, Hamilton Public Health Services (PHS) was approached to identify a PHN with the knowledge and expertise to oversee the implementation of NFP in the role of NFP Clinical Lead. Leaders from Hamilton PHS and the CaNE project met to define roles and responsibilities and to develop a job description. The Board of Health, City of Hamilton approved the secondment at the February 2016 meeting and the job description was finalized. Subsequently, the position was posted internally at Hamilton PHS and candidates were interviewed jointly by a Hamilton PHS Manager and CaNE Curriculum Lead. The successful candidate was selected and she officially began in the role in the spring of 2016. The position has significantly evolved over the course of the CaNE project.

The NFP Clinical Lead began working with the pilot sites to support the implementation of the NFP program at the public health units participating in this pilot project.

NFP clinical lead responsibilities.

The NFP Clinical Lead plays a central role in supporting public health units to integrate NFP into existing Healthy Babies Healthy Children (HBHC) programming. The primary function of the NFP Clinical Lead is to support NFP supervisors and PHNs implement and deliver NFP with fidelity to core model elements, prepare the public health workforce to deliver the program, and provide consultation on public health nursing practice within NFP. A summary of the key roles assumed by the NFP Clinical Lead, as well as the corresponding responsibilities, is summarized in Table 8.

Table 8. *NFP Clinical Lead Roles and Responsibilities*

Role	Responsibilities
Educator	• Curriculum development, refinement and maintenance • Planning, coordination and delivery of face-to-face nursing education sessions • Planning, coordination, and delivery of supervisor education • Provision of support and guidance through completion of all three phases of education
Program Coordinator/Liaison	• Between pilot groups, committees and sub-groups • Organizing meetings, chairing or co-chairing, drafting agendas and recording • Between health units • Between NFP international and pilot stakeholders
Clinical Consultant	• To provide clinical support to pilot sites (e.g. to reflect on and address practice and fidelity questions), via teleconference or through in-person visits to the health units.
Implementation Consultant	• Development of implementation manual • Advise on resources and incentives for pilot sites • Documentation and data collection: planning, consultation (excel database), continuous quality improvement (CQI) initiative (dashboard feature in excel and guidelines)
Marketing	• Template development • Consultation • Facilitation of approval by NFP International and NSO

Resource Development	• Documentation guidance • Program material guidance
Website Management	• Uploading content • Providing new access and maintaining access

Methods

Research Questions

The ***primary research question*** for this pilot study was:

Following completion of the NFP Canada Nurse Education program, are Ontario public health nurses and supervisors able to implement and deliver the NFP program with fidelity to the core model elements, with a specific focus on the following fidelity indicators: 1) public health nurse and supervisor caseloads; 2) duration of the program; 3) service dosage to the program; 4) content of home visits; and 5) client eligibility.

Secondary research questions addressed in this pilot study included:

1. What are NFP public health nurses', supervisors' and NFP educators' perceptions and experiences of the content and delivery methods of the NFP Canada model of education?
2. What is the overall level of acceptability of the NFP model of education to NFP public health nurses and supervisors?
3. How can public health nurse and supervisor knowledge and competencies be measured to demonstrate effectiveness of the education models in improving knowledge, skills and attitudes?
4. What tools can be used to effectively assess professional performance to determine if NFP public health nurses integrate new knowledge and skills into practice.

Research Design

A single, descriptive mixed methods case study (Yin, 2014) was conducted to answer these research questions. In a mixed methods case study design, both qualitative and quantitative research methods and techniques can be combined to tackle complicated research questions and to allow for stronger and richer evidence than could be accomplished by a single method alone (Yin, 2014). Case study involves the description, exploration, or explanation of a contemporary phenomenon within its real-life context (Yin, 2014). It is a particularly useful method of investigation when the phenomenon of interest involves complex social interactions, when investigators have minimal control over variables and when boundaries between the phenomenon under study and the context in which it is situated are not clearly delineated (Yin, 2014). Data triangulation, or the use of multiple data sources and data types, is a key characteristic of case study research (Yin, 2014) and is used to gain understanding, to ensure completeness, and to confirm the credibility of findings (Krefting, 1991). Data sources for this study included NFP PHNs, supervisors and educators. Data type triangulation was achieved through the collection, review and analysis of interviews, documents and program implementation data.

In this study, the case under evaluation was an exploration of the processes of educating PHNs and supervisors to deliver NFP and how they subsequently apply this knowledge to implement NFP with fidelity to the core model elements. This case is bounded by both time (2017-2018) and location, as the participating Ontario public health units are the only NFP sites in Canada that currently have access to this novel education program.

Sample

Four Ontario public health units piloted the process for implementing and delivering NFP as part of their public health programs to support socially and economically disadvantaged pregnant women and first-time mothers to develop competent parenting skills to promote improvements in maternal and child health outcomes. These public health units include: Middlesex London Health Unit, Niagara Region Public Health, City of Toronto (Public Health Division) and Regional Municipality of York, Public Health Branch.

For this pilot study, we aimed to invite the full population of all PHNs and supervisors hired to deliver NFP in their communities. In a case study, it is essential to include individuals who can provide a rich, comprehensive description of the phenomenon under study. Eligibility criteria for NFP staff participation in this pilot study included: 1) initiation of the online and in-person training components of the Canadian NFP education program (NFP Foundations and NFP Fundamentals; as well as NFP Supervisor education – for supervisors only); and 2) experience delivering NFP to eligible pregnant women in their community.

To ensure a comprehensive description of the educational content and process, the NFP Canada educators were also invited to participate to share their experiences of delivering the novel NFP Canadian education. These two individuals included: 1) the NFP Ontario Provincial Clinical Lead; and the 2) NFP International Consultant contracted to assist with the development and delivery of the Canadian education model.

Using publicly available work emails, each potential participant was sent an email invitation to participate in this case study. The study research coordinator subsequently followed up with each participant to review the details of the study as well as the informed consent (see Appendix D).

Data Collection

Data source triangulation, or the use of multiple data sources, is a key characteristic of case study research (Streubert Speziale & Carpenter, 2003). Data triangulation is a strategy used to gain understanding, to ensure completeness, and to confirm the credibility of findings (Krefting, 1991). Triangulation also enables the researcher to ensure construct validity by providing multiple measures of the same phenomenon. In this study, both qualitative and quantitative data were collected, including: 1) in-depth semi-structured interviews (both one-on-one interviews and focus groups); 2) documents; and 3) quantitative implementation data.

Interviews.

Two types of qualitative interviews were conducted in this pilot study to explore participants' perceptions, experiences and recommendations: 1) individual interviews and 2) focus groups.

Individual, or one-on-one, semi-structured interviews are a commonly used strategy for the collection of in-depth description where it can be argued that, in the absence of others, participants may be less susceptible to holding back or altering what is shared (Beitin, 2012). Where researchers already know enough about an area to develop a set of initial questions on the topic, a semi-structured interview guide can be beneficial. Following a semi-structured interview guide, the interviewer can reliably ask the same set of questions to all participants (although not

necessarily in the same order) and can supplement with any planned or unplanned probes (Richards & Morse, 2013).

Focus groups allow for many people to be interviewed at once, and for participants to interact around questions to create meaning or supplement others' responses (Beitin, 2012). In a focus group interview, individuals are brought together to focus on a topic and the group facilitator is responsible for interaction of the group and the way topics are introduced. This method can be effective for quickly gathering data (Richards & Morse, 2013). It is also particularly useful when researchers are interested in the interactions among groups of people connected in some way (in this case study, that included people connected through their NFP education and program delivery experiences) (Beitin, 2012).

Three NFP supervisors were invited to participate in three, one-on-one semi-structured interviews. One supervisor, whose region began implementing NFP in Spring 2018, was interviewed only once. The focus of the first interview was to explore the supervisors' experiences of: 1) coordinating the NFP education experience for the NFP team at their site; 2) completing the first phase of the education – NFP Foundations; 3) completing the second phase of the education – NFP Fundamentals; and 4) their experiences of participating in the supervisor education. Recommendations for changes to both the content and method of delivery of the education were procured. The second interview focused on: 1) balancing their roles as public health program managers and NFP supervisors; 2) their experiences carrying out follow-up education with their teams as part of the third phase of NFP education – NFP Consolidation and Integration; and 3) recommendations of key knowledge, skills and attitude and/or belief indicators for measuring nurse and supervisor knowledge and competencies. The third and final interview explored the process of transitioning into the role of an NFP supervisor over the course of the CaNE pilot and their experiences with doing reflective supervision. We also explored with supervisors the ongoing processes, including facilitators and barriers, being used to implement and deliver NFP within their health unit, and focused on how to meet the goals of the NFP Consolidation and Integration phase of education.

The NFP PHNs were also invited to participate in three qualitative interviews, however information about their experiences were collected through a mix of both focus groups and one-to-one interviews. The use of both individual and group interviews with PHNs served to be complementary and to provide multiple levels of information in the study. For example, we carried out focus groups to generate topics that could be explored more deeply in individual interviews (e.g., related to overall experience of education, comparing their education to others' experiences, what impact the education had so far on their professional practice and experiences implementing including facilitators and barriers). In the one-on-one interviews, PHNs were given the opportunity to elaborate on their experiences more privately and with more time allotted for response. A second round of focus groups with this sample allowed us to investigate themes further and to see if new meaning arises through interaction (Beitin, 2012).

Two focus groups each were conducted at three of the participating health units for an overall total of six focus groups. Focus groups were facilitated by the research coordinator, who reviewed the focus group process, established rapport with the group, and aimed to facilitate a lively discussion of the questions on the interview guide, while being cognizant of group dynamics to ensure that all participants had an equal opportunity to share their perspectives.

For the three NFP PHNs whose region began implementing the NFP in Spring 2018, each were invited to take part in a single individual interview focused on their experiences with the online and in-person training and early implementation and delivery of the program.

The two NFP educators were each invited to participate in two, individual interviews. In these interviews, educators were invited to: 1) describe and reflect on the process of developing the NFP Canadian education; 2) explore their perceptions regarding the delivery of the NFP Fundamentals face-to-face education sessions; and 3) identify their recommendations for further adaptations or additions to the education program. In second interviews, they also had an opportunity to hear and respond to early study findings from PHNs and supervisors who received the education. One of the educators was also able to reflect on having refined and delivered a second round of education to nurses in Spring of 2018.

Interview guides for later interviews were developed once the analysis of the initial data was underway; this iterative process allowed the team to identify new concepts for exploration and to seek clarification around issues or themes that arose during the preliminary analysis. Copies of all of the semi-structured interview guides are located in Appendix E. Permission to digitally record all interviews and focus groups was obtained through the informed consent process.

Documents.

During NFP education sessions, PHNs and supervisors were provided with checklists for evaluation of the content of the educational program. On these checklists, room was provided for documenting open-ended comments on curriculum, including questions and learning needs. These documents were collected by NFP supervisors at the conclusion of each training session. Permission was requested from participants to have access to their de-identified feedback in this study as a means of data triangulation. See Appendix F for the CaNE evaluation checklist templates.

To be able to best describe our sample in research reports and findings, we also asked participants of the study to complete a short questionnaire. Information was requested such as role in NFP (PHN, supervisor, educator), number of years working as a nurse, number of years working in public health and public health home visiting, and dates when NFP training was completed.

NFP program implementation data.

Maintaining and assessing program fidelity is critical for both achieving effective outcomes and for monitoring variation in program implementation across sites. This is especially important when launching the NFP in new settings, across multiple services sites, and due to the geographical spread. Systematically monitoring implementation can help inform the program's consistency and quality across sites, thus ensuring comparable outcomes for families participating in the program. Five elements of implementation fidelity have been identified by Carroll and colleagues (2007) including: 1) adherence to the service model as specified by the developer; 2) exposure or dosage; 3) the quality or manner in which services are delivered; 4) participants' response or engagement; and 5) the understanding that essential program elements are not subject to adaptation or variation. To address points 1-4, the NFP NSO in the US has identified a number of fidelity indicators for monitoring program implementation. Many of these

indicators stem from the NFP Core Model Elements (Appendix A) and are collected from nurses using the Intake and Referral Form, Home Visit Encounter Forms (HVE), and Alternate Home Visit Encounter Forms (AVE).

Home Visit Encounter Forms are completed by PHNs at every visit and provide information about the visit including: duration and location; participants' engagement; program content covered; whether the Universal Assessment of IPV, or Tailored Intervention for IPV were initiated; and whether the visit resulted in any referrals to government or community agencies. These data help document the program services to clients, and by recording the content and length of each visit will ultimately help inform the dosage of the intervention that participants are receiving. AVE Forms are completed by PHNs for each telephone or text contact between the NFP nurse and client, the client's family, and/or other service or healthcare providers. This form is also used when the NFP PHN attends an appointment or case conference with the client. AVE forms are not used when no therapeutic intervention is provided – these are not to be used for scheduling purposes or visit confirmation.

Through the establishment of data transfer agreements, approval was sought for Dr. Susan Jack at McMaster University (receiving party) to receive from the four public health units (disclosing parties) selected de-identified record-level data from the Intake and Referrals, HVE and AVE forms. Data from these forms were securely transferred using ab encrypted file transfer system, from the four participating public health agencies. The data elements approved for transfer are summarized in Table 9 below.

Table 9. *Summary of program fidelity indicators (approved data transfer)*

NFP Program Data Elements	**Descriptors**
Code for NFP client	
Code for NFP nurse	
Date of referral	YYYY/MM/DD
Referral source	SSFB Other MLHU Program CAS Primary care provider Community partner Self-referral
Confirmation of first-live birth	Y/N
Weeks gestation at time of first home visit	
Status	Active Discharged Reactivated after period of discharge
Discharge reason	Client initiated Moved Lost-to-follow up Unable to provide service Lost custody Pregnancy loss/infant death Maternal death Incarcerated
Date of home visit encounter	YYYY/MM/DD
Type of visit	Home Alternate
Home visit location	Client's home

	Family/friend's home Doctor's office School Public health unit Other
No show	Y/N
Alternate home visit	Telephone visit with client Attend appointment with client Text Participate in case conference
Duration of home visit	Minutes
Program Phase	Prenatal Infancy Toddler
% time spent on program domains	My Health My Home My Life My Child My Family & Friends
% planned content covered in interaction	
Date of Referral for service	YYYY/MM/DD
Referral Action	Service recommended and client receptive, Service recommended but client declined, Unable to follow, Client or child already receiving service, Referral in process/wait list or not available, Client no longer receiving service/issue resolved
Service Referred To	Financial assistance, pregnancy and parenting programs, mental health/crisis intervention, substance use and harm reduction, health care, children's services, CAS, shelter and housing

NFP supervisors also provided the research team with short data summaries that included information about the following additional NFP fidelity indicators: supervisor caseload; client age (reported as mean and range across program); number of women referred to public health; number of women referred to the NFP program; number of women referred to the NFP program who met eligibility criteria for the program; number of eligible women contacted by an NFP PHN; number of women contacted by an NFP PHN and who accepted enrollment into the NFP program; number of women who delivered a baby while enrolled in NFP; and number of women enrolled in NFP program with babies > 12 months old.

Data Analysis

Quantitative data analysis.

Descriptive statistics were carried out to provide summaries about the sample and aspects of fidelity indicated by the program implementation data. SPSS 21.0 was used to calculate descriptive statistics including frequencies, means, standard deviations and ranges.

Qualitative data analysis.

All interview data were digitally recorded and transcribed verbatim with identifying information removed. Conventional content analysis (Hsieh & Shannon, 2005) was used to code, categorize and synthesize the data. In this approach, researchers label and name codes based on terms or ideas emerging from the data (Hsieh & Shannon). In this process, the analyst first reads each transcript in its entirety. Then through a process of open, or line-by-line, coding develops a preliminary codebook used to code remaining transcripts (MacQueen, McLellan, Kay & Milstein, 1998). The second level of analysis involved grouping like codes together in categories (Hsieh & Shannon). Categories are then clustered into broader themes, demonstrating a higher level of synthesis and abstraction.

From the documents collected at the end of the education sessions, written comments were extracted and entered into an excel data file. Summative content analysis strategies were used to code and synthesize this data (Hsieh & Shannon, 2005). Common themes as well as lists of recommendations for changes were identified and summarized across each component listed in the document. The qualitative software package, NVivo 10.0 was used for overall data management, including coding, searching and indexing.

Ethics

Ethical approval for this study was received from the Hamilton Integrated Research Ethics Board (HiREB) on June 22, 2017. Ethical approval was also received from Regional Municipality of York, Public Health Branch on August 19, 2018; from Middlesex-London Health Unit on August 25, 2017; from City of Toronto (Public Health Division) on October 27, 2017; and from Niagara Region Public Health on June 28, 2018.

An amendment was approved by HiREB on May 16, 2018 to broaden the sample to include the NFP team at Niagara Region, as well as to collect additional variables that had been added to the home visit encounter form since the original ethics submission. This amendment was shared and approved by Middlesex-London Health Unit on May 16, 2018; by City of Toronto (Public Health Division) on July 3, 2018; and by Regional Municipality of York, Public Health Branch on August 8, 2018. Informed consent was received from all study participants prior to their engagement in the study.

Findings

Description of Sample

From the four participating public health units, 22 participants took part in the CaNE evaluation; this included 16 NFP PHNs (Niagara n=3; York n=4; Toronto n=4; Middlesex-London n= 5), four NFP supervisors, and two Canadian NFP educators. This purposeful sample was well positioned to discuss their experiences with the novel curriculum as well as implementation of NFP into existing public health practices given the length of time worked in public health (PHNs, mean 15.4 years; Supervisors mean 17.8 years) and their extensive expertise around PHN home visiting (PHNs, mean 13.4 years; Supervisors mean 13.5 years) (See Table 10). The two NFP nurse educators also had extensive public health nursing experience and expertise around the NFP program model. Both educators had previously completed the NFP education as a participant, as well as observed expert NFP educators deliver the curriculum.

Table 10. *Participant Characteristics*

	NFP PHNs (n=16)	**NFP Supervisors (n=4)**	**NFP Canada Educators (n=2)**
Age (mean years; range)	43.4 (25-64)	47.25 (38-59)	49.0 (34-64)
Nursing experience (mean years employed; range)	19.1(1.5-33)	23.5(16-32)	26.0(10-42)
Public health experience (mean years in public health; range)	15.4(2.5-28)	17.8(14-30)	17.5(10-25)
Home visiting experience (mean years home visiting experience; range)	13.4(3-28)	13.5(3-20)	14.5(10-19)

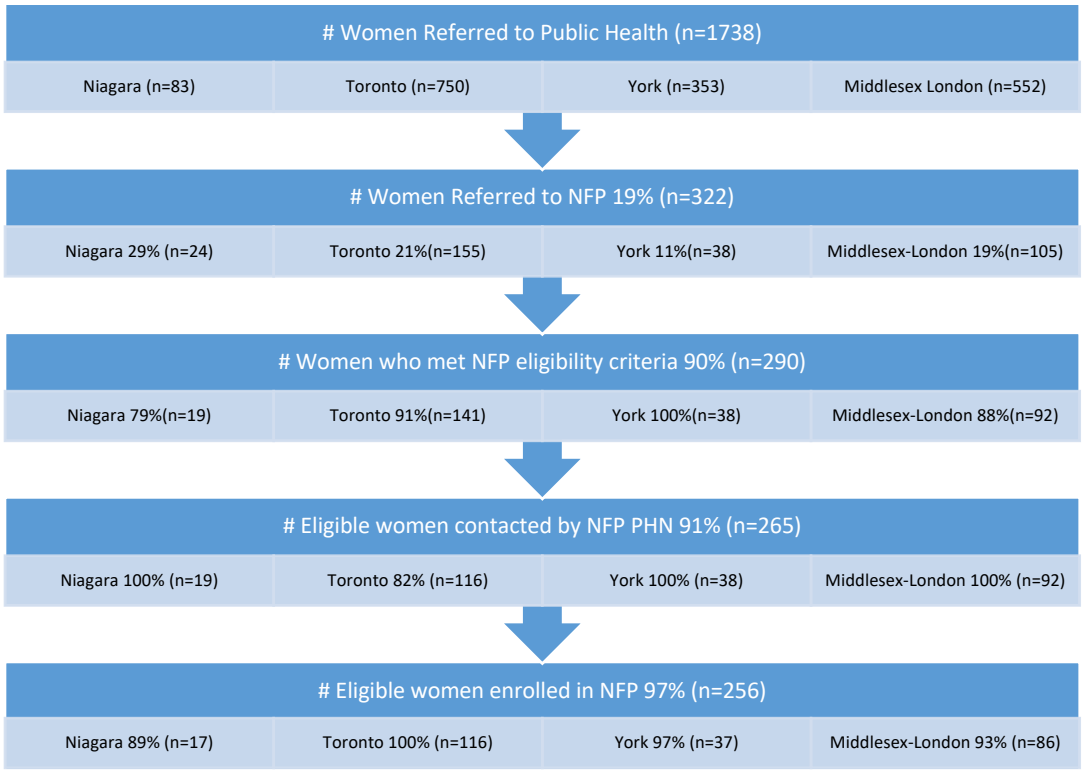
Key Findings: Implementation and Delivery of NFP Program with Fidelity to Core Model Elements

Referral and enrollment of women in NFP: Supervisor program summary reports.

Based on program summary reports provided by NFP supervisors at each of the four participating public health units, we were able to gain insight into referral and enrollment trends.

Overall, across all pregnant women referred to the four public health units (n=1738), 19% (range 11-29%) were internally referred to the NFP program. The NFP program assessed that 90% (79-100%) of those referred met program eligibility criteria (or 17% of all pregnant women referred to public health). Of those who met the eligibility criteria, 91% (range 82-100%) were contacted by an NFP PHN and nurses were successful in enrolling 97% of those women (range 89-100%). Figure 2 below provides a breakdown by health unit.

Figure 2. *Cane Client Referral and Enrollment Flowchart*



NFP client enrollment data: Totals across all four public health units.

The findings below reflect a summary of data obtained from the de-identified records completed at each local public health unit and transferred directly to the research team.

Selected de-identified record level data from each public health unit regarding number of clients enrolled and gestational week of enrollment is presented below, aggregated across all public health units. Over a 21-month period (January 4, 2017 – September 30, 2018), a total of 311 clients were enrolled across all four sites. Of these, 21.2% (n=66) were assigned a client ID number but did not have any home visit encounter (HVE) data recorded. From the 66 clients with no recorded home visit data, the majority (n=59) were entered as 'discharged'; however, 7 clients were still listed as 'active.' Of the 245 clients who had one or more home visits, 28% (n=69) were discharged at a later date, while 71% (n=174) remained active at the time of data submission, and 0.8% (n=2) were 'reactivated.'

Element 1: Client participates voluntarily in the NFP program.

During the first home visit encounter, all NFP PHNs are required to discuss the voluntary nature of the program and seek the woman's permission to enroll her in the program. Based on program summary reports from supervisors, the majority of women (97%) contacted by an NFP PHN agreed to be enrolled in the program.

Element 2: Client is a first-time mother.

Overall, 99.67% (305/306 records) of pregnant women enrolled were identified as first-time mothers (first live birth). Only one participant was listed as not a first-time time mother; data were missing on five participants.

Element 3: Client meets socioeconomic disadvantage criteria at intake.

Socioeconomic disadvantage was determined by meeting local criterion for low-income and by age (< 21 yrs or < 24 yrs depending on demographics of health unit catchment area). Quantitative data on participant income levels were not transferred as per the data sharing agreements.

Across the four public heath units, the mean age at baseline of the pregnant women enrolled in NFP was 18 years. Table 11 provides a summary of client mean age within each public health unit.

Table 11. *Client Age at Time of NFP Enrollment*

Public Health Unit	**Mean age in years (range)**
Toronto	18 (14-22)
York	20 (18-24)
Middlesex-London	16 (14-26)
Niagara	18 (14-25)

Insights from the qualitative data collected from supervisors and PHNs indicated the value of using local epidemiological reports to locate communities or neighbourhoods where higher levels of social and economic disadvantage are reported. Nurses working in communities with a higher proportion of women with higher levels of education, income and social support indicated challenges in enrolling enough pregnant women who met this criterion related to socioeconomic disadvantage. In comparison, NFP teams working in areas characterized by high numbers of families living in poverty, experienced few to no difficulties in enrolling pregnant women that met this specific eligibility criteria.

Element 4: Client is enrolled in the program early in her pregnancy and receives her first home visit no later than the 28th week of pregnancy.

With respect to this fidelity element, 91.8% of eligible women were enrolled no later than the 28th week of pregnancy (See Table 12 below). The mean gestation at time of enrollment was 19.79 weeks (range 4-36 weeks).

Table 12. *Client Enrollment by Gestation*

Enrollment Period	**% women enrolled (n)**
Enrolled ≤ 16 weeks gestation	35.1% (n=94)
Enrolled between 17-25 weeks	36.2% (n=97)
Enrolled between 26-28 weeks	20.5% (n=55)
Enrolled ≥ 28 weeks	8.2% (n=22)

Of those enrolled, 35% (n=94) of referrals were enrolled by 16 weeks gestation. Less than 10% of referrals were enrolled after 28 weeks gestation.

Interviews with PHNs, supervisors, and educators provided some insight into potential factors and hypotheses influencing enrollment of clients beyond the established eligibility criteria. These included:

a. Existing NFP clients were transferred to a CaNE pilot site. CaNE pilot site would have recorded gestational age (normally later in pregnancy) of client when she entered the new site (and not when she originally enrolled in NFP).
b. Client due date revised by physician/midwife after initial intake visit
c. Staff error in interpreting official enrollment date (e.g. program consent visit occurred during 28th week of gestation, but first official home visit did not occur until the following week or later).
d. Referral source lack of awareness about this "novel" program at time of pilot implementation and need to refer early.
e. That some women experiencing social and economic disadvantage may not seek pre-natal care until later in pregnancy, thus limiting opportunity for physician or midwife to refer in a timely fashion.
f. That early in the program, when caseloads were being established, a local decision may have been made to enroll a client slightly over the 28 weeks gestation mark because of a belief that no services or referral to an alternate program would be adequate to address client level of risk/needs as determined by intake screen.

One PHN explained some of these challenges as experienced in practice:

> *That's the other challenge, sticking to the 28-week gestation. Because a lot of [young, pregnant women] don't even see an [obstetrician] OB until 24 weeks, right? And then the OB will, will want them to get involved with the program and make the referral. But sometimes it takes a while, and [the women] they don't want [NFP] right away.*

Referrals to the program came from a number of sources including community partners and self-referrals (Table 13).

Table 13. *Source of Client Referral*

Referral Source	**% women referred from source (n)**
Public health services (e.g. Intake phone line)	21.2% (n=66)
Community partners	18.3% (n=57)
Self-referrals	12.5% (n=39)
Doctor's offices	10.6% (n=33)
Children's Aid Society	7.1% (n=22)
No referral data available	30.2% (n=94)

Across interviews with NFP program nurses and supervisors, there was clear evidence that all program staff were aware of and knowledgeable about the NFP program client eligibility criteria. Nurses confirmed that they understood the importance of enrolling only eligible clients and could theoretically explain and provide rationale for why these specific client eligibility criteria have been pre-determined. In practice however, the greatest challenge comes from repeated requests from referral sources to allow a pregnant woman,

who does not meet all of the program eligibility criteria (e.g. young age, income level, gestation, and planning to parent for the first time), to be allowed to enroll in the program.

For example, stakeholders have expressed a desire to refer multiparous women to the program. As one PHN explained:

> *I know that for the first little bit some of the HBHC nurses were like oh, well even though she's a second-time mom like she really wants the program, she would benefit from the program. We've had a lot of second-time moms who actually want, or second-time parenting moms, that actually want the NFP program and they can't.*

Multiple nurses spoke at length that many referral sources, as well as colleagues within the Healthy Babies Healthy Children program perceive that the intensive NFP program offers significant benefits and supports to young pregnant women, and that there is a desire to refer women, even if they do not fully match the program eligibility criteria. There was consensus across PHNs however that once the rationale for the criteria are explained to referral sources, then a deeper understanding of the program is achieved. As one PHN shared:

> *We seem to be getting more referrals from community partners and family doctors. The only thing that I would say about that is that sometimes they kind of get caught up in the eligibility criteria. Like I know when we've done presentations they'll ask, 'why does [the eligibility criteria] have to be 21 years or under?', or 'why does [an eligible woman] have to be [less than] 28 weeks pregnant?' But I think once we explain to them the reasons for that then they understand that. Then they seem like they're excited about the program as well…explaining things to them like you know a big part of the program is about birth outcomes and that kind of thing. So, I think once we, we explain those kind of things they do, they do understand.*

Another PHN who experienced similar challenges, further emphasized the importance of consistently adhering to the eligibility criteria:

> *So, we've also had [from referral sources] a lot of [comments] like, 'oh well, you know she's 22 but you know she meets all the other criteria.' So we've got a lot of people coming to us saying you know '[my client] would really benefit from your program but they're missing this or they're missing that, can you squeeze her in somehow?' And then when they get the no because we to follow the strict criteria then they're just like, 'really?'... But I think now that they are clear on it that we are not bending the rules for these women, that they don't get their hopes up as much and, and they know. So right now we're not ... we're just getting the women that really fit the criteria, for sure. Yeah, and [referral sources] get excited because they're like, 'I've got one for you, she fits the program to a T.'*

Element 5: Each client is assigned an identified NFP nurse who establishes a therapeutic relationship through individual NFP home visits.

Each eligible pregnant woman that enrolled in the NFP program was assigned a PHN who had completed the NFP education.

There was consensus across study participants that frequency (weekly or biweekly) of home visits and the length of the program (2.5 years) are program characteristics that allow nurses to have the time and flexibility to establish and nurture a therapeutic relationship with the client. It was noted that, for many clients with histories of trauma, building trust with a service provider can take time - time which is afforded to NFP PHNs working with this population.

One PHN outlined the difference it makes to have the flexibility to offer more visits in NFP compared to her experiences offering Healthy Babies Healthy Children:

> *If we weren't seeing them weekly or biweekly and we were just doing the monthly like HBHC did, or sometimes in 6 weeks, you don't have that chance to really support them and provide the best follow up and support that you need to give them. But you have that chance here in the NFP program. So I think definitely the frequency of seeing the client helps build the relationship to make this program more effective.*

Supervisors also confirmed that the number and frequency of NFP home visits facilitates a client's ability to trust the nurse home visitor, which ultimately influences their retention in the program. One supervisor explained:

> *There's something about giving that client time to build the trust with you and maybe being the only person who's truly listened in their world, for like continuous listening, not just like I'm listening to you today but I'll never see you again, right? It's more about this same person who I trust is going to come back and ask me more about this. They've opened up incredibly.*

Element 6: Client is visited face-to-face in the home, or occasionally in another setting (mutually determined by the NFP nurse and client), when this is not possible.

A total of 3,338 visits were recorded. Of these, 84.5% (n=2,820) were home visits. Table 14 summarizes the number of completed home visits and alternate visits, as well as attempted and cancelled visits.

Table 14. *Completed and Cancelled Home Visits*

Encounter Type	**% (no. visits)**
Completed home visits	84.5% (n=2,280)
Completed alternate visits	8.9% (n=297)
Attempted home visits	1.9% (n=65)
Scheduled home visit, cancelled by client	4.1% (n=138)
Scheduled home visit, cancelled by PHN	0.5% (n=18)

Of the 2,820 home visits completed, the location of home visits varied with the majority, 70.7% (n=1,996) occurring in the client's home. The locations of completed home visits are summarized in Table 15.

Table 15. *Location of Completed Home Visits*

Location of Home Visit	**% (no. visits)**
Client's home	70.7%% (n=1,996)
Family/friend's home	84.7% (n=137)
Public health unit	3.3% (n=95)
Doctor's office/clinic	1.6% (n=49)
Other	18.4% (n=523)

Of the 297 alternate home visits completed, most were telephone visits with the client 48.5% (n=144), followed by texting with the client 19.7% (n=29). A summary of all alternate visit types is provided in Table 16.

Table 16. *Alternate Visit Types*

Alternate Visit Type	**% (no. contacts)**
Telephone visit with client	48.5% (n=144)
Texting with client	19.7% (n=59)
Case conference	11% (n=33)
Attending appointment with client	7.4%% (n=22)
Other	9.7% (n=29)
Unknown	3.4% (n=10)

Public health nurses spoke about the importance of delivering services through home visits – in that it allows a more comprehensive assessment of the mothers' and infants' overall well-being, permits deeper insight into household functioning, and reduces potential barriers such as transportation that some new mothers might experience in trying to access other community-based services. However, PHNs emphasized that what is most important, is not necessarily that the visit occurs in the home setting, but that NFP provides the opportunity to have a face-to-face encounter in any context. Alternate visit sites are mutually negotiated between the nurse and the client, and an alternate location for the visit may occur at the request of the client, because a PHN wants to accompany the client on a first visit to another community agency (e.g. Canada Prenatal Nutrition Program, Ontario Early Years Centre) or because of the convenience of an alternate location.

Nurses further emphasized that having the flexibility to accompany young women to other agencies or resources is one strategy to reduce their anxiety of accessing a new service and might facilitate longer-term uptake of referrals. One PHN positively reflected on her own experience of accompanying a client on her first visit to an outreach program for young mothers:

> *I wanted to link my client to [young mother community outreach program] because it's got all these great programs but she was you know afraid to go. So then I suggested to her, 'would it be helpful if I met you at the [outreach program] and we walked in together?' Like you know little things like that that you know. Or there was a young mothers' outreach program that my one client was like,'hmm… Ok, well we'll go together one time, just the first.' And then that's all she needed, one time, you know. … I*

think the value of that is so amazing that they, you know ... Because you help get them over that, that initial hump and then they were good to go after that.

One challenge identified however was that some public health units had policies that put constraints on the times that nurses could visit. In some locations, designated services were only to be provided during the workday (e.g. 8:30 AM - 4:30 PM) and nurses thus did not have the flexibility to meet clients at times that they preferred.

Element 7: Client is visited throughout her pregnancy and the first two years of her child's life in accordance with the current standard NFP visit schedule or an alternative visit schedule agreed upon between the client and nurse.

While there is flexibility within the program to alter the visit schedule to meet client needs, the standard schedule of visits that is recommended is as follows:

- Four weekly visits upon initial enrollment prenatally, then every other week until delivery.
- Six weekly visits after infant birth, followed by visits every other week until the baby is 21 months of age.
- Monthly visits from 21-24 months of age.

As noted above, 311 clients were referred and given a client ID number, at the time of data analysis, 58.8% (n=181) were listed as active in the program, 40% were discharged (n=125), 2.25% (=7) were listed as active, but had no home visit encounter recorded, less than 1% (n=2) were reactivated, and there were no data available for 3 clients.

Of the 69 clients who received at least one or more home visits and who were discharged, reasons for discharge are summarized in Table 17.

Table 17. *Reasons for Client Discharge*

Reasons for Discharge	**% (no. clients)**
Client-initiated discharge	37.7% (n=26)
Lost to follow-up	17.4% (n=12)
Client moved	29.0% (n=20)
Pregnancy loss/infant death	5.8% (n=4)
PHN unable to provide NFP	1.4% (n=1)
Client lost custody of the child	2.9% (n=2)
No reason provided or data missing	5.8% (n=4)

A total of 245 clients had HVE data collected at least once during pregnancy, infancy or toddlerhood. During the pregnancy program phase, 228 clients had one or more HVE/AVE (herein called HVE), during infancy 141 clients had one or more HVE (please note: 10 clients had infancy data, but not pregnancy data – it is not clear how this occurred from the information provided). Using the last pregnancy HVE date and the first infancy HVE date, we were able to estimate the number of clients who continued with the program into the infancy phase – 59.2% of clients (141/238) had at least one HVE during infancy. During pregnancy (n =228), the mean number of home visits was 7.40 (SD = 5.25; range: 1-35). During infancy (n=141), the mean number of visits was 11.6 (SD =8.78; range: 1-41). During toddlerhood, only 6 clients had HVE

data. It is important to note that the number of clients in the toddler phase is likely due to collecting data for analyses prior to many of the clients reaching that phase.

To be able to provide regular, frequent home visits to women enrolled in the program, as well as to meet the program requirements for regular reflective supervision, case conferences, joint visits and team meetings, the number of clients (caseload) that any one PHN provides service to must be taken into careful consideration. In the pilot study to determine the acceptability and feasibility of delivering NFP in an Ontario context, the ideal caseload size for a full-time PHN working in an Ontario public health unit was determined to be approximately 20 clients (Jack et al., 2012).

Table 18 below provides information about the average caseload size by public health unit during the CaNE pilot project. Across the three original public health units in the CaNE project (Middlesex-London, Toronto and York), the average caseload during the prenatal period was 14 clients/PHN. Niagara Region was not included in this calculation as they joined the project later and at the time of data collection the local NFP team was still in a process of recruiting and building caseloads. In interpreting this information, it is important to remember that the early stages of implementing NFP into a health unit requires substantial time for teams to complete the core education, participate in community outreach activities and for nurses to gain competence in delivering the program, as such it often takes time to build a caseload. Also, the length of the full NFP intervention is a maximum of 2.5 years and the length of this pilot study limited our ability to capture data across a full cohort of clients.

Table 18. *PHN Client Caseload*

	Program Phase		
Public Health Unit	**Prenatal**	**Infancy**	**Toddler**
Middlesex-London (April 2017-September 2018)			
1	18	12	0
2	14	15	0
3	18	12	0
4	15	13	1
5	8	6	0
Average	**12**	**12**	-
Niagara Region (May 2018-September 2018)			
1	----	2	0
2	5	3	0
3	3	2	0
4	1	0	0
Average	**3**	**2**	-
Toronto (June 2017-September 2018)			
1	32	22	0
2	21	17	1
3	27	10	0
4	20	5	0
5	4	4	0
Average	**21**	**12**	-
York Region (March 2017-September 2018)			

1	16	16	4
2	12	8	0
3	2	1	0
4	4	1	0
Average	**9**	**6**	**1**

Element 8: NFP nurses and supervisors are registered nurses or registered nurse-midwives with a minimum of a baccalaureate /bachelor's degree.

All NFP PHNs and supervisors in the CaNE pilot study held, as a minimum degree, a bachelor's degree in nursing.

Element 9: NFP nurses and supervisors develop the core NFP competencies by completing the required NFP educational curricula and participating in on-going learning activities.

The CaNE curriculum was piloted with two cohorts of learners. Cohort 1 started in January 2017 (n=15 learners) and Cohort 2 started in March 2018 (n=6 learners). The timeline for initiating the different educational phases is summarized in Table 19. The table also includes the number of study participants who completed the education. Additional learners, not enrolled in the study, but eligible to complete the NFP education (e.g. Director of Nursing, new PHNs hired at Hamilton Public Health) are not included in this table.

Table 19. *CaNE Education Timeline*

Cohort/Timeline	**NFP Foundations**	**NFP Fundamentals**
Cohort 1	January-February 2017 (n=3 supervisors; n=11 PHNs) December 2017-February 2018 (n=1 PHN)	February 2017 (n=3 supervisors; n=12 PHNs)
Cohort 2	March-April 2018 (n=1 supervisor; n=5 PHNs)	April 2018 (n=1 supervisor; n=5 PHNs)

Three NFP supervisors completed NFP Fundamentals: Supervisor Education from March 6-9, 2017. With the addition of a new supervisor in 2018, she was offered the Supervisor Education from December 10-13, 2018.

Element 10: NFP nurses, using professional knowledge, judgment and skill, utilize the visit-to-visit Guidelines; individualizing them to the strengths & risks of each family, and apportioning time appropriately across the six program domains.

PHNs use the NFP Visit-to-Visit guidelines to plan and implement their home visits, individualizing their approach to meet the individual needs of each client and family. During their visits, the PHNs apportion time across the six program domains. The domains are listed below with examples to demonstrate the scope of content covered within each domain:

a. Personal Health (Health Maintenance Practices; Nutrition and Exercise; Substance Use; Mental Health)
b. Environmental Health (Home; Work; School and Neighbourhood)
c. Life Course (Family Planning; Education and Livelihood
d. Maternal Role (Mothering Role; Physical Care; Behavioural and Emotional Care of Child)
e. Family and Friends (Personal Network Relationships; Assistance with Childcare)
f. Health and Human Services (linking families with needed referrals and services)

Estimates of the amount of time that should be spent on different content areas are dependent upon program phase (Pregnancy, Infancy or Toddlerhood). Goals for the amount of time spent in each area are based on the content covered in the three US clinical trials and address the varying needs of clients and families in different stages of pregnancy and child development.

The NFP has designated benchmarks for program domain content coverage for each stage. The benchmarks for pregnancy are as follows: personal health 35-40%; environmental health 5-7%; life course: 10-15%; maternal role 23-25%; and friends & family 10-15%. During infancy the benchmarks are: personal health 14-20%; environmental health 7-10%; life course 10-15%; maternal role 45-50%; friends and family 10-15%. It is expected that the time spent on accessing the need for additional services/making referrals (Domain 6. Health and Human Services) will be captured within the time spent on the relevant domain, so it is not captured as a separate domain.

In Table 20 below, aggregated data across each of the four participating public health units by each domain across all three program phases – pregnancy, infancy and toddlerhood are summarized.

Table 20: *NFP content domain data by Program Phase: Pregnancy, Infancy and Toddlerhood*

PREGNANCY						
	Distinct visits (n)	Personal Health (%)	Environmental Health (%)	Life Course Development (%)	Maternal Role (%)	Family & Friends (%)
Benchmark		35-40%	5-7%	10-15%	23-25%	10-15%
Total/Mean	1,433	41%	13%	12%	21%	13%
INFANCY						
Benchmark		14-20%	7-10%	10-15%	45-50%	10-15%
Total/Mean	1,375	23%	9%	13%	43%	12%
TODDLERHOOD						
Benchmark		10-15%	7-10%	18-20%	45-50%	10-15%
Total/Mean	10	16%	12%	19%	42%	11%

Element 11: NFP nurses and supervisors apply the theoretical framework that underpins the program (self-efficacy, human ecology, and attachment theories) to guide their clinical work and achievement of the three NFP goals.

The majority of study participants had experience home visiting pregnant and parenting women. As such they had a broad foundation of knowledge about public health nursing practice and competencies, and were familiar with concepts such as attachment, self-efficacy, reflection and therapeutic relationships. However, what was unique for many was that following immersion in the NFP education, both nurses and supervisors expressed a much deeper understanding of the theories underpinning their practice. The NFP education provided a review and application of principles from the following theories: critical caring, self-efficacy, attachment and ecological model. Furthermore, they identified that they now felt better positioned to apply the theoretical principles to better explain their practice decisions. Ultimately, nurses perceived that this would play a role in establishing stronger relationships with women enrolled in NFP and help to provide interventions that would influence behaviour change. As one nurse explained:

> *...you know building that therapeutic relationship. Like it puts things in perspective. I think with HBHC it was just we already knew it and is something that we did but with NFP you see the theories and you see all that you've learned in practice on a daily basis when you see your clients. So you can, you can connect it more and I don't know if it's because we're seeing the clients so frequently where ... and maybe because you know we just had the education session and it's still sticking in my brain that like yeah you know I am doing this theory, right? But I find that I, I really feel like I can connect the theories*

and I can connect the learning into what I'm doing because it actually makes a difference."

Another nurse shared how, for her, theory can be a helpful way to "*remind the client of why this is going to make a difference"* – for example, when explaining the importance of attachment.

Most notable in the data was the transformative impact that learning about self-efficacy theory had on how the nurses approached, supported and worked with the women on their caseloads. One nurse shared:

> *The other theory, I think is so critical is the self-efficacy. Oh my goodness. Believing in them. They actually have someone that believes in them – telling them, 'yes, you can do this.' Like right from the beginning it's always about their strengths. We always are pumping their tires, building their … And then the fact that you always try to wrap the visit up with a positive affirmation.*

The application of self-efficacy theory in practice, and the influence that had on professional nursing practice as well as on clients' experiences, was corroborated by the supervisors. One NFP Supervisor summarized that:

> *I know that the nurses have oftentimes said to me that the one thing they believe that is so incredible is the self-efficacy piece. That they never had dwelt a lot on thinking about it before with other clients [in HBHC] but because it's intentional in NFP to build self-efficacy it's now become evident to them that it is a critical piece of the work that they do in NFP and that that is making a difference in the girls' lives…*

Finally, there was acknowledgement that the addition of Critical Caring Theory provided concepts to support the nature of the caring and social justice work they engage in as PHNs, as well as that the theory was complimentary to the increased focus on social determinants of health occurring within various health units.

Element 12: Each NFP team has an assigned NFP supervisor who leads and manages the team and provides nurses with regular reflective supervision.

An NFP supervisor was trained and assigned to each NFP team within each of the four public health units. Within the NFP program, it is advised that a single supervisor provide support to a team of no more than 8 full-time nurse home visitors. With smaller teams, the amount of supervisor time dedicated to NFP can be proportionally reduced. The mean monthly supervisor caseload of PHNs supported (calculated for a period of 21 months, January 2017-September 2018, with the exception of Niagara Region who implemented the program April-September 2018) was: Middlesex-London n=4.3 PHNs; Niagara Region n=3.0 PHNs; York Region n= 3.2 PHNs and Toronto n=3.9 PHNs.

Element 13: NFP teams, implementing agencies, and national units collect/and utilize data to: guide program implementation, inform continuous quality improvement, demonstrate program fidelity, assess indicative client outcomes, and guide clinical practice/reflective supervision.

For the purpose of the CaNE pilot project, tables to record information about referral and enrollment patterns, client demographics, home visit patterns, referrals and client outcomes were developed. Additionally, nurses were required to complete HVE/AVE forms. Throughout the qualitative interviews and focus groups, the need for an NFP specific database, integrated into existing local and provincial data collection systems was identified as a priority need. In the analysis of the data for this project, challenges were also noted – specific to the amount of missing data, the lack of consistent interpretations of codes, and minor errors in data entry. Specific recommendations for improvements will be provided in a later section of this report.

Element 14: High quality NFP implementation is developed and sustained through national and local organized support.

At a national level, a Canadian NFP Collaboration has been established to provide governance to the implementation and expansion of NFP across Canada. As the holder of the NFP license for the Province of Ontario, representatives from Middlesex London Health Unit are members of this committee. The Ontario NFP Clinical Lead, representatives from Hamilton Public Health, and researchers from McMaster University (Susan Jack, Harriet MacMillan) are also members of this collaborative effort.

In Ontario, as part of the CaNE initiative, an NFP Practice Lead position was established to ensure that implementation and delivery of NFP across public health units was a coordinated effort. The NFP Practice Lead continues to provide extensive support and consultation to all five Ontario health units delivering NFP (including Hamilton Public Health) and serves as the lead educator.

Perceptions and Experiences of the Canadian Model of NFP Education

Reflections on the curriculum development process.

In the evaluation phase of this project, CaNE educators were invited to discuss their experiences and share their reflections on the process of developing the curriculum. Given the timeline for development, one CaNE educator identified that the most significant challenge in this process was related to the amount of time to complete a significantly large task:

> *The reality and limitation is that we were on a very tight timeline and so I would say it was not nearly as inclusive a process as it should have been and we knew that, and I feel very badly but there's absolutely nothing we could've done about it given the timeline that was imposed upon us. But, you know, that's ... that, that is what it is but it certainly was less than ideal at the end in terms of the inclusivity of the process…. It's almost an impossible timeline to have imposed upon you and so we just had to motor through, and that's the reality of time-limited funding. And so you do what you can but it is not ideal.*

Despite the timeline being a significant challenge, the educators felt proud of what was accomplished. As one CaNE educator explained, successful completion could be attributed to the curriculum development team's excellent working relationships:

> *We really respect each other and we worked very well together and we just kept it moving. We kept it moving. I don't know how we did it, but we did. [Chuckles] And seriously, you know that sounds really trite and you know of course there's so many other things I'm proud of but I don't know that anybody else could've done it. You know we just, we just had to do it.*

Phases of NFP education.

Findings here are summarized according to the three unique phases of education: 1) NFP Foundations, 2) NFP Fundamentals (including supervisor-only training) and 3) NFP Consolidation and Integration. Findings specific to the NFP Intimate Partner Violence (IPV) education are summarized separately.

NFP Foundations.

NFP Foundations – Delivery method and organization of content.

The introductory curriculum, which was delivered to learners via the online learning management system Moodle, was well-received by the NFP PHNs and supervisors participating in the CaNE evaluation. Overall, their experiences with the platform suggested that it was user friendly and easy to navigate. The NFP educator, whose role included the oversight of this online curriculum, shared that she had, "*almost no complaints about the education website – the platform, the content, and access*," and that overall the feedback for this phase of the NFP education was "*very positive*."

The online platform was praised by several participants for its organized or meaningful structure and supportive learning features. The online content was organized in a manner so that participants could easily identify the order in which to complete the modules. The organization of the modules was further complimented by the nature of the content within each module, specifically that information in one module built upon concepts established in early modules. As one supervisor articulated:

> *I liked the fact that a lot of it built on each ...* ***every chapter built on another piece*** *and it actually was really good at always bringing in the core model elements to me. So that to me was very good because it's making me realize that everything you're doing actually is about a structure that is truly supporting why it's a program, right? As opposed to haphazard pieces of information that were added in.*

Another new element that participants expressed facilitated their learning and understanding of foundational concepts were the built-in opportunities in each module, as well as at the end of the modules, to actively reflect and review concepts covered in earlier modules.

Participants also appreciated that the platform was something they could access from anywhere (e.g., could complete at work or home) and for the flexibility it provided. Several participants

mentioned having permission from their health units/supervisors to complete the introductory curriculum at home or away from the office - which was facilitated by the online format. One PHN explained that it was beneficial to be able to complete the learning in an alternate location because trying to complete the education onsite was challenging, "*because then you're focused on learning something like if you're trying to be at your desk you always get interrupted so it was nice to be able to sit somewhere quiet and just focus on it.*" Additionally, the ability to access the program at any time, from any location, was perceived as being especially helpful to participants who were still working in another home visiting program at the same time as they were completing their NFP education. As one PHN said, "*Benefit would be we can do it when it works for us. So I did [the NFP Foundations] over about 3 weeks and we were still doing other home visiting. So being able to fit that in when works for us was very convenient."* Finally, several participants commented that the ability to access the online modules at any time allowed them to have control over the pace and timing for completion of NFP Foundations.

Learners were most engaged in NFP Foundations when completing an online module that included "interactive" elements such as videos, quizzes, case studies and storyboards. Modules that were built using the Articulate Storyboard software provided opportunities for nurses to answer questions within the module, select different response options and practice different skills. These types of modules were preferred over some of the introductory chapters which consisted predominantly of text-based content saved as PDF files, with review questions and points for reflection embedded in the document. One PHN recalled that the IPV modules were ones that she found to be particularly engaging and interactive*:*

> *I remember doing the modules on IPV and I really liked those ones. They were more interactive and you had to ... there was a lot of motivational interviewing skills and you had to sort of pick what you would say, and I found that really great. I thought wow, this is great, I love this.*

Supervisors also appreciated the interactive elements as well. One supervisor shared the following, emphasizing how the interactivity could appeal to different types of learners:

> *I love the storyboards. I found them they were interactive. They just kind of spiced it up a little bit. Kind of just gave you something different. It reinforced the content so you were kind of like you read through it and then you did the storyboard and it kind of teased out those key parts. I think it's good for people who learn different ways. Some people like to read, some people it's better to hear it. So I think you're reaching different learning styles. So it was good*

It was recommended that the platform could be improved by allowing for all activities to be completed online; however, it should be noted that overall there was support for the *option* to be able to print the reading materials. As one participant shared:

I'm kind of old school – I ended up printing the modules. I find I learn better when I can have paper and I like to highlight and make notes in the margins. And actually as a group we printed off everything and everyone got their own binder. And then I would do the, if there was an accompanying storyboard, I would do that online. I felt they really complemented each other nicely.

The most common criticism of the online platform delivery was that it was not fully "*truly online*" in that there were some aspects of the curriculum which could not be completed in the online system but required participants to print and complete the required learning activities by hand. As one PHN explained:

So I thought it was kind of weird that it was online training but a lot of those 'what do you think?' activities, where you fill in some questions. like you couldn't type in [the answers]. So, we had to print out all of the sections and then we're doing online training but we also had to print it.

It should be noted that there was less support for the meaningful structure and flexibility of the online curriculum from the group of participants who completed their online training in spring 2018 (second education cohort). Some of these participants were hired into the NFP program and then moved very quickly into the face-to-face training. As a result, they worked through the online curriculum not in order, but according to what had been prioritized as essential in preparing for NFP Fundamentals. One nurse shared, "*I felt I was jumping around quite a bit and it didn't seem to flow for me at that point. So I would read one chapter and then I'd go to another one but it wasn't flowing for me, it was something new, something new, something new*." Commenting on how she completed this training intensely rather than being able to control the pace, another PHN shared, "*you can only watch stuff online and read stuff for so long before it doesn't really sink in as much as I would've liked it to."*

It was not surprising, then, that PHNs trained as part of the second cohort expressed that they could have benefitted from more time to complete the online curriculum prior to attending NFP Fundamentals. When asked to suggest an ideal amount of time for completing 'NFP Foundations,' it was felt that somewhere between six to eight weeks might be ideal.

NFP Foundations – Content.

There was consensus that the NFP Foundations content provided an essential and substantive introduction to the NFP program elements, its theoretical foundations, and the nature of the intervention and "set the stage" for the next phases of education. There was agreement that following the completion of NFP Foundations, learners felt prepared to start NFP Fundamentals (face-to-face training). One PHN concluded, *"I found the modules were like pretty much the foundation for me. Like if you didn't do the modules you wouldn't have been able to survive the in class you know because you learned a lot from the modules."* This finding was also corroborated by the NFP educators. One of the NFP Educators shared her perception that, in particular, the first cohort of learners was highly prepared for the face-to-face learning – associating this with the assumption that they had engaged with, had sufficient time to complete the work and were able to do the work that was required of them ahead of time. She further shared:

When the nurses came to their in-person education they'd clearly done the work. Because you can tell when people really don't have the basics. And so, they participated in the modules. Can I say that they all did it 100%? I can't say that. But they all seemed well prepared for in person, which was the intent. Because what they learn in in person builds on the fundamentals that they learned in their introduction to NFP.

Many learners also appreciated that the online curriculum, in reviewing concepts and theories central to the work of public health home visiting nurses, built the case for the work of the NFP program as well as provided them with language to describe the professional practice of nurse home visitors. Public health nurses also commented that the review of evidence and the theories underpinning the program provided them language to articulate the components of home visiting that they already intrinsically valued. In completing the review of NFP theories and core components of therapeutic nurse-client relationships, one nurse explained, "*You know that was really, really helpful. It brought it back to what the actual art of our job is. You know like remembering that yes, we are using these theories, we are implementing these principles. You know it was a good refresher for me."* Review of the theoretical foundations of the program also supported nurses to be able to articulate the "rationale" for different program elements, for example why this program is targeted to "first-time mothers" because of that important "window of opportunity for learning and behavior change." While the theories underpinning the intervention were not new to many of the learners, appreciation was expressed about how key concepts in each theory were explicitly linked to elements of the NFP program model. One supervisor summarized that:

The theory was laid out so well and it anchored the work that we do…the theory was tied so well to the work of why NFP is laid out the way it is, the work that's done in NFP, they tied the theories so well to it. I appreciated hearing that and thought it was done very comprehensively and it, and it helps ... it just strengthens the practice.

NFP Foundations content that was perceived as new knowledge was well received by participants. New content, whether it was an area that had not been addressed in previous training at participating health units OR because it was specific to the NFP program and intervention, was met with enthusiasm. As one PHN shared, "*I think the parts that had information that was the most new to me, so information that was specific to NFP, the STAR [framework], the IPV, and just specifically how the program works. I think I was most engaged at that time.*"

The most commonly referenced topics that provided new and valuable knowledge to the learners included: 1) NFP IPV intervention and clinical pathway; 2) TVIC principles; 3) STAR Framework; 4) NFP History, Evidence, and Theories; and 5) NFP client-centered principles.

One of the unique challenges experienced by nurses in the completion of NFP Foundations was that the modules were designed to introduce concepts and increase awareness of a range of NFP program materials and resources, including checklists, nursing assessment forms, and home visit facilitators. However, this created a sense of frustration for some PHNs when they were only "told" about a form -but not yet able to access the form or understand how the resource would be practically applied in a home visit or integrated into their existing workplace practices. In her written feedback (on the checklist) about the program structure, a PHN shared, "*Would be*

helpful to be able to look at the actual guidelines books. Confusing to be switching between different documents and it isn't clear when I should be looking at the additional resources."

A supervisor corroborated that some nurses were experiencing frustration and that she was then prompted to advise them that these resources would be introduced in NFP Fundamentals:

> *I think that people found it a little bit frustrating because they couldn't see the content. We didn't have the facilitators or stuff in front of us and so I kept saying to them just remember this is all the foundation and we're going to get to it, right?*

Specific tools or resources identified that learners would have appreciated to have accessed earlier included: Coding the STAR Framework, Structure of the NFP Program and Home Visits, and Motivational Interviewing.

For experienced PHNs, they identified that some of the content in NFP Foundations was not new information but provided a "good review" of what they perceived to be common, foundational public health nursing knowledge. Content perceived as common knowledge to these participants was most commonly found in the chapters on therapeutic relationships and communication. However, there were no recommendations to remove this content. There was some indication that a review of this material would be of value to all PHNs and in particular nurses newer to home visiting. One supervisor shared, "*A lot of it was stuff I already knew and I think the nurses would probably say the same thing. But I think there's nothing wrong with reviewing it to feel like there's a solid foundation. I actually didn't have a problem with that part."*

NFP Fundamentals.

NFP Fundamentals – Delivery method.

NFP Fundamentals is an intensive 5-day workshop that provided learners with the opportunity to deepen their knowledge about the NFP program and to develop advanced nursing assessment and intervention skills. For the first cohort of learners, these face-to-face sessions were facilitated by three educators, the lead NFP curriculum consultant, the NFP Clinical Lead and one of days, the NFP IPV education was provided by the developer of the NFP IPV intervention. The NFP Clinical Lead facilitated NFP Fundamentals for the second cohort of learners.

Learners spoke with high regard about the NFP educators and commented specifically on their facilitation skills, their creative use of a wide variety of teaching methods, and the passion and experience they brought to their work. As one PHN said:

> *I know good teaching and it was really well done. Like very adult centered, beautifully facilitated. Like a nice combination of technology use and, and discussion and things like that, so. It was really good. It was really good education.*

Given the length and intensity of the training, it was identified that use of a variety of teaching and learning strategies was effective in keeping the learners highly engaged and attentive. These strategies included quizzes, video clips, small group work, individual work, writing on flipcharts, and role playing. One PHN concluded, "*it was engaging which was nice. It wasn't the same old just sit and listen blah, blah, blah all day for 3 hours. So, it was nice to have like that variety."*

The level of engagement of the participants was also corroborated by the educators. One educator commented:

> *What I saw was almost always people were really tuned in and engaged in the education and when people were kind of disconnecting or disengaging or being fatigued, and people will do that because it's intensive education, [names NFP Clinical Lead] had built in [interactive voting software] and the online quizzes and that's a wonderful technique for immediately sensing what the needs of the group are and using a simple technique to re-engage them.*

Participants from both cohorts of learners also identified key attributes of NFP educators that they perceived enhanced the overall educational experience. Educator credibility was enhanced by having: 1) a high degree of knowledge about the NFP program model and how the elements work together, 2) experience delivering NFP so that they could provide examples of how to apply key concepts in practice, 3) confidence in presenting the material; 4) a high degree of familiarity with NFP nursing assessment forms and facilitators; 5) the ability to teach using a variety of teaching/learning strategies; 6) competence in group facilitation skills; 7) the ability to provide positive feedback to learners during the sessions; and 8) a deep passion and level of enthusiasm for the NFP model of nursing care. One supervisor succinctly summarized many of these key attributes that she observed in an NFP educator:

> *The [NFP Clinical Lead] is so talented and she's clearly confident in the material and you know draws on stories whether they're from her practice or from other nurses that she has trained or worked with really brings things to, to life in that way. She used a variety of facilitation styles. You know we had a real mix of content being presented, videos, activities, discussion.*

A PHN who was part of the second cohort of learners had the following to say about the lead facilitator:

> *I thought [NFP Clinical Lead] was a wonderful, skilled facilitator. She answered questions. She was able to relate some of the questions to her own practice. She was very knowledgeable. So I, I wouldn't change a thing. I thought she was fabulous. The location was good. The timing was good. She kept it interesting. She moved it along quickly... She kept it moving... And you know what else, you can see that she's impassioned by the program. You can see that she's emotional when she talks about it, it's important to her. It, it ... it's impacted her."*

The NFP Educator, who is referenced by several participants above, and who was most involved in carrying out the facilitation, shared that the in-person facilitation was what she was most proud of with respect to her role in this pilot project. She also reinforced what participants had to say about the importance of someone in the facilitator role having had first-hand experience with implementing NFP in practice. She concluded, *"the face-to-face facilitation has been the thing I've been most proud of. I love being able to utilize my visiting experience and bring that into education for nurses. I think it is vital, I think it is crucial, and anybody in this role has to have that."*

In addition to providing opportunities to increase knowledge and refine skills, the face-to-face education provided an opportunity for PHNs to create an NFP community. The format of NFP Fundamentals was conducive to team-building, connecting with, and drawing from, other nurses' experiences. This was considered important within their own teams, as some of the nurses had not worked together previously. One PHN concluded, "*We really came together, and I feel like now because we had that opportunity we really trust each other and can rely on each other and talk to each other in a really open way. I think that having that time together and learning together really helps support that."*

Connection with nurses outside of the health unit was also considered to be important by participants of both the first and second cohorts of NFP Fundamentals. Participation in NFP Fundamentals also created an opportunity for PHNs to meet nurses from other public health units, which allowed them to begin to create an NFP community of practice within the province. One of the PHNs shared that:

> *I liked being around other nurses that were going to be implementing the program, talking about our excitement and our fears and, and making that connection with our team as well. So kind of having that time together as a team. I found connecting with other nurses and learning the experiences and being able to share with each other was really, really valuable.*

As supervisors also participated with the nurses in NFP Fundamentals, they also observed that the time and resources invested in in-person training not only consolidated nurses' skills but also created an opportunity for teams to come together to share strategies about how to integrate NFP within existing public health programs. One NFP supervisor observed that:

> *It was such a benefit to be able to meet with the other public health units going through this training to be able to draw on everyone's experience in home visiting. Because these nurses bring with them a wealth of experience, right? And knowledge that fits very nicely with implementation of NFP. So the training enhances our knowledge and skills but we can really leverage them too, to learn from each other even before we're implementing NFP.*

NFP Fundamentals, as well as the additional time for the focused Supervisor Education, also provided time and space for the small team of supervisors to meet, discuss strategies for programming, and to build their own community of support. One supervisor commented, "*And for me…to be able to meet with the supervisors after hours and build those relationships, wow! It just really helped with the implementation of the program and to be able to reach out when you have questions and I just appreciated that opportunity."*

Participants in the first training cohort (Winter 2017) received, with the support of their health units, overnight accommodations to attend the week-long in-person training. The majority of participants in this cohort were mainly satisfied with the total length and duration of training; however, some participants suggested alternative ways in which the education might have been delivered. For example, one PHN shared:

> *It might have been nice for the in person to be 3 days one week and 2 days the next but I know that that would've cost maybe a bit more but for learning wise it just ... like it was*

like by Friday we were pretty much fried, right? But if we would've had a weekend in between we could've, like even 2 and then a weekend and then 3, whatever, just to kind of help us kind of consolidate some of it in our head first and then come back fresh, you know.

For the second round of NFP Fundamentals that was delivered in Spring 2018, the chosen schedule (based on facilitator availability) was three consecutive days one week, and then two consecutive days two weeks later. A PHN who participated in the second cohort, shared her experience with this alternative schedule including the benefit of having more time between sessions for absorbing material:

I was very grateful to have a bit of break in between. I think I can speak for my colleagues as well because in our situation we were hired to NFP but still had other work to finish up from our previous public health jobs. So it also gave us the opportunity to tie up loose ends. But it also gave us an opportunity to absorb what we had just learned and we met several times formerly and informally, just the three of us and our manager, to reflect on the first 3 days and what we had learned, what we had gained from it, how we saw the program going in [names region]. I think it would have been very overwhelming to have it a full week. That's, that's my opinion. And you know I know [names different city], I think the girls from [names different city] stayed the night that we were driving in every day and you know it's an hour each way so it just makes the day longer.

Supervisors were honest that for some teams, the time required to travel to one location and spend several nights away from home created some logistical challenges for team members, however overall – they expressed that the benefits in terms of knowledge/skill acquisition and the opportunity to strengthen their collaborations outweighed the challenges. One of the supervisors succinctly summarized this by stating:

I think there's always challenges with being away from home for that long, especially some of us have younger children so that was a bit of challenge. However, I think it was worth travelling so that we could do it together. I think you'd have to be able to include multiple agencies to make it efficient, right? So that you could educate a bunch of people at once, but I saw so much value in building the NFP community as a community of practice like to be all together and get to know each other. Even now we've got clients moving to different cities and you'll get emails from one of the other agencies and there's that connection there already.

NFP Fundamentals – Content.

Similar to their experiences with the online curriculum, participants in both cohorts of NFP Fundamentals placed high value on content related to the NFP IPV intervention and TVIC, and felt most engaged when content was presented in more interactive ways or that made use of technology to engage learners (e.g., Kahoot! a game-based learning platform).

Nevertheless, the NFP Fundamentals content was the most highly critiqued aspect of the novel education curriculum CaNE participants received – particularly by those who were part of the first cohort of face-to-face education. Analysis of participants' checklists completed during the previous (online) phase suggested that participants expected to gain considerable hands-on

experience (e.g., with assessment forms, home visiting materials etc.) once they attended NFP Fundamentals. This was confirmed during early individual and focus group interviews when nurses shared that they expected the face-to-face training would better prepare them to "*do NFP";* however, many shared that this was not their experience. Many learners felt that sessions during the first couple of days of face-to-face training were a review of material from the Moodle platform in the introductory phase, and that overall much of the content was review for a group of experienced nurse home visitors. They also struggled with sessions related to the NFP visit-to-visit guidelines and STAR coding, expressing confusion, a lack of confidence and feelings of being overwhelmed – feelings that were detected by the NFP Educators, who responded by making real-time changes to the agenda and curriculum.

The Partners in Parenting Education (PIPE) session delivered to the first cohort of participants was met with mixed reviews. Even though it was perceived as a fun activity, many participants felt it was ineffective at teaching them how to carry out PIPE. Some learners also questioned if PIPE training was necessary to have as part of the face-to-face curriculum, since they had already received training in PIPE at their health units.

Among participants who took part in the first cohort of education, ideas for how the training could have better met their needs included: less review of content from NFP Foundations; more hands-on or interactive stations for observing and/or practicing visits (e.g., how to conduct a consent visit, how to conduct a first pregnancy visit etc.); more interaction with, and learning from, PHNs experienced in delivering NFP; an opportunity to practice completing different NFP nursing assessment forms; strategies for using different facilitators in practice and more time for questions. One PHN provided a very detailed summary of the nature of the interactive content she would recommend integrating into at least one day of NFP Fundamentals:

> *I would've liked to have seen the forms. Maybe a little bit more experience with using the forms, using the facilitators, those tools that we didn't have exposure to prior to implementing NFP would have, really enhanced the training… Like maybe like a day in the life of a NFP nurse, give a case study of a client. So, what am I bringing on the consent visit? Going on the website. Showing everybody where you pull stuff from. And, and this is the … this is the facilitator I'm going to use for you know pregnancy visit 2. Maybe do a role model with one of the trainers, with somebody from the audience and maybe having the audience members role play with each other how to have a discussion using different facilitators.*

As part of this iterative process evaluation, this important feedback from the first cohort of learners was summarized and shared with the CaNE Clinical Lead in preparation for the second cohort of education. As summarized previously in this report (See 'Formative evaluation and curriculum refinement', page 28-29) the curriculum content was subsequently revised in time for the second cohort of learners. Interviews conducted with the second cohort demonstrated an improved overall experience, with several participants referencing the changes made in response to the earlier feedback. For example, where PIPE had not been viewed as a very useful session by the first cohort, a supervisor who attended the second round of education had the following to say:

> *One of the things [the NFP educator] shared during the PIPE session was PIPE tips for NFP nurses ... it was great. It was like tips for introducing it and tips for getting comfortable with it, tips for doing it regularly. Actually, I've been using like some of the tips in there you know to guide staff in Healthy Babies too around their use of PIPE.*

Recognizing the need to speak to, and be mentored by, experienced NFP nurses, arrangements were made to have a guest panel of nurses from the NFP Team at Hamilton Public Health Services. This created an opportunity for new NFP nurses and supervisors to ask questions and in return receive information on strategies related to program implementation, home visit structure, strategies for working with NFP clients etc. In reflecting back on the experience of meeting with these experienced nurses, one PHN stated:

> *We had the chance to have a panel... I think it was the second day with a guest nurse panel and it was great. Like we had been the day prior "parking-lotting" a few questions for them and so we had questions all ready. As s they were talking about their experience we just had more and more questions. I think it was such a great time to hear from people who had been working in it and who believe in the program and who shared with us that it's working and how it's working."*

Within the education, time as well as learning activities to increase nurse skill and knowledge in how to navigate the NFP Canada website and to locate relevant forms, tools, and facilitators for practice was built into NFP Fundamentals. This change was positively received and identified as "*very helpful*." The curriculum was further adapted to refine the presentation of the STAR framework to PHNs and supervisors. Based on her observations, one of the NFP Educators commented that she noticed a difference then in the learning experience between the two cohorts:

> *I got a sense they [second cohort] were open to looking at what is the usefulness of STAR? What it could be? What's the potential [of the framework in practice]? You know there's still some resistance like, "wow, this seems like a lot," or "here's some suggestions or critiques around the tool". But it wasn't the, "why am I doing this?" or " I have no idea how to implement STAR in practice." And even though the content of the session was not that different instead of the, "why and I don't understand", it was, "ok even if I don't agree I understand and I can see why this is being asked or what are the potential uses of it and the potential benefits," and they were able to, to express that back which was definitely different from the first time around.*

NFP Fundamentals - Supervisor education.

The supervisor education was attended by the three supervisors who participated in the first cohort of education. Supervisors were asked to discuss their experiences with this face-to-face training. Overall, there was a high degree of satisfaction with the supervisor training, with the group of supervisors expressing that it was very supportive, informative and interactive as well as practice-oriented. It was also mentioned that the CaNE NFP consultant made an ideal Educator for leading this component of the education due to her experience with both the program and having held a management role in NFP herself.

It was observed by supervisors that a unique aspect of all elements of the face-to-face training in NFP is that the educators were particularly skilled in role modelling how to sensitively engage and communicate with all learners. It was recognized that this is important modelling of the "parallel process," and that how the educator worked and communicated with the supervisor, provided a model for how the supervisor can work and reflect with PHNs during supervisory

sessions. One supervisor summarized this observation as such, "*… the parallel process. How [the educator] was with us, is how we should be with our staff, right?* **...** *It was a nurturing, learning environment that was very supportive and informative."*

One of the most useful aspects of the Supervisor Education was the opportunity to learn more about, and practice, techniques for reflective supervision. The only suggestion that arose for the supervisor education was that it would have been helpful to have spent more time going over the supervisor forms – and to have asked more questions of experienced NFP Supervisors regarding their use of the forms.

NFP Consolidation and Integration.

Questions about the NFP Consolidation and Integration Phase of education focused on job shadowing experiences, and completion of Team Meeting Education Modules (TMEMs).

Job shadowing.

In response to a need identified by learners in the first cohort to be mentored by an experienced NFP PHN, the NFP Clinical Lead organized opportunities for new PHNs and supervisors to spend time observing experienced NFP staff. At least one of the NFP supervisors, and several PHNs from two of the four health units participated in the optional job shadowing component of NFP Consolidation and Integration. PHNs from one health unit declined the opportunity to participate in job shadowing, as their health unit would not cover the cost of travel. Some participants were waiting to have a job shadowing opportunity, and problems were discussed with the reliance of a single health unit (Hamilton) having to host this component of the education and the additional pressure that this put on them.

When questioned about their expectations for the job shadowing, it was commonly shared that PHNs wanted to learn more about the "*NFP process in action.*" Some of the PHNs shared positive experiences with their job shadowing experience. For example, one PHN discussed the usefulness of having shadowed during a consent visit:

> *I had a consent visit which was helpful to see exactly what, what the nurses do on their consent visit and it included like this client had support workers with her as well. So you know that, just seeing how that whole visit went and the importance of you know what it is that she had made sure she had included in the consent.*

Another PHN shard about how she was able to observe reflective practice in action, "*I also saw [names person] do some reflective practice. So I saw some not just a visit part of the NFP program but some of the other aspects of the program I was able to see so that I knew what to expect when we started."*

Other PHNs described enjoying their time with the hosting PHN, but not benefitting greatly from the job shadowing experience. PHNs who did not perceive a high number of benefits were typically more experienced nurse home visitors, who felt confident in scheduling and managing a home visit and engaging with families in a home environment. It was identified that the experiences could have been improved by having opportunities to observe how NFP PHNs: 1) use and complete specific NFP assessment tools and facilitators, 2) introduce to the client NFP specific assessments or interventions; and 3) required activities to complete following a home

visit. It was identified that providing clearer expectations about the purpose and nature of the "job shadowing" experience both for the new NFP PHN and her mentor, would perhaps create a more useful and satisfactory experience.

There was a lack of consensus with respect to the "best" time to offer a "job shadowing" opportunity to a new NFP team member. Some participants indicated a preference to be mentored immediately following NFP Fundamentals. This timing was preferred by some as it would create an opportunity to immediately apply new knowledge and skills in practice, to increase confidence in understanding NFP practices and procedures, and build competence in completing NFP nursing assessment forms. Other PHNs expressed a preference to "job shadow" after they had started to build and establish their caseload. The rationale being that they would then have a list of "practice-based questions" that they could have addressed by the expert NFP mentor.

One participant suggested it would be helpful to have more than one visit – one at the beginning and one later on:

> *I had different questions where if you did it later you could've asked very specific, like I had a challenge with this facilitator, how do you get around that? Or I'm having a client with this struggle and how do you deal with that? Where I hadn't had any clients yet so I would say that I know it might be tricky but if you could do training before you see clients where you get to do kind of more of that consent visit so you're comfortable and then go back and do you know almost kind of like debriefing with the team like these are the types of clients I have, these are some of the challenges, can I see visits that are like this or this? That would be ideal to do both.*

> *Having a more sustainable approach to job shadowing moving forward.*

Given the pressures placed on a single health unit to host PHNs from across the province who wished to have a job shadowing opportunity, it was identified that as the program is offered by more public health units, there will be an increased number of experienced nurses able to provide this form of mentorship. Furthermore, now that the participating health units will have established NFP teams, it was identified that this will allow for local "job shadowing" when a new PHN joins the team. One participant, who joined an existing team partway through, shared the benefits she experienced job shadowing one of her own colleagues,

> *I really learned so much from observing, from watching [PHN] implement motivational interviewing and then coming back and watching her fill out the form. It's one thing to read it and to watch a video but it's another thing to actually see it in practice. So if there are health units who are bringing other nurses, they could go to another health unit and job shadow someone but it wouldn't be the same experience as shadowing someone in their own health unit.*

Team Meeting Education Modules (TMEMs).

Perceptions and use of TMEMs.

In early interviews, several of the health units had yet to embrace the use of the TMEMs. By the second and third interviews, however, these were being implemented on a more regular basis and some of the teams had developed plans for meeting this NFP requirement. For example, one supervisor shared that, "*We have a team education schedule so we try and get two in a month and we balance the TMEMs with other learning activities let getting in a guest speaker or a webinar.*"

A number of TMEMs have been developed for use by the teams and the intent is for teams to self-select which topics will address the professional development needs of the local team. It was acknowledged by participants that some of the modules were "basic" and provided a review of content originally presented in earlier education sessions, whereas other modules provided new information that created an opportunity to further refine and practice an NFP-related skill. The format and structure of the TMEMs, which include learning objectives, learning activities, readings, resources and questions for reflection, were positively received. It was identified that the way in which the TMEMs were formatted meant that there was little preparation a nurse/supervisor had to engage in prior to the team meeting. One PHN described then as, "*grab-and-go kits for nurses, for team meetings- that facilitate really great discussion and gets us thinking about specific areas of our practice*."

Participants identified two common barriers that limited teams' capacity to complete the recommended 10 TMEMs/year: 1) time and 2) competing yet required training offered by their local public health unit. It was identified that it should be left up to the discretion of each individual NFP team to identify their ongoing professional development needs and identify the best strategy (TMEM or other learning resource) to meet that need.

It was identified that at this stage in the pilot project that more detailed instructions about how to complete the NFP Consolidation and Integration phase, including use of TMEMs, is required. Study participants also identified a list of topics for consideration when developing new TMEM:

a) Mental health (anxiety, depression, post-traumatic stress disorder, substance use, addictions)
b) Working with and engaging adolescents (adolescent developmental milestones, common behaviours, functioning and development of the "teenage brain")
c) Engaging and working with women who are experiencing homelessness
d) Engaging and retaining women and families who are "hard-to-reach."
e) Strategies for working with women/families who are receiving services or are involved with child protective services (including families who may lose custody of infant)
f) Outreach and promotion of NFP
g) Basic principles of labour and delivery
h) Attachment in the prenatal period
i) Mindfulness and meditation strategies

NFP Intimate Partner Violence (IPV) education.

Delivery and content.

One of the education innovations being evaluated in this project included the NFP IPV intervention, with its focus on how to safely identify and respond to women exposed to abuse and violence in their intimate relationships. During NFP Foundations, participants completed five online modules which established baseline knowledge about the epidemiology of violence, strategies for asking about IPV in practice, and skills to conduct a risk assessment (including certification to administer the Danger Assessment). In addition to the online modules, this phase of education also included team-based activities and discussions. In NFP Fundamentals, participants were given an opportunity to practice the Universal Assessment of Safety, how to initiate an indicator-based assessment, how to conduct, score and interpret the Danger Assessment, and finally how to develop a tailored plan of care. Then, as part of NFP Consolidation and Integration, NFP teams were instructed to complete the IPV system navigation module, which included organizing guest speakers to talk about protection orders and "field trips" to local agencies that provide supports and services to abused women and their children.

The following themes/patterns resulted from learning about participants' perceptions and experiences with the NFP IPV content and delivery methods: 1) the education helped to fill a knowledge and competency gap for identifying and responding to IPV; 2) the education was effective when delivered in stages; 3) interactive activities, such as role playing, helped to support learning and provided examples of dialogue to use in practice; 4) the role of the NFP IPV clinical pathway and tools in shaping nursing knowledge, competencies & professional performance.

IPV education filled a knowledge and competency gap.

When asked what parts of the education were most valuable for supporting participants to implement NFP, nurses overwhelmingly answered that it was the NFP IPV education. As one of the Educators shared, "*people can't get enough of IPV education."* Nurses and supervisors spoke about how the IPV training served to fill a gap in their practice; they shared how, despite its relevance to their work in home visiting, IPV was an area where they had previously received little or no formal training. As one PHN shared, "*It filled some gaps, especially around the intimate partner violence and the trauma-informed care, and certain things like that we haven't really concentrated on in our health unit."* Another PHN said that*, "IPV was the best part of the education…we have Healthy Babies nurses that are very jealous of us because we've had this good foundation…It's different than what we were doing before asking a very generic abuse question and interactions with clients whereas this teaches us really an application."*

Staged approach to NFP IPV education.

Within NFP Foundations, the inclusion of the NFP IPV online modules was highly rated. According to participants, having this introduction to the IPV intervention helped to prepare them for further discussion on this topic at the face-to-face training.

Participants further commented that within NFP Fundamentals, that it was valuable to receive the NFP IPV face-to-face training in a staged approach. The initial plan for the NFP Fundamentals phase of education was to deliver the IPV content in a single day; however, due to poor weather conditions on the day it was scheduled to be presented, the training had to be cut short and necessitated a second session to be held at a later time. Interviews revealed that there was great value in this unintentional 'staging' of the IPV education. Many participants described that, by the time the second face-to-face session took place, they had been applying the NFP IPV tools in practice and were better prepared with questions to ask. Nurses also shared how they felt it would be too ambitious to expect to work through the entire NFP IPV clinical pathway in a single day. One PHN concluded:

> *It ended up being a blessing in disguise because it was so wonderful to have [Presenter] say come back later on when the nurses had clients and had done some of the IPV intervention stuff with the P5 visit, right? And had some scenarios. I think we always learn a little bit better when you can apply your knowledge. So, I think having her come back really reinforced things.*

> *Interactive methods facilitated learning and provided a dialogue.*

Participants expressed that they were highly engaged with the interactive modules and videos that were part of the online IPV curriculum, as well as with the interactive teaching strategies (e.g., role modeling) that they observed and/or participated in during the face-to-face training. One PHN wrote in her checklist that the online NFP IPV content included, "*Excellent interactive modules"* and that she learns "*so much from scenarios and actual dialogue.*" Similarly, there was a great deal of positive feedback for activities carried out during face-to-face training, including the facilitator's use of role play to demonstrate application of the NFP IPV tools (e.g., Danger Assessment). It was helpful for the nurses to watch her apply the intervention so skillfully in the context of an unpracticed scenario. One PHN even described how this observation helped her think about how she might draw on the different NFP tools for support with asking the right questions in practice. She said:

> *I'm sure I've been in a situation like that but I probably didn't ask the right question and they were using the calendar, so Life History Calendar and were able to bring out all this interesting information out of the client and lead her in the right direction.*

> *NFP IPV tools for shaping nursing knowledge, competencies & professional performance.*

As one of the NPF supervisors shared, there was a need for tools and resources to support nurses in identifying and responding to IPV:

> *It was amazing. I feel like it's … I feel so excited because I feel like it's an area in previous practice that we didn't have really great tools and resources, and you know… I feel really excited that we have such a thorough and comprehensive way of addressing intimate partner violence in our practice.*

Nurses and supervisors described how the tools available to them as part of the NFP IPV intervention contributed to their skill development – helping them to initiate conversations, respond empathically, and work in collaboration with clients on a tailored plan of care. They also

discussed their increased confidence and feelings of competence to address IPV in practice – and related this to the tools (specifically the IPV clinical pathway, Danger Assessment, and IPV facilitators). They spoke about the NFP IPV pathway as a "fool-proof" tool for walking them through, "*what to do next*," knowing "*what resources they had access to*," and knowing the "*flow of how to handle a situation [where abuse was disclosed]*." Having the opportunity to practice how to introduce and complete the facilitators, "Life History Calendar" and "Power and Control Wheels" was identified as particularly helpful. Practicing how to use these tools provided PHNs with non-threatening ways to open the door to conversations about IPV with their clients. As one nurse shared:

> *It's an incredible piece of work for them because they really do see the true value in talking about the relationships in such an intense way...there's something about the content of the wheels that actually is very logical and I think it's the calmness that the nurse presents it in that allows the client the time to think and reflect on what's going on.*

In their reflections about how the IPV education has impacted their nursing practice, the PHNs expressed that they had increased confidence that they were better situated to provide tools and resources to women, so that they could become more aware of how their experiences of violence were impacting their lives and health. In practice, following completion of the IPV training, nurses commented that Beyond knowing what to do, nurses also described feeling like they were helping the women they are servicing – feeling equipped with the tools for supporting clients to build their own awareness of IPV and how it is impacting their lives. Some participants described feeling that the acquisition of these new skills takes them from a place in practice of simply referring an abused women to other community services (what they experienced in previous work) to really being able to intervene and help. One PHN summarized:

> *….from the beginning to the end. I mean just everything about the NFP IPV clinical pathway. The [Power and Control, Equality] Wheels, how to talk to the client, the Danger Assessment. I mean I could just go on and on…We don't...you don't get a lot of knowledge about domestic violence. [In past training] you get taught signs [of abuse] and you know things like that and give [clients who are abused] phone numbers but this is just so much more interactive and it just lets you help the client so much better, like 100% better.*

Table 21 summarizes ways in which participants described the NFP IPV education for shaping nursing knowledge, competencies and professional performance.

Table 21. *NFP IPV Education Impact on PHN Knowledge, Skills and Confidence*

Knowledge
• Awareness of clinical tools to use in practice • Access to a pathway to guide clinical decision making
Skill development
• How to initiate conversations about safety in relationships • How to conduct an indicator-based assessment • How to respond empathically to a disclosure of abuse • "What to do next" following a disclosure of abuse • How to conduct a risk/lethality assessment using the Danger Assessment • How to develop a tailored plan of care in collaboration with the client to increase safety
Confidence/Competence
• Using a reflective approach over time to discuss a complex issue with clients • Tools and process allow them to support clients to have hope and see a safer future for self and child

NFP IPV system navigation module.

NFP Supervisors were questioned about their experiences with IPV follow-up education in the NFP Consolidation and Integration phase of education, specifically with the activities of the IPV system navigation module – a module designed to help NFP teams gain the knowledge and experience necessary to provide authentic anticipatory guidance for women experiencing violence and potentially seeking additional support and resources from other community agencies.

Given the same barriers described in completing TMEMs (e.g., lack of time, competing demands in the health unit), there was limited experience among the participating teams with the activities of this module, although supervisors expressed a desire to better plan for and prioritize these activities. However, some of the teams had started to complete some of the teaching and learning activities outlined in the System Navigation TMEM, specifically arranging "field trips" to agencies where PHNs would potentially refer women and children who are experiencing abuse. While some teams were able to do a visit together, other Supervisors identified that they were unable to afford the time to send the full team on multiple agency visits, deciding instead to divide the team up, assign them an agency to visit, and then report findings back at a team meeting. Supervisors reported that these visits were a positive experience for PHNs as it gave them the opportunity to experience the agency through "*the eyes of the client*." The overall benefit of this activity was that it provided nurses with accurate information about what types of services agencies provided, the process of navigating the agency system, and the information that women would need to bring to their appointment. In turn, nurses could then share this information to their clients as a form of anticipatory guidance.

One elaborated on the benefit of doing these field trips or visits for being able to provide that anticipatory guidance and better prepare clients for what to expect should they need to use the services of a particular agency. She said that that her team experienced:

> *A lot of 'aha moments' where they can see how difficult it might be for a client to find a service and to get in and navigate through the building. Having this knowledge allows the nurse to give them anticipatory guidance, like when you go this is what they're going to ask you for. So that the client is prepared so it's not like multiple trips because they didn't have everything they needed. So just greater awareness about what these services look like from*

the eye of the client, right? I think they're very familiar working with these partners as health practitioners that this activity has them looking at it through a different lens which is really helpful.

Acceptability of Canadian NFP Model of Education to Public Health Nurses and Supervisors

The findings in the previous section, around participants' experiences and perceptions with the educational content and delivery, elucidated their acceptability of different phases, aspects or components of the NFP model of education. Three overarching themes emerged describing participants' *overall* level of acceptability with the novel education curriculum: 1) the NFP model of education is purposefully and thoughtfully delivered; 2) the NFP model of education facilitates building relationships and supporting women in making change; and 3) learning how to implement the NFP program is a process that takes time.

NFP model of education was purposefully and thoughtfully delivered.

Format/structure.

Many of the participants spoke about how the education was purposefully and thoughtfully structured to support their learning. For example, several participants shared perceived benefits to the length and duration of the NFP training. One PHN described the following, comparing her experience with the NFP curriculum to other professional development or training programs she had received in the past:

> *Sometimes things are really rushed and then it's like, "ok!" You know you go to this training and then nothing really comes of it because you just have to get back into your work. But with [the NFP education] we really had the time to go through it and learn.*

Participant feedback also supported a staged approach to the NFP education, with many participants sharing that it was a combination of teaching and learning methods from the different phases of NFP education that helped to consolidate their knowledge, skills and confidence. A supervisor elaborated on the purposefulness of this staged approach to the growth of learners participating in the pilot project. She said:

> *Like it was ... it's just ... it's very thoughtful. Everything has a purpose. And you know when you look back in hindsight you can just see how, how nicely it flowed to do some self-study and then to get together and have that face-to-face and then have a little bit of time to implement and then have your shadowing opportunity and then the integration phase. We were commenting that, 'oh my gosh, I can't believe the pilot's already over.' But then when you actually like stop and think about like what were we doing a year and a half ago like I see the growth in myself and in the nurses.*

NFP tools and strategies.

Other ways in which the NFP education was described as purposeful and thoughtful was in the tools and strategies that participants were taught to use. For example, supervisors spoke about the 'parallel process' as a helpful strategy for working with their teams, and in turn, as a strategy for

their teams to use in working with clients and their babies. The following participant shared what this approach has meant for her in her supervisory roles:

> *NFP has really provided me a much better understanding with the parallel process where it exists in HBHC but NFP really nails it and really labels it…. NFP has really … I just got a greater appreciation for that whole parallelism that happens amongst you know me and the, the nurses and the nurses to the client and the client to the baby, you know.*

Nurses and supervisors both spoke about the reflective practice strategies endorsed in the education curriculum. As one PHN said, "*We take reflective practice very seriously…So I think that the whole model works really well. I'm really impressed with that."* One supervisor shared how the reflective process has been a helpful strategy for working with her team. She said, *"it [reflective practice] is a good opportunity to sort of slow down each and every time and think about one specific instance which actually changes their practice with every single client, right?"*

Finally, a number of tools that participants received as part of the education were described as being purposeful or thoughtful in supporting their work with clients. Nurses most valued receiving access to and instruction about how to use: nurse instruction sheets and home visit facilitators. However, none were more credited with respect to their 'intentionality' than those tools and resources associated with the NFP IPV intervention. One supervisor shared the following about her team's experiences with the NFP IPV tools:

> *I think that they feel like they have the knowledge that they need to be able to tackle these very complicated and complex situations and practice with these young women that they're working with… I know that they love using all of those tools. The Life History Calendar, I've heard over and over again how much they love that, that tool and how much information they get from clients about their history and often it elicits ... you know you can kind of identify like traumatic events that have happened in their life, kind of different ... who they live with. They just get such rich information from that activity*.

Another supervisor shared that the "*regular intentional questioning and assessment*" of the NFP IPV clinical pathway has led to disclosures and realizations among clients that have been "*mind blowing for the nurses.*" Nurse feedback about the NFP IPV education, and as summarized earlier in this report, supports these claims.

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> **The NFP model of education facilitates building relationships and supporting women in making change.**

There was an overall appreciation among participants for aspects of the education perceived as helpful for building relationships and supporting women in making change. As one nurse said, "*The most important thing I think is the skills that we learned through this program how to get to know our clients better. I mean that, that right there gains the client's trust with us and then they'll learn and they'll be there for the visits."*

Many of the participants described how principles and components introduced to them throughout the NFP education have transformed their thinking in ways that help them to better support women in making change. For example, one nurse said:

I kind of wish I had the NFP training 10 years ago when I started home visiting because it went through those key concepts to home visiting. You know, how to work with vulnerable populations; how to work from that trauma-informed lens; and how to really support these women in making change. So, whereas you know in previous training it was like you know you'd observe some home visits, here read these manuals, and then out you go. So, you know a lot of that information came over years of experience. Whereas NFP really kind of gave me these core model elements right from the beginning. So now you can kind of … Like it helped change your mindset over home visiting and the work that you do with women.

Others had similar reflections on how their thinking had been transformed as a result of the focus throughout the education on the NFP as a client-centered, strengths-based intervention. One nurse said, *"I mean it really transforms your thinking in how you work with people and how you see people and how you are able to pick out those small successes or small strengths***.**"

A NFP supervisor further elaborated:

We've always operated from a client-centered philosophy but I feel like with NFP it's forcing some PHNs to really slow down, right? And it's that whole philosophy that," I'm walking beside you not in front of you, right"? Like kind of letting the client be one step ahead and you're just kind of helping them. And I see that as being a challenge for some of them but they're embracing it, and so I do see some changes that way.

One PHN described her struggle with tending towards a 'paternalistic approach' and also trying to recognize the client as the expert on her own life. In referencing a particular scenario, where she did not necessarily agree with her client's decision, she explained how the NFP education, "*helped me be able to support her with that decision without any judgement."*

As a final point, one of the NFP Educators shared the following, reflecting on what she has seen nurses take from the education and begin to embrace in practice:

The client-centered principles come up all the time I think and I don't know if that's a testament to how good the principles are or how well the session went, but you know every ... I really love and I've heard a lot of the participants refer back to one or all of them you know like, "only small change is necessary", or you know we, "focus on strengths, focus on ..." Because it seems to guide practice, as it's supposed to you know, and this sounds obvious when you say it out loud but that's something that you hear language from individual nurses or teams all the time is really embracing and applying those five client-centered principles.

Learning how to implement NFP is a process that takes time.

The third overarching theme, in explaining participants' overall acceptability of the education model, is that learning how to implement and then deliver the NFP program is a process that takes time. As reviewed earlier in the report, there were high levels of anxiety following the first two phases of education, where nurses expressed disappointment with the lack of practice they had with program materials (e.g., guidelines and forms), as well as confusion around the usage of such materials. It was uncovered that much of this anxiety was driven by a desire to carry out the program with fidelity to the core model elements. The NFP educators spoke about tempering

messages about fidelity with those of trusting your own clinical judgment. One of the NFP educators shared the following:

> *I know that it's [fidelity] addressed partly in the self-study and then we talk about core model elements and the thing is if, if we go back to core model elements you know and my answer to them always is follow your gut. Everything else can wait and that is ... there's a really big hang up and work up about if I'm not completing this checklist of things that are part of the guidelines. And I emphasize guidelines are just that, they are not 'have to's.'*

Another educator shared that, in her opinion, it might be best to de-emphasize fidelity in earlier phases of education so that nurses remain focused on delivering the program in ways that are meaningful to the clients they serve. She said:

> *I almost think that early in the program we should de-emphasize fidelity. Because I really believe if people deliver the program in the way in which it's intended fidelity takes care of itself. It really does. And so you know people get overly concerned – "Oh, I got to do this and I got to do that and I got to it just this way because if I don't then I'm not going to meet fidelity." Meeting fidelity becomes the goal versus delivering the program in the way in which it's intended and adapting it in a way that's meaningful to the family. Those are the things, like those are the two things we want to emphasize, not fidelity early on.*

This same educator spoke about balancing nurses' expectations (e.g. wanting to be experts following the training) with the reality that learning takes time, and shared what role supervisors might be able to play in managing this:

> *The nurses want to be the experts and they want to leave the education feeling they know ... what they need to know and that they feel confident and skilled to go out and do it. And they can't because they're just ... we've, we've just barely begun and we tell them that. You try to prepare them for it but you know what, that's not good enough and it's not enough. So, I think that that's something that supervisors need to be not only aware of but have a plan in place about how they are going to manage that. And part of that becomes through their own reflective supervision that they're getting, that the person doing their reflective supervision with them is exploring with them how is that going for them you know with their teams. Because the teams will be anxious, they're always anxious. Some, some nurses more than others obviously. And so that people's expectations settle down fairly quickly because that's what you want to see happen and so that they can just settle down with you're just going out there and just starting to practice your skills.*

In fact, despite the anxieties expressed by many participants around fidelity, there was evidence that, with time, nurses were learning to rely more on their own clinical judgment. For example, one nurse shared how she became comfortable adjusting aspects of the program in favour of maintaining therapeutic relationships with her clients:

> *When you first meet these clients when they're pregnant and **you're trying to develop that therapeutic rapport** and just get to know them you know and, and there's these*

assessments. So I never ... like it's ... but if you look at the visit-to-visit guidelines, visit number 1 is jam packed. Like it's so ... ***you're supposed to be doing all these and I go no, I'll do them over the course of a visit****. Some of the intake questions are really ...You lose them. Too personal.*

Another nurse described how the duration and frequency of visits in the NFP intervention helped her become comfortable balancing fidelity with meeting the needs of clients:

...and the key to it is the relationship with the nurse, right? Like that's the core to the program and that's what you have to kind of work toward all the time to kind of maintain that relationship really in any way that works best for the client… And we have all this time with them that if, if there's something that we think or they think is important but then they ... if something else comes up and you just talk about it at a future visit. It's not like we're only with them for a short amount of time. So that kind of helps me work through that too knowing that we have so much time together.

Finally, others spoke confidently about using their clinical judgment to understand the most pressing needs of their clients and remain focused on those:

I can speak from experience that you know you have to start from the basic social determinants of health and yes you want to focus on the fidelity of the program. But like an example of mine would be that you know what, I've had this client since she was pregnant for 20 weeks, we are at about ... she is now 38 or 39 weeks and our main focus has been housing and stability, immigration stability, and sure we tie in a little bit of prenatal component but I haven't been able to do anything other than the first home visit the forms that I completed I have not been able to do anything and you know what, I'm ok with that because I have to be where the client is at and yes sure yes I know I need to do an Edinburgh and I know I need to do intimate partner violence and I know I need to do all these forms but guess what, you know what, the client's needs are the most important and I'm ok with being flexible with that. And I'm ok with knowing that I have not met the criteria of the program because this is what my client needs.

Overall, nurses described how their anxieties started to diminish once they began to actually implement the program. That despite concerns during the education sessions, once they are building their caseloads and delivering NFP, their level of confidence in using the Visit-to-Visit Guidelines and completing the Nursing Assessment forms increases significantly. As one PHN stated, "*You know by the time I started to get clients it just all made ... it made a lot of ... everything made a lot of sense."* And another PHN concluded:

At the beginning I thought, 'oh god', but you know now I'm really embracing it. I think it, it really adds structure to your visit ...I look at that one for my next visit and it really helps me prepare and then during the visit it helps me to remember what it is that, that you know she needed to be following up on and what I needed to be following up on. So I find that whole part of the program is, is great.

Similarly, a supervisor described her initial discomfort with strategies she was introduced to as part of the NFP supervisor education, but how she's learned to "trust the process." She shared:

So, what you feel and what you think you know these are questions that I wasn't as comfortably using. S,o after they tell their story and then you know what do you ... what are you ... what are you thinking when you think about this client and what went on and what are you feeling? I used to feel that was redundant, but it's taught me that it's not redundant. You get different responses. So that was a little bit of my discomfort at first with the Gibbs' model (Gibbs, 1988) which I have now stretched, right? and I've, you just trust the process.

Recommendations for Future Measurement of Nurse and Supervisor Knowledge and Competencies

Given the small number of participating health units and subsequent sample size of participants, it was outside of the scope of this pilot project to measure changes in nurses' and supervisors' knowledge and competencies; however, given the emphasis on participants' qualitative experiences with the educational model, an opportunity presented to ask them about key constructs for subsequently informing assessment strategies or instrument development. In interviews and focus groups, participants were asked to think about what the key indicators would be (and measurement strategies) for the types of knowledge, skills, and attitudes that PHNs and supervisors gain as a result of participating in the NPF education. They were also asked specifically about key indicators for the knowledge, skills and attitudes gained as part of the NFP IPV education.

Key knowledge indicators – Public health nurses.

Table 22 lists what was shared across participants with respect to key indicators for the types of ***knowledge*** that PHNs should acquire as a result of participating in the NFP education. Responses given for key knowledge indicators concentrated around theory, relationship building, and communication techniques for supporting and encouraging behaviour change. As one of the NFP supervisors shared, this type of knowledge is particularly important for PHNs to gain in preparation for delivery of an intensive long-term intervention. She said:

The various theories, so the theoretical foundation, the four theories, the client-centered principles. Oh, therapeutic relationships and boundaries that's a biggie, especially just with the intensive nature of the relationship and the long-term relationship... Communication skills absolutely, especially use of motivational interviewing.

Table 22. *Key Knowledge Indicators for Public Health Nurses*

	Key Indicators	**Measurment Strategies**
Public Health Nurse (PHN)		
Knowledge	• Theory • Client-centered principles • Therapeutic Relationships • Boundaries • Communication skills (e.g., motivational interviewing) • Parallel process • NFP Home Visiting Schedule • NFP Domains	• Self-assessment • Qualitatively assess how nurses synthesize and apply knowledge

Self-assessment as a measurement strategy for revealing changes in knowledge was suggested by one PHN who said:

> *I would think if you did a needs assessment in the beginning and then remember when we were doing the modules we put down points ok this is where I feel like I need more knowledge, and then looking at it 6 months later to say hey did you get any of this training, and looking at it a year later.*

One of the NFP Educators shared her perspective on measurement of knowledge gains. She explained that, rather than testing participants' recall of material delivered, a more meaningful way to measure gains would be to qualitatively assess how nurses synthesize and apply that knowledge. As she explained:

> *And so indicators, so is that the ability to spew back the information that they've learned in NFP education and how do you measure that? Do you measure it through a knowledge quiz? And does that have any indication of somebody's ability to deliver the program skilfully and I think you know all the adult learning you know theorists would say probably not. It's the ability to take that information and synthesize it and apply it. So I, I … And, and we're talking qualitative, right?*

The same educator further elaborated on how these assessments could involve nurses describing how they take the NFP knowledge and apply it in their work with families. She described the following strategies:

> *Ask qualitative questions that really probe about what their understanding around the base components of the NFP model and how they apply that knowledge in practice. I mean I guess that's the only thing I can offer as to where I would go with it. Because it's not just about articulating back… what the three, well four theories because we added critical caring theory. So people can tell you what those theories are and I would say and so what? It's about so how do you take that information and use it in your work with families? That's what I would want to know. And so I would take the core components of the model, you can't ask about all of them because you'd be interviewing people all day, but what are the critical things and I'd wanting to know about how they use the theories, how they use the visit-to-visit guidelines.*

Key skills indicators – Public health nurses.

Table 23 summarizes key indicators shared by participants for the types of ***skills*** that PHNs should gain from participation in the NFP education.

Table 23. *Key Skill Indicators for Public Health Nurses*

	Key Indicators	**Measurment Strategies**
Public Health Nurse (PHN)		
Skills	• Use of assessment tools and resources (e.g., DANCE, NCAST, PIPE, STAR) • Using communication techniques to elicit client's goals and motivations (e.g., motivational interviewing) • Enacting client-centered principles • Role modeling to clients • Empowering clients using self-efficacy concepts • Application of the intervention across the different domains • Engage/retain clients	• Observation • Self-assessment/ Practice-based examples • Clients retained • Client feedback • Achievement of goals

Common responses given for key skills indicators included nurses' use of NFP assessment tools and communication techniques for eliciting client's goals and motivations, as well as their ability to empower and engage clients (e.g., through application of theoretical concepts and through therapeutic relationship building). It was pointed out that the PHNs who participated in the pilot project came to the education with a well-developed skill set. This is because, prior to being hired into the NFP program, the majority of participants had experience working in public health and with delivering HBHC, a public health home-visiting program delivered by all health units. As one NFP supervisor explained, the NFP education was not necessarily about nurses *developing* the necessary skills, but rather about them *strengthening* their skill set in the context of a new intervention. She said:

> T*hese are skills that they brought with them from HBHC but I do think that it strengthened ... I'm kind of repeating myself. But having gone through that education just really brings it forward, highlights the importance of it, validates it, just puts it front and center and I think I used this word already but just very intentional in our practice that these are really important things that we need to do and to be doing consistently.*

Suggestions for measurement of these gains included nurse self-assessment or drawing from practice-based examples. For example, one supervisor shared the idea of asking nurses to give examples of how they have incorporated strategies like *change talk* and *sustain talk* into their practice. An NFP educator also claimed that observing PHNs in practice (e.g., video recording nurse-client interactions) can serve to accurately assess change in their skill levels. As she explained:

> *Well the best way to do that is to actually observe them in practice…you could actually videotape nurses making visits..Because that's the only way you ever really know.*

Because people can tell you what they're doing or what they think they're doing, but that's not necessarily an accurate representation of what they're really doing.

Other participants suggested that positive client feedback and client retention rates could serve as measures of nurses' engagement skills. Finally, one of the participants suggested that an indicator of PHN skill could include achievement of clients' goals. She shared how her local database might be able to play a role in eliciting a measure for this indicator:

I think one of the things that is in ISCIS we use certain goals. Like it'll say prenatal, it will say housing, you know. And you know it doesn't say ... like when we fill out a home visiting encounter form it talks about how much time we're spending on each of them. But at the end of our ... when we discharge a file none of our encounter forms will say was this goal completed? ...ISCIS captures that it was completed but the home visiting encounter form doesn't capture whether it was completed, not completed.

Key attitude/belief indicators – Public health nurses.

In Table 24 below, information is summarized with respect to key indicators for the types of ***attitudes/beliefs*** that PHNs should acquire as a result of participating in the NFP education.

Table 24. *Key Attitude Indicators for Public Health Nurses*

	Key Indicators	**Measurment Strategies**
Public Health Nurse (PHN)		
Attitudes/Beliefs	• Shift from teacher to partner • Valuing understanding over judgment • Respect for client as expert of her own life	• Qualitative, scenario-based questions

It was felt, among participants, that nurses would come into the education with a set of attitudes/beliefs supportive of the NFP interevention. Nevertheless, participants were able to describe what had shifted or been strengthened with respect to their attitudes and/or beliefs as a result of engaging with the education. For example, one supervisor described how PHNs were perceiving their roles differently in working with clients in NFP. She said:

I could see the attitude piece as being a big shift with some of them. Not that it was negative to begin with, I don't mean it was a bad attitude to begin with, but just it would've been more like they would of thought that maybe didn't do ... be more of a teacher rather than the role model, the partner in the program delivery.

Another indicator shared by participants was the valuing of "understanding" over "judgment." One participant explained this in the context of a perceived lack of engagement by clients. She said:

I think NFP does a really good job of recognizing that sometimes that lack of engagement isn't because they aren't ready, it's maybe a lack of trust. You know so it's kind of ... I think it's more open, it's more forgiving, it's ... Yeah, like that trauma-informed perspective of ... And also from around like it models that attachment, right? Like you

know you're not going to show up but I'm still going to be here. You know what I mean? Like you can, you cannot call me back and I'm going to be ok with that. Like I'm still ... when you're ready to work well let's just pick up and carry on. So it's a little bit of a different value from that perspective…I'm not going to judge. I'm not going to ... you know it's reframing, like oh she never ... she always cancels becomes you know I don't know, she must have a lot going on right now. You know what I mean? Like you try to come from a place of understanding instead of judgement.

Finally, it was pointed out that, as a result of the education, participants would have greater respect for the client acting as an expert on her own life. As one supervisor shared, it's *"realizing that people are going to choose to live their lives not necessarily the way we would choose, and how do you work with that…"*

One of the NFP Educators felt that the best way to measure changes in PHN attitudes/beliefts was qualitatively through scenario-based questions. She described the following:

By asking people about the population they serve and what are the things that they admire or like about the population and what are the things that frustrate them. So you get it a little bit that way. The other way, and probably a better way to do it, is to give them a scenario that's, or a couple of scenarios that are sort of slanted to get at those issues and ask them some pointed questions about it.

Key knowledge, skills and attitude/belief indicators – Leadership/management.

Table 25 summarizes key indicators shared by participants for the types of ***knowledge, skills, and attitudes/beliefs*** that those in NFP leadership/management level positions (e.g., supervisors) should gain from participation in the NFP education.

Table 25. *Knowledge, Skills and Attitudes/Belief Indicators for Leadership/Management*

	Key Indicators	Measurment Strategies
Leadership/Management		
Knowledge	• Reflective supervision principles	
Skills	• Reflective supervision • Integration of clinical supervision within usual supervision/PH management role • Mentorship and evaluation • Availability and flexibility	• Comfort level in guidance of skilled PHNs
Attitudes/Beliefs	• Availability and flexibility	• Feedback from PHNs

Reflective supervision was felt to be a key indicator of both supervisor knowledge and skills. Other skills indicators mentioned by participants included mentorship and evaluation (e.g., how supervisors provide feedback), as well as the ability to be available and flexible. For example, one PHN said:

I feel like our manager does a very good job of allowing us to debrief with her and we don't need to have set times in order to do it with her. She's very, she's very available

and very flexible for us and so to do it on a need-to-do basis is more important than to do it at set times all the time.

The last part of this statement also suggests that availability and flexibility can be indicators of supervisors' attitudes/beliefs (e.g., valuing needs of staff over having scheduled check-ins).

One of the NFP educators expressed that an important indicator of supervisor skills would be the integration of clinical supervision within a usual supervision/public health management role. She explained that the specific skill here would be how supervisors manage conflicting responsibilities (e.g., the regular and frequent contact the NFP team requires with public health initiatives that they are drawn to organizationally). Furthermore, she suspected that clinical supervision might be something NFP supervisors are less comfortable with (compared to what they may have done in their usual management roles) and that their comfort level in providing this guidance to skilled PHNs might be an important measurement strategy.

Key knowledge, skills and attitude/belief indicators – NFP IPV education.

Participants listed the following (Table 26) as key indicators for the types of ***knowledge, skills, and attitudes/beliefs*** that learners should gain from their participation in the NFP IPV education.

Table 26. *IPV Knowledge, Skills, and Attitudes/Beliefs*

	Key Indicators	**Measurment Strategies**
NFP Intimate Partner Violence Education		
Knowledge	• Risk factors (e.g., choking, weapons in home) • Signs and symptoms (e.g., self-esteem, mental health) • Awareness of tools & steps in NFP IPV Clinical Pathway • NFP Facilitators best suited to situation/scenario • Community Resources	• Scenario-based questions • Confidence in recognizing IPV
Skills	• Administration of tools that are part of NFP IPV clinical pathway (e.g., Risk assessment, Danger Assessment) • IPV disclosure or traumatic histories elicited through use of NFP IPV clinical pathway tools • Identifying and responding to IPV disclosures • Guiding clients through safety planning	• Documented use of tools in practice • Comfort/confidence in identifying and addressing IPV, use of NFP tools
Attitudes/Beliefs	• Important to ask about IPV • Respecting clients' wishes	• Scenario-based questions

With respect to key knowledge indicators for IPV, participants mentioned the following: IPV risk factors and signs/symptoms, NFP IPV resources/tools (e.g., steps in clinical pathway, appropriate facilitators to use in different situations/scenarios), and community resources for supporting clients (e.g., upon disclosure of IPV).

Skills indicators were concentrated around appropriate administration of the NFP IPV clinical pathway tools, as well as the ability to use these tools to identify IPV and/or elicit disclosures and traumatic histories from clients. Finally, this list included responding empathically to IPV disclosures and being able to guide clients through safety planning.

Finally, key indicators for changes in attitudes and beliefs included recognizing the importance of asking about IPV, and respecting clients' wishes even if they may not be in agreement. The following excerpt taken from a nurse interview summarizes many of the above ideas:

> *I think you know as a nurse sometimes you may want to shy away from it [IPV] and actually NFP has allowed me to realize actually it's detrimental to your client to shy away from it because they are ... you're going to, yeah you're going to bring all the good stuff, all the teaching and yet they may be in a situation where they are dying inside. Their self-esteem is being affected. Their mental health is being affected. They're not coping well. And you may see a big aspect of that because you didn't have the ability to address it. So for me that was a knowledge gain for me. It was a big help in that, yeah. I'm going to be that nurse who's going to go in there with all the resources and who's going to feel comfortable to allow my client to realize that yeah, maybe I do need to change. Maybe I need to start looking at my baby first.*

To measure or assess these knowledge, skills and attitude/belief indicators, participants sugggested scenario-based questions (e.g., *"You know you have this sort of scenario which facilitator would you, would you pull?"*), recorded or documented use of the NFP IPV clinical pathway tools in practice, and nurse confidence levels.

Tools to Assess Professional Public Health Nurse Performance

Supervisors were asked how NFP nurses are currently assessed on their professional performance and what tools, if any, they would find helpful in exploring if new knowledge and skills were being integrated into practice. Some of the PHNs in the project also expressed ideas about how to (and how not to) effectively assess their professional performance.

NFP Supervisors.

Performance appraisal processes existed at each of the different health units, and some supervisors spoke more in-depth than others about what this process looks like. Two of the supervisors explained that their performance appraisal tools are modelled after the Canadian Community Health Nursing Competencies (Community Health Nurses of Canada, 2011). For at least one of the sites, nurses complete a self-assessment and provide practice examples and reflective statements. The supervisor from this site explained that the purpose of the performance appraisal is both to identify strengths as well as to identify areas where nurses and supervisors can partner to help improve practice. Another supervisor was less enthusiastic about the forms used within her health unit, indicating that the performance indicators reflected general, and not specialized, PHN competencies. This same supervisor also noted that while the competencies used to assess nurses are based on the Canadian Community Health Nursing Competencies, it is not specific to the competencies of NFP.

Supervisors spoke about the process of evaluating nurses' performances during joint visits. One supervisor described how her team is using the home visit model, and how they have found the NFP tools helpful and to be well laid out. She shared that, "*We're using the forms and then we come back and we sit down and they ... like because they fill theirs out and I fill mine out and we, we talk about it and it's really, a really nice process… the tools that NFP has just really makes it easy for you, right? It's all laid out for you."*

Another supervisor described the benefits her team has experienced with the NFP home visit model and its associated forms. She said:

> *I find that the form is actually pretty good and what's good about it is that you don't have to cover everything all at once, right? So basically we've been working with the nurses to say what do you want me to look for with this one [home visit], right? I just find that a lot it gives them the opportunity to really demonstrate how they'd like to do the program, and of course it depends on what's going on on the day you get there because life can change on a dime with this population… But even that teaches you something completely different, like how are you managing a crisis and did you follow like what you should be doing, right? There's always good feedback."*

Finally, at least one of the NFP supervisors shared that client feedback is something that is elicited as part of nurse assessment. She shared, "*So we reach out to clients and get their feedback and we document that and we, we don't share it with the nurse or the family visitor. We don't share it with the nurse according to the client's name but sort of give general, general feedback from the clients that we speak to."*

NFP PHNs.

PHNs felt strongly that client feedback would be an important way to assess their professional performance and how well they were integrating new knowledge and skills in practice. As one nurse stated, "*I strongly believe speaking to the clients will allow one to have a better understanding of what they have gained from their interactions with their nurses."* At least one nurse gave the example of using the ***How's it Going Between Us?*** program facilitator to elucidate the nature and quality of the nurse-client relationship, explaining that "*I feel like clients are very honest. Like teenagers are very honest.*" It was also suggested that clients could be interviewed about how they feel they are benefitting from the program, and what gains they have achieved (e.g., quitting smoking/drugs, returning back to school, graduating, securing employment, moving to safety, leaving a toxic or abusive relationship, etc). Finally, PHNs had strong feelings about how they would *not* wish to be assessed with respect to their professional performance – for example, being evaluated based on numbers of home visits or assessments completed. As one nurse explained, '*like you're going to count how many clients and how many no-shows and cancellation, that's not going to measure ... Like I, I would struggle with that being like ... because we try to not make that a reflection on ourselves so if all of sudden you're saying well [Participant] had six cancellations this week it's already hard to not take it a little personally."*

Another nurse was in agreement, and also shared her concerns over retention as a measure of professional performance – especially given the nature of the NPF client population. She said:

I wonder for retention if that's fair to assess. As well family, our home visit frequency. But then you see some of this can be the client's issue but then one could say that you know the clients that are following through maybe ... if we see trends amongst the nurses and others where they're not getting those, you know those home visits as frequently as what they should then maybe that's an indication of engagement, right?, or something else. So retention. If their, you know if their ... if their clients are falling off, you know if there's no trend. If it's a trend of the client you know are not sticking around well then that could be an issue, right?, tied to the nurse. But you know the one-off, you know these clients do lead complex lives and it's not uncommon for them to not follow through all the time, you know."

Finally, nurses warned about being compared to each other, especially in circumstances where their caseloads might look entirely different. As one PHN shared, "*But, but when like [PHN's] caseload is totally different than my caseload because like all of mine are involved with CAS so like they kind of have to have me in there like ... So like it's totally different. You can't compare that, right?"*

Introduction of NFP to an Ontario Public Health Unit

Across Ontario, all public health units are required to deliver the Healthy Babies Healthy Children program to provide health promotion and early intervention services to pregnant women and families with young children. The introduction of NFP into this pre-existing program as a complementary strategy to meet the needs of a prioritized population of young women experiencing social and economic disadvantage requires careful planning to ensure that it is successfully integrated into the organization. Across the interviews with supervisors, PHNs and educators, insights about strategies undertaken in the early stages of NFP adoption emerged and are summarized here.

Through this pilot study, what emerged was an awareness of the importance of considering how NFP teams need to balance delivering NFP with fidelity to the core model elements while also ensuring that they had time to engage in or meet local organizational requirements for employment or training. It was identified that strategies to ensure that both NFP program and organizational requirements for staff are developed, so that one program is not sacrificed for the other. In one of her reflections, an NFP Educator shared:

We made the decision in Canada to have public health nurses in public health units deliver NFP…. We have never stepped back from that conversation though and really talked about what are the advantages and disadvantages to using public health nurses and how do we minimize the disadvantages? So that's a conversation that needs to happen… I think again it's easy [for NFP teams] to give up the [NFP Consolidation and Integration] sessions, right? – You know, 'oh, we'll just, we'll just miss this planned NFP education because we have to do CPR recertification or we have to go to our immunization recertification'. And so we can just give this one up and we can just give that one up, and then you're just giving a lot of them up. And you can't give them up. But then they also have obligations to their health units and so of course we have to meet those expectations and so how do you balance that? It's not easy. It's not easy.

Some evaluation participants spoke to the importance of making concerted efforts to purposefully integrate NFP into existing home visiting programing, highlighting that NFP is not a duplication of pre-exiting home visiting services, but rather a unique and complementary home visiting program within a continuum of home visiting supports. The complementary nature of NFP was evident when exploring alignment between HBHC and NFP in the following areas: general policy and practice; service and system integration; access to information and resources; early identification and intervention screening; assessment; service coordination; referrals to community services and evaluation. Positioning NFP as a unique and complementary home visiting program provided the opportunity to implement NFP within the context of HBHC as a more intensive stream of service for families experiencing complex needs.

Increasing Community Awareness of the NFP Program

Early in the stages of adopting and integrating NFP into existing public health programming, NFP teams were actively involved in promoting awareness of the program within the health unit and among community partners. This essential work, which involved sharing information about the program eligibility criteria, the program model elements and building or enhancing relationships with existing community partners, was conducted to promote the referral of eligible young, women – in the early stages of pregnancy, to the public health unit.

Access to high quality, program promotional materials that could be tailored by adding local contact information was identified as a key priority by the NFP teams. In this pilot project, promotional materials were not available at the time the program was first introduced in each health unit which left each health unit "scrambling" to create their own materials. Once this need was identified, promotional pamphlets targeted to potential clients as well as towards health professionals were developed and distributed to each health unit.

Overall, the NFP teams strongly recommended that public health units implementing NFP have a well-developed communication and outreach strategy in place and ready to implement during the early stages of program implementation. Nurses also confirmed that during the early stages of the program, while they were building up their caseloads, this afforded them sufficient time to engage in community outreach activities. Communication and outreach strategies that were utilized and endorsed by participants included:

NFP team community outreach and presentations.

This often involved creating a list of local potential referral sources (e.g. community agencies, midwife clinics, primary care clinics, physician offices, Canadian Prenatal Nutrition program groups, teen or young parent resources, community health centers), then arranging a time for an NFP team member to visit the office/agency to meet local staff to build a relationship, present a presentation on NFP (many local sites developed PowerPoint presentations), distribute pamphlets, a "one-page" summary or posters about the program, and to answer questions about the program. It was also identified that it might also be useful to have additional promotional materials available (e.g. pens) to handout to increase awareness about NFP.

Many NFP nurses then spoke about the outcomes that resulted from this outreach work, including an increase in the number of referrals of young women early in pregnancy, the development of new relationships with key providers, and establishing a foundation for long-

term working relationships. When relationships already existed with community partners, nurses further reflected that the increased number of contacts and discussions about NFP resulted in a deeper connection and a much stronger, collaborative relationship,

One PHN reflecting on her outreach work to physician offices, commented that:

> *I see the benefit now because I have doctors calling me by name and saying, 'I have another client for you.' [This is happening] because, one, they can put the face to the name and two, they know the work I am now doing. So definitely, I was one to not originally like the outreach part, but I can honestly tell you that now, that' its beneficial in the work we are doing, for sure, especially with the population.*

Beyond the benefits identified by PHNs, supervisors also identified that this form of community outreach has longer term benefits with respect to building community capacity. They explained that when NFP PHNs establish and nurture connections with community partners, they are also explaining how other community professionals become part of the NFP community and will play a key role in providing additional supports and services to NFP clients beyond the referral point.

One supervisor in her interview discussed the importance of this form of outreach and the value it contributed to the successful implementation of NFP:

> *With [NFP PHNs]I have instilled what a true partnership is, what true outreach is and what is needed to continue sustaining partnerships. It's not just about going and saying, 'make referrals.' No, the [nurses] are going there to talk to them about what's happening. You are going to provide them that letter that says you're part of this program and that you are delivering the program along with them. This is about building capacity for communities to actually meet the needs of their young people, It's not just about NFP providing the service. So that has been a big ... I really firmly believe in that that we have to instill in ... HBHC should probably spend more time on this, it's just that nobody ever has time. There's no rocket science to it. Like it's just what we should've been doing all along. But with NFP it is very, very important because it is about all of the domains that matter to this young group becoming great parents and great parents rooted in their own solid foundation so that they actually have a good future too.*

Another supervisor commented as well on the positive response from community partners and that as a result of the NFP program outreach activities, and the increased number of young mothers being home visited, that an important gap in service delivery has been addressed to meet the needs of a population that often finds services hard-to-access. She said:

> *One of the things that has happened with service co-ordination here is that the [NFP PHNs] have gotten to know some of our community partners extraordinarily well and have built really strong interactional relationships with them. S,o referrals to and fro, support to and fro. Sort of like service co-ordination planning with them about what's going on with the client even though we're still sticking to our NFP program. I've had lots of people in the community phone me and say, 'wow, we love NFP.' Because they really feel like the young women weren't getting what they needed.*

Utilize local public health unit outreach teams.

Several of the participants identified that they partnered with pre-existing outreach teams already established within their public health unit who took on a responsibility to increase awareness about NFP with their relevant community partners. This also included identifying key individuals within the public health unit, with pre-established relationships with community partners who work with the target population. Examples were given about connecting with teams or liaison nurses in the health unit who worked directly with women's shelters, early years' programs, Children's Aid Societies or high schools.

Social media strategy.

Some of the participating health units were also able to leverage and utilize existing public health unit social media platforms, including posting about NFP on Facebook, Twitter, Instagram or the agency website. One health unit also held a media launch to highlight the work of the NFP teams and the meaning of the program to women receiving home visits.

Post referral follow-up.

In several of the programs, a follow-up letter is sent to the referral source once the pregnant woman has consented to be enrolled in NFP. The purpose of this letter is to share the "permission to share information" consent form signed by the client, to acknowledge and thank the referee for the referral and to use this as another opportunity to provide information about the scope and nature of the NFP program.

Discussion

In this section, the significance and limitations of the findings, are discussed and organized using the evaluation questions as the main sub-headings.

Primary Research Question

Following completion of the NFP Canada Nurse Education program, are Ontario PHNs and supervisors able to implement and deliver the NFP program with fidelity to the core model elements, with a specific focus on the following fidelity indicators: 1) public health nurse and supervisor caseloads; 2) duration of the program; 3) service dosage to the program; 4) content of home visits; and 5) client eligibility?

Overall, the four public health units that participated in this pilot study demonstrated the ability and capacity to implement and deliver NFP with a high degree of fidelity to the program's 14 core model elements.

Public health nurse and supervisor caseloads.

Across the three public health units implementing NFP at the start of this study, the mean caseload size during the prenatal phase was 14 NFP clients per PHN (mean range 9-21). In the first pilot study to determine the acceptability and feasibility of delivering NFP in an Ontario context, the ideal caseload size for a full-time PHN working in an Ontario public health unit was determined to be approximately 20 clients (Jack et al., 2012).

In interpreting this information, it is important to consider that early stages of NFP adoption by a health unit requires substantial time for teams to complete the core education, participate in community outreach activities to establish referral pathways into the program and for nurses to gain competence in delivering the program, as such it often takes time to build a caseload. In this CaNE study, the amount of time following nurse education and program implementation where nurses could build their caseloads (5-19 months) was less than the amount of time required to graduate a full cohort of NFP clients. The length of the full NFP intervention is up to a maximum of 2.5 years. Thus, the length of this pilot study limited our ability to capture data across a full cohort of clients and accurately estimate what a PHN caseload would be at the "steady state" of a program once fully implemented.

Through this early analysis, however we can postulate that there may be a higher concentration of eligible women living in specific communities (e.g. Toronto) with pre-established networks with referral sources working with young, pregnant women, thus leading to the ability for NFP teams to rapidly reach, or sometimes exceed, full caseload capacity. Careful consideration will need to be taken by other Ontario public health units interested in the future in adopting NFP to ensure that their community level data indicates the presence of a sufficient number of young, low-income pregnant women preparing to parent for the first time, to ensure that even a small NFP team (e.g. 4 PHNs) have access to sufficient clients to build a full caseload.

Additional data are also needed to identify and understand the range of client, nurse, intervention and community factors that ultimately influence a benchmark number for client caseload per PHN. To be able to provide regular, frequent home visits to women enrolled in the program, as well as to meet the program requirements for regular reflective supervision, case conferences,

joint visits and team meetings, the number of clients that any one PHN provides service to must be taken into careful consideration. Additionally, nurses are providing an intensive intervention, focused on promoting behaviour changes to improve a wide range of prenatal, maternal and infant health outcomes amongst a population of women experiencing high levels of social and economic disadvantage. For example, many of the women enrolled in NFP may be parenting or preparing to parent with a personal history of exposure to adverse childhood experiences as well as managing current experiences of poor mental and physical health, substance use, exposure to various forms of family violence, and unstable housing. Findings from baseline data of 739 women and girls enrolled in the BCHCP RCT highlighted that the majority of women (74%) during pregnancy were managing long-term health conditions, with almost half (47%) experiencing poor mental health (Waddell et al., 2018). Among these same participants, more than half (56%) reported exposure to maltreatment in childhood and 50% disclosed exposure to IPV in the last 12 months (Waddell et al.). Working closely to establish a therapeutic relationship and to implement a range of nursing interventions to promote behaviour change, in this population experiencing multiple and often chronic challenges, requires time, flexibility and nurse availability – which ultimately influences the number of clients any one nurse can support.

Across the project timeline within all four participating public health units, the mean number of nurses supervised by a single NFP supervisor was 3.6 PHNs. With respect to supervisor caseload, each participating team met or fell slightly below the recommended benchmark of the number of PHNs to be supervised by an NFP supervisor. Decisions were made at the start of this project to pilot NFP with the establishment of small nursing teams. The NFP program guidelines identify that a full-time supervisor can manage a team of no more than eight nurses. The minimum team size is four nurses, supervised by a half-time NFP supervisor (NFP International, 2017). Two of the participating public health units required permission from the licensor to temporarily operate with a smaller team and/or to function with a different team model.

Program duration.

Among women assigned a program ID and who had received at least one home visit (n=245), 71% (n=174) remained active in the NFP program at the time of data analysis. This recorded rate of retention is higher than estimates of program retention in US-based NFP programs (O'Brien et al., 2012). In addition, we were able to estimate that 59.2% of women remained in the program long enough to receive at least one home visit during infancy. Of the 69 women who no longer received NFP home visits, 38% (n=26) were discharged because of "non-addressable" factors (pregnancy loss/infant death, move from service area, or lost custody). However, the majority of discharges (57%, n=39) were initiated by the client or because the client was "lost to follow-up", both potentially addressable conditions. Again, a limitation was that the study timeline did not enable us to follow the first cohort of families through to NFP graduation, thus limiting our ability to collect data on client retention through infancy and toddlerhood.

The retention of young, new mothers is a common problem experienced across all types of home visiting programs and an issue of specific concern to NFP (O'Brien et al., 2012). Attrition of clients from home visiting programs ultimately reduces the dose of the intervention received and is subsequently connected to poorer outcomes among women and their children (Holland, Christensen, Kearney, & Kitzman, 2013; Korfmacher, Kitzman, & Olds, 1998). In an analysis of home visitation data for 10,367 women enrolled in 66 US-based NFP agencies, total attrition (from pregnancy through the child's 12th month of life) was 49.5% (O'Brien et al).

Approximately 10% of attrition was accounted for by "non-addressable" factors such as miscarriage, infant death, maternal death, loss of child custody, and moves from service area (O'Brien et al.).

Recent innovations in the NFP program to promote client retention have focused on supporting nurses to offer a flexible schedule of home visiting by tailoring the frequency, duration and content of visits to clients' specific needs (Ingoldsby et al., 2013). Elements of this innovation were thoughtfully integrated and emphasized in the CaNE model of education in both the NFP Foundations and NFP Fundamentals stages which may account for PHNs' abilities to retain clients through pregnancy and early infancy. However, given the number of clients who left due to potentially addressable reasons, future evaluations of NFP in Ontario and Canada could include a description of the patterns of participation and qualitative exploration to identify clients' perspectives on reasons for program drop-out.

Service dosage.

Service dosage is an indicator as to whether a client is receiving sufficient amounts of the NFP intervention to achieve expected outcomes (NFP International, 2017). With the data available, we were able to estimate that the mean number of home visits in the prenatal period was 7.4 visits/client. In comparison, O'Brien (2005) in an analysis of clinical data from 5,433 NFP clients enrolled in US-based programs, calculated that the mean number of visits completed in pregnancy was 9.5. While the program promotes tailoring the visit schedule to client needs, it would be reasonable for a client, enrolled early in pregnancy to receive a maximum of 14 prenatal home visits. In the CaNE project, given that a majority of eligible women were enrolled after 17 weeks gestation (64.9%), this reduced the number of weeks available to schedule a home visit. Future effort within Ontario to identify strategies for increasing the number of referrals of eligible women early in pregnancy is recommended.

Content of home visits.

Within each home visit, NFP PHNs comprehensively assess and address client needs across six program domains: 1) personal health; 2) environmental health; 3) life course; 4) maternal role; 5) friends and family; and 6) health and human services. Overall, the PHNs generally met this program requirement. In comparison to the benchmarks for the proportion of time in each home visit to be dedicated to a specific domain, PHNs in the CaNE project met the program benchmarks across pregnancy, infancy and toddlerhood for: 1) life course development and 2) family and friends. More time than recommended was consistently spent addressing: 1) personal health across the three program phases and 2) environmental health during pregnancy and toddlerhood. Finally, PHNs spent less than the recommended time addressing maternal role across the three program phases. In an analysis of 5,433 NFP participant records in the US, O'Brien (2005) also noted in her analysis that it is typical that nurses under-emphasize content related to maternal role during the infancy and toddlerhood stages.

Further reinforcement of the content benchmarks and of strategies to meet those benchmarks could be incorporated into NFP education. Additionally, NFP supervisors and the NFP Community of Practice can promote accountability to meeting content benchmarks during home visits.

Client eligibility.

Nurse-Family Partnership is a program targeted to meet the needs of pregnant and parenting women experiencing significant social and economic disadvantage. To be enrolled in NFP, women are required to meet specific eligibility criteria, including: 1) being a first-time mother; 2) meeting socioeconomic disadvantage criteria and 3) enrolled early in her pregnancy and receives first home visit no later than the 28th week of pregnancy. In this evaluation, to establish if women were living in circumstances of social and economic disadvantage, this criterion was met by the client being of young age (either $\leq$ 21 years or $\leq$ 24 years depending on public health unit demographics) or meeting locally determined "low income" criteria. Participant income data were not transferred as part of the data agreements.

In the CaNE pilot study, the participating NFP teams across the four public health units demonstrated a high degree of awareness of, and commitment to, identify and enroll women who met the eligibility criteria. Overall, with an exceptionally high degree of fidelity, NFP teams in all four health units were able to identify and enroll women who met the eligibility criteria. With only one exception, all women (99.67%) enrolled were preparing to parent for the first time. The mean age of NFP enrolled clients was 18 years. While quantitative data were not available about client income level, findings from the qualitative indicate that PHNs were delivering services to women experiencing significant levels of social and economic disadvantage in the majority of public health units. PHNs in one public health unit identified that their regional demographics contained a larger percentage of higher socioeconomic status families and it required additional effort on their part to identify and enroll women for which this program is intended.

While the benchmark for this core model element is that 100% women should be enrolled by 28 weeks gestation, overall, participating health units were highly successful in enrolling 98.1% of women by the required timepoint. This core model element also has two additional benchmarks. The second one is that, 75% of eligible referrals who are intended to be recruited to NFP, are enrolled in the program (NFP International, 2017). Using data from supervisor-provided summaries, across the province, once referrals were received by the NFP team and eligible women confirmed, all teams exceeded this benchmark in their capacity to convert eligible referrals to successful enrollments. Using the denominator of referrals of women who met the eligibility criteria (n=290), 88% of women were enrolled. This rate increases to 96.6% if we only take into consideration the number of eligible women that the PHNs were even able to contact (n=265) to arrange an enrollment visit.

This high rate of conversion, from referred to enrolled, may be due in part to a number of factors. First, as a response to teams' active community engagement efforts, referral sources are able to more accurately determine and refer to public health, women who meet the program criteria. While participants did speak about experiencing some pressure from external referring sources to accept women outside of the eligibility criteria, PHNs were very skilled in responding and explaining the rationale behind the program criteria, and could also offer services through an existing provincial prenatal and postpartum home visiting program with different eligibility criteria, for those referrals that did not meet the NFP criteria. Second, during the first encounter when the program is explained, the participating PHNs are able to expertly outline the program benefits, quickly establish rapport, and demonstrate the skills necessary to engage the potential client, thus using knowledge and skills refined in their completion of the CaNE curriculum.

The third benchmark for this core model element is that 60% of pregnant women are enrolled by 16 weeks gestation (NFP International, 2017). Enrolling women early in pregnancy provides time to initiate and strengthen the therapeutic relationship between the client and creates opportunities to provide interventions to address prenatal health behaviours with the goal of improving birth and infancy outcomes. In the CaNE study, while the mean gestation at time of enrollment was 19.79 weeks, only 35% of women were enrolled ≤ 16 weeks. In the qualitative interviews, PHNs highlighted that some young pregnant girls or women may delay seeking prenatal care and therefore referral sources such as physicians or midwives are unable to refer early in pregnancy.

Available information about the sources of referrals indicate that eligible women are referred by a range of community agencies and partners. It is interesting to note that only 10.6% of referrals come from physicians' offices and provides further support that that this population of young mothers may seek prenatal care later in pregnancy, or that physicians are not clear on referral processes. Future marketing campaigns to increase awareness about NFP therefore should be targeted towards a range of health and social service agencies, community partners and parents. Given the 12.5% rate of self-referrals, there may be value in marketing the program directly to young adult women through a range of social media. Given the significant amount of missing data (30.2%) and the lack of clarity about how different health units are interpreting "public health service referrals," it will be important for the provincial NFP program to re-evaluate this data entry point on the data collection forms and develop consensus among sites for interpretation of existing codes and to develop new codes to reflect locally relevant referral sources.

Secondary Research Questions

Internationally, this is among the first studies to describe and document nurses' and supervisors' experiences of completing the NFP education. Findings from this study will provide important insights into the key elements required to ensure that there is a sustainable model of education, both for current and future NFP sites in Ontario, and for other Canadian jurisdictions that may be in a future position to implement NFP. The exploratory nature of the results from this study will be useful in guiding subsequent revisions and enhancements to this model.

> **What are NFP PHNs', supervisors' and NFP educators' perceptions and experiences of the content and delivery methods of the NFP Canada model of education?**

All participants responded extremely positively to completing an intensive, three-phase model of NFP education: NFP Foundations, NFP Fundamentals, and NFP Consolidation and Integration. Our understanding of participants' perceptions and experiences is informed by their in-depth responses in qualitative interviews, focus groups and completion of feedback forms at the end of each learning session.

The delivery of NFP Foundations through an online learning management system provided PHNs and supervisors with the flexibility to control the pace of their learning and to complete the required learning activities in a location of their choosing. To maximize the time for learning, particularly for PHNs transitioning from another public health program into NFP, it was recommended that staff be allotted 6-8 weeks to complete NFP Foundations prior to attending

NFP Fundamentals. While placement of the learning modules on a web-accessed e-learning platform promotes flexibility and sustainability of this component of the education, participants noted the number of text-driven modules. One limitation of text-driven modules was then the need in some cases to download and print modules, so that the answers and reflections could be typed in. In comparison, participants were highly engaged while completing the more interactive IPV modules, that included videos, case scenarios, quizzes and storyboards. Further development and transformation of the text-based modules into interactive e-learning courses using responsive course authoring software such as Rise 360 would provide learners with the opportunity to experience a greater range of interactive teaching/learning strategies as well as embed learning outcome measures in the form of quizzes.

Participants confirmed that the NFP Foundations content provided them with a solid foundation of knowledge about the NFP program model, history, evidence, theories, and client-centered principles. There was positive support for the inclusion of a nursing theory, and selection of Critical Caring Theory (Falk-Rafael, 2005) provided language and rationalization for the work they do as a PHN home visitor, and specifically in relation to understanding how social justice and addressing the social determinants of health compliments their practice. The CaNE pilot project provided an opportunity to integrate new NFP innovations, developed in the US, into Canadian NFP education for the first time. Without prompting, some of this newly added content (e.g. IPV, TVIC, STAR content), was consistently identified among the list of most valuable/useful topics participants completed.

Some of the NFP Foundations content was familiar to participants. Given the high level of experience this selected sample of PHNs and supervisors had in both public health and home visiting practice, it is not surprising that they were knowledgeable about principles of therapeutic relationships and communication. However, participants valued the opportunity to review this content. Maintaining this content in the curriculum is important however as it might provide new knowledge to any future hires that have less public health experience.

NFP Fundamentals, a 5-day, course was identified as an essential component of the overall NFP education. There was overall support for securing resources to maintain this component of the education as a face-to-face learning session. To provide time for reflection, as well as to reduce the amount of time away from work in one period of time, a recommendation was provided to split the 5 days into 3+2 day sessions. This mode of educational delivery allowed participants the opportunity to observe, practice, and receive feedback on newly developing skills, to engaged in discussions and ask questions specific to program implementation and delivery, and to establish and build an NFP community of practice. There was also a high level of support among participants to offer a second in-person training day, focused in IPV interventions, approximately 4-6 months after NFP Fundamentals.

Exploration of the attributes of an NFP educator revealed the importance of identifying an educator who has a deep knowledge of all components of the NFP program model, is a skilled and responsive facilitator, and who also has experience in delivering the NFP program. The invitation of content experts as well as experienced NFP teams was identified as an important augmentation to this model.

With respect to content, it was identified that the emphasis in NFP Fundamentals should be on skill acquisition and development, with only a minimal amount of time dedicated to review or introduction of foundational content.

To ensure that supervisors have the opportunity to develop their expertise related to the NFP model, it is essential to have supervisors complete NFP Foundations and Fundamentals, and to play a central role in coordinating and facilitating NFP Consolidation and Integration at the local team level. In addition to participating in the nurse education, supervisors highly valued the opportunity to complete in-person education focused on the development of new supervisory skills.

NFP Consolidation and Integration is the third and final component of the NFP education. Within the CaNE project, a series of TMEMs were developed to support supervisors coordinate and facilitate this educational component upon their return to their health units. While this opportunity for ongoing professional development was valued, participants identified a need for the NFP program to provide additional guidance and instruction on how and when to complete the modules. Flexibility to tailor ongoing professional development to meet specific team needs was also recommended. The opportunity to participate voluntarily in "job shadowing" to observe experienced nurses delivering NFP was valued by nurses who were able to participate. However, the overall experience could have been improved by providing clearer goals and expectations of the job shadowing opportunity to both the mentor and mentee. As local capacity and NFP experience develops within each health unit, there will be increased opportunities to offer local job shadowing rather than trying to secure the resources to send a PHN to another health unit.

The perceptions and experiences outlined above provide helpful guidance for the refinement of both content and delivery methods within the Canadian model of NFP education.

What is the overall level of acceptability of the NFP model of education to NFP public health nurses and supervisors?

There was overall consensus among participating PHNs and supervisors, that the CaNE three-phase model of education was highly acceptable and supported them in developing knowledge, skills, confidence to not only implement the program model with fidelity to core model elements but to also be skilled in implementing interventions to support behavior change among home-visited women. Three overarching themes emerged describing participants' *overall* level of acceptability with the novel education curriculum: 1) the NFP model of education is purposefully and thoughtfully delivered; 2) the NFP model of education facilitates building relationships and supporting women in making changes; and 3) learning how to implement the NFP program is a process that takes time.

Given the high priority, vulnerable population served by NFP, intensive support for advanced practice skill acquisition is required so that NFP PHNs can deliver care at their full scope of practice and have the knowledge and skills necessary to promote behavior change across pregnancy, infancy and toddlerhood. Given the challenges experienced by women in this program, NFP PHNs must be knowledgeable about and skilled in providing care related to

addressing maternal health across the lifespan, parenting, infant growth and development, mental health, family violence, and substance use. Furthermore, NFP is a comprehensive program, that supports nurses to develop and nurture strong therapeutic relationships with their clients and to effectively apply the nursing process to respond to client needs using a broad range of tools, assessment forms, and frameworks developed specific to NFP. Time and resources are required to develop a nursing workforce, through engagement in the NFP model of education developed in this study, with the knowledge, skills, and confidence to deliver this comprehensive program.

Within Canada at this time, the investment in time and resources to develop a robust NFP nursing workforce is not recommended due to the timeline for the RCT in BC.

How can public health nurse and supervisor knowledge and competencies be measured to demonstrate effectiveness of the education models in improving knowledge, skills and attitudes?

Given the small number of participating health units and subsequent sample size of participants, it was outside of the scope of this pilot project to measure changes in nurses' and supervisors' knowledge, skills and attitudes. However, through the interviews with all participants, we were able to identify key constructs and variables that would be of greatest relevance and priority for future evaluation. The next step for the CaNE model of education will be to use these constructs to develop evaluation measures for each of the three stages of education.

Key Lessons Learned from the Evaluation

1. Overall, the Nurse-Family Partnership is a targeted home visitation program that is acceptable to PHNs and supervisors as a public health intervention to address maternal and child health outcomes among a priority population of vulnerable pregnant and first-time parenting women through the prenatal period, infancy and toddlerhood.
2. Following completion of the Canadian Nurse-Family Partnership Education model, PHNs and supervisors demonstrated the capacity to implement the program with a high degree of fidelity to 13 of the program's 14 core model elements. Particularly with respect to enrolling women that meet program eligibility criteria, client retention, and application of content distributed across all program domains.
3. Having a full-time Provincial NFP Nursing Practice Lead to provide consultative support to NFP teams across the province to initiate, establish, and sustain program implementation and delivery is essential.
4. To develop the knowledge, practice skills, and confidence to deliver NFP, a three-phased approach to NFP education that includes a range of teaching and learning strategies, including intensive face-to-face education, is necessary to deliver the program with fidelity to core model elements. Minor revisions to NFP Foundations delivery, NFP Fundamentals content and delivery, and NFP Consolidation and Integration content and coordination are needed.
5. Completion of the CaNE model of education, practice support from the NFP Nursing Practice Lead, and guidance to provide a flexible schedule of visits, with dose, duration and content tailored to client needs may have contributed to PHNs' abilities to retain a majority of women in the program through pregnancy and infancy. Additional evaluation is required to further understand the factors and patterns of attrition among clients with "addressable" reasons for leaving the program.
6. Development and implementation of local community outreach initiatives and media campaigns seem to increase awareness about NFP and program eligibility criteria among sources of referral. Additional community engagement is required to identify strategies to increase the number of women enrolled $\leq$ 16 weeks gestation.
7. The development of a province-wide database to collect and report on NFP-related data indicators, that links with existing public health databases such as ISCIS is recommended, however, is not likely at this time and investment in such would be more appropriate upon completion of the RCT. In the meantime, efforts to enhance existing processes and practices for collecting and reporting on NFP-related indicators are required.
8. Public health nurses and supervisors identified contextually relevant variables, constructs and processes for consideration in the development of tools to measure learning outcomes associated with completion of the CaNE program of education.
9. Having a provincial NFP governance structure to provide oversight and to promote communication, consistency, and cohesion was key in the success of this project.

How will this Evaluation Help Inform the Initiative Moving Forward?

Findings from this study will help inform the initiative moving forward in the following ways:

1. Identify program delivery areas where local public health units are not meeting established program benchmarks and support organizational efforts to enhance practice.
2. Provide focused recommendations for revisions to delivery and content for all three phases of the CaNE model of education.
3. Provide recommendations for enhancements to existing data collection system processes and practices, which could also inform future province-wide developments.
4. Identify key constructs to include in the development of evaluations to measure learning outcomes upon completion of the CaNE model of education as well as to provide insight into the types of evaluation metrics preferred by nurses.
5. Provide information to influence directions taken by the Ontario NFP Steering Committee, Ontario NFP Advisory Committee, Ontario NFP license holder, Ontario NFP Nursing Practice Lead, and Ontario NFP Community of Practice.
6. Provide future guidance to other public health units on strategies to successfully promote the adoption and uptake of NFP into existing public health programming, should the BC RCT findings recommend broad implementation of NFP in Canada.

Recommendations and Conclusions

1. Ensure a full-time Ontario NFP Nursing Practice Lead is available to provide support to the five public health units that continue to deliver NFP in Ontario, and to educate any new PHNs and supervisors at these sites, until such time that the results from the BCHCP RCT are available (2021).
2. Deliver the Canadian model of NFP education through a three-phase process that includes NFP Foundations, NFP Fundamentals and NFP Consolidation and Integration to eligible PHNs and supervisors in Ontario and use this model to provide NFP education as needed elsewhere in Canada, pending approval from the Canadian Collaborative for Nurse-Family Partnership®.
3. Collectively identify community development strategies to 1) increase the number of eligible women enrolled early in pregnancy and 2) identify strategies for reducing the number of women who leave the program early.
4. Implement recommended revisions to NFP Foundations: 1) transform text-based modules to interactive e-learning modules using Rise 360.
5. Implement recommended revisions to NFP Fundamentals: 1) Offer, when possible, face-to-face education over a 3+2 day split; and 2) increase number of learning activities that involve use and application of NFP tools, nursing assessment forms and facilitators.
6. Implement recommended revisions to NFP Consolidation and Integration: 1) develop checklist and expectations for mentors/mentees engaged in job shadowing opportunities; 2) develop local capacity within participating health units to provide job shadowing opportunities; 3) develop and disseminate guidance for supervisors on how to better coordinate, implement and facilitate this third phase of integration; and 4) develop additional TMEMs (see findings for content suggestions).
7. Explore what steps would be required to develop a provincial NFP database, and determine if any steps are appropriate to move forward at this time.
8. Further reinforce home visit content benchmarks and highlight strategies to meet those benchmarks in the NFP education. Additionally, ensure NFP supervisors and the NFP Community of Practice promote accountability to meeting content benchmarks during home visits.
9. Address the following specific recommendations to improve data entry and data quality with existing, current data collection tools and processes:
    a. Consider having a separate category, or file for clients that are given NFP Client ID number, but then never have a subsequent visit, and designate them as something other than ‘discharged’. This would facilitate in separating clients who leave after receiving some of the program versus those that never start the program to begin with.
    b. To assess fidelity indicators such as dosage, or what percent of clients were active during the various program phases, dates are extremely important for anchoring the data analyses. It would be helpful to include actual discharge dates in the files, and infant date of birth.
    c. In order to better understand reasons for discharge, consider providing further codes, or break down reasons into sub-categories. For example, ‘client initiated’ discharge, it would be helpful to understand why the client left the program.

Perhaps this information is recorded in the client files, however it is not captured in the data.

d. Look at designating a central person that 'spot checks' data entry. Although rare, in some cases there were errors, for example a client was listed as in the infancy phase at one date, and then at a later date was entered as in the pregnancy phase.
e. The excel files are quite text heavy which requires a lot of coding if one is attempting to transfer files to a statistical program such as SPSS. Consider using numerical codes to represent various states, for example, 1= pregnancy, 2= infancy, and 3= toddlerhood. However, this does introduce another layer of potential error given everyone must know the codes and follow them accurately.

10. Maintain a provincial-level governance structure to provide oversight, facilitate collaboration, and ensure consistency and cohesiveness in NFP implementation across the province. This governance structure was an important element in the success of the CaNE project and is expected to continue to provide significant benefits.

If you could do another evaluation of the initiative subsequent to this one, what would be the next research question(s) you would investigate?

1. Among young pregnant women and first-time mothers, what are their perceptions of and experiences of receiving home visiting support from public health nurses in the Nurse-Family Partnership program?

   Exploring NFP clients' experiences in the program would provide program developers and implementers with insight into: 1) factors influencing decisions to enroll in the program; 2) factors related to client retention/attrition; and 3) client recommendations for augmentation to home visit content and processes.

2. At Niagara Region Public Health, the NFP team is piloting an alternate model of supervision. Instead of having one supervisor provide clinical, reflective, and administrative supervision to the team, two individuals have been assigned to assume the supervisory functions. One individual will be assigned to carry a small NFP caseload (part-time) and then provide reflective supervision to remaining team members; the second individual will then be responsible for coordinating all additional clinical and administrative supervision. As such, a case study protocol has been written and funded to answer the following questions:

   a. What are the characteristics of a shared model of NFP supervision as implemented by Niagara Region Public Health?
   b. What are NFP public health nurses' and supervisors' experiences of implementing and delivering the NFP program within the context of this shared model of supervision.
   c. How has Niagara Region Public Health integrated the NFP home visitation program with their existing Healthy Babies Healthy Children program?
   d. To what extent is Niagara Region Public Health implementing the program with fidelity to NFP core model elements?

3. How do NFP public health nurses identify and respond to women's experiences of sexual coercion within their intimate partner relationships?

An important client outcome indicator within the NFP program is the amount of time between subsequent pregnancies. For women who are exposed to IPV, and specifically sexual coercion, they may be limited in their ability to regularly access and utilize safe methods of contraception. There is little disciplinary practice knowledge about how PHNs in a home visiting program can safely ask about women's experiences of sexual coercion and then respond with appropriate nursing interventions.

4. What adaptations are required to make to the NFP program materials and CaNE model of education to meet the needs of Indigenous women and their infants?

The existing set of NFP materials have been adapted from versions developed in the US and the United Kingdom. Within Canada, to meet the specific needs of Indigenous women and their infants, it will be important to initiate a project of community-engaged research to identify which program materials require further adaptation, and what these adaptations would entail.

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Appendix A

Nurse-Family Partnership Core Model Elements

Element 1:	Client participants voluntarily in the Nurse-Family Partnership (NFP) program
Element 2:	Client is a first-time mother
Element 3:	Client meets socioeconomic disadvantage criteria at intake
Element 4:	Client is enrolled in the program early in her pregnancy and receives her first home visit no later than the 28th week of pregnancy
Element 5:	Each client is assigned an identified NFP nurse who establishes a therapeutic relationship through individual NFP home visits
Element 6:	Client is visited face-to-face in the home, or occasionally in another setting (mutually determined by the NFP nurse and client), when this is not possible
Element 7:	Client is visited throughout her pregnancy and the first two years of her child's life in accordance with the current standard NFP visit schedule or an alternative visit schedule agreed upon between the client and nurse
Element 8:	NFP nurses and supervisors are registered nurses or registered nurse-midwives with a minimum of a baccalaureate /bachelor's degree.
Element 9:	NFP nurses and supervisors develop the core NFP competencies by completing the required NFP educational curricula and participating in on-going learning activities.
Element 10:	NFP nurses, using professional knowledge, judgment and skill, utilize the Visit-to-Visit Guidelines; individualizing them to the strengths & risks of each family, and apportioning time appropriately across the six program domains.
Element 11:	NFP nurses and supervisors apply the theoretical framework that underpins the program (self-efficacy, human ecology, and attachment theories) to guide their clinical work and achievement of the three NFP goals.
Element 12:	Each NFP team has an assigned NFP Supervisor who leads and manages the team and provides nurses with regular reflective supervision
Element 13:	NFP teams, implementing agencies, and national units collect/and utilize data to: guide program implementation, inform continuous quality improvement, demonstrate program fidelity, assess indicative client outcomes, and guide clinical practice/reflective supervision.
Element 14:	High quality NFP implementation is developed and sustained through national and local organized support

Appendix B
CaNE Committees' Terms of Reference

1. CaNE Provincial Advisory Committee Terms of Reference 2016-12-06

Purpose	Works in an advisory capacity to facilitate collaboration, policy/practice consultation and ongoing communication amongst the various stakeholders, and the research/education/implementation workgroups on relevant aspects of CaNE.
Reports to	The Provincial Advisory Committee consults with and informs the CaNE Steering Committee and working groups.
Attendance	It is important to have representation from all PAC member organizations. If a committee member is unable to attend, it is their responsibility to arrange for an alternative representative from their organization.
Objectives	1. Provide guidance and consultation to the CaNE pilot project and advise the steering committee on decision making matters 2. Share information about NFP as it relates to the CaNE pilot project throughout the province 3. Provide long-term visioning and planning beyond the CaNE pilot project 4. Consider systems planning for pilot project clients 5. Clarify fit/alignment/intersection of NFP with existing services and systems (framed as a continuum of services) 6. Examine and promote the role of public health nursing in Ontario/health human resource capacity building as it relates to home visiting in pregnancy, postpartum and the early years.
Meeting Frequency and Agendas	• Frequency of meetings – every 2-3 months • Agenda items are to be submitted to the NFP CaNE Provincial Clinical Lead. • The NFP CaNE Provincial Clinical Lead sends out a "call for agenda items" at least one week in advance.
Decision-making	Committee provides non-binding but informed guidance and consultation. Consensus is not necessary, valuing the diverse voices and perspectives of all members to inform decisions made by the steering committee.

Membership	• Duration of membership – length of CaNE Pilot Project?
	  • NFP Manager, City of Hamilton, Public Health Services (ad hoc)
	  • Director, Family Health Division, City of Hamilton, Public Health Services
	  • AMOH, City of Hamilton, Public Health Services
	  • Associate Director, City of Toronto, Public Health Division
	  • NFP Manager, City of Toronto, Public Health Division
	  • NFP Manager, Regional Municipality of York, Public Health Branch
	  • Director, Ministry of Children and Youth Services
	  • NFP Provincial Coordinator, Ministry of Health, British Columbia
	  • Executive Director, Healthy Populations and Development, Ministry of Health, British Columbia
	  • Faculty, Offord Centre for Child Studies, McMaster University
	  • Chief, Health Promotion, Chronic Disease and Injury Prevention, Public Health Ontario

	• President, RNAO • CaNE lead researcher, School of Nursing, McMaster University • CaNE research coordinator, School of Nursing, McMaster University • CaNE co-investigator, School of Nursing, York University • NFP International Consultant, Prevention Research Center, University of Colorado at Denver • MOH, MLHU • Director, Healthy Start Division, MLHU • NFP Manager, MLHU • *consider expanding membership to include representation from an organization with a poverty mandate, a provincial representative from primary care/midwifery and a representative from child protection services.
Role of Chair/ Recorder	• NFP CaNE Provincial Lead will coordinate the agenda from submissions. • A CaNE Steering Committee Member will chair the meeting. • The recording of notes from the meeting will be rotated among PAC members.
Role of PAC Members	Members are responsible for ensuring that information, recommendations and questions, issues or concerns are brought forward to the PAC and the Steering Committee for consultation and consideration.
ToR Review	The ToR will be reviewed annually and sent to members of the CaNE Pilot Project Provincial Advisory Committee for feedback/approval.
Date Approved	Dec 2016

2. CaNE Steering Committee Terms of Reference 2016-09-27

Purpose	Provides strategic oversight and ultimate decision-making for the CaNE Pilot Project, including: 1) delivery of the NFP pilot program within the designated Health Units; and 2) the development and evaluation of the piloted Canadian NFP nurse education model.
Reports to	The Steering Committee is accountable to the terms outlined in the grant contract. Middlesex London Health Unit (MLHU) is accountable to NFP license agreement.
Attendance	Every effort is made to ensure meetings are scheduled based on the availability of all committee members and therefore attendance for all members at every meeting is required unless unforeseen circumstances arise.
Objectives	7. To support the objectives of each CaNE pilot project workgroups and provide consultation and ultimate decision-making for the CaNE pilot project.
Meeting Frequency and Agendas	• Bi-Monthly meetings by teleconference for 1 hour or at the discretion of the membership. • Agenda items are to be submitted to the NFP CaNE Provincial Clinical Lead. • The NFP CaNE Provincial Clinical Lead sends out a "call for agenda items" at least one week in advance.
Decision-making	Committee decisions are usually made by consensus unless a decision is driven by other parameters.
Membership	• Grant holder, MLHU (co-lead) • Evaluation lead, McMaster (SC co-lead) • Education lead, International NFP consultant • Implementation lead NFP CaNE Provincial Clinical Lead • Participating Health Units: o MLHU Director or alternate o York Region Public Health (YRPH) Director or alternate o Toronto Public Health (TPH) Director or alternate
Role of Chair/ Recorder	• NFP CaNE Provincial Lead will coordinate the agenda from submissions. • Dr. Susan Jack will chair the meeting. • The recording of notes from the meeting will completed by NFP CaNE Provincial Lead. • When the chair or NFP CaNE Provincial Lead is away, one of the other members will assume the role
Role of Workgroup Members	• Members are responsible for ensuring that internal consultations, information, recommendations and questions are brought forward. • Members are resp0nsible for ensuring that information received and decisions made at the workgroup meetings, are shared and implemented within and across their organizations.
ToR Review	The ToR will be reviewed annually and sent to member of the CaNE Pilot Project Provincial Advisory Committee for feedback/approval.

Date Approved	Sept 2016

3. CaNE Education Workgroup Terms of Reference 2016-12-06

Purpose	To provide expert practice advice related to the development and delivery a Canadian NFP Nurse Education program to be piloted, based on current best evidence, and which builds on work done internationally and in British Columbia.
Reports to	The workgroup reports to the CaNE Pilot Project Steering Committee
Attendance	It is important to have representation (at least one member) from each Public Health Unit (PHU), at each meeting, therefore it is the responsibility of each PHU representatives to send an alternate if unable to attend a meeting.
Objectives	1. To develop an integrated model of nurse and nurse supervisor education to promote learners' understanding of the interrelated components of the NFP model. 2. To prepare public health nurses (PHNs) and supervisors to deliver the NFP program with the required level of competence to achieve positive client outcomes comparable to the three US trials. 3. To develop and sustain an effective workforce that achieves a high level of client outcomes through delivery of the NFP with fidelity to NFP principles and model elements. 4. To promote self-efficacy in NFP PHNs and supervisors in relation to their own continuing education and professional development. 5. To build strong nursing teams able to support their members in building/maintaining expertise, skills and confidence in delivery of the NFP program. 6. To support PHNs in becoming skilled in: 7. Developing and maintaining therapeutic relationships with each client 8. Using NFP program methods to enable necessary behaviour change, ensuring the mother is able to nurture, develop and protect her child from harm. 9. To ensure the NFP education aligns with principles as laid out in the Public Health Nurse and Supervisor NFP Education Curriculum (2016.09.13)
Meeting Frequency and Agendas	• Monthly meetings for 1 hour or at the discretion of the membership. • Agenda items are to be submitted to the chair. • The chair sends out a "call for agenda items" at least one week in advance.
Decision-making	Committee decisions are usually made by consensus. If a lack of consensus exists, then the issue will be forwarded to the Steering Committee for further discussion and decision-making.
Membership	• International NFP Consultant (chair) • NFP CaNE Provincial Clinical Lead • NFP supervisors from CaNE participating health units • BC NFP Provincial Coordinator (ad hoc) • NFP supervisor from City of Hamilton, Public Health Services (ad hoc) • CaNE lead researcher, McMaster School of Nursing

Role of Chair/ Recorder	• The chair will coordinate the agenda from submissions. • The International NFP Consult will chair the meeting. • The recording of notes from the meeting will be rotated amongst all members. • When the chair is away, one of the other members will assume the role
Role of Workgroup Members	• Members are responsible for ensuring that consultations, information, recommendations and questions are brought forward. • Members are resp0nsible for ensuring that information received and decisions made at the workgroup meetings, are shared and implemented within and across their organizations.
ToR Review	The ToR will be reviewed annually with revisions sent to the CaNE Pilot Project Steering Committee for approval.
Date Approved	Dec 2016

4. CaNE Implementation Workgroup Terms of Reference v1 2016-12-06

Purpose	To provide expert practice advice related to developing and implementing a plan to deliver the NFP Program through the CaNE project within the designated Health Units, while maintaining fidelity to the NFP model.
Reports to	The workgroup reports to the CaNE Pilot Project Steering Committee
Attendance	It is important to have representation (at least one member, supervisor preferred) from each Public Health Unit (PHU), at each meeting, therefore it is the responsibility of each PHU representatives to send an alternate if unable to attend a meeting.
Objectives	1. To develop and support an implementation plan for the designated health units in the pilot. 2. To address administrative issues and track administrative costs. 3. To support public health nurses (PHNs) and supervisors to deliver the NFP program with the required level of competence to achieve positive client outcomes comparable to the three US trials. 4. To promote self-efficacy in NFP PHNs and supervisors in relation integrating their acquired NFP program knowledge and skills with their daily practice within their designated health units. 5. To build strong nursing teams able to support their members in building/maintaining expertise, skills and confidence in delivery of the NFP program. 6. To support PHNs in becoming skilled in: 7. Developing and maintaining therapeutic relationships with each client 8. Using NFP program methods to enable necessary behaviour change, ensuring the mother is able to nurture, develop and protect her child from harm. 9. Delivery of NFP program within the required policies and procedures of their designated health units while maintaining fidelity to NFP principles and model elements.
Meeting Frequency and Agendas	• Monthly meetings for 1 hour or at the discretion of the membership • Agenda items are to be submitted to the chair. • The chair sends out a “call for agenda items” at least one week in advance.
Decision-making	Committee decisions are usually made by consensus unless a decision is driven by other parameters. If a lack of consensus exists, then the issue will be forwarded to the Steering Committee for further discussion and decision-making.
Membership	• NFP CaNE Provincial Clinical Lead (chair) • NFP supervisor from each CaNE implementing Public Health Unit • NFP supervisor from City of Hamilton, Public Health Services (ad hoc) • NFP Provincial Coordinator, Ministry of Health, BC (ad hoc) • International NFP Consultant (ad hoc)
Role of Chair/ Recorder	• The chair will coordinate the agenda from submissions. • The NFP CaNE Provincial Clinical Lead will chair the meeting. • The recording of notes from the meeting will be rotated amongst all members. • When the chair is away, one of the other members will assume the role

Role of Workgroup Members	• Members are responsible for ensuring that consultations, information, recommendations and questions are brought forward to the working group. • Members are resp0nsible for ensuring that information received and decisions made at the workgroup meetings, are shared and implemented within and across their organizations.
ToR Review	The ToR will be reviewed annually with revisions sent to the CaNE Pilot Project Steering Committee for approval.
Date Approved	Dec 2016

5. CaNE Implementation Workgroup Terms of Reference v2 2017-05-26

Purpose	To provide expert practice advice related to developing and implementing a plan to deliver the NFP Program and developing and delivering the piloted Canadian NFP Nurse Education program through the CaNE pilot project within the designated Health Units, while maintaining fidelity to the NFP model.
Reports to	The workgroup reports to the CaNE Pilot Project Steering Committee
Attendance	It is important to have representation (at least one member, supervisor preferred) from each Public Health Unit (PHU), at each meeting, therefore it is the responsibility of each PHU representatives to send an alternate if unable to attend a meeting.
Objectives	1. To develop and support an implementation plan for the designated health units in the pilot. 2. To address administrative issues and track administrative costs. 3. To address any arising nursing education issues during the "NFP integration" phase that would have previously been addressed by the education work group (see archived Terms of References for details) 4. To support public health nurses (PHNs) and supervisors to deliver the NFP program with the required level of competence to achieve positive client outcomes comparable to the three US trials. 5. To promote self-efficacy in NFP PHNs and supervisors in relation integrating their acquired NFP program knowledge and skills with their daily practice within their designated health units. 6. To build strong nursing teams able to support their members in building/maintaining expertise, skills and confidence in delivery of the NFP program. 7. To support PHNs in becoming skilled in: 8. Developing and maintaining therapeutic relationships with each client 9. Using NFP program methods to enable necessary behaviour change, ensuring the mother is able to nurture, develop and protect her child from harm. 10. Delivery of NFP program within the required policies and procedures of their designated health units while maintaining fidelity to NFP principles and model elements.
Meeting Frequency and Agendas	• Monthly meetings for 1 hour or at the discretion of the membership • Agenda items are to be submitted to the chair. • The chair sends out a "call for agenda items" at least one week in advance.
Decision-making	Committee decisions are usually made by consensus unless a decision is driven by other parameters. If a lack of consensus exists, then the issue will be forwarded to the Steering Committee for further discussion and decision-making.
Membership	• NFP CaNE Provincial Clinical Lead (chair) • NFP supervisor from each CaNE implementing Public Health Unit • NFP supervisor from City of Hamilton, Public Health Services (ad hoc) • NFP Provincial Coordinator, Ministry of Health, BC (ad hoc) • International NFP Consultant (ad hoc)

Role of Chair/ Recorder	• The chair will coordinate the agenda from submissions. • The NFP CaNE Provincial Clinical Lead will chair the meeting. • The recording of notes from the meeting will be rotated amongst all members. • When the chair is away, one of the other members will assume the role
Role of Workgroup Members	• Members are responsible for ensuring that consultations, information, recommendations and questions are brought forward to the working group. • Members are resp0nsible for ensuring that information received and decisions made at the workgroup meetings, are shared and implemented within and across their organizations.
ToR Review	The ToR will be reviewed annually with revisions sent to the CaNE Pilot Project Steering Committee for approval.
Date Approved	2017-05-26

6. CaNE Evaluation Workgroup Terms of Reference 2016-12-06

Purpose	To provide expert methodological advice related to the evaluation of the Canadian NFP Nurse Education program to be piloted, based on current best evidence, and which builds on work done internationally and in British Columbia.
Reports to	The workgroup reports to the CaNE Pilot Project Steering Committee
Attendance	It is important to have representation (at least one member) from each Public Health Unit (PHU), at each meeting, therefore it is the responsibility of each PHU representatives to send an alternate if unable to attend a meeting. This individual will be the primary liaison between the Evaluation Workgroup and local research ethics board (REB)
Objectives	1. To refine and implement a protocol, building on the detailed evaluation plan submitted April 2016, to evaluate the feasibility and acceptability of the CaNE curricula in order to answer the following research questions: • Following completion of the NFP Canada Nurse Education program, are Ontario public health nurses and supervisors clinically competent to deliver NFP? • What are NFP PHNs' and supervisors' perceptions and levels of satisfaction with the NFP Canada model of education, including teaching methods? • How can PHN and supervisor knowledge and competencies be measured to demonstrate effectiveness of the educational model in improving knowledge, skills and attitudes? • What tools can be used to effectively assess professional performance to determine if NFP PHNs integrate new knowledge and skills into practice? 2. To obtain approval from all required REBs (e.g. Hamilton Integrated Research Ethics Boards, local health unit research review boards) to conduct this evaluation. 3. To conduct all stages of the program evaluation, including obtaining consent from NFP clients and PHNs/supervisors, sampling, data collection, analysis and dissemination.
Meeting Frequency and Agendas	• Monthly meetings for 1 hour or at the discretion of the membership; options to attend in-person or via teleconference will be provided. • Agenda items are to be submitted to the chair. • The chair sends out a "call for agenda items" at least one week in advance.
Decision-making	Committee decisions are usually made by consensus. If a lack of consensus exists, then the issue will be forwarded to the Steering Committee for further discussion and decision-making.
Membership	• Lead Researcher (chair) • CaNE Research Coordinator • Researcher(s) with NFP content and qualitative methods expertise • Researcher(s) with NFP content and quantitative methods expertise • At least one representative from each participating Public Health Unit (with NFP supervisors included in all communication) • CaNE Provincial Clinical Lead (ad hoc)

Role of Chair/ Recorder	• The chair will coordinate the agenda from submissions. • The Lead Researcher will chair the meeting. • The recording of notes from the meeting will be rotated amongst all members. • When the chair is away, one of the other members will assume the role
Role of Workgroup Members	• Members are responsible for ensuring that consultations, information, recommendations and questions are brought forward. • Members are resp0nsible for ensuring that information received and decisions made at the workgroup meetings, are shared and implemented within and across their organizations.
ToR Review	The ToR will be reviewed annually with revisions sent to the CaNE Pilot Project Steering Committee for approval.
Date Approved	Dec 2016

Appendix C

Summary of CaNE Committee and Workgroup Activities

Name of group	Timeline	Number of completed meetings
CaNE Education Workgroup	Sept 2016 to Jan 2017 *amalgamated CaNE Education workgroup with implementation workgroup beginning in Feb 2017	2016 – 3, 2 (Moodle specific) 2017 – 1 **Total – 6**
CaNE Implementation Workgroup	Jul 2016 to Apr 2018 *transitioned to ONCOP to include Hamilton	2016 – 2 (second meeting was 2 day long, in-person) 2017 – 10 2018 – 4 **Total – 16**
Ontario NFP Community of Practice (ONCOP)	Began May 2018 (ongoing)	**Total of 7**
CaNE Research Workgroup	Sept 2016 to Dec 2018	Formally identified workgroup never met but members communicated by email CaNE research related meetings (variety of attendees): 2018 – 2
CaNE Steering Committee	Jul 2016 to Dec 2018	2016 – 3 2017 – 7 2018 – 6 **Total – 16**
CaNE Provincial Advisory Committee (PAC)	Sept 2016 to Dec 2018	2016 – 1 2017 – 1 2018 – 3 **Total – 5**
Canadian Clinical workgroup	Began July 2017 (ongoing)	2017 – 5 2018 – 6 **Total – 11**
Canadian Governance Committee	Began June 2017 (ongoing)	2017 – 6 2018 – 5 **Total – 11**

Appendix D

Approved Versions of Information/Consent Forms

Information Sheet & Consent Form

Canadian Nurse-Family Partnership Education (CaNE) Pilot Study

Principal Investigators:

Dr. Susan Jack, Associate Professor, School of Nursing, McMaster University; and
Dr. Christopher Mackie, Medical Officer of Health and Chief Executive Officer, Middlesex-London Public Health Unit

Sponsor: Ontario Trillium Foundation, Local Poverty Reduction Fund

Background and purpose of the study

You are being invited to participate in a research pilot study to evaluate the acceptability of a Canadian model of education for the Nurse-Family Partnership (NFP) program. As you know, the NFP is a home visitation program for first-time, socially and economically disadvantaged pregnant women and mothers with young children. NFP has been evaluated in three United States (US)-based randomized controlled trials (RCT) and demonstrates consistent program effects in improving prenatal health, child outcomes and maternal self-efficacy.

To-date, the effectiveness of this public health program is unknown within the context of Canadian health and social care systems. In 2008, researchers at McMaster University and the City of Hamilton Public Health Services implemented the first Canadian NFP pilot study and began to adapt the US-NFP materials to the Canadian context. It was confirmed that it is feasible to deliver the NFP through public health departments, by Public Health Nurses (PHNs), and to successfully enroll and home visit young, low-income first-time mothers living in an urban setting. The first Canadian-based RCT is currently underway in British Columbia.

Before delivering NFP in the community, PHNs are required to complete the core NFP education program, which is designed to support them in achieving clinical practice competencies. In 2016, a team located at McMaster University developed a Canadian model of NFP education for public health teams hired to implement and deliver NFP.

You are being invited to participate in this research study because you are a **PHN or Supervisor** hired into the NFP program and who has received the new NFP education in Ontario ***OR*** because you are an **NFP Canada Educator** who developed curriculum and facilitated face-to-face NFP training. We want to know your experiences with the content and delivery of the education, and with implementing and delivering the NFP program.

In order to decide whether or not you want to be a part of this research study, you should understand what is involved and the potential risks and benefits. This form gives detailed

information about the research study, which will be discussed with you. Once you understand the study, you will be asked to sign this form if you wish to participate. Please take your time to make your decision, and feel free to discuss it with whomever you wish.

What do I have to do if I agree to participate?

If you agree to participate in this research project, you will be asked to complete a short questionnaire that includes information about yourself, such as number of years working as a nurse and for how long you have worked in public health and home visiting. For nurses and supervisors, we also ask that you grant us the permission to access the feedback forms/checklists that you completed during NFP training. Your name will not be included on these forms.

If you agree to take part, we will also ask you to participate in interviews where you will be asked about your overall experience of the NFP education process, and if applicable, what impact the education has had so far on your professional practice and experiences implementing the program.

Public Health Nurses will be asked to take part in **three** interviews (one each in Summer 2017, Fall 2017 and Spring 2018). The first interview will be a group interview with other NFP PHNs in your organization to generate topics that can be explored more deeply in individual interviews. In a one-on-one individual interview, you will then have an opportunity to elaborate on your experiences more privately. At the conclusion of the project, we will conduct the second group interview to investigate any themes that may have arisen and how the group reflects on these themes together. Please note that neither your supervisor nor any NFP educators will be participating in group interviews.

Supervisors will be asked to take part in **three**, one-on-one individual interviews (one each in Summer 2017, Fall 2017 and Spring 2018).

NFP Canada Educators will be asked to take part in **two**, one-on-one individual interviews over the course of the project.

Group sessions will last from 90-120 minutes each in length, and individual one-on-one interviews will be approximately 60-90 minutes in length. For NFP nurses and nurse supervisors, all interviews will be scheduled during working hours for which you are paid. Interviews will be arranged at a time and place that is mutually convenient. A trained research coordinator and/or the principal investigator (Susan Jack) will facilitate the interviews. Interviews will be recorded using a digital recorder and transcribed verbatim with identifying information removed. Audio tapes will only be heard by the research team and a transcriptionist, and will be destroyed once transcription is completed. At no time will you be made to answer any questions you do not wish to answer.

How many people will be in this study?

We plan to interview everyone who received the new NFP Canada education between January-March 2017 (12 PHNs & 3 supervisors from 3 public health units in Ontario), as well as the Ontario NFP Clinical Lead and NFP Canada International Consultant. We will also interview any new public health nurses or supervisors who are hired into the NFP program and complete the education.

What are the possible risks and benefits to participating in this study?
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If I have any questions or problems, whom can I call?

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If you agree to take part, we will also ask you to participate in interviews where you will be asked about your overall experience of the NFP education process, and if applicable, what impact the education has had so far on your professional practice and experiences implementing the program.

We will ask you to take part in **three** interviews (one each in Fall 2017, Winter2018 and Spring/Summer 2018). The first interview will be a focus group interview with other NFP PHNs in your organization to generate topics that can be explored more deeply in one-on-one individual interviews. In an individual interview, you will then have an opportunity to elaborate on your experiences more privately. At the conclusion of the project, we will conduct the second focus group interview to investigate any themes that may have arisen and how the group reflects on these themes together. Please note that neither your supervisor nor any NFP educators will be participating in focus group interviews. You do not need to participate in the focus group interviews to take part in the individual interview.

Focus group interviews will last from 90-120 minutes each in length, and individual interviews will be approximately 60-90 minutes in length. All interviews will be scheduled during working hours for which you are paid. Interviews will be arranged at a time and place that is mutually convenient. A trained research coordinator and/or the principal investigator (Susan Jack) will facilitate the interviews. Interviews will be recorded using a digital recorder and transcribed verbatim with identifying information removed. Audio tapes will only be heard by the research team and a transcriptionist, and will be destroyed once transcription is completed. At no time will you be made to answer any questions you do not wish to answer.

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You may choose to withdraw your information from the study. For individual interviews, the data can be removed up to two weeks following the date of the interview. Opinions expressed in the focus group will not be able to be withdrawn as these will not be linked to your name (e.g., we will not be able to identify what opinions were expressed by a specific person).

What information will be kept private?

All information collected in this study will be kept confidential and only used for research purposes. Information will be securely stored on a password-protected computer in a locked office. We will keep the data for 10 years and then it will be destroyed.

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I understand that if I agree to participate in this study, I may withdraw from the study at any time.

I will be given a signed copy of this form. I agree to participate in the study.

I agree that interviews may be audio-recorded.

□ I would like to receive a summary of the study's results.
Please send them to this email address: _____
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Participant (print name)	Date	Signature
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Consent Form Addendum

The original consent form I signed is still valid, and I understand that my participation in this research study is entirely voluntary.

By signing this form I indicate that I plan to continue to participate in this research study.

Date	Participant's Signature for Consent
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Before delivering NFP in the community, PHNs are required to complete the core NFP education program, which is designed to support them in achieving clinical practice competencies. In 2016, a team located at McMaster University developed a Canadian model of NFP education for public health teams hired to implement and deliver NFP.

You are being invited to participate in this research study because you are a **Supervisor** hired into the NFP program and who has received the new NFP education in Ontario. We want to know your experiences with the content and delivery of the education, and with implementing and delivering the NFP program.

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If you agree to take part, we will also ask you to participate in interviews where you will be asked about your overall experience of the NFP education process, and if applicable, what impact the education has had so far on your professional practice and experiences implementing the program.

Supervisors will be asked to take part in **three**, one-on-one individual interviews (one each in Fall 2017, Winter 2018 and Spring/Summer 2018). Individual interviews will be approximately 60-90 minutes in length. All interviews will be scheduled during working hours for which you are paid. Interviews will be arranged at a time and place that is mutually convenient. A trained research coordinator and/or the principal investigator (Susan Jack) will facilitate the interviews. Interviews will be recorded using a digital recorder and transcribed verbatim with identifying information removed. Audio tapes will only be heard by the research team and a transcriptionist, and will be destroyed once transcription is completed. At no time will you be made to answer any questions you do not wish to answer.

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If you agree to take part, we will also ask you to participate in an individual one-on-one interview where you will be asked about your overall experience of the NFP education process, and if applicable, what impact the education has had so far on your professional practice and experiences implementing the program.

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How many people will be in this study?

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Appendix E

Semi-Structured Interview Guides

Canadian Nurse-Family Partnership Ecucation (CaNE) Pilot Project
Semi-Structured Interview Guide
Public Health Nurses: Focus Group #1

Interview Logistics	
Public Health Unit	
Interview Date (month/day/year)	
Interviewer	
Length of Interview (minutes)	
Additional Notes	

Introduction

Hello, my name is (*name*) and I am the (*position*) on the Canadian Nurse-Family Partnership Education (CaNE) Pilot Project. I would also like to introduce (*name Research Coordinator*), who will be co-facilitating today's session and taking notes.
I would like to invite you to share today about your experiences having received the NFP education curriculum, and with implementing and delivering the program in your capacity as an NFP public health nurse. We are most interested in learning about the successes and challenges you have encountered throughout this process. There are no right or wrong answers, and we may hear differing points of view. You don't need to agree with others but you must listen respectfully as others share their views. My role as moderator will be to guide the discussion.
The interview today will last approximately 90-120 minutes, and will be audio-recorded. Your participation is completely voluntary and we can stop the interview at any time. The information you share about your work in the NFP program will also remain confidential and will not be shared with your supervisor. The data from all of the interviews will be synthesized and general broad themes will be summarized and shared back to the participating health units and CaNE stakeholders.

Interview Questions

In this interview I will ask questions about your experiences with the NFP Introduction and Fundamentals phases of NFP education.

1. Where you were hired as an NFP PHN and learned you had to complete this education, what were your expectations for how this would prepare you to do that job?

2. What were your experiences using the pilot education website on Moodle?

    a. What were the benefits and challenges to using this education website?
    b. Is there anything you can think of that would make this website more helpful?

3. The NFP Introduction phase of education was developed to introduce you to the principles, theories and practices of NFP. Please describe the process of how you completed the NFP Introduction units (probe for individual or team study).

    a. What preparation was required? What tools or resources did you need, or did you end up creating, to facilitate your learning?
    b. What was it like to be given an opportunity to engage with this material in your work day?,
    c. When were you most engaged in learning during NFP Introduction?
    d. When were you least engaged in learning during NFP Introduction?

4. For NFP Introduction, how did the content presented in the units complement or build on your existing public health nursing knowledge and skills?

    a. Did you feel the content was valuable to you as an NFP PHN?
    b. What new knowledge did you gain in NFP Introductions that enhanced your practice? How?

5. Following NFP Introduction, all NFP Nurses and Supervisors came together to complete NFP Fundamentals.
    a. What components of NFP Fundamentals (face-to-face) were most useful/supportive?

6. What feedback from the face-to-face sessions do you have about the methods of:
    a. facilitation/teaching?
    b. structure?
    c. logistics?
    d. content?

7. How did you find the timing of the face-to-face sessions with respect to:
    a. the total length?
    b. length of individual sessions during that week?
    c. when you completed training and then began picking up clients?

8. How did the content of NFP Fundamentals complement or build on your existing public health nursing knowledge and skills?
    a. What new knowledge did you gain in NFP Fundamentals that enhanced your practice? How?

9. One of the novel aspects of NFP education is an intensive focus on how to identify and respond to Intimate Partner Violence. What did you think of the IPV education?
    a. An unanticipated plan to the delivery of the IPV education was that it was split in half and delivered in-person over two days approximately six months apart. What are the advantages or disadvantages to having the IPV curriculum delivered in this way?

10. What, from the NFP education, has been the most helpful in preparation for implementation of the program? Thinking back to your expectations for the training, how have these been met/not met?
    a. Is there anything you feel was missing/lacking in the curriculum or training?
    b. What other supports (e.g., outside of NFP education) have been helpful in preparing you for implementation of the program?
    c. Can you speak to the value and importance of job shadowing for a program like NFP?
    d. How are you building awareness of NFP in your community?

11. Do you have any further reflections on NFP Introduction or NFP Fundamentals that you would like to share with the research team?

Canadian Nurse-Family Partnership Ecucation (CaNE) Pilot Project
Semi-Structured Interview Guide
Public Health Nurses: Individual Interview

Interview Logistics	
Study ID	
Interview Date (month/day/year)	
Interviewer	
Length of Interview (minutes)	
Additional Notes	

Introduction

Hello, my name is (*name*) and I am the (*position*) on the Canadian Nurse-Family Partnership Education (CaNE) Pilot Project. I would like to invite you to share today about your personal experiences having received the NFP education curriculum, and with implementing and delivering the program in your capacity as an NFP public health nurse. We are most interested in learning about the successes and challenges you have encountered throughout this process. There are no right or wrong answers.
The interview today will last approximately 60-90 minutes, and will be audio-recorded. Your participation is completely voluntary and we can stop the interview at any time. The information you share about your work in the NFP program will also remain confidential and will not be shared with your colleagues or supervisor. The data from all of the interviews will be synthesized and general broad themes will be summarized and shared back to the participating health units and CaNE stakeholders.

Interview Questions

In this interview I will ask questions you ab out your personal experiences of completing the NFP education, and how this education has prepared you to implement NFP within your public health unit.

1. To start, can you summarize for me, how many women you currently have on your caseload?
   Pregnant women: _____
   Women with infants (<12 months): _____
   Woman with toddlers: _____

2. Reflecting back on your engagement in the NFP education, both NFP Introduction and NFP Fundamentals, what aspects of the education were most valuable to support you in understanding how to implement NFP? Why?

3. Compared to other education or professional development workshops/education you have completed as a public health nurse, what has been unique about the NFP education? How do you think this education is transforming your professional nursing practice?

4. What was your job shadowing experience? In your opinion, what was the purpose? What did you do? What were the benefits or disadvantages? When would be an optimal time to do it? What should be the focus?

5. Is there anything else at this point that you want to tell us about your experience with the NFP education [if necessary, prompt: NFP Introduction (online), NFP Fundamentals (face-to-face), job shadowing].

6. As part of your team, have you continued to engage in completing NFP team meeting education modules during your team meetings? Which modules? Have these modules been helpful to your practice? What additional modules should be developed?

Now I want to talk with you about what it's been like to take this education and begin to deliver the NFP program to clients.

7. First, I'd like to learn more about how NFP is being implemented within your health unit. Can you describe to me how NFP has been integrated into the existing family health programs at your health unit.
   a. How has NFP been communicated/integrated/positioned within HBHC/Health Unit?
   b. What strategies have been helpful in integrating this novel intervention into existing programming?
   c. What challenges to integration has your team had to address?

d. In what ways do you think we can understand and begin to solve these problems/challenges?
e. How have you been building awareness about NFP in your community?
f. How does your team meet/connect with different referral sources?

8. Given the stage that you're at, do you find this program is acceptable to mothers? To you as a PHN? To your community partners? Why?

9. Is there anything else you would like to share that is important for us to understand about early implementation of the program in Ontario? Can you think of a key message or recommendation that would be important for us to share with NFP stakeholders, senior decision makers and funders?

Canadian Nurse-Family Partnership Ecucation (CaNE) Pilot Project
Semi-Structured Interview Guide
Public Health Nurses: Focus Group #2

Interview Logistics	
Public Health Unit	
Interview Date (month/day/year)	
Interviewer	
Length of Interview (minutes)	
Additional Notes	

Introduction

Today's interview is a continuation of our previous discussions, where I invited you to share information about your personal experiences with receiving the Canadian NFP model of education, and the process of implementing the NFP program in your capacity as an NFP Nurse. In addition to exploring this further today, I will also ask you some questions that will help inform the development of measures we can use in subsequent evaluations of the NFP education program. We are most interested in learning about the successes and challenges you have encountered throughout this process. There are no right or wrong answers, and we may hear differing points of view. You don't need to agree with others but you must listen respectfully as others share their views. My role as moderator will be to guide the discussion.
Today's interview will last approximately 90-120 minutes, and will be audio-recorded. Your participation is completely voluntary and we can stop the interview at any time. The information you share about your work in the NFP program will remain confidential and will not be shared with your supervisor. The data from all of the interviews will be synthesized and general broad themes will be summarized and shared back to the participating health units and CaNE stakeholders.

Interview Questions

1. To what extent has the NFP education, as well as the ongoing support that you've received, contributed to your ability to deliver the NFP program as it was intended to be delivered?
    a. What from the NFP training stands out to you as the most valuable and why?
    b. How have you balanced fidelity with adapting the program to meet the needs of the families you serve?

2. What additional education, including Team Meeting Education Modules but also outside of NFP, have you completed? How has this been useful to your practice? [probe: IPV follow-up education – e.g., field trips, meeting with community partners, meeting about protection orders]
    a. At this stage in your implementation of the program, what gaps might you have identified that are learning needs for an NFP PHN?

3. What specific NFP resources have been most useful to you in delivery of the program?
   What resources have been less useful? Why? [probe: usefulness of NFP Supervisor forms in reflective practice]
    a. What outside resources, if any, have you used or adopted to support your practice? How have these been helpful?

4. Describe for me any challenges you have experienced with implementing the NFP program with fidelity to the core model elements in your capacity as an NFP PHN?
    a. Are there any challenges to implementing NFP that you believe are unique to your health unit? If so, please describe.
    b. How have you tried to overcome these challenges? How successful has that been?

5. Eventually one of our goals will be to measure nurse and supervisor knowledge and competencies as part of formally evaluting the education program.

    a. If you think about the type of knowledge that Nurses gain as part of the NFP education, what do you think would be ***key knowledge indicators***? Or in other words, what could we measure with respect to knowledge that might demonstrate effectiveness of the model in improving? (e.g., theory; communication techniques that support and encourage behaviour change; NFP model and the research behind the program).
    b. What would be ***key skills indicators***? (e.g., elicit client's goals and motivations; engage and retain clients through therepeutic relationships;

appropriately assess strengths and risks; use of V2V guidelines to facilitate learning and behaviour change).

c. What would be ***key attitude and/or belief indicators***? (e.g., strengths-based; solution focused; compassionate; collaborative; client is the expert on her own life; only a small change is necessary).
d. Are there specific knowledge, skills, or attitude/belief indicators that you can think of with respect to the NFP ***IPV education*** (e.g., demonstrate an awareness of the complexity of the dynamics between violence perpetration and victimization across the lifespan; use therapeutic relationship and communication skills to enhance trust and feelings of safety for those who have experienced violence and its effects; respect the wishes of a person with capacity to self-determine what is safe and how to proceed)
e. What would be key indicators of knowledge, skills & attitudes at the ***leadership and management level***? (e.g., reflective supervision; support team to build and maintain expertise, skills & confidence in delivery of the program).

6. At this stage in your delivery of the NFP program, how acceptable do you feel the program is to mothers? What benefits have you have witnessed for your clients? Can you describe any unanticipated outcomes?
    a. How acceptable is the program to your community partners?
    b. How acceptable is the program to yourself as a PHN? How is the education you've received as part of NFP transforming your professional nursing practice?

7. What key messages or recommendations do you have regarding future implementation of NFP in Ontario?
    a. In your opinion, what would be the best strategy for integrating NFP as a program offered as part of the Healthy Babies, Healthy Children program?

8. Is there anything else that you'd like to share about your experience with the NFP education or as a PHN implementing the program?

Canadian Nurse-Family Partnership Education (CaNE) Pilot Project
Semi-Structured Interview Guide
Public Health Nurses: Individual Interview for 2nd Cohort

Interview Logistics	
Study ID	
Interview Date (month/day/year)	
Interviewer	
Length of Interview (minutes)	
Additional Notes	

Introduction

Hello, my name is (*name*) and I am the (*position*) on the Canadian Nurse-Family Partnership Education (CaNE) Pilot Project. I would like to invite you to share today about your personal experiences having received the NFP education curriculum, and with early implementation of the program in your capacity as an NFP PHN. We are most interested in learning about the successes and challenges you have encountered throughout this process. There are no right or wrong answers.
The interview today will last approximately 60-90 minutes, and will be audio-recorded. Your participation is completely voluntary and we can stop the interview at any time. The information you share about your work in the NFP program will also remain confidential and will not be shared with your colleagues or supervisor. The data from all of the interviews will be synthesized and general broad themes will be summarized and shared back to the participating health units and CaNE stakeholders.

Interview Questions

In this interview I will ask you questions about your personal experiences of completing the NFP education, and how this education has prepared you to implement NFP within your public health unit.

1. The NFP Introduction phase of education was developed to introduce you to the principles, theories and practices of NFP.
    a. What were your experiences using the pilot education website on Moodle during this phase of education? Is there anything you can think of that would make this platform more helpful?
    b. Please describe the process of how you completed the NFP Introduction units (probe for individual or team study).
    c. When were you most engaged in learning during NFP Introduction?
    d. When were you least engaged in learning during NFP Introduction?

2. For NFP Introduction, how did the content presented in the units complement or build on your existing public health nursing knowledge and skills? What new knowledge did you gain in NFP Introductions that enhanced your practice? How?

3. Following NFP Introduction, recently hired NFP Nurses and Supervisors came together to complete NFP Fundamentals.
    a. What components of NFP Fundamentals (face-to-face) did you find to be most useful/supportive?

4. What feedback from the face-to-face sessions do you have about the methods of:

    a. facilitation/teaching?
    b. structure?
    c. logistics?
    d. content?
    e. Balance of theoretical/practical?

5. How did the content of NFP Fundamentals complement or build on your existing public health nursing knowledge and skills?
    a. What new knowledge did you gain in NFP Fundamentals that enhanced your practice? How?

6. One of the novel aspects of NFP education is an intensive focus on how to identify and respond to Intimate Partner Violence. Following the education, how confident do you feel to use the IPV clinical pathway in your practice?

7. What, from the NFP education, has been the most helpful in preparation for implementation of the program (e.g., ‘doing NFP’)?

a. Is there anything you feel was missing/lacking in the curriculum or training?

8. Compared to other education or professional development workshops/education you have completed as a public health nurse, what has been unique about the NFP education? How do you think this education is transforming your professional nursing practice?

9. What has it been like to take this NFP education and to begin to implement NFP within your health unit? [Possibly relevant questions: What are the ways in which the NFP team in place at your health unit has supported you in learning about NFP? Do you have any recommendations with respect to NFP education in the case of someone like yourself, who is hired to join an already existing team?]

10. Is there anything else that you'd like to share with me about your experiences with the NFP education at this point?

Canadian Nurse-Family Partnership Ecucation (CaNE) Pilot Project
Semi-Structured Interview Guide
Supervisors: Individual Interview #1

Interview Logistics	
Study ID	
Interview Date (month/day/year)	
Interviewer	
Length of Interview (minutes)	
Additional Notes	

Introduction

Hello, my name is (*name*) and I am the (*position*) on the Canadian Nurse-Family Partnership Education (CaNE) Pilot Project. I would like to invite you to share today about your personal experiences having received the NFP education curriculum, and with implementing and delivering the program in your capacity as an NFP Nurse Supervisor. We are most interested in learning about the successes and challenges you have encountered throughout this process. There are no right or wrong answers.
The interview today will last approximately 60-90 minutes, and will be audio-recorded.
Your participation is completely voluntary and we can stop the interview at any time.
The information you share about your work in the NFP program will remain confidential.
The data from all of the interviews will be synthesized and general broad themes will be summarized and shared back to the participating health units and CaNE stakeholders.

Interview Questions

In this interview I will ask questions about your experiences with the NFP Introduction and Fundamentals phases of NFP education, as well as with coordinating NFP at your health unit.

1. What did you have to do to get yourself and the NFP Nurses ready for NFP education?
    a. Within your organization, what had to happen so that you and the NFP nurses could successfully complete NFP training? What tools and resources had to be put in place? What time and space was needed?

2. As an NFP Nurse Supervisor, and prior to receiving the education, what were your expectations for how this training would prepare you to do that job?

3. What was your personal experience using the pilot education website on Moodle?
    a. What were the benefits and challenges to using this education website? Is there anything you can think of that would make this website more helpful?

4. The NFP Introduction phase of education was developed to introduce you to the principles, theories and practices of NFP. What were your overall perceptions and experiences related to the content of NFP Introduction?

    Please describe the process of how you completed the NFP Introduction units (probe for individual or team study).
    d. What preparation was required? What tools or resources did you need, or did you end up creating, to facilitate your learning?

5. Following NFP Introduction, all NFP Nurses and Supervisors came together to complete in-person NFP Fundamentals.
    a. Why it is important for NFP Supervisors to take part in the in-person training with their staff? What are the benefits to having been involved in this education?

6. What feedback from the NFP face-to-face sessions do you have about the methods of:
    a. facilitation/teaching?
    b. structure?
    c. logistics?
    d. content?

7. How did you find the timing of the face-to-face sessions with respect to:
    a. the total length?
    b. length of individual sessions during that week?
    c. When training finished and nurses began picking up clients?

8. As a Supervisor, you also took part in the in-person NFP Supervisor education. Please describe your experiences with this training.

9. One of the novel aspects of NFP education is an intensive focus on how to identify and respond to Intimate Partner Violence. What did you think of the IPV education overall?
    a. An unanticipated plan to the delivery of the IPV education was that it was split in half and delivered in-person over two days approximately six months apart. What are the advantages or disadvantages to having the IPV curriculum delivered in this way?
    b. As part of the supervisor education, a 1/2 day was dedicated to IPV education. In your experience, what were the benefits of adding focused education for supervisors related to IPV content?
    c. What additional supervisor specific IPV education is required?
    d. As a result of this half day IPV education – do you feel more confident to: 1) support nurses to use the IPV clinical pathway? 2) address issues related to IPV during reflective supervision?

10. As you've observed the NFP Nurses that you supervise going through this education, what changes have you noticed to their knowledge and skills? Do you have examples of how this has enhanced their practice?

11. Thinking back to your expectations for the training, how have these been met/not met?
    a. What from the NFP education has been the most useful/supportive to you as an NFP Nurse Supervisor?
    b. Is there anything you feel was missing/lacking in the curriculum or training?
    c. What other supports (e.g., outside of NFP education) have been helpful in preparing you to supervise PHNs carrying out this program?

12. Do you have any further reflections on NFP Introduction, Fundamentals, or Supervisor education that you would like to share with the research team?

Canadian Nurse-Family Partnership Ecucation (CaNE) Pilot Project
Semi-Structured Interview Guide
Supervisors: Individual Interview #2

Interview Logistics	
Study ID	
Interview Date (month/day/year)	
Interviewer	
Length of Interview (minutes)	
Additional Notes	

Introduction

Today's interview is a continuation of our first interview, where I invited you to share information about your personal experiences with receiving the Canadian NFP model of education, and the process of implementing the NFP program in your capacity as an NFP Nurse Supervisor. In addition to exploring this further today, I will also ask you some questions that will help inform the development of measures we can use in subsequent evaluations of the education program.
Today's interview will last approximately 60-90 minutes, and will be audio-recorded.
Your participation is completely voluntary and we can stop the interview at any time.
The information you share about your work in the NFP program will remain confidential.
The data from all of the interviews will be synthesized and general broad themes will be summarized and shared back to the participating health units and CaNE stakeholders.

Interview Questions

1. In thinking about the education, as well as the ongoing support that you've received, can you tell me how you feel about the comprehesiveness of your training with respect to:
    a. Supervisor forms?
    b. Balancing responsibilities as a public health program manager and NFP supervisor?
    c. Peer support and reflective practice (reflective supervision of supervisors)?

2. As part of your team, have you continued to engage in completing NFP team meeting education modules during your team meetings?
    a. Which modules?
    b. How have these modules been helpful to nursing practice?
    c. Looking forward, can you provide a list of content areas or topics to inform the development of additional team meeting education modules?

3. As part of the IPV follow-up education, the IPV system navigation module was designed to help NFP teams gain the knowledge and experience necessary to provide authentic anticipatory guidance for clients. Has your team carried out any of the activities in this module? (located on p.57 of the IPV Intervention Education Workbook).

If yes: What activities has your team completed? (e.g., plan a field trip to the local domestic violence service agency or local shelter, host a team meeting to meet community partners, host a team meeting focusing on protection orders).
If no: Are there plans to carry out these activities? Why or why not?
If field trip: Where was the visit, and can you describe the process to me? [probes: Who attended? Can you walk me through what happened?]
If meeting with community partners: Whom did you meet with? (e.g., individual from the local domestic violence/shelter agency, domestic violence advocate, court advocate, individual from child protective services, or individual from housing services). What questions were you most interested in? Please tell me a little about the meeting.
If meeting about protection orders: Who was invited? Please tell me a little about the meeting.
Questions for activities above: How has this activity been helpful to nursing practice?
probe: How was the activity helpful for,

- understanding the different types of support that women exposed to abuse (and their children) require across different stages?
- understanding women's multiple and complex needs for information, resources, active referral and system linkage

- linking help-seeking strategies and facilitators to specific stages of women's experiences and understanding of their relationships and matching them with women's expressed goals
- assessing and prioritizing a woman's immediate, short-term and long-term needs for IPV-related services.
- being able to describe relevant services offered locally?

4. Eventually one of our goals will be to measure nurse and supervisor knowledge and competencies as part of formally evaluting the education program.

    a. If you think about the type of knowledge that Nurses gain as part of the NFP education, what do you think would be ***key knowledge indicators***? (e.g., theory; communication techniques that support and encourage behaviour change; NFP model and the research behind the program).
    b. What would be ***key skills indicators***? (e.g., elicit client's goals and motivations; engage and retain clients through therepeutic relationships; appropriately assess strengths and risks; use V2V guidelines to facilitate learning and behaviour change).
    c. What would be ***key attitude and/or belief indicators***? (e.g., strengths-based; solution focused; compassionate; collaborative; client is the expert on her own life; only a small change is necessary).
    d. Are there specific knowledge, skills, or attitude/belief indicators that you can think of with respect to the NFP ***IPV education*** (e.g., demonstrate an awareness of the complexity of the dynamics between violence perpetration and victimization across the lifespan; use therapeutic relationship and communication skills to enhance trust and feelings of safety for those who have experienced violence and its effects; respect the wishes of a person with capacity to self-determine what is safe and how to proceed)
    e. As an NFP supervisor, what would be key indicators of knowledge, skills & attitudes at the ***leadership and management level***? (e.g., reflective supervision; support team to build and maintain expertise, skills & confidence in delivery of the program).

5. In public health practice, how are nurses currently assessed? Do health units have policies or procedures for doing this? Is so, please describe? If not, do you think it would be important? Is it even feasible? Is there a goal or a need?
    a. In joint visits, what and how would you be evaluating PHNs? What tool would you be using, or what would you find to be helpful?

Canadian Nurse-Family Partnership Ecucation (CaNE) Pilot Project
Semi-Structured Interview Guide
Supervisors: Individual Interview #3

Interview Logistics	
Study ID	
Interview Date (month/day/year)	
Interviewer	
Length of Interview (minutes)	
Additional Notes	

Introduction

Today's interview is the third and final interview that you have been invited to participate in as part of the CaNE pilot study. The questions that I ask you today will focus on the implementation of NFP in your capacity as an NFP Nurse Supervisor, including the successes and challenges you may have faced. I will also ask you some questions about how to optimize the NFP integration phase of education, and about what key messages or recommendations you feel would be important for us to share with NFP stakeholders, decision makers and funders.

Today's interview will last approximately 60-90 minutes, and will be audio-recorded. Your participation is completely voluntary and we can stop the interview at any time. The information you share about your work in the NFP program will remain confidential. The data from all of the interviews will be synthesized and general broad themes will be summarized and shared back to the participating health units and CaNE stakeholders.

Interview Questions

1. Can you describe for me the process of transitioning into the role of an NFP supervisor and what that's been like for you?
    a. In comparison to past nursing supervisor roles you have held, what have been the most significant differences to assuming the role as a NFP supervisor?
    b. What has been the most rewarding aspects of becoming a NFP supervisor?
    c. What have been the most significant challenges related to assuming this new role? How do you manage any "pushes and pulls" or conflicting responsibilities? (e.g., where team requires frequent and regular contact, but you are drawn to something organizationally that is going on in public health).
    d. What supports have been helpful to you to address these challenges?

2. In NFP, nurses receive extensive support from their supervisor – in the form of administrative, clinical and reflective supervision-provided during joint visits, 1:1 meetings, team meetings or case consulations. In focusing, just on reflective supervision – can you:
    a. Describe your perception of the goals and purpose of reflective supervision between a NFP nurse and yourself.
    b. How do you prepare for a reflective supervision session? What is the most common format – or process – you use to move through the start, middle, and end of a reflective supervisory session?
    c. What are the types of topics that are raised in reflective supervision? What are the most challenging topics to explore with NFP nurses?
        i. Have nurses raised concerns in supervision around the amount or quality of education (online or in-person) they have received? How have these concerrns been explored and addressed?
        ii. If nurses raise concerns around delivering NFP with fidelity to the core model elements, how do you address this?
    d. How did the NFP supervisor education prepare you to have the knowledge and skills to provide reflective supervision? What additional education/support would you still like to receive?
    e. What other information about reflective supervision – would you like to share with me- so that we can understand the importance of this practice to the NFP program?

3. Have you had a job shadowing experience and, if so, can you please describe for me what that was like? In your opinion, what is the purpose of a job shadowing experience for an NFP supervisor? What did you do/would you like to do? What

do you see as the benefits or disadvantages? When would be an optimal time to do it? What should be the focus?

4. NFP Integration is the third and final phase of education, and we have talked previously about aspects of this phase including team meeting education modules and the IPV system navigation module.

   I'd like to share with you the different goals of this phase of education, and then to hear from you about what you think is going well (e.g., what is currently happening to meet these goals?); what is not going well (e.g., what needs to be changed, improved or strengthened to meet these goals?); and what is missing (e.g., what could be added to meet these goals?).

   a) Goal 1: To build strong nursing teams able to support their members in building/maintaining expertise, skills & confidence in delivery of the NFP program.
   b) Goal 2: To support NFP PHNs and supervisors in synthesizing, integrating, and honing their NFP specific knowledge and skills.
   c) Goal 3: To develop and sustain an effective workforce that achieves a high level of client outcomes through delivery of the NFP with fidelity to NFP principles and model elements.
   d) Goal 4: To promote self-efficacy in NFP PHNs and supervisors in relation to their own continuing education and professional development.
   e) Goal 5: To develop a community of practice that supports ongoing professional development, peer support, and clinical consultation.

5. Is there anything else at this point, that I haven't covered in our three interviews, that you want to tell us about your experience with the NFP education [if necessary, prompt: NFP Introduction (online), NFP Fundamentals (face-to-face), job shadowing].

6. Given the stage that you and your team are at, do you find that the NFP program is acceptable to mothers? To you as a supervisor? To PHNs? To your community partners? Why?

7. Can you think of a key message or recommendation that would be important for us to share with NFP stakeholders, senior decision makers and funders?
   a. What key messages or recommendations do you have regarding future implementation of NFP in Ontario?
   b. In your opinion, what would be the best strategy for integrating NFP as a program offered as part of the Healthy Babies, Healthy Children program?

Canadian Nurse-Family Partnership Ecucation (CaNE) Pilot Project
Semi-Structured Interview Guide
Educators: Individual Interview #1

Interview Logistics	
Study ID	
Interview Date (month/day/year)	
Interviewer	
Length of Interview (minutes)	
Additional Notes	

Introduction

Hello, my name is (*name*) and I am the (*position*) on the Canadian Nurse-Family Partnership Education (CaNE) Pilot Project. Today I would like to talk to you about your personal experiences as an NFP Canada Educator and with developing and delivering the NFP education to public health nurses and supervisors. We are most interested in learning about the successes and challenges you have encountered throughout this process. There are no right or wrong answers.
The interview today will last approximately 60-90 minutes, and will be audio-recorded. Your participation is completely voluntary and we can stop the interview at any time. The information you share about your work in the NFP program will remain confidential. The data from all of the interviews will be synthesized and general broad themes will be summarized and shared back to the participating health units and CaNE stakeholders.

Interview Questions

In this interview, I will ask questions about your experiences developing and delivering the NFP Education for and to public health nurses and their supervisors.

1. Can you explain why existing NFP education programs needed to be changed and adapted to meet the needs of Canadian Public Health Nurses?

2. Can you describe for me the process of developing the NFP Canadian education curriculum? (Probe: What was being adapted?)
    a. In comparison to other NFP education programs, what is new and unique to the Canadian program of NFP education? (Probe: both content and education delivery process)
    b. One of the new additions is the integration of Critical Caring Theory. Can you explain why this was added to the NFP education?
    c. Looking back, is there anything you would change about the process?
    d. Is there anything that could have been more supportive to you in the process?
    e. Thinking about the Canadian program of NFP education, what are you the most proud of?
    f. Is there anything else you would like to tell me about the process of developing the Canadian program of NFP education?

3. What was your role in supporting NFP Teams in Ontario to complete NFP Introduction?
    a. From your perspective, what is your overall assessment of how the NFP Introduction component was received by the NFP teams?
    b. Do you have any recommendations for future changes or adaptations to NFP Introduction?

4. Please describe your role in delivering the NFP Fundamentals face-to-face education sessions? (e.g., coordination, facilitation, encourage reflection, content experts)

5. How do you perceive delivery of the NFP face-to-face education sessions to have been received by public health nurses and supervisors?
    a. What components/sessions do you believe to be most well received?
    b. What components/sessions do you believe to be least well received?
    c. Do you have any recommendations for further changes or additions to the NFP fundamentals sessions?

6. What is your reflection on the teaching/learning activities used in the face-to-face training, when it comes to:
    a. Structure and range of activities?
    b. Length of time devoted to each individual content session?

7. What is your reflection on the content included in the education program?
    a. Did it meet what expectations you had for the training?
    b. How do you feel about the time spent on different aspects of the content? Is there content you would have liked to spend more time on? Less time on? Why?
    c. Is there any content that you would like to see adapted or changed?
    d. Do you have recommendations for additional content?

8. Suppose that you could make one change that would make the education program better. What would it be?

9. Do you have any further reflections about your experience as a NFP educator that you would like to share with the research team that would assist them in evaluating the acceptability of this novel education program?

Canadian Nurse-Family Partnership Ecucation (CaNE) Pilot Project
Semi-Structured Interview Guide
Educators: Individual Interview #2 for ED01

Interview Logistics	
Study ID	
Interview Date (month/day/year)	
Interviewer	
Length of Interview (minutes)	
Additional Notes	

Introduction

Hello, my name is (*name*) and I am the (*position*) on the Canadian Nurse-Family Partnership Education (CaNE) Pilot Project. The purpose of today's interview is 1) sharing with you a summary of your first interview and hearing from you if we captured your thoughts & experiences accurately; and 2) sharing you with some of the broader themes emerging from the study & exploring your thoughts/reflections, as well as any gaps you might help to identify for further data collection. I will also ask you some questions that will help inform the development of measures we can use in subsequent evaluations of the education program. There are no right or wrong answers.
The interview today will last approximately 60-90 minutes, and will be audio-recorded. Your participation is completely voluntary and we can stop the interview at any time. The information you share about your work in the NFP program will remain confidential. The data from all of the interviews will be synthesized and general broad themes will be summarized and shared back to the participating health units and CaNE stakeholders.

Interview Questions

1. First, please take a few minutes to read over the 1 page summary I have provided to you of your first interview.

    a. Would you agree that the summary accurately captures your thoughts and experiences?
    b. Is there anything you would like to add? Is there anything you would like to clarify?

2. In my interview with ED02, she shared that one of the things she would have changed about the process of developing the education would have been to have a governance structure in place. I also recall you saying: "*there needs to be this process for any educational program for NFP of having someone who is monitoring the curriculum and the materials to make sure as things change and they will, because NFP is an ongoing process, that somebody is watching that, identifying the need and there's somebody available to make those changes."*

    My question is: In thinking about core functions of a national NFP "center" – if it were to take on the role of education – what activities, in your opinion, would this "center" need to be responsible for with respect to NFP education? (e.g., development and updating of curriculum, delivery of education, evaluation of education, development of teaching materials, guidebooks etc.).

3. Eventually one of our goals will be to measure nurse and supervisor knowledge and competencies as part of formally evaluting the education program.

    a. If you think about the type of knowledge that Nurses gain as part of the NFP education, what do you think would be ***key knowledge indicators***? (e.g., theory; communication techniques that support and encourage behaviour change; NFP model and the research behind the program).
    b. What would be ***key skills indicators***? (e.g., elicit client's goals and motivations; engage and retain clients through therepeutic relationships; appropriately assess strengths and risks; use V2V guidelines to facilitate learning and behaviour change).
    c. What would be ***key attitude and/or belief indicators***? (e.g., strengths-based; solution focused; compassionate; collaborative; client is the expert on her own life; only a small change is necessary).
    d. At the NFP supervisor, what would be key indicators of knowledge, skills & attitudes at the ***leadership and management level***? (e.g., reflective supervision; support team to build and maintain expertise, skills & confidence in delivery of the program).

4. I'd now like to share with you some of the early themes arising from the study, mainly around PHNs' experiences with the education, and to explore your thoughts and reflections [Probes may include: What is significant about this to you? How do you feel about that? Why does that matter? What do you think made them respond in this way?]

    a. I learned that, in developing the education, the decision was made to shorten the amount of time spent on PIPE - both online and face-to-face - because nurses participating in the pilot had previous PIPE training; however, PHNs from two out of the three health units wished they'd had more time during training to practice PIPE and become more familiar with the PIPE lessons. While everyone thought the activity was fun, they didn't necessarily see it as a valuable use of the time.
        i. How do you feel when hearing this?
        ii. What suggestions might you have for educating a group of PHNs with varying levels of experience with PIPE?

    b. I hear nurses speak about how incongruent they find the information on the principles and theories underlying NFP (which do resonate with them!) & the structure/rigidity of the program – particularly as it concerns fidelity.
        i. Do you see this as a barrier in their education? (e.g., they're so overwhelmed with the how-to's of the program that they miss the bigger picture),
        ii. If so, how might this be better addressed in the education? What is/are the messages you think learners need to hear at that point?

    c. The participants of this project overwhelmingly describe the value of NFP, both to their clients as well as to themselves as PHNs. They have described experiencing changed mindset, feeling re-energized in their work, feeling they are making a difference, and having the permission to use skills and strategies they weren't making use of in other programs. They often link this back to the theory/underlying principles of NFP!

        Some have said they don't know what they'd do if they had to go back to their previous work. They describe experiencing high levels of interest and engagement from clients, and seeing positive outcome in their clients' lives. Many participants describe a desire for continued learning - especially among each other - and the idea of a PHN community of practice has been raised.

        i. From your perspective, what is the significance of their feedback?
        ii. In your work internationally, are you familiar with any successful models for PHN communities of practice?

5. Do you have any further reflections about your experience as a NFP educator that you would like to share with the research team?
    a. From your perspective, can you think of any key message or recommendation that would be important for us to share with NFP stakeholders, senior decision makers and funders?

Canadian Nurse-Family Partnership Ecucation (CaNE) Pilot Project
Semi-Structured Interview Guide
Educators: Individual Interview #2 for ED02

Interview Logistics	
Study ID	
Interview Date (month/day/year)	
Interviewer	
Length of Interview (minutes)	
Additional Notes	

Introduction

Hello, my name is (*name*) and I am the (*position*) on the Canadian Nurse-Family Partnership Education (CaNE) Pilot Project. The purpose of today's interview is 1) sharing with you a summary of your first interview and hearing from you if we captured your thoughts & experiences accurately; 2) learning about your experiences as an NFP educator in the delivery of a second round of NFP education; and 3) sharing you with some of the broader themes emerging from the study & exploring your thoughts/reflections, as well as any gaps you might help to identify for further data collection. There are no right or wrong answers.
The interview today will last approximately 60-90 minutes, and will be audio-recorded. Your participation is completely voluntary and we can stop the interview at any time. The information you share about your work in the NFP program will remain confidential. The data from all of the interviews will be synthesized and general broad themes will be summarized and shared back to the participating health units and CaNE stakeholders.

Interview Questions

1. First, please take a few minutes to read over the 1 page summary I have provided to you of your first interview.

    a. Would you agree that the summary accurately captures your thoughts and experiences?
    b. Is there anything you would like to add? Is there anything you would like to clarify?
    c. Given the stage you are at in the CaNE project, and your experiencing having delivered a second round of NFP education, would your answers to any of the questions be different now? Please describe.
    d. Have you since been since able to develop the Educator guidebook?
    e. In thinking about core functions of a national NFP "center" -if it were to take on the role of education - what activities would this "center" need to be responsible for with specific respect to NFP education (e.g. development and updating of curriculum, delivery of education, evaluation of education, development of teaching materials, guidebooks etc).

The next set of questions that I have for you will explore your role as an NFP educator with the second round of education in spring 2018.

2. Can you describe for me how you prepared for the second round of NFP education?
    a. What challenges/barriers did you encounter, if any? How did you overcome those?
    b. What was your general impression of the feedback from the CaNE participants about the initial round of education? How did you use this feedback to make changes or adaptations to the second round of NFP education?

3. Please describe your role in delivering the second round of NFP Fundamentals face-to-face education sessions? (e.g., coordination, facilitation, encourage reflection, content experts)

4. How do you perceive delivery of the NFP face-to-face education sessions to have been received by those who attended the second round of education?

    a. What components/sessions do you believe to be most well received? Why?
    b. What components/sessions do you believe to be least well received? Why?
    c. Do you believe that the changes and adaptations made to this round of education were well received? Why or why not?

    d. Do you have any recommendations for further changes or additions to the NFP fundamentals sessions?

5. Do you have any further reflections on the face-to-face training? (e.g., activities, content, structure, length of time devoted to sessions)

6. When you are connecting with teams after the education, what components of the NFP education are you excited to see that the NFP nurses have understood and are embracing in practice? What education areas need more focus?
    a. What recommendations might you have for topics to develop as TMEMs?

7. I'd now like to share with you some of the early themes arising from the study, mainly around PHNs' experiences with taking the education and beginning to implement the program with clients. I'd like to explore your thoughts or reflections on their experiences (read each one and allow participant to comment)

Probes may include: What is significant about this to you (or in your role as clinical lead)? How do you feel about that? Why does that matter? What do you think made them respond in this way?

- Successes & Challenges
    - Increased confidence in asking clients about IPV; observation of positive client outcomes as a result of implementing the IPV clinical pathway
    - Balancing fidelity/structure of program with principles of program (e.g., client-centered, meeting the client "where they're at"/needs of the day)
    - Balancing fidelity/structure of program with nature of their clientele (e.g, frequently missed/cancelled appointments)
- How to evaluate NFP PHN nursing knowledge, skills and attitudes
    - Client feedback/evaluations
    - Client gains (e.g, quitting smoking or drug use/returning back to school/ getting a diploma /college or university/securing employment/moving to safety (leaving a toxic or abusive relationship)
    - Client outcomes (being able to create a budget/ number of doctor's visits that were avoided because they knew what to do from advice provided by their nurse/choosing a birth control that works having gained the knowledge from their nurse to make an informed decision, improving their communication skills in order to maintain healthy relationships with loved ones including their partners)
    - Importance of qualitative over quantitative measures (e.g., do not feel that # of visits or # of completed assessments capture quality of their work with clients); What about the work they do that is beyond scope of job? (e.g., advocacy)
- Importance of the 'parallel' process in their work; Supervisors to PHNs, PHNs to clients, clients to babies

- Interest in ongoing opportunities to connect about their NFP work with the other CaNE PHNs (e.g., face-to-face opportunity once/year, community of practice etc.)

Based on what we have discussed about some of the study findings, do you have any suggestions for further questions to explore in final interviews?

8. Do you have any further reflections about your experience as a NFP educator that you would like to share with the research team?
    a. From your perspective, can you think of any key message or recommendation that would be important for us to share with NFP stakeholders, senior decision makers and funders?

Appendix F

CaNE Evaluation Checklist Templates

NFP Canadian Nurse Education (CaNE) Pilot Education Assessment + Completion: Introduction to NFP, STAR Framework, and IPV

Name: _____ Public Health Unit _____ ☐ PHN ☐ Supervisor

Content: Introduction to NFP	Questions, learning needs. comments	Date completed	Time to complete
1. History, Evidence, and Theories			
2. NFP International Program			
3. Excellence in Nurse-Family Partnership Nursing			
Complete Skills and Experience Assessment Form			
4. Human Ecology Theory			
5. Attachment Theory			
6. Social Cognitive Theory and Self-Efficacy			
7. Critical Caring Theory			
8. Client-Centered Principles			
9. Reflection in Practice			
10. Therapeutic Relationships + Boundaries			
11. Maternal Role			
12. PIPE			
13. Motivational Interviewing			

14. Content Domains			
15. Structure of the NFP Program and Home Visits			
16. Strategies for Initiating Successful Home Visiting			
17. Nursing Assessment Forms & Information Gathering			
18. Putting it All Together			

Content: STAR Framework	**Questions, learning needs. comments**	**Date completed**	**Time to complete**
1. Introduction to the STAR Framework			
2. Coding the STAR Framework			

Content: IPV Intervention	**Questions, learning needs. comments**	**Date completed**	**Time to complete**
1. Introduction to the IPV Intervention			
2. Characteristics of an Abusive Relationship			
3. Responding to a Client Disclosure			
4. Identifying IPV			
5. Introduction to the Danger Assessment			

NFP Canadian Nurse Education (CaNE) Pilot Education Assessment + Completion:
NFP Fundamentals – Febuary 6-10, 2017

Name: _____ Public Health Unit _____ ☐ PHN ☐ Supervisor

Content: NFP Fundamentals	Questions, learning needs. comments
1. NFP Model Review	
2. Review of STAR Framework	
3. Using the four theories: Self-efficacy, human ecology, attachment, critical caring	
4. Communication Skills Part 1 MI	
5. Trauma & Violence Informed Care (TVIC)	
6. Visit-to-Visit Guidelines	
7. Core Model Elements and Fidelity to the Model	
8. STAR Framework Part 1	
9. Client-Centered Principles	
10. Cultural Responsiveness: Four-Step Process	
11. Therapeutic Relationships + Boundaries	
12. STAR Framework Part 2	
13. Reflection in Practice	
14. Client Retention	

15. PIPE	
16. Maternal Role	
17. Communication Skills Part 2 TTMC	
18. IPV	
19. NFP Integration	
20. Other	

NFP Canadian Nurse Education (CaNE) Pilot Education Assessment + Completion:
NFP Fundamentals – April 9, 10, 11, 23, 24, 2018

Public Health Unit _____ ☐ PHN ☐ Supervisor

Content: NFP Fundamentals	Questions, learning needs. comments
1. NFP Model Review	
2. STAR Framework	
3. Trauma & Violence Informed Care (TVIC)	
4. Guest PHN Panel	
5. Visit-to-Visit Guidelines	
6. IPV	
7. Client-Centered Principles	
8. Communication Skills	

9. Using the four theories: Self-efficacy, human ecology, attachment, critical caring	
10. Client Retention	
11. Therapeutic Relationships + Boundaries	
12. Core Model Elements and Fidelity to the Model	
13. PIPE	
14. TOC_____	
15. Reflection in Practice	
16. NFP Integration	
17. Other	

NFP Canadian Nurse Education (CaNE) Pilot Education Assessment + Completion: Supervisor Fundamentals

Name: _____ Public Health Unit _____

Session	Questions, learning needs. comments	Date completed
1. Leadership & the NFP Supervisor Role		
2. Reflective Practice, Reflective Supervision, and Coaching		
3. Core Model Elements		
4. Burnout, Compassion Fatigue, Job Stress, and TVIC		
5. Data Collection		
6. Facilitating ongoing NFP nurse-education		
7. Intimate Partner Violence		
8. Continuous Quality Improvement		

1 hour sessions to discuss implementation issues		
Any additional comments		