BC Healthy Connections Project
PROCESS EVALUATION

Promoting Fidelity to the Nurse-Family Partnership® Core Model Elements 1-4 (Client Eligibility): Supervisors' Experiences in British Columbia (2013-2018)

A synthesis of selected findings from the British Columbia Healthy Connections Project Process Evaluation

2020

McMaster University

SFU SIMON FRASER UNIVERSITY

Acknowledgements

Members of the British Columbia Healthy Connections Project (BCHCP) Process Evaluation Research Team would like to thank the Nurse-Family Partnership (NFP) public health nurses, supervisors and program administrators from Fraser, Interior, Island, Northern and Vancouver Coastal Health Authorities who participated in the process evaluation. We appreciate their generosity in sharing their expertise on how this nurse home visitation program was implemented and delivered in British Columbia (BC). Thank you to members of the BCHCP Steering Committee for providing feedback on this report.

The BCHCP is a randomized controlled trial (RCT) funded by the BC Ministry of Health with support from the BC Ministry of Children and Family Development, and from Fraser, Interior, Island and Vancouver Coastal Health Authorities. A Study Team at the Children's Health Policy Centre in the Faculty of Health Sciences at Simon Fraser University is leading the BCHCP — in collaboration with Scientific Team members from McMaster University, the University of British Columbia, the University of Victoria and the Public Health Agency of Canada. The Djavad Mowafaghian and R. and J. Stern Family Foundations also generously support the BCHCP (for more information see *https://childhealthpolicy.ca*). In addition, the BCHCP supports two adjunctive studies: a Process Evaluation (reported on here), and the Healthy Foundations Study (funded by the Canadian Institutes of Health Research). Funding for the BCHCP Process Evaluation was provided by the Public Health Agency of Canada.

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How to cite this report:

Jack, S.M., Gonzalez, A., Kurtz Landy C., Campbell, K., Catherine, N.L.A., MacKinnon, K., MacMillan, H.L., Marcellus, L., Sheehan, D., Tonmyr, L., Van Borek, N., Varcoe, C., & Waddell, C., (2020). Promoting fidelity to the Nurse-Family Partnership core model elements 1-4 (client eligibility): Supervisors' experiences in British Columbia (2013-2018). Hamilton, ON: School of Nursing, McMaster University.

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Introduction

The 14 NFP core model elements (CME) are the program components that Nurse-Family Partnership® (NFP) license holders are required to adhere to as they implement and deliver this nurse home visitation intervention through their respective implementing agencies. Delivery of NFP with fidelity to the CMEs contributes to maintaining the integrity and quality of the program, while also being respectful of, and adaptive to, the local context.[1] NFP license holders are provided with extensive information and guidance about the CMEs through documents provided by the International NFP program.

This brief report provides insights about unique factors that influenced how CMEs 1-4, which focus on client eligibility for the program, were addressed in practice by the NFP teams in British Columbia (BC). This report is intended to help inform public health nurses and their supervisors who are delivering NFP within their regions or provinces and also health policy decision makers responsible for overall implementation of NFP within their portfolios. This information may also be of interest internationally to governments or agencies in the early planning stages of developing local NFP eligibility criteria.

Nurse-Family Partnership Core Model Elements 1-4

1. Client participates voluntarily in the NFP program
2. Client is a first-time mother
3. Client meets socioeconomic disadvantage criteria at intake
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

Evaluation of NFP in BC, Canada

Implementation of NFP is a part of the BC Ministry of Health's 10 year plan to address mental health and substance use in BC[2]. The BC Healthy Connections Project (BCHCP) comprises a randomized controlled trial[3] (RCT) evaluating the effectiveness of the NFP program compared with existing health and social services in improving child development and mental health, as well as maternal outcomes. NFP has been implemented and delivered as part of the BCHCP RCT in four regional Health Authorities (2011-2022). The study design, measures and procedures are described in the published RCT study protocol. The BCHCP also includes two adjunctive studies, the Healthy Foundations study[4] and a process evaluation.[5] The process evaluation took place in five regional BC Health Authorities (2013-2018). Research ethics approvals for the conduct of these studies were obtained from 10 participating institutions.

Enrollment into the BCHCP as a new study participant closed in December 2016. Beyond this time, NFP is being offered to eligible adolescent girls and young women as a program within the suite of enhanced public health services offered in four BC regional Health Authorities.

BCHCP Process Evaluation

The overarching goal of the BCHCP mixed methods process evaluation was to explore and document how NFP was implemented and delivered in five unique regional health authorities. The qualitative study component was guided by the principles of interpretive description. From 2013-2018, the full population of NFP public health nurses (n=82) and supervisors (n=19) who were a part of an NFP team during this time period, as well as a purposeful sample of senior managers or decision makers (n=23) who had NFP within their portfolio completed qualitative interviews approximately every 6 months. This report presents an analysis of a sub-set of data collected from NFP supervisors only.

In each participating regional health authority, supervisor(s) are responsible for leading and managing teams of public health nurses delivering NFP to clients, including those enrolled in the trial, process evaluation or as part of the current suite of enhanced public health services. An NFP supervisor leads a team of no more than eight public health nurses, and in addition to supporting regular one-to-one reflective supervision, also facilitates case conferences, team meetings, accompanied home visits and learning activities.[1] All of the NFP supervisors were also registered nurses with experience in public health.

The process evaluation included eight waves of qualitative data collection with an overall total of 19 NFP supervisors. NFP supervisors answered open-ended questions about how NFP teams implemented and delivered the program as guided by the CMEs (Box 1) at two points in time, Spring 2014 (n=11 supervisors) and Summer 2017 (n=11 supervisors). With supervisor turnover, 6 supervisors completed both interviews and 10 only completed a single interview on this topic. This analysis thus includes data collected during 22 individual interviews from 16 distinct individuals. This longitudinal qualitative study allowed for exploration of practices developed and used to implement and deliver NFP to clients who participated in either the the RCT or process evaluation studies, or who received NFP as part of the enhanced suite of public health services offered since 2017. Interview data were recorded, transcribed verbatim, and then analyzed using the principles of reflective thematic analysis, a qualitative approach to coding, categorizing, and synthesizing the data. For this analysis, data from the two timepoints were pooled together.

Box 1: Open-Ended Questions about the CMEs Posed to NFP Supervisors

In each interview, the CME element statement was read to the supervisor. Then the following four open-ended questions were asked in reference to each specific CME:

1. How has your NFP team interpreted the meaning of this CME?
2. What are your perceptions on how successful your NFP team has been in meeting this CME?
3. What contextual factors or challenges (at community, organizational, team levels etc) has the team encountered, that influenced implementation and delivery of the program with respect to this CME?
4. What types of strategies have been used in your region to promote fidelity to this CME?

BCHCP Participant Eligibility

Of 739 adolescent girls and young women who consented to participate in the BCHCP trial, 368 were randomized to receive NFP through their local regional health authority.[6] An additional 157 NFP-eligible adolescent girls and young women living in small communities where there was minimal capacity to support enrollment in the trial, still received the program as part of the process evaluation study.

It is important to note that the implementation of this public health nursing intervention was a collaboration between the Ministry of Health, regional Health Authorities and the scientific evaluation team. This required NFP teams to assess potential eligibility per the trial protocol. The study eligibility criteria were informed by the NFP CMEs and BC data. Following the closure of enrollment into the BCHCP, the trial referral and eligibility criteria were adapted and used by the regional health authorities to screen potential clients to receive NFP as part of the enhanced suite of public health services.

The BCHCP study eligibility criteria are listed in Box 2. Figure 1 provides a general overview of the process for determining an individual's eligibility for the NFP program across either the BCHCP trial or process evaluation.

Box 2: BCHCP Participant Eligibility Criteria[1,3,6]

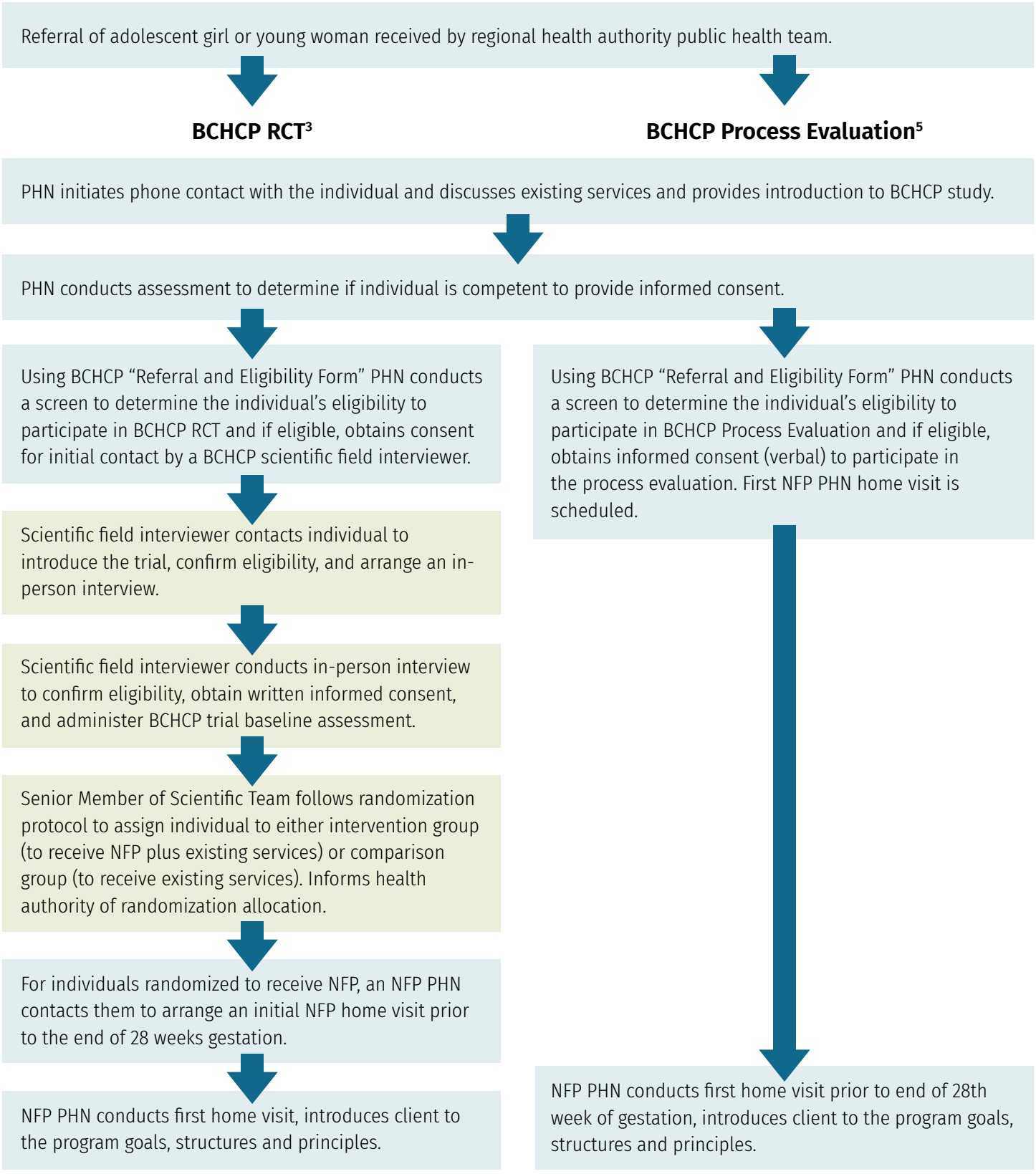
Inclusion Criteria

1. Age 24 years or younger
2. Preparing to parent for the first time (eligible if previous pregnancy ended in termination, miscarriage or stillbirth; or if previous parenting experience involved step-parenting only)
3. Less than 28 weeks gestation (must receive first NFP visit by end of the 28th week of gestation)
4. *Experiencing socioeconomic disadvantage. Indicators of disadvantage included:
    - Age 19 years or younger (pregnant adolescent girls were deemed to automatically meet disadvantage criteria)
    - Age 20-24 years and meet 2 of the following 3 indicators:
        - Lone parent (not married or living with the same partner for one year or more consecutively)
        - Less than Grade 12 (did not complete secondary school or did not receive secondary school equivalency certificate)
        - Low-income as determined by meeting one of the following:
            i. receiving income assistance,
            ii. Homeless, defined as living on the streets, in an emergency or homeless shelter, staying in places not meant as residences (e.g. care or tent), or experiencing "hidden homelessness" such as couch surfing
            iii. Finding it very difficult to live on total household income regarding food or rent
5. Able to converse in English

Exclusion Criteria

1. Planning to have the child adopted
2. Planning to leave the catchment area for three months or longer during the trial

Figure 1: Process for Referral and Determining NFP Eligibility



Referral Sources

The BC Prenatal Birth Registry was implemented as one component of a provincial integrated perinatal services model. The goal of the registry is to connect women who access primary care for their pregnancy as soon as possible with additional community services, such as public health nursing, that meet their individual needs. The main referral sources to these registries are primary healthcare providers such as midwives and physicians.[3] Agencies that also provide services to youth, incuding schools, may also refer to the BC Prenatal Birth Registry.

Key Findings

The findings synthesized in this section represent 16 NFP supervisors' perceptions of: 1) their local teams' ability to implement the program with fidelity to the first four NFP CMEs; 2) a summary of their description or interpretation of CMEs 1-4; 3) client, team, or contextual factors perceived to potentially influence fidelity to a CME; and 4) strategies applied in practice to promote fidelity to the CME.

Element 1: Client participates voluntarily in the NFP program

> *"We want clients to understand from the very beginning that their participation in NFP has to be based on their own desire to be in the program, not someone else's desire for them to be in the program. The NFP team is not here to meet [another agency's] requirements for the client. For [the adolescent girls and young women enrolled] it is important that they understand that their continuation in NFP is also based on their needs and their desire to be in the program."*

The supervisors expressed with confidence that "100%" of the individuals enrolled in NFP did so voluntarily.

However, as NFP was the intervention being evaluated within the BCHCP studies, it is important to clarify that all participants provided informed consent to participate in the research which included enrollment in NFP (for individuals in the trial intervention arm or enrolled in the process evaluation). In the interviews, beyond the discussions of how program eligibility was determined, the supervisors framed their responses and discussion around the nursing work involved in confirming a client's participation and ongoing engagement in NFP, focusing on the clinical context rather than study protocols.

Supervisors perceived meaning or interpretation of CME 1

- Consensus among responses was that this CME reflected the value of *"choice"* – and that adolescent girls or young women could not be *"mandated"* or *"coerced"* by any other individual or organization to enroll in NFP and equally important that they were *"choosing"* to be a part of NFP.
- Voluntary participation also extended to *"choice"* beyond the period of enrollment, and that clients were aware that they were *"free"* to leave the program at any time.

Factors Potentially Influencing Fidelity to CME 1

Voluntary participation in NFP matches the philosophy and ethics of public health

- Supervisors confirmed that the concept of voluntary participation in public health programming was a common, established practice and thus application of this principle in NFP was familiar and understandable to NFP nurses and complemented their philosophy of how health promotion interventions are delivered.
- There was recognition and appreciation among NFP team members that when an individual voluntarily participates in a program that this may support active client engagement and retention over the long term in the home visits.

Evaluation of NFP within the context of the BCHCP studies

- Only one supervisor identified and then discussed the possibility that delivering NFP within the context of a study might influence an individual's decision to participate, explaining that she and her team had discussed the possibility that some individuals consented to be in the BCHCP trial because they wanted the *"coupons [study honoraria] and they were actually hoping for the control group."*

Pressure from other individuals or organizations to "mandate" an individual's enrollment in NFP

- Supervisors shared that some community partners (e.g., parole officers, child protection workers) expressed a preference for *"mandating"* that their NFP-eligible pregnant clients be required to enroll in NFP.
- Some supervisors experienced that some NFP clients may have received *"pressure"* from other social services or health care providers to accept the home visits as they might give her a *"better chance to keep her baby."*

Client motivation is to meet requirements associated with other programs

- It was identified that some individuals enrolled in NFP to meet requirements of other programs/services (e.g., to meet required probation hours) and not due to personal *"desire"* or motivation to engage in home visits to focus on health promotion, infant attachment or parenting.

Nurse "persistence" in locating and contacting client to meet to discuss enrolment

- Within the context of the BCHCP studies, supervisors confirmed that nurses were aware of the heightened need to locate and contact individuals to determine study eligibility. As such, nurses were very persistent and motivated to attempt to contact or follow up with individuals multiple times as necessary.
- It was identified that some nurses were concerned that these *"persistent"* attempts to enroll clients or keep clients engaged in the program might be too much for some individuals, and explored with supervisors, *"when does a client's passive refusal to meet actually infer a lack of consent to be in the program or a desire to drop out?"*

Strategies Applied to Promote Fidelity to CME 1

During NFP nurse education

- Nurses and supervisors were introduced to the CME definition and discussed the rationale underlying the benefits associated with voluntary participation in NFP.

During supervision

- At team meetings, nurses and supervisors shared and discussed language and strategies for introducing the NFP program to eligible individuals.
- In reflective supervision, nurses shared and reflected on their experiences contacting, locating and enrolling individuals in NFP, and explored how to ascertain when a client no longer *"desires"* to be in the program or if her lack of engagement is reflective of other events in her life.

During nurse home visits with potential or current clients

- On the first home visit, all nurses provided information about the program (e.g., program goals, length of visits, number of home visits, home visit content), explored and discussed individual's goals and interests in receiving NFP home visits, then sought explicit permission to continue to home visit (or enroll in program).
- In the discussion, the nurses used language to emphasize the voluntary nature of the program. Nurses engaged in respectful dialogue with the individual and empowered them to recognize that they have the choice to make the decision to be a part of NFP or not.
- In discussing the program goals and benefits, nurses often sought to *"find the hook"* or identify what part of the program might interest the individual and motivate their interest to continue with the home visits. To demonstrate what a regular NFP home visit was like, on the first enrollment visit, the nurse might also provide information and engage in a discussion about *"healthy pregnancy."*
- On some first nurse home visits (after assessment of eligibility), if an individual was ambivalent about continuing with the program, the nurse provided her with the NFP supervisor's phone number – so that additional concerns could be addressed at that level.
- When concerns were expressed, nurses would re-assure the client that child protection services could not *"mandate"* them to enroll or remain in NFP, and if necessary, the nurse could offer to speak directly to the child protection worker.
- Even once a client had initially consented for NFP home visits, nurses recognized that informed consent was an ongoing process, so they continually evaluated the relationship with the client, regularly explored with the client her level of interest in continuing with NFP, provided flexibility in the visit schedule, and reaffirmed that she could leave or take a break from the program at any time.

During communication with referral sources and community service partners

- NFP supervisors or nurses emphasized the voluntary nature of the program to referring professionals (e.g., physicians) or organizations (e.g., child protection services) in program materials, education sessions and at inter-organizational meetings.

- They used clear language to describe that NFP was not a *"mandatory program, that they could not prescribe it to the clients and participation was to be by client choice."*
- They identified that explanations to community partners about: 1) why individuals could not be mandated to enroll in NFP, as well as: 2) the benefits of voluntary participation, were positively received.
- They provided information and language about NFP program goals for other health care and social service providers to share with potential clients so that future clients wouldn't *"feel like she has to do it [NFP]. [Instead feel] that it's voluntary and that it [NFP] will be helpful to her."*

Element 2: Client is a first-time mother

> *"[This criterion] is right on the Referral and Eligibility form. So, we start with this focus, 'is this your first baby?' or 'is this your first pregnancy?' And if they say, 'no, I've had another pregnancy,' then we go into what happened and what was the outcome. This is our first starting point in terms of the criteria that we're looking for in enrolling clients."*

NFP is offered to adolescent girls and young women preparing to parent for the first time based on the premise that this is a period of significant change in her life and when she is most open to accept support and guidance from a nurse and be more motivated to engage in the adoption of healthy behaviours.[1] The NFP supervisors interviewed confirmed that given the clear eligibility criteria outlined on the referral and information sheets developed by the BCHCP RCT study team, they were confident that all adolescent girls and young women screened as eligible, met the study criteria for "first-time mother."

Supervisors perceived meaning or interpretation of CME 2

- Consensus among supervisor responses was that this CME referred to ensuring that pregnant adolescent girls or young women had no previous or past history of parenting their own infant or child. Supervisors were clearly able to identify that this eligibility criterion made an exception for individuals with experience as a step-parent, but an individual with a history of parenting a biological child, was not eligible for the program.
- Supervisors confirmed their understanding that if a girl or young woman had a history of stillbirth, pregnancy termination or miscarriage, she would still meet this program eligibility criterion.

Factors or Challenges Potentially Influencing Fidelity to CME 2

An individual's level of comfort to share personal, historical information about outcomes of past pregnancies during eligibility screening

- While uncommon, it was identified that during the eligibility screening process an individual might declare no past history of pregnancy or parenting, yet once a trusting therapeutic relationship had been developed with an NFP nurse through the home visitation process, some clients chose to disclose that they indeed had previous parenting experience (other than step-parenting) and most often had experienced a painful apprehension of that child.

Moral distress experienced by nurses with respect to restrictive definition of CME 2

- During early implementation of NFP in BC, supervisors shared that some nurses experienced moral distress about not being able to deem adolescent girls or young women eligible for the program who had parented an infant for a very short period of time (e.g., a few days to weeks) before the child was apprehended - yet trying to understand why an individual who had step-parenting experience was NFP-eligible.

Moral distress

While there are different theoretical and conceptual constructions of how moral distress has been defined, as a term it was first coined[7] to describe what nurses experience when institutional structures, rules, or policies constrain them from acting on what they believe is the right thing to do within their context of care or service.

"Philosophic" challenges to the premise that the program should be for first-time parents only

- Supervisors clearly articulated that program eligibility criteria were being correctly applied and that individuals preparing to parent for the first time were being enrolled in the program, yet they experienced challenges and questions from internal and external stakeholders about why the program eligibility could not be expanded to individuals with previous parenting experience or multiparous "multip" women.
- Supervisors and other stakeholders expressed a need for evidence about the potential program benefits for "multips." *
- In the later series of interviews (which included supervisors' reflections on providing NFP to adolescent girls and young women who received NFP as part of the enhanced suite of public health services), it was identified that some First Nations communities were expressing a preference to expand eligibility to all parenting girls and young women.

"On that ethical level, a challenge for some of the nurses has been when they're doing their prenatal assessment [to determine program eligibility] and they discover that, ... you know the mother has maybe had a baby die right after delivery or the infant was adopted from the hospital. I know that's been a challenge for some of the nurses on that ethical level, as they feel that these women are actually first-time parents and yet they are not eligible for the program [NFP]."

*In the United States, the benefits of NFP for women with multiple children is currently being evaluated. In Australia, as well as in some American Indian tribal communities in the United States, a variance for NFP license holders to deliver the program to "multips" has been approved by the International NFP Program or the US National Service Office respectively.

Strategies Applied to Promote Fidelity to CME 2

During NFP nurse education

- In the NFP education, nurses and supervisors were introduced to and discussed the theoretical foundations of the CMEs. Supervisors explained that the education provided information so that nurses could provide rationale to other professionals or organizations for offering the program to "first-time parents" including that the *"opportunity to influence behaviour change was greatest among those first-time mothers."* This knowledge underpinned nurses' competency in providing the rationale for the CME to internal and external stakeholders.
- Supervisors discussed how some nurses practiced communication skills on how to rapidly develop rapport and trust, and how to introduce and engage potential clients in discussions of their past experiences, including difficult histories of pregnancy or their own childhood experiences of being parented.

Through program materials

- The NFP teams used consistent forms that outlined eligibility criteria including definitions on how to operationalize the criteria.

During supervision

- Supervisors identified opportunities to discuss with the public health nurses their experiences of moral distress and ethical concerns arising in practice, reinforcing the need to *"follow recommendations"* for client eligibility to maintain program fidelity while also taking time to debrief and reflect on their concerns.

During communication with referral sources and community service partners

- In all communication with internal and external program stakeholders they provided information outlining program eligibility criteria and identified opportunities to explain and provide theoretical rationale for need to enroll first-time parents.

Element 3: Client meets socioeconomic disadvantage criteria at intake

"When the nurses are creating these relationships before we go into the R & E [Referral and Eligibility Form], they discover information that implies that we know this person is going to be a good fit. You know they really don't have any money. They're washing dishes two nights a week. And their boyfriend is hit and miss. But they're living with their moms and their dads and well - right now they do have an income because it's total [household] income. So, there's these ethical dilemmas where the nurse knows they're going to be a really good fit or they're with a boyfriend but you know he's not graduated or whatever. I think the limitations are that as nurses we use our gut instinct, and our assessments and when we feel that NFP would be a good fit for a client but that they actually don't really fit the eligibility, it's frustrating."

The NFP supervisors confirmed that public health nurses were consistently using the criteria for social and economic disadvantage as defined on the BCHCP "Referral and Eligibility" forms, which contributed to their confidence that all adolescent girls and young women referred to NFP met these criteria at intake and as directed. Nurses asked key income eligibility questions by reading them verbatim from the eligibility form.

There are a multitude of social, economic, relational and social factors that contribute to social and economic disadvantage. Even though supervisors described that nurses were committed to carefully adhering to the eligibility criteria, there were instances when discrepancies arose. This divergence likely occurred because nurses in using their clinical judgment (informed by a more holistic assessment of the individual's situation in conjunction with the written criteria), would have indicated that they met or exceeded the criteria for experiencing social and economic disadvantage. These incongruities in determining NFP program eligibility within the context of a research study were perceived by some supervisors as potentially having a negative impact on the number of individuals recruited.

In comparison, from the interviews conducted in 2017, when adapted criteria were also being applied to determine eligibility to enroll in NFP as part of the enhanced suite of public health services (or what supervisors referred to as within the "open enrollment" context) and with recruitment into the studies closed, supervisors explained that teams were still maintaining fidelity to the CMEs. However, the process for ascertaining an individual's experience of social and economic disadvantage now allowed nurses opportunities to explore and discuss the individual's *"actual"* situation.

"We're still meeting the fidelity requirement... when we offer the program it is because they met the eligibility criteria. It is a bit of an ethical dilemma though. The criteria are rigid, particularly the marriage or being in a relationship for greater than a year criteria which we know is not necessarily a strength in our context. Many couples stay together for financial reasons, cost of housing or low income. And some couples - both need support. Maybe they are both on disability. Maybe they are both low IQ and yet they don't qualify? And some partners are abusive. But since open enrollment we have the ability to explore actual financial hardship versus just [basing the eligibility decision] on a straight 'yes' or 'no.' And the criteria have opened up, homelessness is now accepted as an automatic which is great because it indicates instability even if they do have a partner."

Supervisors' perceived meaning or interpretation of CME 3

- Language used to describe this CME provided confirmation that supervisors and NFP teams were aware that the program is intended to serve adolescent girls or young women experiencing socioeconomic disadvantage related to limited income, low levels of education and limited social supports.

Factors Potentially Influencing Fidelity to CME 3

Evaluation of NFP within the context of the BCHCP studies

- Delivery of NFP within the broader context of the BCHCP RCT and process evaluation required the development of administrative processes to ensure that pregnant girls and young women referred to the BCHCP studies consistently met study eligibility criteria [which were informed by the NFP CME and BC data].

*Complexity in defining the socioeconomic disadvantage criteria may mean that some girls and young women who experience high levels of disadvantage do not meet program criteria according to BCHCP eligibility criteria definitions.

- Supervisors identified that some nurses did not perceive that living with a partner or being married should be a criterion that could potentially make an individual ineligible for the program. Supervisors explained that in certain geographic areas the high cost or limited availability of housing meant many girls or young women lived with a partner out of necessity; that both individuals within the relationship may have received assistance or benefits or individuals may have lived in a relationship where they experienced intimate partner violence that might put them at greater social and economic disadvantage compared to being a lone parent. It was also identified that individuals were also required to financially support their partners, which again placed an adolescent girl or young woman in situations of greater economic disadvantage compared to living alone.
- It was explained that assessing disadvantage based on "total household income" may not provide an accurate picture of the young girl or woman's long-term economic situation; several supervisors explained that many individuals may move back to the familial home or live with their parents during pregnancy. Yet based on nurses' experiences, most of them will eventually move out to live independently with the infant which results in a much lower "total household income."

"I think that the lone parent question should not be there or in some way readdressed. It is a huge problem and lots of times when you've got the lone parent – you actually have two parents, who may or may not live together, but they are both on income assistance, neither of them have any money, both of them might have been raised in foster care and they both have huge, huge, huge issues. And so, as a family they need some serious help."

Subjective interpretation of criteria by the individual adolescent girl or young woman

- Nurses and supervisors learned that for some clients:
  - If they had a boyfriend, but did not live with him, they may not consider themselves a "lone parent."
  - That if "poverty" or "low-income" was all they have known, then their response to "do you find it difficult to live on your total income with respect to food or rent?" was "no" because it was perceived as a normal situation or because they were using other resources (e.g., regular access of the food bank) to reduce the amount of difficulty experienced.
- As part of the study protocols, nurses reviewed the eligibility criteria and read them verbatim as written on the Referral and Eligibility form. Supervisors noted that this was challenging for nurses at times; they further clarified that when the program shifted to open enrollment, nurses had more latitude to explore the meaning of the criteria to a potential client. As a result, more in-depth information about their income and supports was obtained and this allowed the nurse to make a more accurate assessment of the level of social and economic disadvantage.

Clients' lack of knowledge about sources of income

- It was identified that some individuals did not know if they received social assistance or any other forms of benefits, particularly if those benefits were paid to another individual (typically their parent) on their behalf.

Social stigma associated with poverty

- Supervisors shared that based on assessment, observation and answers to questions on the eligibility form, nurses began to form a decision that the individual might be eligible, yet they observed a hesitancy among some individuals to confirm that they had a *"concern with respect to either food or rent."*
- Supervisors interpreted this to mean that it may be difficult for some individuals to provide information about income, given the stigma associated with being "poor." A second rationale provided was that the individual might be hesitant to share this information at the outset as they may be unsure of consequences of providing these details; for example,' would admission of low-income raise concern among social services/health care providers that they wouldn't be able to adequately care for their infant?'

Availability of clearly, defined eligibility criteria focused on circumstances rather than income

- Overall, supervisors confirmed that the availability of clearly defined criteria for "social and economic disadvantage" was useful in ensuring that nurses were consistently and reliably assessing program eligibility.
- Expressed satisfaction that the criteria relied on descriptions of an individual's circumstances rather than requiring "income testing." It was stated that having to ask about a specific annual income total would not have been acceptable to public health nurses working with this population.

Strategies Applied to Promote Fidelity to CME 3

During study orientation sessions and presentations from the research study team

- Extensive education sessions and updates that included clarification on the criteria were provided by the BCHCP RCT research team from Simon Fraser University.
- Development and use of a Referral and Eligibility form with clearly defined criteria promoted reliable determination of social and economic disadvantage criterion.

Through professional development

- Public health nurses increased their knowledge about the different types of social assistance offered in BC, as well as the processes to access these supports, so that they could help potential clients determine if they were receiving funding or to support clients in system navigation.

During supervision

- Reflective supervision and team meetings provided safe spaces for nurses to talk about moral distress and to express their feelings of frustration about deeming an individual ineligible for the program based on the written criteria alone. This was particularly frustrating when the nurse perceived that supplementation of the written criteria with the nursing assessment data would have led to a more accurate determination or decision about social and economic disadvantage.
- As part of the BCHCP studies, pregnant adolescent girls and young women were referred to public health through regional pre-natal registries and programs. At the local health authority level, public health nurses would offer existing services and then screen and refer potentially eligible individuals to the BCHCP Scientific Team.[3]
- When public health nurses experienced any challenges in interpreting or explaining one of the eligibility criteria or needed support in interpreting an ambiguous response, they often sought out clarification from their local NFP supervisor, who in turn could seek further clarification from the Provincial NFP Coordinator or the RCT study team at Simon Fraser University.

During nurse home visits with potential or current clients

- Nurses consistently applied eligibility criteria consistently, yet as sites transitioned to offering NFP as part of a suite of enhanced public health services, supervisors described nurses using clinical judgment, informed by their nursing assessment skills, to inform eligibility decision.
- Nurses developed enhanced communications skills and confidence to ask about sensitive topics such as income and circumstances that contribute to social and economic disadvantage.

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

> *"Everyone works really hard at making sure that if there is someone that potentially meets the criteria that we're [the NFP team] getting in touch with them early enough if possible."*

At both interview timepoints, supervisors confirmed that with only a few minor exceptions [where consultation had occurred to allow a variance], that all individuals who were ultimately enrolled in NFP received their first nurse home visit before the end of the 28th week of pregnancy.

Supervisors' perceived meaning or interpretation of CME 4

- Supervisors' interpretation of the CME confirmed that they were aware of the importance of the first NFP nurse home visit occurring prior to the end of the 28th week of pregnancy.
- Supervisors also alluded to ideal timeframes for initiating NFP home visits, identifying that when referrals were received very early in pregnancy (e.g., 8 weeks gestation), nurses were given flexibility to assess the best time to approach a potential client about enrolling in NFP. Supervisors explained that for some girls or young women, the pregnancy does not feel *"real"* at this early time stage or there was increased risk for miscarriage. Supervisors indicated that nurses held a preference to start visits within the first four to five weeks of the second trimester and ideally prior to 16 weeks gestation.

Factors Potentially Influencing Fidelity to CME 4

Evaluation of NFP within the context of the BCHCP studies

- While enrolling adolescent girls and young women into NFP through the BCHCP study processes, supervisors indicated that while following the criteria outlined on the Referral and Eligibility form ensured that fidelity to the CME was maintained, study processes may have inadvertently affected the overall number of individuals who were eligible for the program. The explanation provided was that the time required for both the nurses and the scientific field investigators to locate, contact, recruit, consent and enroll individuals into the study meant that some *"timed out"* or were past the end of the 28th week of gestation before the first NFP home visit could be booked.
- It was identified, that as sites transitioned to offering NFP as a program within a suite of enhanced public health programs, that determination of program eligibility, consent to participate and then enrollment into the NFP program sometimes occurred on a single, first nurse home visit; thus, the risk of "timing out" was reduced.

Referral of pregnant girls and young women through the Regional Prenatal Registries

- The establishment of a provincial prenatal registry through which physicians and midwives could register all pregnant women, who could then be referred to appropriate public health services (including NFP), was identified as a system change that improved the referral process to public health.

- However, supervisors noted some limitations to the system including: 1) not all girls and young women seek prenatal care and thus are not pre-registered; 2) some seek prenatal care late in pregnancy or the physician/midwife does not register (or encourage self-regisration) early enough, closing the opportunity to be referred to NFP.
- Referrals through the registry also included a confirmation of gestational age. This information increased confidence that sites were approaching only individuals who would meet the eligibility criteria.

Public health nurse NFP work assignments

- In some health authorities, nurses working part-time in NFP sometimes lacked the time or flexibility to schedule a home visit prior to the end of the 28th week.
- In local health authority offices staffed by a single NFP public health nurse, when the nurse was on vacation or extended leave and no back-up support was available, there was an increased risk that a potential client might not be contacted within the eligibility timeframe.

Lack of accurate information about gestational age

- For some referrals received outside of the prenatal registration system it was identified that an individual may not have or be able to provide accurate information about gestational age.

Strategies Applied to Promote Fidelity to CME 4

During communication with referral sources

- NFP teams actively promoted awareness about the NFP program eligibility criteria. In communications with referral sources they emphasized the importance of registering pregnant individuals early onto the regional prenatal birth registry. Supervisors explained that these types of communication with community partners and referral sources occur on an on-going and continuous basis.

During pre-enrollment phases

- As regional health authorities transitioned to providing NFP as a program within an enhanced suite of public health services, supervisors explained that some NFP sites established protocols on when and how frequently to contact an individual referred to the program through the regional prenatal registry, with the attempts to contact by the nurse increasing in frequency the closer the individual gets to the 28th week of pregnancy.
- Nurses invested time and energy in being persistent and pro-active to implement whatever steps were necessary to meet with a potentially eligible individual before the 28th week of pregnancy.

> *"The nurses don't give up until the end. And some will go out and meet then on the last day and get in there if they can."*

Discussion

In this analysis of a subset of qualitative interview data from the BCHCP process evaluation, NFP supervisors expressed a high degree of confidence that fidelity to these first four CMEs was fully achieved. In BC, the evaluation of NFP conducted alongside the implementation of this complex intervention within regional health authorities provided tremendous opportunity and structure. This contextual condition was most likely responsible for ensuring that consistent processes for referring and accurately assessing potential participant (client) eligibility were established across the participating regional health authorities. Application and use of the BCHCP study Referral and Eligibility criteria as well as adherence to the BCHCP research screening and consenting procedures ensured that all individuals randomized to receive NFP (plus usual services) consequently met the program eligibility requirements.

While specific procedures for determining eligibility and enrolling individuals into NFP will be developed provincially by the BC Ministry of Health together with the regional health authorities, there are a few broad conclusions that may provide valuable programming insights for future public health programs in Canada seeking to implement NFP once the BCHCP RCT results are reported.

Embedding NFP within public health programming and having public health nurses deliver the intervention provided several advantages to support teams in acheiving fidelity to these select CMEs. First, the concept of promoting an individual's voluntarily participation in health promotion interventions is integral to public health programming. Second, in addition to ensuring that each individual volunteered and provided informed consent to participate in one of the BCHCP studies, NFP supervisors explained that public health nurses invested additional time and effort to ensure that potential clients were aware of the NFP program's goals and structures, and understood that they had a choice to both accept the program as well as to leave the program at any time.

As the first point of contact with public health services, the NFP nurses had a central role in screening individuals for their eligibility to participate in the BCHCP studies. The NFP supervisors noted that the nurses on their teams were confident and skilled in initiating the discussion to ascertain if the individual was experiencing socioeconomic disadvantage or was preparing to parent for the first time. These are complex, personal and sensitive topics of discussion that can be particularly difficult to engage in during a first encounter between a public health nurse and a potential client. Supervisors explained that completion of the NFP education ensured that nurses were knowledgeable about the rationale for each CME and that many nurses had opportunities to further enhance their skills related to initiating difficult conversations and establishing therapeutic relationships.

However, within the screening process, supervisors shared that many public health nurses felt constrained by having to read the "eligibility" criteria verbatim or that there was no latitude for them to also apply their professional nursing judgment to the decision as to whether or not the individual met the NFP eligibility criteria. These circumstances were also reported to increase experiences of moral distress among nurses. As teams transitioned from recruiting and enrolling individuals into the BCHCP studies to inviting eligible individuals to consider enrolling in the NFP

program as part of the enhanced suite of public health services, supervisors spoke about a shift in practice. In this shift there continued to be a focus on adhering to the eligibility criteria but opportunities were increased for nurses to holisitically assess and fully understand the nuances and complexities of the individual's social and economic situation and then to use this information to better inform the decision. Using multiple sources of these types of evidence may be most useful when determining if an individual meets the "social and economic disadvantage" or "first-time mother" criteria. Therefore, the use of consistent eligibility criteria combined with nursing judgment may ultimately ensure that individuals most suited for the program are enrolled. A central requirement of the NFP program is that public health nurses are provided with opportunities to engage in regular reflective supervision and participate in team meetings. Supervisors identified that these program activities provided valuable opportunities for nurses to express, discuss and understand the moral distress and challenges they experienced while enrolling women in the NFP program. As nurses are beginning to establish their NFP client caseloads in the early stages of program implementation, it is important for supervisors to explore topics of client eligibility during supervision.

Public health nurses also played a critical role in ensuring that an eligible individual receives her first NFP home visit prior to the end of the 28th week of pregnancy. Supervisors spoke about nurses' perseverance in using repeated contacts and multiple strategies to contact, locate, schedule and then complete the first home visit. Given the complexity and unpredictability in the lives of pregnant girls and young women, supervisors highlighted that nurses often invested a significant amount of time to ensure that the first visit happened on time. Within the context of the BCHCP study enrollment process, securing enough time for the scientific field interviewers to complete their screening and data collection responsibilities, added an additional time pressure to this process, and ultimately some potential clients were not enrolled. In comparison, as teams transitioned to providing NFP as part of the enhanced suite of public health services, supervisors spoke about providing nurses with greater flexibility to contact eligible individuals, begin to establish rapport and trust, and use a client-centered approach to determine the right time or visit (still before 28 weeks gestation though) to provide the individual with the option to enroll in NFP.

At the community level, supervisors noted that potential threats to the teams' abilities to implement the program with fidelity to these four CMEs were rooted in the professional practices and beliefs of referral sources and community partners. It was not uncommon for other community professionals to perceive NFP as a primary prevention intervention that could offer significant benefits and supports to their clients. The unintended consequence of this was that some professionals tried to require or "mandate" their client to enroll – or in other circumstances, professionals would query why the program was limited to individuals preparing to parent for the first time only. The consistent response to manage these potential threats was to provide early and ongoing written and verbal communication about the NFP program criteria, principles and goals to professionals and agencies involved in referring girls or women to the program. Through the NFP education, supervisors affirmed that the inclusion of content on the theoretical and evidentiary foundations of NFP provided nurses with the information required to be able to explain and provide rationale for why NFP is a program that is delivered to a specific, targeted population of girls and young women experiencing socioeconomic disadvantage. Continuous engagement with referral sources

and community partners to increase their awareness and understanding of the program's eligibility criteria therefore is an essential strategy to initiate in the early implementation stages and to reinforce these messages in all future contacts.

Conclusion

NFP supervisors who participated in the BCHCP process evaluation were able to accurately define and operationalize the first four NFP CMEs which relate to client eligibility. Future analyses will explore strategies used by the BC regional health authority NFP teams to maintain fidelity to the remaining NFP CMEs. Given their educational preparation as well as the administrative tools and processes developed for NFP in BC, the supervisors perceived that their teams were highly competent in delivering the program with fidelity to these elements. Individual (nurse and client), research, inter-organizational, and program related factors were identified that could potentially influence fidelity requirements. However, the supervisors and teams were able to identify and implement education, practice, and administrative strategies to address these challenges.

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