



The BC Healthy Connections Project: A Scientific Evaluation of the Nurse–Family Partnership Program in British Columbia

Presenters:

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Conflict of Interest Declaration

- ▶ As speakers for this presentation, we declare that we, our spouses and close family members do not have any affiliation (financial or otherwise) with a commercial or other industry interest with respect to information being presented at this conference.
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Learning Objectives

1. Review the scientific methodology of the BC Healthy Connections Project (BCHCP), including the randomized controlled trial (RCT) and process evaluation (PE) methods.
2. Discuss the collaborative governance structure built in between policy, practice, research and community stakeholders.
3. Inform practitioners on how to refer a pregnant woman to public health.

What is the Nurse–Family Partnership Program?



- ▶ Landmark primary prevention program first developed by Dr. David Olds in the US 35 years ago
- ▶ Aimed to help young, first-time mothers vulnerable to socioeconomic disadvantage and their children to age 2



What is the Nurse-Family Partnership Program?



- ▶ Regular home visits by Public Health Nurses
 - First visit before 28th week of gestation
 - Range of 38 to 68 visits
 - Flexibility to meet individual needs of clients
 - Nurses build a trusting, therapeutic relationship with the client



What is the Nurse–Family Partnership Program?



- ▶ 3 goals of NFP:
 - I. Improve pregnancy outcomes
 - II. Improve child health and development
 - III. Improve parents' economic self-sufficiency
- ▶ Nurses: weekly reflective supervision
- ▶ Anecdotal feedback/progress with clients



Why Evaluate NFP in BC?



BC Healthy
Connections
Project

US Scientific Evaluations

- ▶ Three randomized controlled trial (RCT) evaluations
 - Elmira, New York (semi-rural, 89% White)
 - Memphis, Tennessee (urban, 92% African-American)
 - Denver, Colorado (urban, 45% Hispanic)
- ▶ Multiple significant positive outcomes found
 - When children turned 2 years old (at RCT completion)
 - Over 10–17-year follow-up
 - Program “pays for itself”
 - Net returns → \$US 2.88 – \$US 5.70 for every dollar invested



Why Evaluate NFP in BC?

- ▶ Required steps for delivering NFP outside US
 - i) Adaptation & Feasibility (completed in Hamilton, ON)
 - ii) Randomized Controlled Trial
 - iii) Expansion

- ▶ NFP is untested in Canada
 - Greater socioeconomic inequalities and fewer baseline health and social services in the US compared with Canada
 - NFP may not be more effective than our existing services



BC Healthy Connections Project

I. Randomized Controlled Trial (RCT)

- Compare the effectiveness of the Nurse-Family Partnership (NFP) program to BC's existing services

II. Process Evaluation (PE)

- Assess feasibility and acceptability of delivering the NFP program in small rural and remote settings

Eligibility Criteria: RCT and PE

INCLUSION: Women are eligible to participate if they meet all inclusion criteria

1. Aged 24 years or under
2. First birth¹
3. Less than 27 weeks gestation²
4. Competent to provide informed consent, including conversational competence in English³
5. Experiencing socioeconomic disadvantage⁴

EXCLUSION: Women are ineligible to participate if they meet any exclusion criteria

1. Planning to have the child adopted
2. Planning to leave BCHCP catchment area for three months or longer⁵

1. Eligible if a previous pregnancy ended in termination, miscarriage or stillbirth
2. Mothers must receive their first home visit by 28th week of gestation, according to NFP fidelity requirements
3. Must be able to participate without requiring an interpreter
4. Based on indicators associated with increased risk of child injuries
5. Catchment area comprises designated Local Health Areas within BC and surrounding areas

Randomized Controlled Trial Methodology



RCT Outcome Indicators

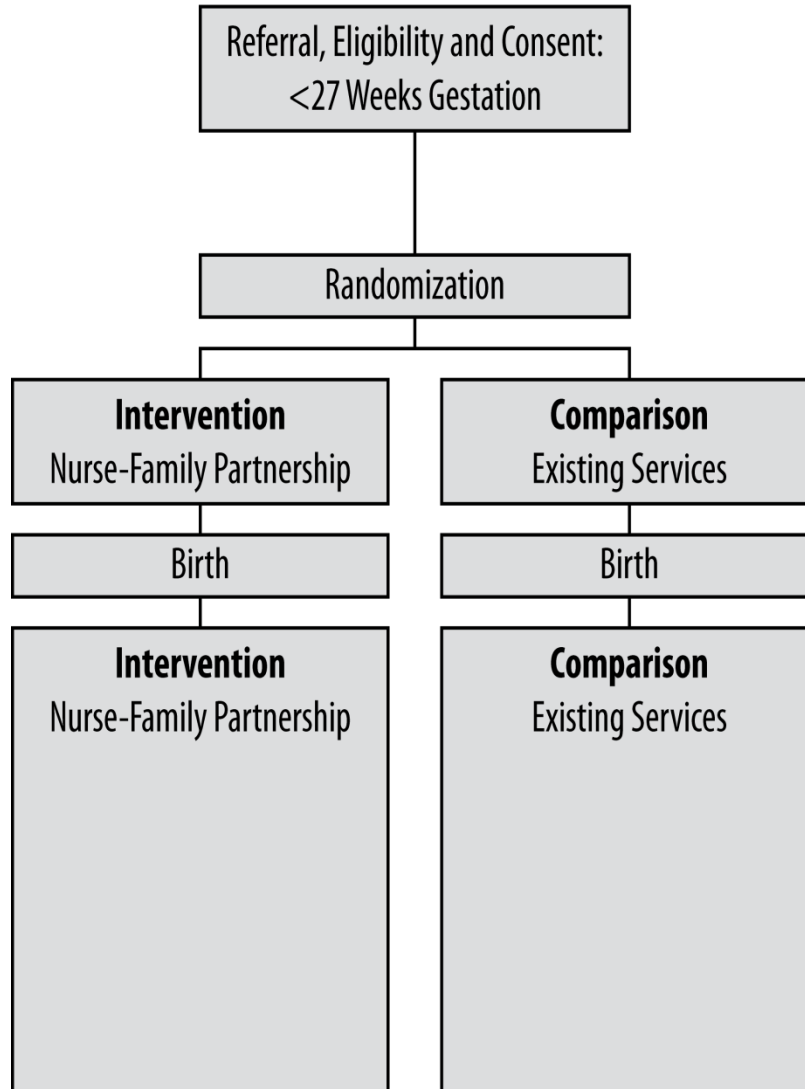
Sample size = 1040

Domain	Primary Indicator	Secondary Indicators
Pregnancy		Prenatal tobacco + alcohol use (Maternal Self Report)
Child Health	Childhood injuries birth → 24 mos (Ministry of Health data on outpatient, emergency + hospital healthcare encounters)	Child cognitive development @ 24 mos (Bayley Scales of Infant Development) Child behaviour @ 24 mos. (Child Behaviour Check List)
Maternal Health		Subsequent pregnancies @ 24 mos (Maternal Self Report)

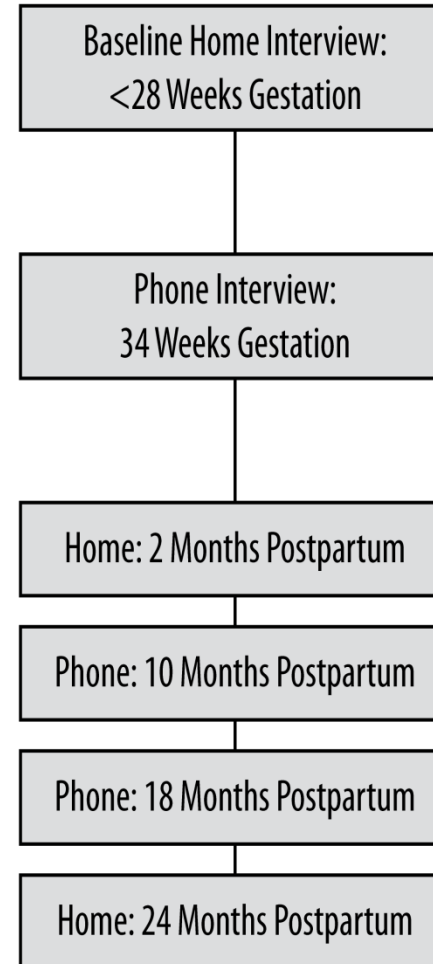




Participant Pathways



Interview Schedule



Process Evaluation Methodology

Process Evaluation Objectives

- ▶ Determine *fidelity* to required NFP model elements
- ▶ Explore *acceptability* by nurses
- ▶ Describe experiences of the *education* program
- ▶ Document *supervisory processes* used to support nurses
- ▶ Identify *contextual factors*

Process Evaluation Data Sources

▶ Interviews:

- Public Health Nurses and Supervisors
- NFP provincial coordinator
- Twice/year for 60 minutes

▶ Documents:

- NFP Fidelity reports
 - Team meeting & case conference report
 - Supervision report
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BCHCP Progress to Date

BCHCP Phase I (2012–2014)

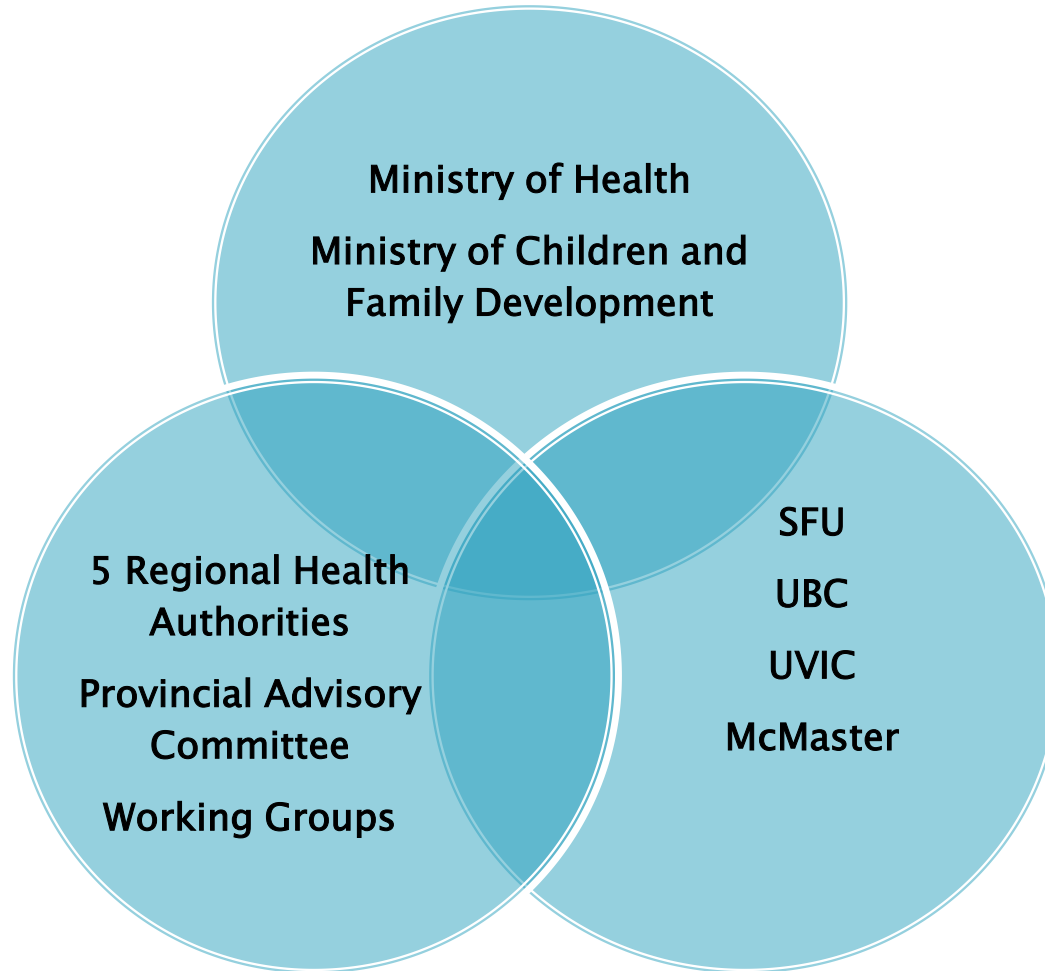
- PHN and Supervisor Education
 - New Canadian NFP curriculum finalized
 - New curriculum added on intimate–partner violence (IPV)
 - PHN and Supervisor NFP basic education completed
 - Practice period of 6–12 months required to hone PHN knowledge and skills → with “guiding clients”
 - Ethics approval provided by SFU and five Health Authorities

BCHCP Phase II (2013–2018)

► RCT and Process Evaluation

- Ethics approval obtained
 - SFU, UBC, University of Victoria, McMaster University
 - Five BC Health Authorities, Public Health Agency of Canada
- Protocols, measures, instruments and databases developed
- Government data-sharing agreements finalized
- RCT and Process Evaluation launched Oct & Dec 2013

BC Healthy Connections Project Collaborative Governance



Public Health Services

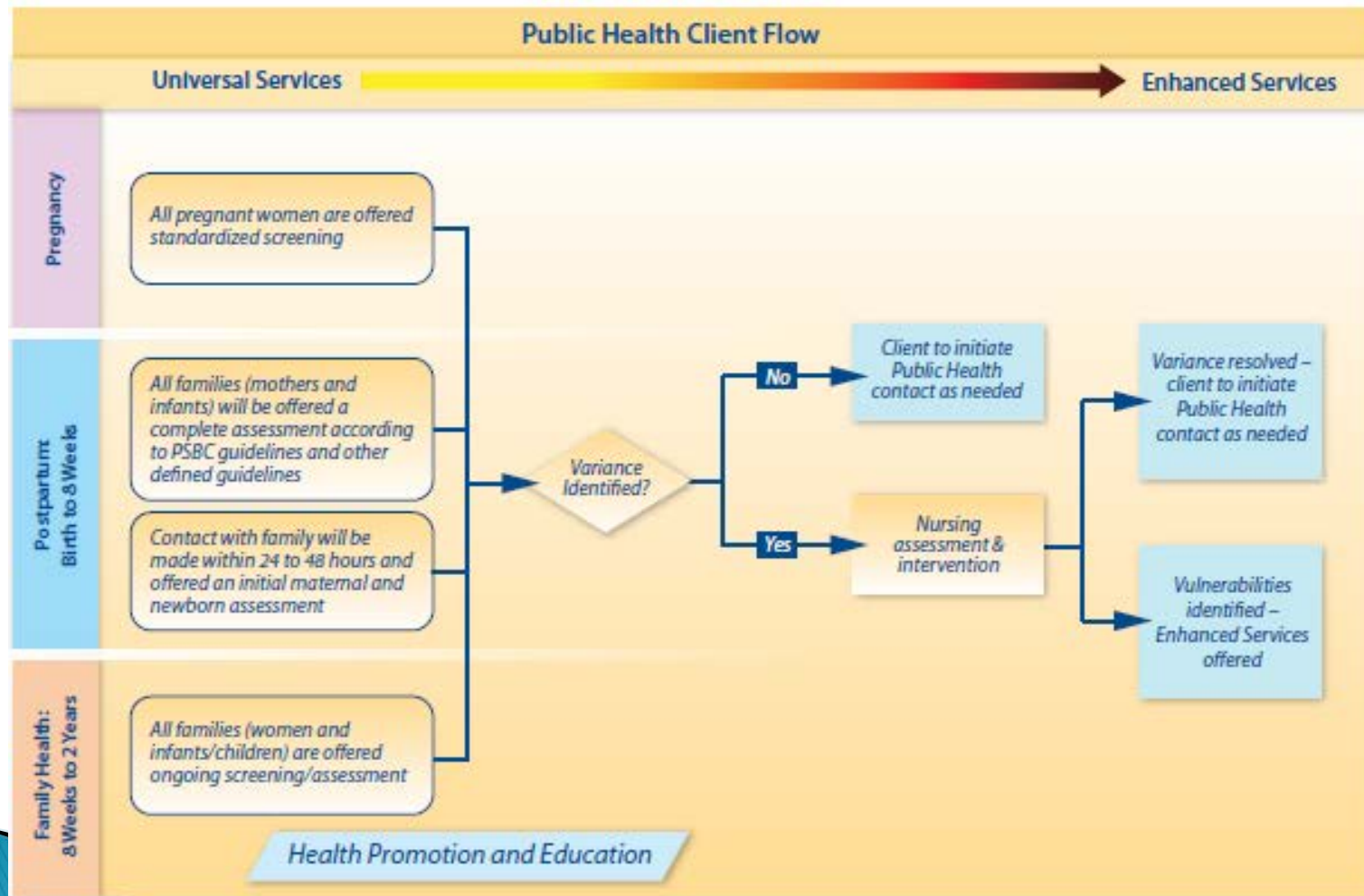
Universal Service Statement

- All pregnant women are offered standardized screening, health promotion and education (supported by resources such as Baby's Best Chance), and intervention, including referral as needed.

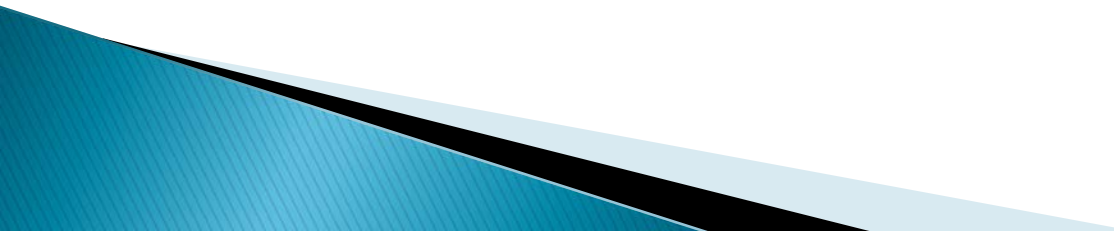
Enhanced Service Statement

- Women identified as vulnerable through screening/referral will be offered nursing assessment, health promotion and education and more intensive follow-up including enrolment in enhanced services and referral as need and vulnerability are indicated.

Prenatal Programs in Health Authorities



Eligibility for BCHCP


- ▶ Aged 24 years or younger
 - ▶ First birth
 - ▶ Less than 27 weeks gestation (first home visit must occur before 29 weeks)
 - ▶ Experiencing socioeconomic disadvantage
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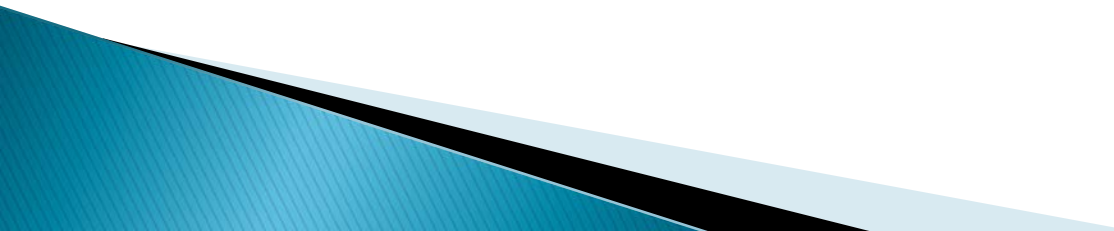
Experiencing Socioeconomic Disadvantage

1. **Aged 19 years or younger** → Eligible
2. Aged 20 – 24 years of age → Eligible if has TWO of the following three indicators
 - I. **Lone parent**¹
 - II. **Less than grade 12**²
 - III. **Low income** (ONE or more of the following)
 - Receives 1) Medical Services Plan Premium Assistance 2) Disability Assistance or 3) Income assistance
 - Finds it difficult to live on total household income with respect to either food or rent
 - Lives in a group home, shelter or institutional facility or is homeless

1. Not married and not living with the same person for more than one year
2. Do not have BC's Dogwoods certificate, the General Education Development credential or other diploma equivalent to grade 12

- Empirical literature links these **four** indicators of socioeconomic disadvantage to childhood injuries – the primary outcome of the RCT.
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Referral to Public Health

- ▶ Fraser Health, Island Health, Northern Health and Interior Health have prenatal registries
 - ▶ VCH is targeting prenatal programs to those who would benefit from enhanced services
 - ▶ Refer all clients to your local public health office
 - ▶ All clients will be assessed for BCHCP and offered public health services
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How Can Care Providers Refer Pregnant Clients to Public Health?

Health Authority	Name of Prenatal Registry or Prenatal Program	On-Line Registration for Self-referral	Phone Registration
Fraser Health	Best Beginnings	http://bestbeginnings.fraserhealth.ca/default.aspx	Call local health unit
Interior Health	Healthy From the Start	http://www.interiorhealth.ca/HealthyFromTheStart	Call toll-free 1-855-868-7710 (Mon to Fri, 8:30- 4 pm PST)
Island Health	Right From the Start	http://www.viha.ca/children/pregnancy/prenatal_registration.ht	Call local health unit
Northern Health	Northern Health Prenatal Registry	http://www.northernhealth.ca/YourHealth/PublicHealth/Infants,ChildrenandFamilyHealth.aspx	Call local health unit
Vancouver Coastal	VCH Public Health Prenatal Program	http://www.vch.ca/pregnancy	Call 1-855-550-2229 (Mon. to Fri, 8:30-4:30). Can leave message.

Questions / Comments



For more BCHCP information:

<http://www.childhealthpolicy.ca>

<http://www.healthyfamiliesbc.ca/home/articles/pregnancy-support-and-care>

<http://www.health.gov.bc.ca/socsec/>

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BC Health Authorities

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