The BC Healthy Connections Project (BCHCP): A Scientific Evaluation of the Nurse-Family Partnership Program in British Columbia

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For the BCHCP Steering Committee & Scientific Team

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Goals of Presentation

1. Review research evidence re the Nurse-Family Partnership (NFP) program.
2. Provide high level overview of BCHCP study.
3. Share experiences re formal collaborations which support BCHCP.
4. Highlight important fit with public health nursing role.
What is Healthy Start and how is BCHCP embedded?

• *Healthy Start*, an initiative of the *Healthy Families BC* prevention strategy

• [http://www.healthyfamiliesbc.ca/](http://www.healthyfamiliesbc.ca/)

• *Healthy Start* includes a continuum of infant and family perinatal public health services, with:
  – Universal services provided to all families
  – Enhanced (additional) services provided where vulnerabilities are identified based on level of need, risk, strengths & protective factors

• *Healthy Start’s* continuum focuses on 3 key periods:
  – Pregnancy
  – Birth to 8 weeks
  – 8 weeks to 2 years
Healthy Families BC
Great Goal 2: “Lead the way in North America in healthy living and physical fitness”

- **HEALTHY EATING**
  - Informed Dining
    - Nutrition Information Requirements in Restaurants
  - Sodium and Sweetened Beverage Reduction:
    - Public Awareness Campaigns
    - Education Programs

- **HEALTHY START**
  - Enhanced perinatal and child public health services for all women and their families
  - BC Healthy Connections Project (Scientific Evaluation of the Nurse-Family Partnership Program)
    - Public health nurse-led home visiting program for vulnerable women and their families

- **COMMUNITIES FOR HEALTHY CITIZENS**
  - Healthy Families BC Communities
  - Healthy Families BC Schools
  - Healthy Workplaces

- **HEALTHY LIFESTYLES**
  - Prescription for Health Program:
    - Personal Health Risk Assessment
    - Lifestyle Coaching
  - BC Prevention Schedule for Life
  - Integrated Cancer Care and Prevention
Nurse-Family Partnership (NFP)

• Landmark primary prevention program first developed by David Olds in the US 35 years ago
• *Child maltreatment* chosen as primary prevention focus because of profound associated consequences
  – Poor mental and physical health outcomes for children
  – Ongoing socioeconomic disadvantage and social exclusion
  – High associated societal costs, e.g., youth crime
• Three US randomized controlled trial (RCT) evaluations:
  – Elmira, New York; Memphis, Tennessee; Denver, Colorado
Robust US NFP Outcomes

• Child health and development (2→19 years)
  – Reduced child maltreatment
  – Improved child behaviour → reduced youth crime
  – Improved cognitive development → improved academics

• Maternal health
  – Reduced prenatal tobacco use
  – Increased economic self-sufficiency

• Program “pays for itself” (over 10–15 years)
  – Net returns → $US 2.88 – $US 5.70 for every dollar invested
Key NFP Program Elements

• Serving young, low-income, first-time mothers
• Providing regular home visits by public health nurses
• Building in flexibility to meet individual and cultural needs
• Beginning early → first visit before 28th week of pregnancy
• Providing long-term supports → until the child’s 2nd birthday
• Ensuring continuity in relationships with mothers and children
• Encouraging community engagement
Required Steps for Delivering NFP Outside the US

1. Adaptation
   • Modify the program for the local context → Hamilton, ON, 2007

2. Feasibility and Acceptability
   • Conduct a pilot study in a small sample → Hamilton, 2008-2012

3. Randomized-Controlled Trial (RCT)
   • Evaluate effectiveness in a large sample at multiple sites → BC

4. Expansion
   • Disseminate and maintain, with ongoing evaluation
Why Evaluate NFP in BC?

• NFP has never been tested 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

• Many outcomes also not yet fully evaluated, e.g.,
  – Prenatal alcohol use
  – Child anxiety, depression and substance abuse

• BCHCP therefore involves an RCT and process evaluation over the next five years
## BCHCP Eligibility Criteria

### INCLUSION: Women are eligible to participate if they meet **all** inclusion criteria at referral

1. Aged 24 years or under
2. First birth<sup>1</sup>
3. Less than 27 weeks gestation<sup>2</sup>
4. Competent to provide informed consent, including conversational competence in English<sup>3</sup>
5. Socioeconomically disadvantaged<sup>4</sup>

### EXCLUSION: Women are ineligible to participate if they meet **any** exclusion criteria at referral

1. Planning to have the child adopted
2. Planning to leave BCHCP catchment area for three months or longer<sup>5</sup>

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1. Eligible if a previous pregnancy ended in termination, miscarriage or stillbirth, or if a child from a previous pregnancy was adopted at birth; individual circumstances may also be considered on a case-by-case basis
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
## BCHCP Outcome Indicators

<table>
<thead>
<tr>
<th>Domain</th>
<th>Primary Indicator</th>
<th>Secondary Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnancy</td>
<td></td>
<td>Prenatal tobacco + alcohol use (Maternal Self Report)</td>
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<tr>
<td>Child Health</td>
<td><strong>Childhood injuries birth → 24 mos</strong> (Ministry of Health data on outpatient, emergency + hospital healthcare encounters)</td>
<td>Child cognitive development @ 24 mos (Bayley Scales of Infant Development) Child behaviour @ 24 mos. (Child Behaviour Check List)</td>
</tr>
<tr>
<td>Maternal Health</td>
<td></td>
<td>Subsequent pregnancies @ 24 mos (Maternal Self Report)</td>
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</tbody>
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BCHCP Process Evaluation

• NFP’s feasibility and acceptability in smaller rural and remote communities has never been tested
• Process evaluation will inform program adaptations to improve NFP’s delivery in these communities
  – Same eligibility criteria and timelines as RCT
  – *Qualitative* interviews will be conducted with PHNs and Supervisors every 6 months on their experiences with NFP
  – *Quantitative* NFP program (e.g., fidelity) data will also be collected and analyzed
NFP Education for 52 Nurses and 10 Supervisors

• Formats: Self-study; in-person; team based; web-ex; on-line; teleconference

• Curriculum Examples:
  – NFP 18 Core Model Elements
  – Motivational Interviewing
  – Attachment, Ecological, Self-Efficacy Theory
  – Visit to Visit Guidelines
  – Intimate Partner Violence/Danger Assessment
  – ASQ-3 and ASQ-SE Developmental Screening
  – Edinburgh Postpartum Assessment
  – Dyadic Assessment of Naturalistic Caregiver–child Experiences
  – Reflective supervision and practice
Lessons Learned from Guiding Clients

• Client recruitment: 196 clients, 127 babies, 32 sites
• Client engagement: positive overall
• Client retention: 85 – 91%
• Nurses/Job satisfaction: “Hardest job I’ve ever loved”
Collaborative Partners

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Thank you for your time. Questions?