Midwifery-Led Birth Centres in Ontario: A New Option for Families

Liz Darling and Geneviève Gagnon, Registered Midwives

BORN Ontario Provincial Rounds, June 20, 2013
Objectives

- Introduce the concept of birth centres as a third option for choice of birth place and review the political context of Birth Centres in Ontario
- Highlight the research on out-of-hospital births and birth-centre births
- List the eligibility criteria for women who wish to give birth at the Birth Centres
- Discuss the evaluation of the Ontario Birth Centre Demonstration project
Midwifery Care in Ontario

“Evidence shows midwives provide quality care - Excellent patient outcomes and good value for health care dollars. Midwifery care also leads to fewer medical and surgical interventions, which benefits both mother and baby.”

Deb Matthews - Minister of Health and Long Term Care
Birth Centre Policy Background

- The *Tsi Non:we Ionnakeratstha Ona:grahsta‘ Six Nations Maternal and Child Centre* of the Six Nations of the Grand River was established as a department within Six Nations Council Health Services in 1996.
- Serves approximately 100-120 families per year, including 100 births – half at birth centre, half at home.
- Partially funded through MOHLTC, with Aboriginal Healing and Wellness Strategy support.
- The Birth Centre demonstration project will fund two new facilities to open in Ottawa and Toronto in 2013.
Action Plan for Healthcare

Ontario is promoting Birth Centres as a banner initiative, exemplifying the Minister’s Action Plan:

“Right Care at the Right Time in the Right Place”
Research Evidence

Birth Center Studies
- Large prospective cohort studies
- Settings: UK and US

Canadian Homebirth Research
- Ontario (Hutton)
- British Columbia (Janssen)

Randomized Controlled Trials re: alternative birth settings
- Cochrane Review
Birth Centre Studies


Birthplace Study (UK)

- Large, prospective cohort study (79,774 births)
- April 1, 2008 – April 30, 2010
- Compared birth in obstetrical units, along-side midwifery units, free-standing midwifery units, and homebirth
- Primary outcome: composite neonatal morbidity & mortality
- No significant difference in primary outcome when free-standing midwifery units (FMU) compared to obstetrical units (OU)
Birthplace Study (UK) (cont’d)

For low-risk women, planning to give birth in a FMU vs an OU associated with fewer interventions:

- Spontaneous vertex birth OR=3.38 (99% CI 2.70-4.25)
- Vacuum OR=0.32 (99% CI 0.22-0.47)
- Forceps OR=0.45 (99% CI 0.32-0.63)
- Cesarean Section OR=0.32 (99% CI 0.24-0.42)
- Maternal admission to higher level of care OR=0.32 (99% CI 0.13-0.84)
- Epidural or spinal anaesthesia OR=0.27 (99% CI 0.22-0.34)

[Link to study](http://www.netscc.ac.uk/hsdr/files/project/SDO_FR4_08-1604-140_V03.pdf)

* Results weighted, and adjusted for age, parity, & maternal socio-demographic characteristics
National Birth Center Study II (US)

- Large, prospective cohort study (15,574 women)
- 2007-2010, 79 birth centers in 33 states
- Examined outcomes of women planning birth centre birth at onset of labour
- 47.2% nulliparous
- 84% gave birth in birthing centre
- Transfers to hospital: 4% prior to admission, 12% in labour; 1.9% of mothers or newborns required urgent transport
National Birth Center Study II (US) (cont’d)

• Spontaneous vaginal birth - 93%
• Assisted vaginal birth – 1%
• Cesarean – 6%
• No maternal deaths
• Intrapartum fetal mortality (for all admissions to the birth center in labor) - 0.47/1000
• Neonatal mortality rate - 0.40/1000 excluding anomalies
Homebirth Research


Homebirth – British Columbia

- Prospective cohort study
- All homebirths from Jan 1, 2000 to Dec 31, 2004, compared to women eligible for homebirth
  - Midwife-attended planned home births (n=2802)
  - Midwife-attended planned hospital births (n=5984)
  - Physician-attended hospital births (n=5985)
- Planned homebirth group had very low and comparable rates of perinatal death and reduced rates of obstetric interventions and other adverse perinatal outcomes
Homebirth - Ontario

• Retrospective cohort study

• All homebirths (n=6992) in three years (2003-2006) compared to matched eligible hospital births attended by same midwives (n=6992)

• Low rates of perinatal & neonatal mortality (no significant difference in composite neonatal morbidity & mortality), homebirth associated with lower serious maternal morbidity, and lower rates of intervention, including cesarean section

  5.2% vs 8.1%, RR = 0.64 (95% CI 0.56, 0.73)
Alternative birth settings
Cochrane Review, 2012


• Ten trials, 11,795 women
• Confounded by important differences in the organizational models for care (separate staff, more continuity of caregiver)
• Care by the same or separate staff had no apparent effects, but difficult to draw inferences about effects of continuity of caregiver or independent effects of physical birth environment/architectural characteristics
Alternative birth settings (cont’d)

Allocation to an alternative setting associated with decreased rates of intervention:

- **Epidural analgesia**  
  8 trials, n = 10,931  
  RR 0.80, 95% CI 0.74 to 0.87

- **Oxytocin augmentation of labour**  
  8 trials, n = 11,131  
  RR 0.77, 95% CI 0.67 to 0.88

- **Instrumental vaginal birth**  
  8 trials, n = 11,202;  
  RR 0.89, 95% CI 0.79 to 0.99

- **Episiotomy**  
  8 trials, n = 11,055;  
  RR 0.83, 95% CI 0.77 to 0.90
Alternative birth settings (cont’d)

Other outcomes:

• No intrapartum analgesia/anesthesia 6 trials, n = 8953; RR 1.18, 95% CI 1.05 to 1.33
• Spontaneous vaginal birth 8 trials; n = 11,202; RR 1.03, 95% CI 1.01 to 1.05
• Breastfeeding at six to eight weeks 1 trial, n = 1147; RR 1.04, 95% CI 1.02 to 1.06
• Very positive views of care 2 trials, n = 1207; RR 1.96, 95% CI 1.78 to 2.15
• No apparent effect on other adverse maternal or neonatal outcomes
Midwifery Client Birth Centre Study

- Initiated by Ryerson University in May 2012, across MPG in Toronto and Ottawa
- Women who are in care with midwives
- Information about Birth Centres, including choice of birth place with this new option, traveling distance to a BC, and key elements important to women when giving birth in a Birth Centre.

➤ **Judith Rogers**, Associate Professor, MEP Ryerson

➤ **Ayeshah Haque**, Research Assistant, MEP student
Midwifery Client Birth Centre Study (cont’d)

- 42% primiparous, 58% multiparous
- Where considering giving birth in current pregnancy:
  - 64% - Hospital
  - 26% - Home
  - 10% - Undecided
Midwifery Client Birth Centre Study (cont’d)

Women said they would choose...

- If a Birth Centre was currently available:
  - 41% - Birth Centre
  - 23% - Hospital
  - 16% - Home
  - 16% - Undecided

- For their next pregnancy:
  - 42% - Birth Centre
  - 14% - Hospital
  - 16% - Home
  - 22% - Undecided
Midwifery Client Birth Centre Study (cont’d)

Factors that women might identify as important to them in a Birth Centre:

- 97% - Giving birth with their own midwife
- 83% - Having tubs for use in labour and birth
- 82% - Wanting a comfortable space for family & friends
- 73% - Wanting the Birth Centre to be near their home
“Women need to have as many options open to them as possible for pregnancy and birth.”

“It would be amazing to have this option in Ottawa, especially for women/families not comfortable with giving birth at home. They could have an option other than the hospital.”

“First child was born at a birth centre in Quebec. When we moved to Ontario I was disappointed that this service doesn’t exist. It was a wonderful experience compared to the hospital birth with my second. Thanks!”
• “I had my first two children in birthing centres and heartily recommend them - Especially because of the home birth like feel for those who are unable to have homebirths.”

• “I think a birth centre is a good idea. Now that I have had 2 amazing home births I would choose home birth again. But if a birth centre had been an option, my first time I would have considered it.”

• “I think it’s a great idea. I believe that there are too many c-sections in hospitals and it would be nice to have a place where you could give birth comfortably with the help of your midwife.”

• “I think birth centres are a terrific idea and fully support and welcome a birth centre in Ottawa. This area is in great need for more options.”
Ottawa ONLINE SURVEY (n=169 participants)

- **Birth environment**: comfortable, quiet (sound proof), peaceful, home-like environment, freedom to walk around in labour, freedom to eat and drink in labour, access to use of shower and large tubs, and waterbirth, natural lighting and access to outdoors

- **Pain relief options**: (Low Tech, High Touch) Freedom to move, hydrotherapy, touch, massage and counter pressure, supportive friend or family member, etc.

- **No additional cost**
  (non-OHIP respondants)
Breastfeeding: drop-ins/clinic / lactation counseling/breast milk screening for milk donation

Prenatal care: pre-conception counseling / Prenatal care/ Childbirth education / Counseling services/ nutritional counseling

Other services: pre & post-natal fitness / bodywork (massage/chiro/osteopathy/physiotherapy) / parenting workshops (CPR, infant massage, etc.) / Peer Support Groups, etc.
Toronto Community Consultation

• Held a 3-day community consultation as part of CIHR funded project looking at Aboriginal midwifery and birth centres

• Focus groups with community members, front-line workers from variety of agencies, and a wide range of stakeholders from Aboriginal, academic, health, professional associations, regulators, social service agencies, and government agencies (not including MOHLTC) but including BORN

• Overall meeting identified strong desire for support of Aboriginal midwifery and culturally safe care
Ontario Birth Centres

Project Timelines

☆ 2010 - 2012 - Association of Ontario Midwives campaigns the government to have Birth Centres in Ontario

☆ March 20, 2012 – Ontario Premier reveals funding for two birth centres in Ontario

☆ July 4, 2012 to Sept 4, 2012 – Timeline to write and submit the application

☆ Dec. 18, 2012 – Announcement re: Toronto Birth Centre

☆ Jan. 24, 2013 - Announcement re: Ottawa Birth Centre
Ottawa Birth and Wellness Centre (OBWC)

- Retrofit of existing building
- 2260 Walkley road (corner of St-Laurent Blvd)
- Central to 4 of 5 midwifery practices in Ottawa
- Close proximity to major highways and to major transfer hospitals in Ottawa
Toronto Birth Centre (TBC)

- Retrofit in ~12,500SF of commercial space in family social housing redevelopment (ground and second floor, new construction)
- Access for about 80-90 midwives from 7 of 11 Toronto MPGs
- Downtown - close to public transport and major traffic routes
- 5 hospitals w OB units within Toronto Central LHIN, plus Sick Kids
Structure of Birth Centres

- Independent Healthcare Facility – IHF Act is the legislation that governs all out-of-hospital clinics and facilities

- College of Midwives of Ontario (CMO) is the regulator of Birth Centres
  - Develops the Facility Standards and Clinical Practice Parameters
  - Coordinates inspections and assessments through the IHFA program
Structure of Birth Centres (cont’d)

- Not-for-profit organization
- Requirement to have 2/3 Registered Midwives on the Board of Directors
- Ottawa and Toronto have strong partnerships with key community stakeholders (CMNRP & WCH)
Birth Centre Philosophy

- Registered Midwives provide the same services in Birth Centres as they do in home births
- Birth Centres are not hospitals: Maxi home, not mini hospital
- Philosophy maintained through full scope of midwifery practice care, as set out by the College of Midwives of Ontario
- Midwives maintain their hospital privileges
- Birth Centres may offer complementary services (which are funded separately from core birthing services) that meet the needs of the community
Birth Centres in Ontario will:

- make midwifery care and out-of-hospital births more accessible to women
- provide care to vulnerable populations to help meet community needs
- provide culturally-safe environments
- have a high volume of normal births, providing an ideal site for inter-professional education and research on normal birth
Services available at the Birth Centre

* Equipment/technology equivalent to what midwives carry/use for home births (equipment/supplies for common emergencies, including instruments, intravenous therapy, oxygen, suction, medications to treat bleeding, anaphylaxis, etc.)

* No doctors or nurses at the BC

* Hospital interventions are not available: medical induction and augmentation of labour, electronic fetal monitoring, instrumental delivery (forceps and vacuum) and C-section

* Hospital-based pain relief methods are also not available: narcotics and epidurals

* Admission in active labour

* Length of stay: 3-4 hours after birth
Eligibility Criteria for Birth at a BC

- Prenatal care by Registered Midwife with admitting privileges at OBWC
- Woman is in good health, experiencing an uncomplicated low-risk, singleton pregnancy
- Fetus in cephalic presentation, expected to be healthy at birth
- Spontaneous labour at term
- Labour and birth expected to be normal and uncomplicated
Transport protocols

**Non-urgent** (majority)

- Most likely reasons:
  - prolonged/arrested labour, PROM
  - request for pain relief, maternal exhaustion
  - Newborn instability

- RM calls hospital where she has privileges

- Transport via EMS or client’s own vehicle as condition/time permits

- Normal cases usually result in vaginal birth
Transport Protocols (cont’d)

**Urgent** (3.1% out-of-hospital births in Ontario)

- Most likely reasons:
  - Abnormal FHR on auscultation
  - Obstetrical emergency (e.g. cord prolapse, maternal hemorrhage, seizure)
  - Newborn respiratory distress, Apgar < 7 @ 5 min.

- 9-1-1 call for EMS services
- RM transfers to the closest receiving hospital with L&D capacity
Volume of Births

- Midwifery-led births = normal births
- Both BC aim for 450 births a year, which will be prorated in the first year of operations
- Anticipated transfers
Evaluation

MOHLTC has contracted BORN Ontario to lead the evaluation process

BORN established working group with membership representing:

- BORN scientific manager
- BORN scientific director
- MOHLTC
- Midwifery client
- Aboriginal midwifery stakeholder
- Practicing midwife
- Midwife researcher
- Physician
Evaluation Framework

- Framework based on Quality → aligns with current health policy
- Components of evaluation:
  - Project outcomes
  - Clinical outcomes
  - Satisfaction (client & provider)
  - Economic
- Process: literature review, development and selection of indicators
- Selection criteria: Clinically meaningful, Alignment to ministry objectives, Feasibility, Relevance to future evaluation
Evaluation Framework (cont’d)

Quality Domains

- **Accessible**: Frequency of reasons for clients not be able to register or be admitted, arrivals of unregistered women in labour
- **Person-Centred**: Client satisfaction, known midwife, 1:1 care
- **Equitable**: Deprivation quintiles, priority groups, uninsured women
- **Integrated (Education)**: Presence of students and other health professionals at birth
- **Effective**: Intermittent auscultation, latch within 2 hours of birth, normal birth
- **Safe**: Severe maternal & neonatal morbidity or mortality, frequency of reasons for transport, adherence to eligibility criteria
- **Cost**: In development…
Indicator Selection Working Group

ANN SPRAGUE – Scientific Manager, BORN Ontario (Chair)
ELIZABETH DARLING – RM, Assistant Professor, Laurentian University
VIVIAN HOLMBERG – Coordinator, BORN Ontario
WENDY KATHERINE – Manager, MOHLTC
SHERRIE KELLY – Epidemiologist, BORN Ontario
LISA PRICE – Senior Policy Advisor, MOHLTC
JUDY ROGERS – RM, Associate Professor, Ryerson
DANA SIDNEY – Coordinator, BORN Ontario
AMBER SKYE – Aboriginal stakeholder representative
BOBBI SODERSTROM – RM, Risk Management
VICKI VAN WAGNER – RM, Associate Professor, Ryerson
MARISHA WARRINGTON – Policy Analyst, MOHLTC
ANN WELSH – Consumer representative
MARK WALKER – Obstetrician, The Ottawa Hospital
Questions?