Healthy Mothers and Healthy Babies:

New Research and Best Practice Conference

February 21 - 22, 2014 | Vancouver, BC

B1i

Standard Lecture | New Research

Alcohol Use During Pregnancy: A Research Update

Nancy Poole, Tasnim Nathoo

Nancy Poole, Director, BC Centre of Excellence for Women's Health
Tasnim Nathoo, Researcher, BC Centre of Excellence for Women's Health

Learning Objectives:

1. Provide an update on recent research evidence regarding alcohol use during pregnancy, including controversies related to light drinking
2. Facilitate discussion regarding emerging research on brief interventions in the preconception and prenatal period regarding alcohol use during pregnancy
3. Briefly review existing better practices documents such as the Alcohol Use in Pregnancy Consensus Clinical Guidelines (SOGC) and Canada's Low Risk Drinking Guidelines
4. Present additional resources for health care professionals interested in enhancing their practice related to alcohol use in pregnancy

Presentation Overview

1. Review of Recent Research
   - Who drinks alcohol during pregnancy?
   - Why do women drink alcohol during pregnancy?
   - Is there a safe amount of alcohol consumption during pregnancy?
2. Brief Interventions by Health Professionals
   - Evidence for Brief Intervention Approaches
   - Current better practices documents
   - Resources and Tools

Resources and Tools - for health professionals:

Alcohol Use and Pregnancy Consensus Clinical Guidelines
http://sogc.org/guidelines/alcohol-use-and-pregnancy-consensus-clinical-guidelines/
This Clinical Practice Guideline (2010) by the Society of Obstetricians and Gynecologists of Canada (SOGC) provides the national standards of care for the screening and recording of alcohol use and counseling on alcohol use of women of child-bearing age and pregnant women based on the most up-to-date evidence. Key recommendations are provided along with helpful strategies and resources for communication, screening, and brief interventions.

Coalescing on Women and Substance Use website - Alcohol and Pregnancy
http://www.coalescing-vc.org
Developed by the BC Ministry of Health in collaboration with the BC Centre of Excellence for Women's Health. Includes a brief overview of recent research findings on alcohol use during pregnancy; practical strategies for addressing alcohol issues with women; online resources for further reading and for sharing with women and their supports; reflection and discussion questions; and referral information for British Columbia.

Canada FASD Research Network, Girls, Women, Alcohol and Pregnancy blog
fasdprevention.wordpress.com
A collaborative, interdisciplinary research network. Resources and research related to diagnosing, intervening, and preventing FASD.

Project CHOICES Curriculum
http://www.cdc.gov/NCBDDD/fasd/freematerials.html
CHOICES: A Program for Women About Choosing Healthy Behaviors is an intervention for non-pregnant women of childbearing age and is designed to prevent alcohol-exposed pregnancies by addressing risky drinking and ineffective or no use of contraception. Resources available for free download include a Facilitator Guide, Counselor Manual, and Client Workbook.

PRIMA (Pregnancy-Related Issues in the Management of Addictions)
www.addictionpregnancy.ca
The PRIMA project assists physicians in providing care for pregnant and postpartum women with substance use problems through continuing education initiatives and web-based resources on the effects of various substances and clinical considerations.

The Essentials of… Motivational Interviewing
http://www.cnsaap.ca/SiteCollectionDocuments/PT-Essentials%20of%20Motivational%20Interviewing-20070322-e.pdf
Developed by the Canadian Centre on Substance Abuse, this resource defines and describes Motivational Interviewing and how it can be used to elicit change in substance use.

Best Start Drinking Alcohol while Breastfeeding Resource with Timetable
http://www.beststart.org/resources/alc_reduction/pdf/brstfd_alc_deskref_eng.pdf
This two-page resource promotes breastfeeding as the optimal method of infant nutrition. It provides important information for health care providers about reducing any possible negative effects of alcohol while continuing to support breastfeeding. It also provides a table for mothers of infants who go several hours without breastfeeding to assist in scheduling their alcohol consumption around breastfeeding.

Resources and Tools - for sharing with women and their support networks:

Best Start Alcohol and Pregnancy Pamphlet
http://www.beststart.org/resources/alc_reduction/pdf/bs_brochure_lr.pdf
This pamphlet addresses common questions women have around alcohol and pregnancy including, 'What happens if I drink alcohol when I am pregnant?' and 'What if I had a couple of drinks before I knew I was pregnant?'. It highlights the key message: so safe time, no safe kind, no safe amount and shares information on what is FASD, as well as resources for women who need help to stop drinking.

Give and Take: A Booklet for Pregnant Women about Alcohol and Other Drugs
http://www.aware.on.ca/sites/default/files/Give-and-Take.pdf
Booklet written by women to support pregnant women who struggle with substance use issues. It provides information about the effects of alcohol and other drugs on pregnancy and breastfeeding and acknowledges that many women find it difficult to quit or cut down substance use during pregnancy.

Healthy Pregnancies – Information for Partners
http://fasd.alberta.ca/information-for-partners.aspx
Web link to Alberta FASD website with information on partner's role and how to help.

Mocktails for Mom
http://www.beststart.org/resources/alc_reduction/LCBO_mocktail_Eng_LR.pdf
This booklet developed by the Best Start Resource Centre has recipes for delicious non-alcoholic drinks, also called 'mocktails.'

References

Andersen, A.M., Andersen, P.K., Olsen, J., Gronbaek, M., and Strandberg-Larsen, K. (2012). Moderate alcohol intake during pregnancy and risk of fetal death. *International Journal of Epidemiology*, 41(2): 405-413.

Bakhireva, L.N., Wilsnack, S.C., Kristjanson, A., Yevtushok, L., Onishenko, S., Wertelecki, W., and Chambers, C.D. (2011). Paternal Drinking, Intimate Relationship Quality, and Alcohol Consumption in Pregnant Ukrainian Women. *Journal of Studies on Alcohol and Drugs*, 72(4): 536-544.

Best Start Resource Centre. (2003). *Keys to a Successful Alcohol and Pregnancy Communication Campaign*. Best Start: Toronto, Ontario.

Carson, G., Cox, L.V., Crane, J., Croteau, P., Graves, L., et al., (2010). Alcohol use and pregnancy consensus clinical guidelines. *Journal of Obstetrics and Gynaecology Canada*, 32 (8 Suppl 3): S1-31.

Cismaru, M., Deshpande, S., Thurmeier, R., Lavack, A.M., and Agrey, N. (2010). Preventing fetal alcohol spectrum disorders: the role of protection motivation theory. *Health Marketing Quarterly*, 27(1): 66-85.

Feldman, S., Lyons Jones, K., Lindsay, S., Slymen, D., Klonoff-Cohen, Kao, H., Rao, S., and Chambers, C. (2012). Prenatal Alcohol Exposure Patterns and Alcohol-Related Birth Defects and Growth Deficiencies: A Prospective Study. *Alcoholism: Clinical and Experimental Research*, 36: 670–676.

France, K., Donovan, R.J., Henley, N., Bower, C., Elliott, E.J. et al. (2013). Promoting Abstinence From Alcohol During Pregnancy: Implications From Formative Research. *Substance Use & Misuse*, Early Online:1–13. DOI: 10.3109/10826084.2013.800118

Henderson, J., R. Gray, and P. Brocklehurst. (2007). Systematic review of effects of low moderate prenatal alcohol exposure on pregnancy outcome. *British Journal of Obstetrics and Gynaecology*, 114(3): 243–252.

Humphriss, R., Hall, A., May, M., Zuccolo, L., and Macleod, J. (2013). Prenatal alcohol exposure and childhood balance ability: findings from a UK birth cohort study. *BMJ Open*, 3(6).

Kelly, Y., Iacovou, M., Quigley, M.A., Gray, R., Wolke, D., Kelly, H, Sacker, A. (2013). Light drinking versus abstinence in pregnancy - behavioural and cognitive outcomes in 7-year-old children: a longitudinal cohort study. *BJOG*, 120(11): 1340-7.

Kelly, Y. J., Sacker, A., Gray, R., Kelly, J., Wolke, D., Head, J., et al. (2012). Light drinking during pregnancy: Still no increased risk for socioemotional difficulties or cognitive deficits at 5 years of age? *Journal of Epidemiology and Community Health*, 66(1), 41-48.

Kelly, Y., Sacker, A., Gray, R., Kelly, J., Wolke, D., & Quigley, M. A. (2008). Light drinking in pregnancy, a risk for behavioural problems and cognitive deficits at 3 years of age? *International Journal of Epidemiology*, 38, 129-140.

Niccols, A., C.A. Dell, and S. Clarke. (2009). Treatment Issues for Aboriginal Mothers with Substance Use Problems and Their Children. *International Journal of Mental Health and Addiction*, 8: 320-335.

B1ii

Standard Lecture | Innovative Practices

Best Practice Guidelines for the Treatment of Major Depression in the Perinatal Period

Deirdre Ryan

Best Practice Guidelines for the Treatment of Major Depression in the Perinatal Period

Dr. Deirdre Ryan, Psychiatrist
Medical Director,
Reproductive Mental Health Program,
BCMHSUS

Learning Objectives:

- Introduction to B.C.'s Best Practice Guidelines for Mental Health Disorders in the Perinatal Period
- To become familiar with recommendations specific to Major Depressive Disorder in the Perinatal period
- Medication Tables and the Importance of Informed Consent

Partners:

- **B.C. Reproductive Mental Health Program**
- **Perinatal Services B.C.**

(Both are agencies of the Provincial Health Services Authority in BC)

Special Thanks To:

- Janet Williams,BSN, MBA, Project Lead and Main Author
- Kate Thomas-Peter, BSc, MSc., Project Manager
- Barbara Cadario, BSc(Hons), BScPharm, MSc
- Dorothy Li, BScPharm
- Janet Walker, RN,MSN, Editor

Background:

- Time for Update - Last Best Practice Guidelines written in 2003
- Ongoing requests from health care providers and women for information about safety of psychotropic medications in pregnancy and breastfeeding
- Ongoing requests from health care providers and women for advice about different treatment options to address mental health disorders in pregnancy and postpartum.

Disorders Reviewed in the Guideline:

- Major Depressive Disorder
- Anxiety Disorders
- Bipolar Disorder
- Psychotic Disorders, including Schizophrenia and Postpartum Psychosis
- Special Section on Suicide and Infanticide

What's New in "Mental Health Disorders in the Perinatal Period (2013)"

- More information about the clinical presentations of all the disorders
- Each Disorder has a **Key Points and Recommendations Section**
- More detail about Non- Pharmacological treatment options.
- More medications covered in the Medication Tables, and more information addressing common concerns about exposure of the fetus/infant to medications
- Suggested Questions to ask when there are concerns about suicide risk or infanticide risk and **Developing a Safety Plan**.
- More in-depth discussion about Screening

Prevalence of Major Depressive Disorder in the Perinatal Period

Major Depressive Disorder (MDD)

- Estimates suggest that between 5% - 16% of women will experience MDD at some point during their pregnancy.
- Estimates suggest that between 4.2% - 9.6% will experience a major depressive disorder between birth and 3 months postpartum
- Estimates vary between 9.3% and 31% for the first year postpartum.
- **No evidence that there is a difference in prevalence between perinatal women and women of childbearing age.**

PND or MDD in the Perinatal Period

- The DSM-V criteria for diagnosis of "depression with peripartum onset" indicates that the onset of the depressive episode must occur during pregnancy or within four weeks after childbirth
- Clinical experience in BC has shown that symptoms can appear anytime up to one year postpartum.

PND or MDD in the Perinatal Period

The **DSM-V criteria for a Major Depressive Disorder** include:

At least one of the following must be present for at least a 2-week time period:

- Depressed mood or Anhedonia (loss of interest or pleasure).

At least five or more of the following must be present over the same 2-week time period:

- Feeling sad most of the time, nearly every day.
- Decrease in pleasure or interest in all, or almost all, daily activities, nearly every day.
- Changes in appetite (with marked weight gain or loss).
- Sleep disturbance (insomnia, hypersomnia), nearly every day.
- Psychomotor retardation or agitation nearly every day (observable by others).
- Lack of energy or fatigue nearly every day.
- Feelings of worthlessness or excessive or inappropriate guilt nearly every day.
- Difficulty concentrating, or making decisions, nearly every day.
- Frequently occurring thoughts of death, suicide or suicidal plan.
- Symptoms must cause significant impairment or distress in social, occupational or other important daily living functions.

Risk Factors :

Major Risk Factors:

- **Personal history of depression.** This is the strongest risk factor for depression during pregnancy and a strong predictor of postpartum depression.
- Up to 50% of women who have a history of depression before conception and during pregnancy will experience depression during the postpartum period.
- **History of postpartum depression with a previous pregnancy**. More than 40% of women who experience postpartum depression will experience a recurrent episode after a subsequent pregnancy.
- **Family history of depression.** Up to 50% of women experiencing postpartum depression have a family history of psychiatric illness.

Risk Factors:

Contributing risk factors include:

- Excessive anxiety during pregnancy or postpartum
- Poor social support – social isolation, recent move, poverty, cultural or language issues.
- Poor partner relationship/conflict.
- Recent adverse life events (e.g., loss of close relative or friend).
- Life/financial stress.
- Domestic violence.
- Unintended pregnancy/ambivalence towards pregnancy.
- Infants with health problems or perceived difficult temperaments.
- Chronic/acute maternal health problems.

Impact of Untreated mental health disorders in the Perinatal Period

Potential impacts on women:

- Negative attitude toward motherhood & themselves as mothers.
- See their baby's behaviour as "difficult".
- May not recognize their baby's cues & respond appropriately, with potential of negative consequences to baby's development.
- May breastfeed for shorter period of time.
- May use alcohol, cigarettes or other substances.
- Increased risk of future episodes of depression and other mental health issues.
- Risk of suicide (rare but does occur, especially in cases of untreated postpartum psychosis).

Impact of Untreated mental health disorders in the Perinatal Period

Potential impacts on babies:

- Behaviour disturbances:
  - Quicker to cry & cry louder & longer.
  - Spend less time in the 'quiet & alert' state when they learn the most about their environment.
- Development delays:
  - May walk & talk later than others.
- Social issues:
  - May have more difficulty establishing secure relationships.
  - May be socially withdrawn.
- Risk of infanticide (rare but does occur, especially in cases of untreated postpartum psychosis).

Impact of Untreated mental health disorders in the Perinatal Period

Potential impacts on partners/families:

- Relationship disruption (increased risk of separation/divorce).
- Partners may also be depressed and may need treatment.
- A meta-analysis of depression rates in men in the perinatal period reported:

  Depression rates of about 10% (studies ranged from 1.2% - 25.5%).

  Rates were highest in the 3 – 6 month postpartum period.
- A moderate positive correlation between paternal and maternal depression.
- Partner depression in the perinatal period has been shown to have many of the same negative impacts on relationships, family and the baby as maternal depression.

Screening for Perinatal Depression Using the Edinburgh Postnatal Depression Scale (EPDS)

Perinatal Services BC
An agency of the Provincial Health Services Authority

Edinburgh Perinatal/Postnatal Depression Scale (EPDS)

For use between **28 – 32 weeks** in **all** pregnancies and **6 – 8 weeks** postpartum

Name: ______________ Date: ________ Gestation in Weeks: _____

As you are having a baby, we would like to know how you are feeling. Please mark "X" in the box next to the answer which comes closest to how you have felt in the **past 7 days** – not just how you feel today.

In the past 7 days:

1. I have been able to laugh and see the funny side of things
   - 0 ☐ As much as I always could
   - 1 ☐ Not quite so much now
   - 2 ☐ Definitely not so much now
   - 3 ☐ Not at all
2. I have looked forward with enjoyment to things
   - 0 ☐ As much as I ever did
   - 1 ☐ Rather less than I used to
   - 2 ☐ Definitely less than I used to
   - 3 ☐ Hardly at all
3. I have blamed myself unnecessarily when things went wrong
   - 3 ☐ Yes, most of the time
   - 2 ☐ Yes, some of the time
   - 1 ☐ Not very often
   - 0 ☐ No, never
4. I have been anxious or worried for no good reason
   - 0 ☐ No, not at all
   - 1 ☐ Hardly ever
   - 2 ☐ Yes, sometimes
   - 3 ☐ Yes, very often
5. I have felt scared or panicky for no very good reason
   - 3 ☐ Yes, quite a lot
   - 2 ☐ Yes, sometimes
   - 1 ☐ No, not much
   - 0 ☐ No, not at all
6. Things have been getting on top of me
   - 3 ☐ Yes, most of the time I haven't been able to cope
   - 2 ☐ Yes, sometimes I haven't been coping as well as usual
   - 1 ☐ No, most of the time I have coped quite well
   - 0 ☐ No, I have been coping as well as ever
7. I have been so unhappy that I have had difficulty sleeping
   - 3 ☐ Yes, most of the time
   - 2 ☐ Yes, sometimes
   - 1 ☐ Not very often
   - 0 ☐ No, not at all
8. I have felt sad or miserable
   - 3 ☐ Yes, most of the time
   - 2 ☐ Yes, quite often
   - 1 ☐ Not very often
   - 0 ☐ No, not at all
9. I have been so unhappy that I have been crying
   - 3 ☐ Yes, most of the time
   - 2 ☐ Yes, quite often
   - 1 ☐ Only occasionally
   - 0 ☐ No, never
10. The thought of harming myself has occurred to me
    - 3 ☐ Yes, quite often
    - 2 ☐ Sometimes
    - 1 ☐ Hardly ever
    - 0 ☐ Never

Total Score ☐

Talk about your answers to the above questions with your health care provider.

Translations for care-provider use available on PSBC website: perinatalservicesbc.ca.

Screening for Perinatal Depression Using the EPDS:

- Assuming care pathways are established, **<u>screen all women for perinatal depression.</u>**
- Screen using the Edinburgh Postnatal Depression Scale or EPDS at least once during pregnancy and once in the postpartum period. Suggested timeframes for administering the EPDS are: **28 to 32 weeks gestation** (although the tool is valid anytime during pregnancy), **6 to 16 weeks postpartum** and anytime concerns are identified.

  EPDS Scores: Interpretation and Actions:

  <u>Score Less than 8:</u>
- Depression not likely
- Continue support

  <u>Score 9 – 11:</u>
- Depression possible
- Support, re-screen in 2-4 weeks. Consider referral to primary care provider (PCP)

  <u>Score 12 – 13:</u>
- Fairly high possibility of depression
- Monitor, support and offer education. Refer to PCP.

Screening for Perinatal Depression Using the EPDS:

<u>EPDS Score 14 and higher (positive screen)</u>

- Probable depression
- Diagnostic assessment and treatment by PCP and/or specialist.

  <u>Positive score (1, 2 or 3) on question 10</u>
- (suicidality risk)
- Immediate discussion required.

  Refer to PCP +/- mental health specialist or emergency resource for further assessment and intervention as appropriate. Urgency of referral will depend on several factors including: whether the suicidal ideation is accompanied by a plan, whether there has been a history of suicide attempts, whether symptoms of a psychotic disorder are present and/or there is concern about harm to the baby.

Screening for Perinatal Depression: Controversial!!

- On May 13, 2013, The Canadian Task Force on Preventive Health Care recommended <u>NOT ROUTINELY SCREENING</u> for Depression, even in the perinatal period:

  "Due to a lack of high quality evidence on the benefits and harms of screening, the new guideline recommends not routinely screening adults who show no apparent symptoms of depression."

- A Forum has been called for Jan 17th, 2014 to address the issue of universal screening for depression in pregnancy and postpartum

Recommendations for all mental health disorders in the perinatal period:

Encourage women with a history or family history of a mental health disorder to plan their pregnancy, ideally timed when their mood (and physical condition) is as stable as possible.

- For women with a chronic mental health disorder:
  - Work with the woman and other healthcare providers pre- and during pregnancy to develop **an individualized treatment plan** which optimizes the woman's mental health during the perinatal period.
  - Consider referring the woman to a psychiatrist pre- or during pregnancy to assist with treatment planning and ongoing monitoring of the woman's mental health status during the perinatal period.
  - If a woman decides to stop taking her medications prior to or upon discovery of her pregnancy without consulting a healthcare professional, pay particular attention to her mental status throughout the pregnancy and especially in the postpartum period (high risk of relapse).

Treatment of Mental Health Disorders in the Perinatal Period:

Mild to Moderate Symptoms:

- Psychoeducation
- Self-Care: The NEST-S Program
  Mind- Body Modalities e.g. Meditation, Mindfulness
- Psychotherapies
  - Cognitive Behavioural Therapy (CBT) or MCBT
  - Interpersonal therapy (IPT)
  - Psychodynamic therapy (PDT)
  - Group Therapy (therapist and/or peer led)
  - Parent-Infant psychotherapy
  - Couples and Family therapy
- Bright Light Therapy

NESTS Program:

Each letter in **NEST-S** stands for one area of **self-care**:

- **N**utrition: Eating nutritious foods throughout the day.
- **E**xercise: Getting regular exercise. There is considerable research on the benefits of exercise for improving depression.[77]
- **S**leep & rest: Sleep is very important for both physical and mental health. Getting enough in the perinatal period can be challenging.
- **T**ime for self: Taking self-time is an area that new mothers often neglect. This is a particular concern in women who are depressed and/or experiencing other mental health disorders.
- **S**upport: Social support plays an important role in helping new mothers adjust to the life changes that go along with being a mother. Healthy relationships are a protective factor against depression and other mental health disorders and are an important factor in recovery.

Recommendations for all Mental Health Disorders in the Perinatal Period:

- **For women with moderate to severe symptoms requiring psychotropic medications in the perinatal period:**
  - Support **informed decision-making** by **discussing the risks and benefits** of the medications with the woman as well as the risks of not treating her symptoms. Involve the woman's partner and other family members whenever possible and where appropriate.
  - **Risks of Medication exposure in pregnancy may include:**

    Spontaneous Abortion/ obstetrical complications
    Major Congenital Malformation
    Neonatal Adaptation Syndrome
    Persistent Pulmonary Hypertension of the Newborn
    Possible longterm developmental Effects

  - **Risks of Not Treating her Symptoms may include:**

    increased risk of obstetrical complications
    self-medication or substance use
    compromised mother/infant interactions
    cognitive, emotional and behavioural impairments in the developing child
    maternal suicide and infanticide.

Recommendations for all Mental Health Disorders in the Perinatal Period:

- **Where possible, encourage breastfeeding** (psychotropic medications are not usually a contraindication to breastfeeding):
  - **Maximize the breastfeeding support** provided to women to increase the probability of success (e.g., refer to a lactation consultant and/or public health nurse).
  - In situations where exclusive breastfeeding is not possible (e.g., medical reasons for the mother/baby or there are challenges with breastfeeding, including significant psychological stress for the mother), **support infant feeding options that promote optimal nutrition for the baby and consider the health and wellbeing of the mother**. This may include use of the mother's own expressed breast milk, pasteurized donor milk and supplementation with formula and/or formula feeding.
  - Encourage women wanting to breastfeed but whose babies are premature or have significant health problems to discuss their psychotropic medications with their baby's pediatrician.

Recommendations for all Mental Health Disorders in the Perinatal Period:

- **For women requiring psychotropic medications in the perinatal period:**
  - Use the minimum number of psychotropic medications at the lowest effective dose.
  - When breastfeeding whilst taking psychotropic medications, monitor the baby for any adverse effects.
- Encourage women with severe mental health disorders that require multiple psychotropic medications to deliver in a hospital (versus a home birth). This will facilitate closer monitoring of the mother and baby.

Recommendations for all Mental Health Disorders in the Perinatal Period:

- Educate partners and family members about recognizing the symptoms of mental health disorders and ways to support women during pregnancy and after the birth.
- Support should include ways to maximize the woman's opportunity for adequate sleep.

Recommendations Specific to Perinatal Depression:

For Women with mild to moderate MDD who have been clinically stable for 4-6 Months and Risk of Relapse is Low:

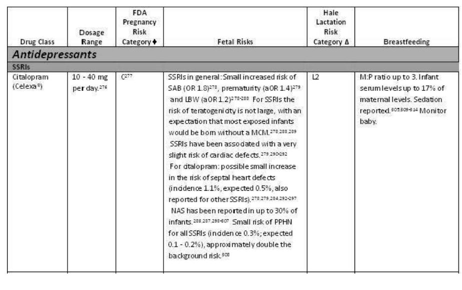
- Focus on Psychoeducation, Self-Care and/or Psychotherapies
- If taking a medication, consider gradually discontinuing the medication prior to pregnancy.
- If evidence of postpartum relapse, consider recommencing an SSRI medication, if non-pharmacological treatments are not fully effective in treating the women's symptoms.

Recommendations Specific to Perinatal Depression:

For Patients with Moderate to Severe MDD who are symptomatic or Risk of Relapse is High:

- Medications are frequently requiresd, in addition to Psychoeducation, Self-Care and/or Psychotherapy
- If taking an antidepressant, continue with the current medication, if effective.
- If not taking an antidepressant and one is required during pregnancy, consider an SSRI (1st option) or SNRI (2nd. Option). If possible, avoid paroxetine
- At birth, maintain therapeutic dose of antidepressant to reduce the risk of postpartum relapse.
- Dose adjustments may be necessary postpartum. Treat for 6-12 months .

Appendix 5: Psychotropic Medications Used in the Perinatal Period
SSRIs: Citalopram



Drug Class	Dosage Range	FDA Pregnancy Risk Category ♦	Fetal Risks	Hale Lactation Risk Category Δ	Breastfeeding
Antidepressants					
SSRIs					
Citalopram (Celexa®)	10 - 40 mg per day.[276]	C[277]	SSRIs in general: Small increased risk of SAB (OR 1.8)[278], prematurity (aOR 1.4)[279] and LBW (aOR 1.2)[278-288] For SSRIs the risk of teratogenicity is not large, with an expectation that most exposed infants would be born without a MCM.[278,288,289] SSRIs have been associated with a very slight risk of cardiac defects.[279,290-292] For citalopram: possible small increase in the risk of septal heart defects (incidence 1.1%, expected 0.5%, also reported for other SSRIs).[278,279,284,292-297] NAS has been reported in up to 30% of infants.[283,287,298-307] Small risk of PPHN for all SSRIs (incidence 0.3%; expected 0.1 - 0.2%), approximately double the background risk.[308]	L2	M:P ratio up to 3. Infant serum levels up to 17% of maternal levels. Sedation reported.[305,309-314] Monitor baby.

Appendix 6: Suggested Actions/Monitoring for Women on Psychotropic Medications in the Perinatal Period

Psychotropic Medication	Pregnancy	At Birth	Breastfeeding
Antidepressants			
SSRIs (except Paroxetine) SNRIs	Folic acid (0.4-1.0 mg daily). Detailed ultrasound 18-20 weeks.	Monitor for Neonatal Adaptation Syndrome (NAS). Take baby's vital signs post-delivery q4 hr x 24 hr. If possible, measure O_2 sat using pulse oximeter 1 hr post-delivery & q4 hr with vital signs x 24 hrs. If O_2 sat low, consult with pediatrician (to rule out rare congenital heart defects or PPHN).	Considered safe; however: • Monitor baby for adverse effects (e.g., sedation, poor feeding & irritability). • If concerns, check baby's serum drug level (if possible).

Suicide

Pregnancy-related maternal mortality is rare.

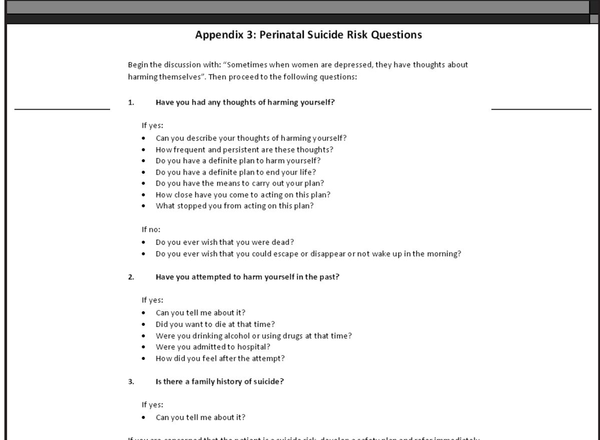
However, of the causes, **suicide is the most common cause of death during pregnancy and in the first postpartum year**. BC data from 2001 to 2010 presented to the Maternal Mortality Review Committee of Perinatal Service BC (unpublished, 2013) showed that of women in the perinatal period, there were:

- 10 documented suicides (3 during pregnancy and 7 during the first year postpartum).
- 3 accidental poisonings "suggestive" of suicide.
- 1 "traumatic" death.
- 3 deaths involving trauma and/or drugs where suicide could not be ruled out.

- In BC in 2008, the estimated pregnancy-related mortality rate was 7.6 per 100,000 births (BC Maternity Mortality Review Committee, 2008; www.perinatalservicesbc.ca). If suicides and deaths suspicious for suicide were to be included, this rate could increase to as high as 11.6 per 100,000.

Suicide and Infanticide:

- Suicide is four times more likely to occur in the nine months after childbirth than during pregnancy.
- Psychiatric illness leading to suicide was a significant factor in at least 28% of maternal deaths in the United Kingdom.
- Women who have had a postpartum psychiatric admission have a 70 times greater risk of suicide in their first postpartum year.
- Violent suicides appear more common in childbearing women who commit suicide than in the population generally.
- It is important that women who are depressed and have suicidal thoughts in the perinatal period be assessed for suicide risk and, if present, appropriate actions taken.



Appendix 3: Perinatal Suicide Risk Questions

Begin the discussion with: "Sometimes when women are depressed, they have thoughts about harming themselves". Then proceed to the following questions:

1. **Have you had any thoughts of harming yourself?**

   If yes:
   - Can you describe your thoughts of harming yourself?
   - How frequent and persistent are these thoughts?
   - Do you have a definite plan to harm yourself?
   - Do you have a definite plan to end your life?
   - Do you have the means to carry out your plan?
   - How close have you come to acting on this plan?
   - What stopped you from acting on this plan?

   If no:
   - Do you ever wish that you were dead?
   - Do you ever wish that you could escape or disappear or not wake up in the morning?

2. **Have you attempted to harm yourself in the past?**

   If yes:
   - Can you tell me about it?
   - Did you want to die at that time?
   - Were you drinking alcohol or using drugs at that time?
   - Were you admitted to hospital?
   - How did you feel after the attempt?

3. **Is there a family history of suicide?**

   If yes:
   - Can you tell me about it?

If you are concerned that the patient is a suicide risk, develop a safety plan and refer immediately

Suicide and Infanticide:

Concern about harm to the baby

- The baby's safety is paramount. Ask who will be responsible for the care of the baby or supervision of the mother's care of the baby and, if appropriate, make contact with the partner or other family member(s).
- A Social Worker at the Ministry of Child and Family Development should also be contacted (phone: 310-1234, no area code required) for their assessment of the suitability of alternative carers or supervisors and the home circumstances. Good communication between all agencies is vital to the safety of the baby as well as the mother.

Developing a safety plan

- A healthcare provider should develop a safety plan in collaboration with the woman and a responsible family member or friend.
- A safety plan is a prioritized list of coping strategies and sources of support that women can use when they experience suicidal thoughts.

General Responses to Identified Suicide Risk

Table 12: General Responses to Identified Suicide Risk

Ask • Suicidal thoughts • Plan • Lethality • Means **Consider risk to the infant at all times**		
Suicidal ideation or thoughts only, without a plan	**Suicidal ideation with a plan or history of suicide attempt, without immediate intent**	**Suicidal ideation with an imminent plan**
Low Risk	**Medium Risk**	**High Risk**
• Refer to primary care provider (PCP) as soon as possible for further assessment &/or mental health referral	• Contact PCP to discuss need for urgent mental health assessment	• Refer immediately to local Emergency Room
• Provide information about crisis/urgent telephone lines e.g., 1 800-SUICIDE (1-800-784- 2433)	• Provide information about crisis/urgent telephone lines	• If family unable to take woman to ER, call 911 (or other immediate response such as 'car 87' in Vancouver)
• Develop a Safety Plan with the woman (see section on Developing a Safety Plan)	• Develop a Safety Plan with the woman (see section on Developing a Safety Plan)	

Components of a Safety Plan

Table 13: Components of a Safety Plan

Safety Plan:

1. Warning signs of the risk of imminent suicide (e.g., feeling trapped, worthless, hopeless, talking about death, writing a will, hoarding medications).
2. Coping strategies that decrease the woman's level of risk (activities that calm or comfort the woman such as deep breathing, meditation, taking a bath, a walk, etc).
3. People within the woman's network who can assist in times of need (friends/family).
4. Health professionals, agencies and crisis lines that can be contacted for help.

Safety plans need to be frequently revisited and modified as needed.

Table 14: Sample Safety Plan

Example of a safety plan:

Mary told her public health nurse that she was having thoughts that '*she would be better off dead*'. She had no definite plan and no immediate intention to end her life. Through discussion and identifying the issues for her, the public health nurse helped Mary to draw up her safety plan.

Mary's Safety Plan

1. Warning signs to look out for: *Hoarding my antidepressants. Feeling like a failure.*
2. Coping strategies: *Going for a walk with neighbour, Ann. Practising mindfulness meditation.*
3. Phone numbers of friends who can be called on: *Ann: XXX-XXX-XXXX. Joan: XXX-XXX-XXXX.*
4. Supportive Health Professionals: *Family Physician: Dr A, XXX XXX XXXX. Crisis Line: 1-800-784-2433. Emergency: 911.*

Coping and Support Networks

- **Community Resources for Moms**
- Family Physician/Midwife/Nurse Practitioner
- Local Public Health Nurse
- Local Mental Health Team
- Emergency Room
- HealthLink BC at 811 (24/7). Provides non-emergency health information. www.healthlinkbc.ca
- Mental Health Support/Crisis Line at 310-6789 (no area code) (24/7). Provides mental health support, information and resources
- Suicide Line at 1-800-784-2433 or 1-800-SUICIDE (24/7). Provides skilled suicide assessment and intervention. www.crisiscentre.bc.ca

- **Self-Care Guides for Moms**
- Coping with Depression during Pregnancy & Following the Birth: A Cognitive Behaviour Therapy-based Self-Management Guide for Women. Download from www.bcmhas.ca
- Coping with Anxiety during Pregnancy and Following the Birth: A Cognitive Behaviour Therapy-based Resource and Self-Management Guide for Women and Healthcare Providers, 2013. www.bcmhas.ca
- PPD & anxiety: a self-help guide for mothers (small cost). Order from www.postpartum.org

Coping and Support Networks

Resources for BC Physicians:

- Psychiatrist from BC Reproductive Mental Health available M-F 09:00-16:30 @ 604-875-2025
- Reproductive Mental Health Programs:
- BC Reproductive MH (BC Women's): 604-875-2025; www.bcmhas.ca
- St Paul's: 604-806-8589
- Richmond: 604-244-5488
- Royal Columbian: 604-520 4662
- Surrey Memorial: 604-582-4558
- Victoria General: 250-737-4529
- Kamloops Perinatal Support Services: 250-377-6500
- Motherisk (information for physicians and patients regarding medication safety in pregnancy and while breastfeeding from the Hospital for Sick Children in Ontario). www.motherisk.org
- BC Psychosis Program (UBC Hospital): Inpatient services to patients with psychotic illness (referral required). www.vch.ca
- Edinburgh Postnatal Depression Scale (PEDS) is available in multiple languages at www.perinatalservicesbc.ca
- Medical Genetics Programs
  - BC Women's (genetic counselling); ph: 604-875-2000, ext 4733.
  - Victoria General Hospital: ph: 250-727-4461.

Acknowledgements:

REVIEW GROUP

- **Tricia Bowering,** MD**,** FRCPC, Psychiatrist
- **Diana Carter,** MB., BS, FRCPC, Psychiatrist
- **Sheryl Davis-Kahn**, MA, RCC. Clinical Counsellor
- **Andrea Kennedy,** MD, FRCPC, Psychiatrist
- **Shaila Misri**, MD, FRCPC, Psychiatrist
- **Christie Newton,** MD, CCFP, Family Physician
- **Pratibha Reebye**, MB., BS., FRCPC, Infant Psychiatrist.
- **Barbara Shulman**, MD, FRCPC, Psychiatrist
- **Jana H Wong,** MSW, RSW. Social Worker.
- **Leanne Yeates,** RM, BHSc, BA. Midwife.

ADVISORY GROUP:

- **Sarah Bell**, MBA., RN., CHE., Executive Director, Children's and Women's Mental Health Programs, BC Mental Health and Substance Use Services
- **Joan Geber** RN, BN, MPA. Executive Director, Healthy Development and Women's Health Population and Public Health, Ministry of Health BC.

Mental Health Disorders in the Perinatal Period

DOWNLOAD COPIES FROM :

- BC Reproductive Mental Health www.reproductivementalhealth.ca
- BC Mental Health and Substance Use Services www.bcmhsus.ca (Programs and Services)
- Perinatal Services BC www.perinatalservicesbc.ca .

PURCHASE HARD COPIES FROM :

- C&W Bookstore, http://bookstore.cw.bc.ca

B1iii Standard Lecture | Innovative Practices

Use of Ultrasound in Clinical Dating of Pregnancy

Kenneth Lim

Dr Kenneth Lim, MD, FRCSC.
Clinical Associate Professor,
Dept. of Obstetrics/Gynecology, University of British Columbia
Medical Director, Diagnostic Ambulatory Program, BC Women's Hospital

LEARNING OBJECTIVES:

1. **To review sources of error with clinical dating.**
2. **To review the evidence for ultrasound based gestational age assessment.**
3. **To review the SOGC guideline on gestational age assessment.**

INTRODUCTION: The accurate dating of pregnancy is critically important for pregnancy management from the first trimester to delivery. The timing of interventions (eg. IOL for post dates, corticosteroids for prematurity) and investigations (eg. detailed ultrasound, maternal serum screening) depends on the gestational age assigned to the pregnancy. Prior to the widespread use of ultrasound, caregivers relied on a combination of history and physical exam to clinically determine gestational age. With the widespread use of ultrasound, a direct method to measure the embryo/fetus was readily available allowing estimates of gestational age when clinical information was lacking. As new information emerges in fields such as reproductive biology, perinatal epidemiology and medical imaging, our current clinical practice which relies heavily on accurate menstrual history, is being challenged. There is more uncertainty with "certain" menstrual dating than previously thought.

In the past, it was probably felt that a few days of inaccuracy was acceptable, however, emerging data suggests that a few days of inaccuracy can affect things such as the performance of maternal serum screening, the occurrence of post dates pregnancy and subsequent induction of labor. Although a number of women are very aware of their internal reproductive rhythms and can have very accurate awareness of ovulation, this is not true for everyone.

There are many different methods and algorithms in current use to estimate the gestational age of the fetus. Because there is no one accepted standard, this can be a cause of confusion when different caregivers are using different gestational age estimates based on different algorithms/rules. Different care providers may also have conflicting information as well, adding to the confusion. The goal of this guideline is to try and establish a common, simple way to estimate the CLINICAL gestational age (as opposed to BIOLOGICAL) in the absence of precise knowledge of date of conception. The concept of CLINICAL dating is a functional and practical concept.

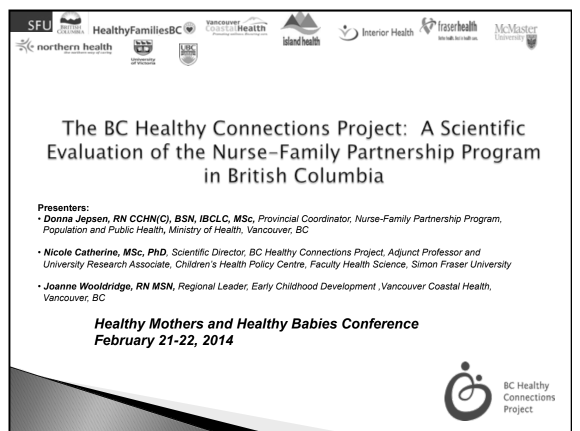
When ultrasound is performed with quality and precision, there is evidence to suggest that dating a pregnancy using ultrasound measurements is clinically superior compared to using menstrual dating with or without ultrasound and this has been advocated and adopted in other jurisdictions. Based on the available research, the use of ultrasound derived dates is the best method to determine gestational age for clinical use, especially if standardized biometry charts are to be used (as is happening in BC). It is not intended to be used to determine the exact date of fertilization because of biological variability in reproduction, fetal size and development. It is acknowledged that clinical history may have value in determination of gestational age and on rare occasions supercede ultrasound dating; however, in order to achieve the most clinical benefit, the use of ultrasound dating should be used predominantly.

B2i

Panel Session | New Research

The BC Healthy Connections Project: A Scientific Evaluation of Nurse-family Partnership in British Columbia

Donna Jepsen, Nicole Catherine, Joanne Wooldridge



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.
  - Nicole Catherine
  - Joanne Wooldridge
  - Donna Jepsen

Learning Objectives

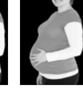
1. Review the scientific methodology of the BC Healthy Connections Project (BCHCP), including the randomized controlled trial (RCT) and process evaluation (PE) methods.
2. Discuss the collaborative governance structure built in between policy, practice, research and community stakeholders.
3. Inform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

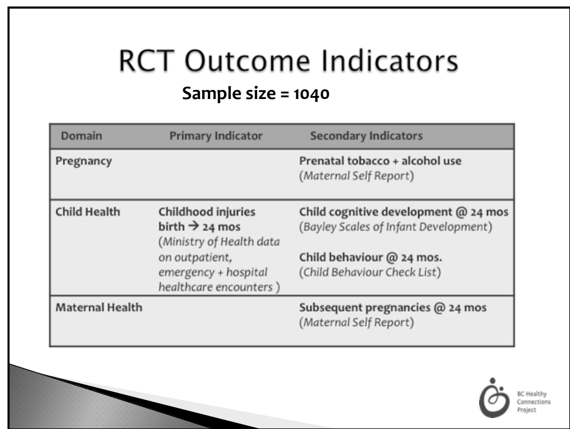
- Assess feasibility and acceptability of delivering the NFP program in small rural and remote settings

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 birth[1] 3. Less than 27 weeks gestation[2] 4. Competent to provide informed consent, including conversational competence in English[3] 5. Experiencing socioeconomic disadvantage[4]
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 longer[5]

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

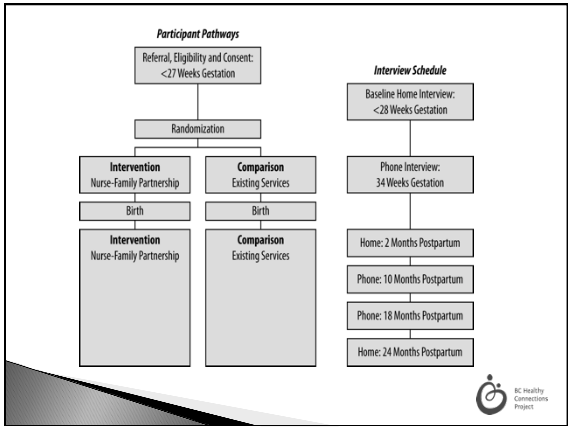
Randomized Controlled Trial Methodology



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*)



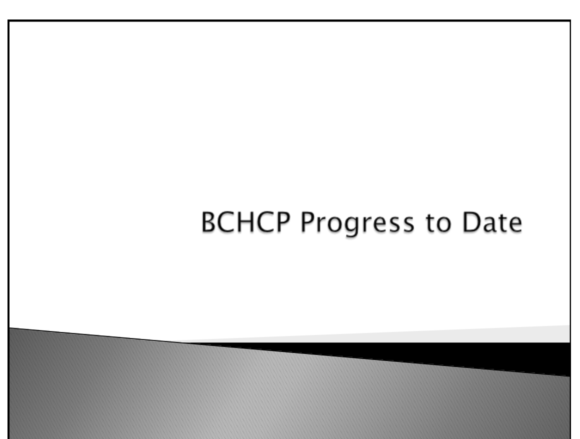
Process Evaluation Methodology

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



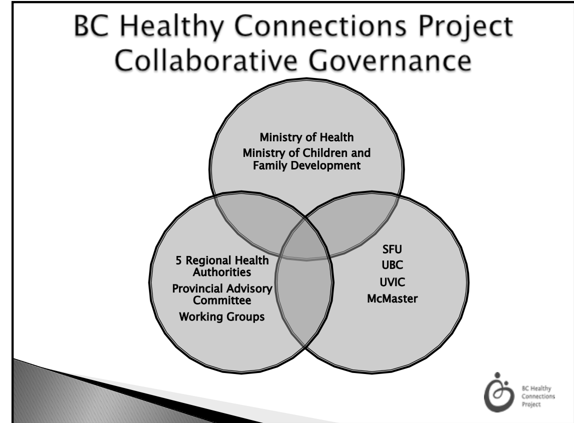
BCHCP Phase I (2012-2014)

- 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

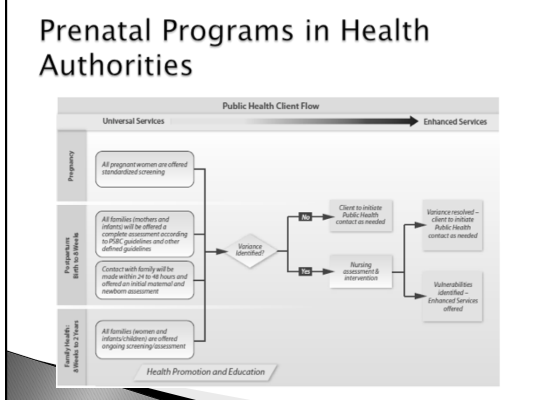
Universal Service Statement

- 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

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.

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

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

Nurse-Family Partnership
Helping First-Time Parents Succeed

BC Healthy Connections Project

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/

Nicole Catherine, MSc, PhD, Scientific Director of the BC Healthy Connections Project, Children's Health Policy Centre, Simon Fraser University
email: nicole_catherine@sfu.ca

Joanne Wooldridge, RN MSN, Regional Leader, Early Childhood Development, Vancouver Coastal Health
email: joanne.wooldridge@vch.ca

Donna Jepsen RN CCHN(C), BSN, IBCLC, MSc
Provincial Coordinator, Nurse-Family Partnership Program
Healthy Development and Women's Health Branch
Population and Public Health, Ministry of Health
Suite 201- 601 West Broadway, Vancouver, B.C. V5Z 4C2
Direct Line: 604-707-6372 donna.jepsen@gov.bc.ca

Funding

BC Ministry of Health
BC Ministry of Children and Family Development

BC Health Authorities
Fraser Health, Interior Health, Northern Health
Vancouver Coastal Health, Vancouver Island Health

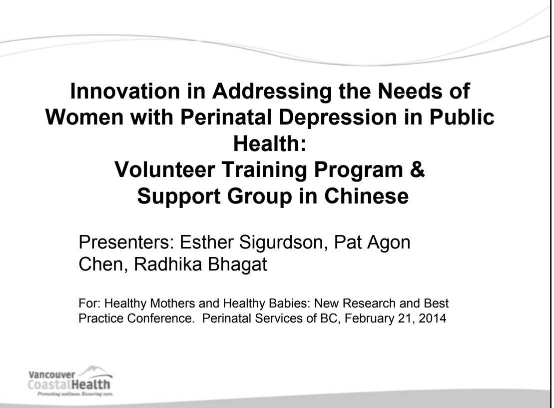
Canada Research Chairs Program
Djavad Mowafaghian Foundation
Public Health Agency of Canada

B2ii

Panel Session | Innovative Practices

Innovation in Addressing the Needs of Women with Perinatal Depression in Public Health: Volunteer Training Program and Support Group in Chinese

Esther Sigurdson, Pat Agon Chen, Radhika Bhagat



Session Objectives

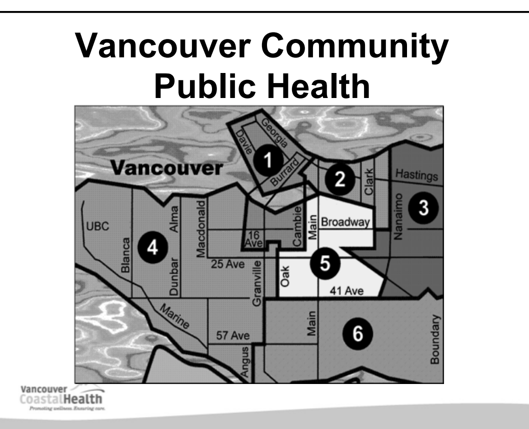
Participants will:

- Learn about 2 innovative practices
- Gain an understanding of the strengths, challenges and barriers
- Learn how to duplicate one or both of the practices in your community or area of practice

Vancouver CoastalHealth

Journey

Vancouver Community Public Health

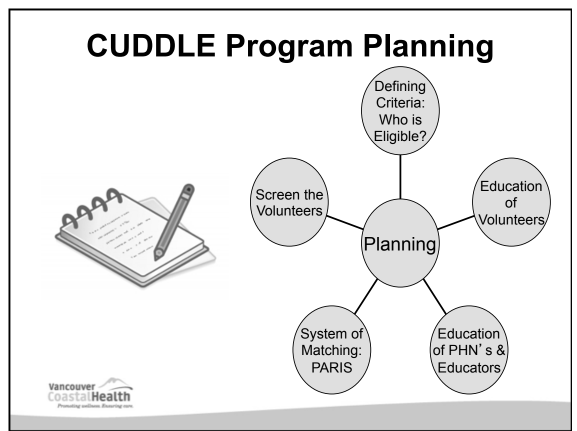


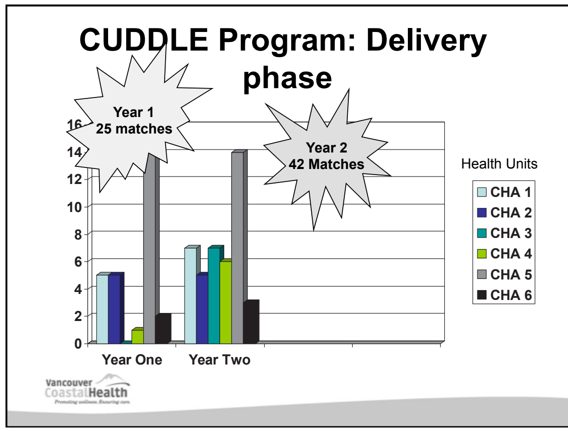
The CUDDLE Program: Background

- **CUDDLE** stands for
- **C**aring,
- **U**nderstanding,
- **D**esire to help by **D**oing and being with,
- **L**istening, and
- **E**ncouragement

Vancouver CoastalHealth

6





CUDDLE Program: evaluating and sustaining

- EPDS pre/post
- Evaluations completed by clients, volunteers and PHN's
- Developed a training program-responsive and efficient, coordinated between volunteer program and 2 Educators
- 50% of the volunteers are referred by other cuddle volunteers

Vancouver Coastal Health

What the Moms & Volunteers have to say:

KEEP CALM AND VOLUNTEER

Vancouver Coastal Health

CUDDLE program: Lessons learned

WHO
WHAT
WHERE
WHEN
WHY
HOW
QUESTIONS
ANSWERS

Vancouver Coastal Health

Chinese PND Group: planning

PHASE 1 (2011): PHN driven

- Resources
  - Challenges with source, translation
  - What was developed, modified
- MH training of PHN
- Setting up the group
  - Space, childcare, recruiting
- Use of volunteers

Vancouver Coastal Health

Chinese PND Group: planning

PHASE 2 (2013): Public Health & Mental Health Partnership

- Role of Mental Health Clinician vs PHN
- Resources
  - Modification What was developed, modified
- Other consideration

Chinese PND Group: Delivery phase

- Number of sessions
- Curriculum
- Group activities vs take home work for women
- Issues related to childminding in phase 1 vs phase 2

EPDS Scores

Client #	First EPDS (prior to session)	Second EPDS (after the session)	Comments
1	21	21	"I am not getting out of bed except for coming group"
2	5	12	Gained insight into emotional health through group
3	6	8	Client surprised her score was so low the first time
4	18	12	Decreased
5	16	12	Decreased
6	14	3	Decreased
7	15	7	Decreased
8	14	5	Decreased
9	12	6	Decreased
10	19	8	Decreased
11	25	Not done	Left after 3 sessions. Hx of mental illness. Followed by GP
12	13	Not done	Left for Hong Kong as death in family
13	7	Not done	Sick child so could not attend.

Chinese PND Group: Evaluation

- Attendance
- EPDS results
- Anecdotal feedback from client
- Other "ripple" effect from this work – partnership with PPPSS, working relation with mental health, volunteer recruitment for PPPSS

Chinese PND Group: Evaluation

Suggestions for anyone thinking about doing this

References/Resources: CUDDLE Program

Program Documents:
- Volunteer and Referral Guidelines, CUDDLE Program Q&A, Evaluations

Training materials:
- Volunteer Handbook and PowerPoint, DVD's: Purple Crying, Life with a new baby, A simple gift

Reference Resources:
- VCH PND Level 1

References/Resources: Chinese PND Support Group

- References used for developing the curiculum – Pacific Postpartum Support Society, BC Reproductive Mental Health, Changeways Program
- Mental health first aid workshop by Canadian Mental Health Association
- Additional resource for immigrant population: Multicultural Mental Health Resource Center www.bridgeforhealth.org

B2iii

Standard Lecture | Quality Improvement, Innovative Practices

Towards Flourishing – A Mental Health Promotion Strategy during the Perinatal Period

Kim Toews

The Towards Flourishing Project: A Brief Summary

Introduction

The Towards Flourishing Project is a new initiative that promotes the mental well-being of parents and their families through the development and addition of a mental health promotion strategy to Manitoba's Families First Home Visiting Program. Emotional distress in the perinatal period has been deemed a public health concern because it is highly prevalent and is believed to adversely affect child development. Results from Manitoba's universal screening at birth suggest that 11% to 14% of women experience some degree of post-natal depression or anxiety. The Towards Flourishing Mental Health Promotion Strategy focuses on positive mental health as well as mental illness and distress. This multilayered Strategy includes simple and practical activities that have shown to be effective in rigorous evaluation studies.

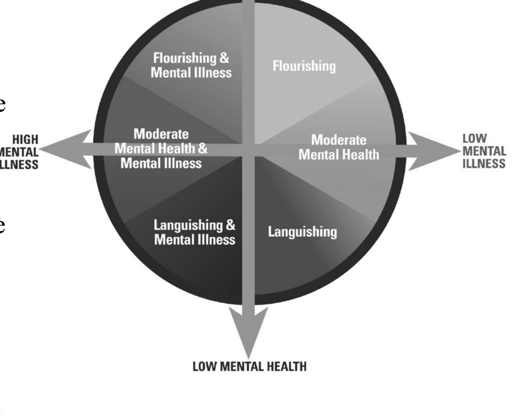
The main goals of the Towards Flourishing Project are:

1. To improve the mental health and decrease mental illness/distress of parents and their children in the Families First Home Visiting Program.
2. To strengthen public health workforce capacity to address mental health promotion and support collaboration between Mental Health and Public Health systems.
3. To create and sustain mechanisms for effective mental health promotion interventions in community settings across Manitoba.

What is Mental Health?

Mental health is the capacity of each and all of us to feel, think and act in ways that enhance our ability to enjoy life and deal with the challenges we face. It is a positive sense of emotional, and spiritual well-being that respects the importance of culture, equity, social justice, inter connections and personal dignity (*Public Health Agency of Canada, 2006).*

Keyes' Model (2002) illustrates that mental health is a complex state and not merely the absence of mental illness symptoms or diagnosis. It is also the presence of something positive. The horizontal line measures mental illness. The vertical measures a person's mental health as a separate but interrelated concept. In considering mental health and mental illness as separate but related - this model demonstrates how those with many attributes of mental health (emotional, psychological and social well-being) can still have varying degrees of mental illness – and how even those with high levels of mental illness can have many attributes of mental health . A critical message of Keyes' work is that maintenance and protection of positive mental health, and not just alleviation of mental distress, is necessary to achieve a mentally healthy population.

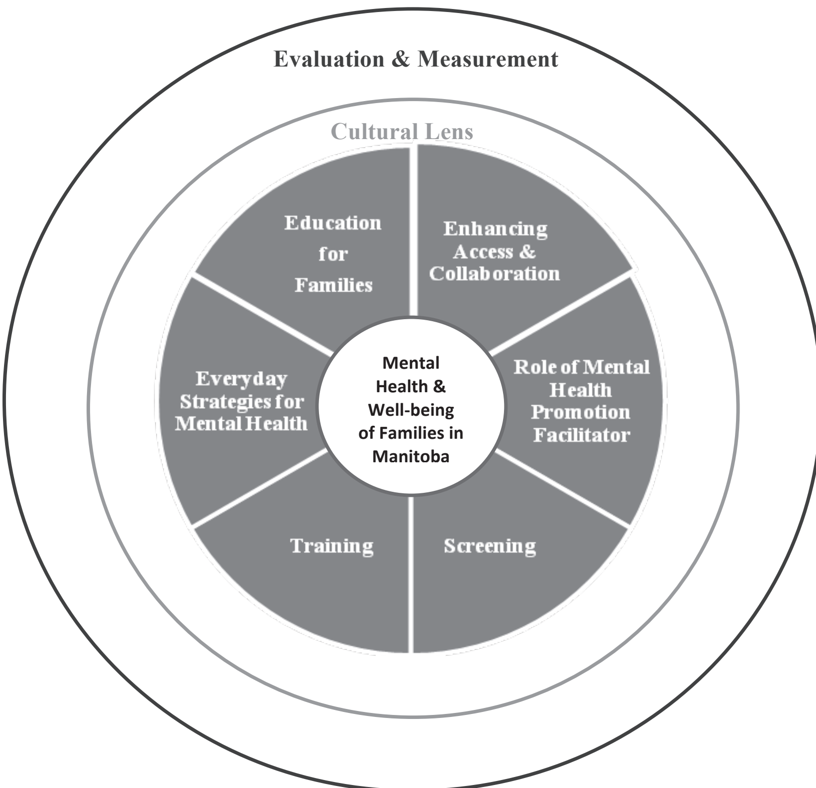


The Towards Flourishing Project, a collaboration between the University of Manitoba, Healthy Child Manitoba and Winnipeg Regional Health Authority, acknowledges the Public Health Agency of Canada for funding this project.

Everyday Strategies for Population-based Interventions

Numerous simple strategies have been scientifically proven to have reliable effects on at least one specific behavior (Embry & Biglan, 2008). They are akin to the "active ingredients" found in more complex interventions. According to Embry and Biglan (2008), these evidence-based strategies or 'kernels' are appropriate for population-based interventions because they are simple, easy to use, low cost, spread by word of mouth, and produce big results. Based on the concept of 'kernels' and upon extensive consultation with public health and Families First Program stakeholders in Manitoba, a set of nine strategies for enhancing mental health were selected and adapted as Everyday Strategies: Creating a Vision; Three Good Things; Belonging; Connecting With Others; Nasal Breathing; Physical Activity; Self Monitoring; Three Minute Breathing; and Progressive Muscle Relaxation.

The Towards Flourishing Mental Health Promotion Strategy



The Mental Health Promotion Strategy is an evidence-based strategy designed to provide multiple levels of support to families and public health staff in Manitoba including:

- **Mental health education** for new parents offered through a new Curriculum introducing topics on mental health and wellness including a menu of simple **Everyday Strategies** for parents and their families to promote positive mental health and well-being

The Towards Flourishing Project, a collaboration between the University of Manitoba, Healthy Child Manitoba and Winnipeg Regional Health Authority, acknowledges the Public Health Agency of Canada for funding this project.

- **Training for public health staff** to enhance knowledge of mental health promotion and guide the introduction of new mental health tools for families
- Additional **screening for new parents** involving a new collection of measures of mental health and well-being
- **A plan to improve access of families** to mental health services, resources and supports and to **strengthen collaboration between Public Health and Mental Health** systems by streamlining communication, consultation and referral processes
- The new **role of a Mental Health Promotion Facilitator** to enhance public health and community capacity to meet the mental health needs of families by strengthening connections within and between programs, facilitating access to mental health resources and services, and by serving as a resource for mental health promotion
- A **Cultural Lens** on the Strategy developed collaboratively with community leaders, experts and stakeholders to ensure that it has cultural relevance and reflects the distinct world views of all families in Manitoba with a specific mandate to incorporate the perspective of Manitoba's Aboriginal, Francophone and immigrant and newcomer populations

What new mothers, public health nurses and home visitors told us about the Strategy:

According to evaluation results in Phase I of the Project, training successfully resulted in increased mental health literacy and a shift to more positive attitudes about mental health promotion among public health teams according to surveys. The confidence of public health nurses and home visitors in addressing the mental health needs of their clients also increased with training.

Women who participated in the mental health screen acknowledged the benefits of asking about mental health/mental illness. They found that it provided an opportunity to discuss mental health, to increase self-awareness and to gain an understanding of the prevalence of mental health issues in their communities.

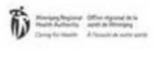
Women in the Families First Home Visiting Program (FFHV) and public health staff rated the embedding of a mental health intervention in the Program as both acceptable and useful. The Toward Flourishing Project intervention was viewed as a potentially good fit for the Program because of the trusting relationship and safe environment families have with home visitors. The mental health modules were viewed as beneficial because they could be readily added to the existing curriculum allowing for easy implementation. Ensuring that the topics are culturally safe was emphasized for all families, and particularly for Aboriginal families.

Comprehensive Evaluation

The Towards Flourishing Mental Health Promotion Strategy is being rigorously evaluated in 2 ways:

1. Evaluation of the process and early impacts of the Strategy to learn how well it is working
2. Evaluation of the long term outcomes of the Strategy to learn if it makes a difference in the mental health and well-being of parents and their children

The Towards Flourishing Project, a collaboration between the University of Manitoba, Healthy Child Manitoba and Winnipeg Regional Health Authority, acknowledges the Public Health Agency of Canada for funding this project.



Evaluation of multiple components of the Strategy in process has occurred during the pilot phase and is ongoing during the trial implementation stages of the project. Data is collected through interviews, focus groups and survey questionnaires with several stakeholders in the Families First Home Visiting Program including parents, public health staff, mental health staff and managers. The data will be synthesized and shared back with participants and the project team to refine the Strategy and further enhance program and practice.

Evaluation of the long term mental health outcomes of participating families will be conducted over a four year trial period. Data is collected from families using the Towards Flourishing mental health survey before and after the intervention Strategy is sequentially introduced. Year I involved ongoing development and piloting of the mental health promotion intervention in Winnipeg. In Year II, all participating sites begin the trial by implementing the Families First Home Visiting program as per usual and collecting baseline assessment data. This baseline data will serve as comparison data and will include measures on well-being (psychological, emotional and social), depression, psychological distress, alcohol abuse, parenting stress. Sites were then randomly assigned to three groups which will initiate the Intervention Strategy at three time points in succession after a period of collecting comparison data. Once a group has begun delivering the intervention, they will continue delivering until the end of the trial (Years II to IV). The intervention will be delivered as an adjunct to the curriculum that the FFHV program currently employs and will be completed within the first 6 months that families participate in the home visiting program. During the 3 years of the trial, data will be collected on each participating parent at 3 month intervals, during both the comparison and the intervention phases.

References

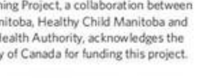
Embry, D. D., & Biglan, A. (2008). Evidence-based Kernels: Fundamental units of behavioural influence. *Clinical Child and Family Psychology Review,* published with open access at Springerlink.com

Healthy Child Manitoba Office (2010). *Evaluating the effectiveness of the Families First home visiting program in improving the well-being of at-risk families with preschool children*. Available at http://www.gov.mb.ca/healthychild/familiesfirst/ff_eval2010.pdf

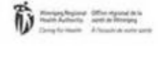
Keyes, C. L. M. (2002). The mental health continuum: from languishing to flourishing in life. *Journal of health and social behavior, 43,* 207-222.

Public Health Agency of Canada (2006) *The Human Face of Mental Health and Mental Illness in Canada*. Ottawa, Ontario: Minister of Public Works and Government Services Canada.

The Towards Flourishing Project, a collaboration between the University of Manitoba, Healthy Child Manitoba and Winnipeg Regional Health Authority, acknowledges the Public Health Agency of Canada for funding this project.



University of Manitoba
Manitoba Centre for Health Policy



Outline

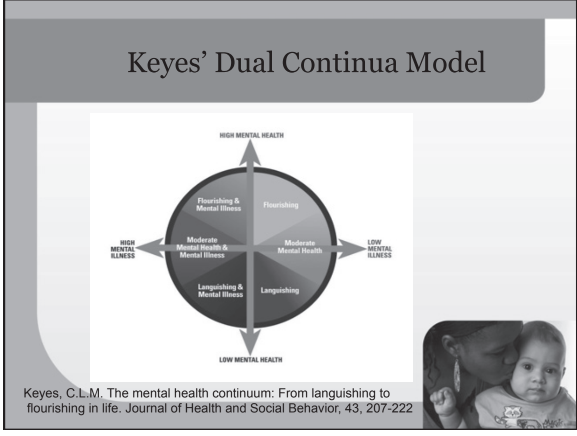
- Mental health promotion
- Description of Towards Flourishing Mental Health Promotion Strategy
- Early Findings
- Conclusions

Towards Flourishing Mental Health Promotion Strategy

- 5 year demonstration project funded by the Public Health Agency of Canada
- Partnership between Government of Manitoba, Health Authorities, University of Manitoba
- Province-wide program
- Targeted to vulnerable families in postpartum period
- Embedded in home visiting program within public health system

Canadian Institute for Health Information (CIHI)

Mental health promotion is defined as "building and supporting individual resilience, creating supportive environments and addressing the broader determinants of mental health. Mental Health promotion strategies and activities can be found across three broad levels: individual, community, society." (2009)



Families First FF

- Intensive Home Visiting program offered through the public health system.
- Evaluation showed significant improvements in parenting, early childhood development
- Evaluation also showed a lack of improvement in maternal mental health
- Decision made to embed TF within this program

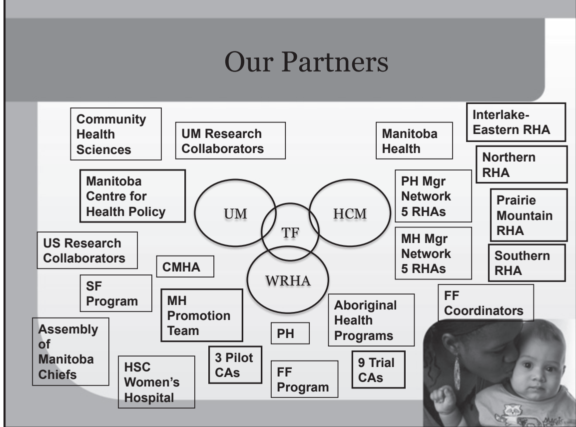
Maternal Mental Health and Child Development

- 13% of women report postpartum depression (O'Hara, M., & Swain, A. (1996). Rates and risk of postpartum depression: A meta-analysis. *International Review of Psychiatry, 8,* 37-54)
- 12-15% of women screened in Manitoba show signs of anxiety or depression (Chartier M.J., Mayer T.M., Santos R.G. Prevalence Rates (2003 to 2006) of Risk Factors for Poor Child Outcomes: Results from Manitoba's Families First Screening Form. Poster presented at Manitoba Institute of Child Health Research Day. Winnipeg, October 2007)
- Maternal mental health is linked to
  - Healthy child development
  - Level of parent-child interaction
  - Developmental delays
  - Child abuse and neglect(Sohr-Preston &Scaramella, 2006; Dickstein, Seifer, Hayden, Schiller, Sameroff, Keitner et al., 1998).

Project Work Plan

- Year 1 – Scoping, Consultation, Partnership building, development of "pilot" strategy
- Year 2 – Piloted strategy in 3 areas in Winnipeg
- Year 3 – progressive implementation of strategy & collection of post-intervention data
- Year 4 – ongoing data collection, interviews – network analyses
- Year 5 – outcome analyses

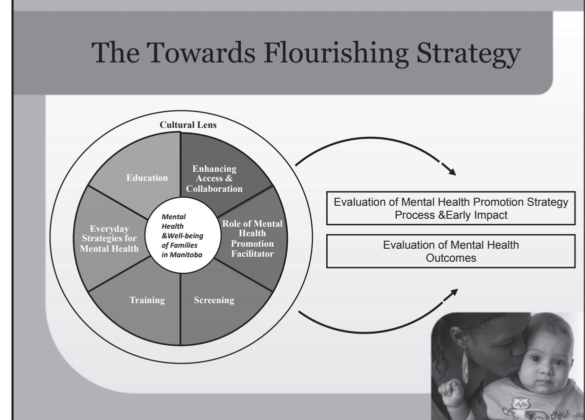
Our Partners



Project Goals

1. To improve the mental health and decrease mental illness/distress of parents and their families in the Families First Home Visiting Program
2. To strengthen public health workforce capacity to address mental health and well-being needs of families
3. To build community capacity for mental health promotion.

The Towards Flourishing Strategy



Target populations

- Families First recipients are primary recipients of Towards Flourishing Strategy
- Trial is occurring with Francophone Population
- Cultural adaptations for Newcomers eg. Strategies have been translated into other languages
- First Nations program called Strengthening Families will be adapting TF

Enhancing an existing program/ service delivery system

- Addition of Evidence Based Strategies
  *Evidence-Based "Kernels" – Embry and Biglan (2008)
  - Simple activities to promote mental health
  - Scientifically proven
  - Easy to use
  - Low cost
  - Spread by word of mouth

Towards Flourishing Everyday Strategies

- Physical Activity
- Three Good Things
- Nasal breathing
- Progressive muscle relaxation
- Three minute breathing break
- Self monitoring
- "I belong…"
- Developing a vision
- Social connections

Research Questions

- Is the Towards Flourishing Mental Health Promotion Strategy perceived as useful by parents and home visitors?
- What are some of the early impacts observed by parent and home visitors?

TF Curriculum Design & Content

Translating Ideas
- Simplicity of Everyday Strategies – outstanding feature
- Modify language to better reflect literacy levels of families
- Visual examples and hands-on modules facilitated understanding

Utility
- Offers practical, immediate support to families
- Applies to a wide range of mental health needs from wellness to those in distress
- Integrates and fits well with home visiting practice

Talking about Mental Health: A new dialogue

- Opens communication
  And I find parents often do want to talk about these things but if there's not that invitation, or the opening, you're not necessarily just going to bring it up , they might or the more they know us the more they share but it's kind of even more like permission to share.
  – Home Visitor
- Deepens level of sharing
  I've gotten to know, you know, families that I thought I knew quite well, I've gotten to know even better through this. Like one of my mums has bipolar and does some things on her own, like does the deep breathing, like it's just interesting that; it's a conversation that we might not have had otherwise…
  – Home Visitor

Early Impacts on Practice

- Increased understanding of parents' mental health experience
- Tools fit the needs of families
- Complemented existing practice
- Filled a gap with concrete mental health resources

Including Fathers

I think that it [the TF Curriculum] should be given to a family so that they can work through it together or, at least so that the man can understand what the woman is doing when she says, "I need a break," you know, and he can understand, okay this is a strategy that she's using to decrease stress. – Mother

- Increases understanding and support of the mother's postpartum experience
- Acknowledges mental health needs of men
- Contribute to the mental well-being and growth of families

Early Impacts on Parents

I like it [information on mental health and Everyday Strategies] because it does not make you feel like you are the only one that feels that way. When you are feeling stressed out, you are feeling a little bit sad, it makes [it] seem normal, makes it seem okay, and you will not feel [like a] horrible mother, you feel, okay, this is normal, now what do I do, it tells you… -- Mother

- Enhanced positive feelings
- Promoted independence
- Fostered relaxation

Impacts

- Validates self-care
- *Most of the time, when all the outside help you get is always telling you it's all about the baby, there's no time to think about yourself at all. It's good to know there's actually things you can do yourself because you do have to take care of yourself before you take care of your baby. . . . For sure baby is first priority but you need to think about yourself also. - Mother*
- Increased awareness of existing supports
- *Yeah it made me realize I do have as much, I have supports that I didn't really think I did have. - Mother*

Conclusions

- Integrating mental health promotion within public health practice is feasible
- Discussion of mental health accepted by families and public health teams
- Strengths: Concrete materials, simple everyday strategies, m.h.p. facilitator role, training
- Challenges: Stigma, time pressures, life stresses
- Training and mental health promotion facilitator role is important

Thank you

Special thanks to the families, home visitors, nurses, and managers from

Point Douglas, River Heights & Saint Boniface community areas of the WRHA for their time and commitment in sharing this information.

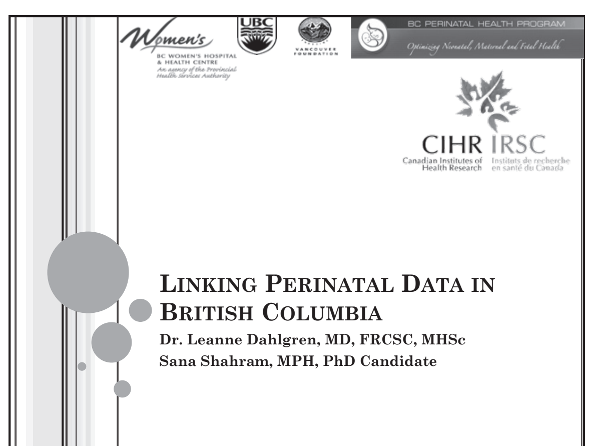
- A tripartite initiative made possible through generous Phase I and Phase II support for innovation in mental health promotion by the Public Health Agency of Canada.

B3i

Standard Lecture | Innovative Practices

Linking Perinatal Data in British Columbia

Leanne Dahlgren, Sana Shahram



A little bit about us…

Dr. Leanne Dahlgren, MD, FRCSC, MHSc
Department of Obstetrics and Gynaecology, UBC
Children's and Women's Health Centre of BC
E-mail: ldahlgren@cw.bc.ca

Sana Shahram, MPH, PhD Candidate
Research Coordinator, UBC Dept. of Obs/Gyn
E-mail: sana.shahram@cw.bc.ca

Learning Objectives

At the end of this lecture, you will:

1. Understand the landscape of perinatal data in British Columbia.
2. Know the key steps necessary for successful perinatal data access applications
3. Be able to think creatively about ways to obtain information from data within confidentiality and data restrictions.

BC Perinatal Database Registry

- Maintained by the BC Perinatal Health Program
- All live births and stillbirths over 20 weeks gestation in BC
- Initiated in 1996, complete ascertainment of all births in BC by 1999

BC Perinatal Database Registry

- Comprehensive database which serves the purpose of monitoring and surveillance in relation to perinatal outcomes, care process and resources, with goal of improving maternal, fetal and newborn care
- Database is routinely used to summarize, interpret, and report on perinatal events, outcomes and processes at community, regional and provincial level
- Maternal characteristics, socio-demographic factors, preconception health status, antenatal complications, mode of delivery, birth outcomes (including neonatal status at birth), postnatal/postpartum morbidity prior to discharge from birth hospital.

BC Vital Statistics Agency

- Comprehensive data on all live births, stillbirths and deaths in BC
- BC MSP & Health Canada: medical billing info
- Health Status Registry:
  - congenital anomalies, genetic conditions, selected disabilities
  - Hospital admission/discharge abstracts
  - HSDA/HA
  - UBC Medical Genetics
  - BC Children's Hospital
  - Public Health Nurses

Population Data BC

- A multi-university, data and education resource facilitating interdisciplinary research on the determinants of human health, well-being and development.
- Support research access to individual-level, de-identified longitudinal data on British Columbia's 4.4 million residents.
- Linkage of data across sectors, such as health, education, early childhood development, workplace and the environment, facilitates advances in understanding the complex interplay of influences on human health, well-being and development.
- MSP payment info, Discharge Abstract Data (hospital separations), Consolidation file, Vital Stats files, Income band data

Population Data BC

Internal data holdings

- Health care and health services data
  - Medical Services Plan Payment Information (MSP)
  - Pharmacare
  - Discharge Abstract Database (Hospital Separations)
  - Home and Community Care (Continuing Care)
  - Mental Health
  - BC Cancer Agency
- Population and demographic data
  - Consolidation file (MSP Registration and Premium Billing)
  - Vital Statistics Births
  - Vital Statistics Stillbirths
  - Vital Statistics Marriages
  - Vital Statistics Deaths
  - Income band data
- Occupational data
  - WorkSafeBC Claims and Firm Level files
- Early childhood data
  - Early Development Instrument data
  - Middle Years Development Instrument data
- Spatial data
  - Integrated Cadastral Information (ICIS) data

External data available

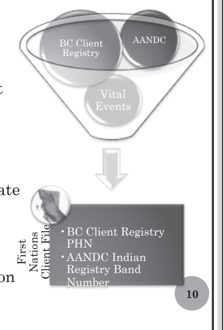
- Canadian Community Health Survey (CCHS)
- PharmaNet
- Perinatal data
- Spatial data

Research Involving First Nations

- Aboriginal Ancestry
  - Self-identified ethnicity not routinely collected in any databases
  - Restricted to First Nations identified as Status Indian on Federal registries
  - Vital Statistics Agency uses data from First Nations and Inuit Health and Health Canada to identify women and fetuses/infants as Status Indian or non-Status Indian
  - OR, the First Nations Client File (FNCF)

First Nations Client File

- The First Nations Client File (FNCF) records registered First Nations BC Residents and their unregistered children whose entitlement-to-register can be determined – currently the best source for identifying status First Nations in BC.
- Data collected from Aboriginal Affairs and Northern Development is being matched against BC's databases to create the FNCF.
- The FNCF contains the BC Care Card PHN numbers, band number, demographic information and population denominators.



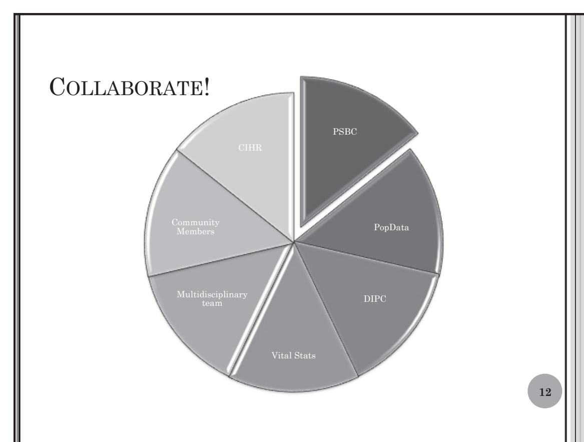
10

First Nations Client File- Cont'd

- The FNCF is currently held in the Ministry of Health (MoH) and is governed by the Data and Information Planning Committee (DIPC), comprised of members from the MoH, First Nations Health Authority (FNHA) and Health Canada.
- The FNCF is a relatively new source of data, policies/processes are continuously being developed regarding its appropriate use and governance
- Due to limited resources, the FNCF is not available for external researchers at this time and is exclusively used to support health service programming needs of FNHA and its partners.

For more information about the FNCF, please contact:
Katherine Wang
Data and Information Coordinator
First Nations Health Authority
Katherine.wang@fnha.ca

Collaborate!



12

Meaningful Collaboration

First Nations Health Information Governance:
refers to a structure, process and protocols by which First Nations in B.C. have access to First Nations Data and are influentially involved in decision-making regarding the culturally appropriate and respectful collection, use, disclosure and stewardship of that information in recognition of the principle that such information is integral to First Nations policy, funding and health outcomes.

Key: Involvement of First Nations throughout the project

13

Applying for Data- Keys To Success

- Ethics approvals
- Institutional support
- Attention to details
- A clear proposal
- The right team members
- Avoid fishing!
- Patience!

FIPPA

The purposes of this Act are to make public bodies more accountable to the public and to protect personal privacy by

- giving the public a right of access to records,
- giving individuals a right of access to, and a right to request correction of, personal information about themselves,
- specifying limited exceptions to the rights of access,
- preventing the unauthorized collection, use or disclosure of personal information by public bodies, and
- providing for an independent review of decisions made under this Act.

Getting Creative

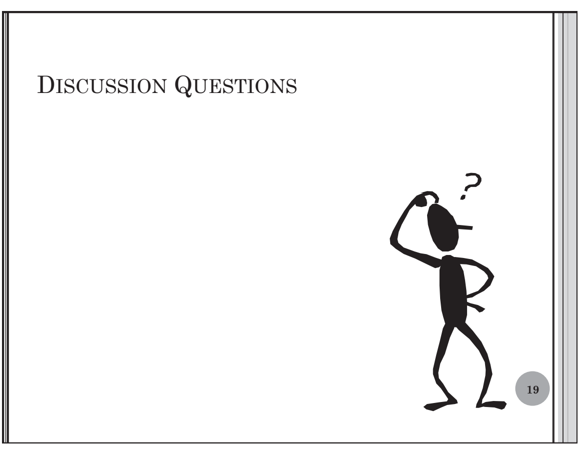
- Geography is an important access issue in BC for maternal and infant health
- Postal code information could not be released due to confidentiality issues
- Major goal of the project was in jeopardy
- Created a walk-over file
- Now, could assess access issues in terms of distance, as well as forms of transportation to different levels of care

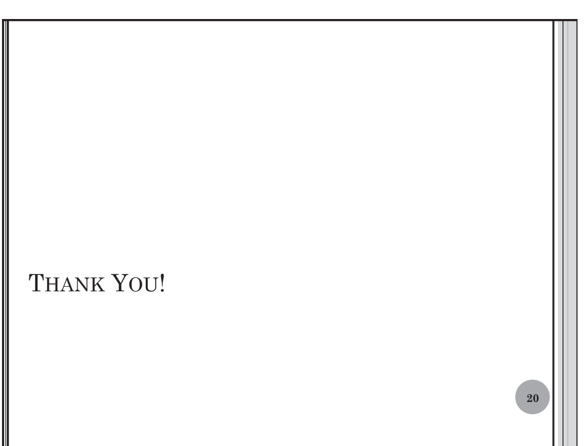
Getting Creative

- Need mother's age?
  - Do not request birthdate (individually identifying)
  - Ask for calculation of mother's age at delivery
- Same for baby
  - Do not request baby's birthdate (individually identifying)
  - Ask for calculation of gestational age

Put It All In Perspective

- Be courteous and patient!
- Multiple requests & own priorities
- They are liable
- Many people to answer to
- Always going to be a delay…plan for the unplanned


Discussion Questions
19

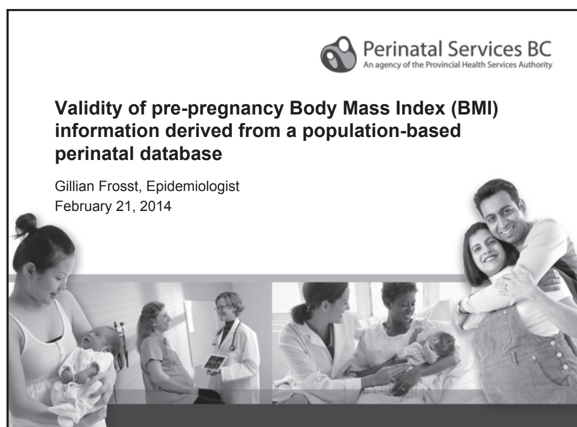

Thank You!
20

B3ii

Standard Lecture | Quality Improvement

Validity of Pre-Pregnancy Body Mass Index (BMI) Information Derived From a Population-based Perinatal Database

Gillian Frosst



Learning Objectives

1. To describe one of Perinatal Services BC's (PSBC's) quality assurance processes related to the BC Perinatal Data Registry (BCPDR)
2. To provide information on the validity/reliability of BC perinatal data that are widely utilized for surveillance and research purposes
3. To facilitate discussion on innovative strategies to improve quality of BMI data in administrative databases

The BCPDR

- Data abstracted from obstetrical and neonatal medical charts for ~99% births in BC
- PSBC's mandate directly supported by operation and maintenance of the BCPDR
- Vision for the BCPDR is to "… be an industry-leading system for collecting relevant high-quality perinatal data that directly supports optimal neonatal, maternal and fetal health for BC residents" (PSBC, 2011)

Perinatal Services BC (2011). Perinatal data registry system development: business case.

The BCPDR – Data Collection

Standardized Provincial Perinatal forms

Medical Record

Electronic entry (70%)

~300+ data elements

Imports
•CIHI (30%)
•ADT

Hospital Perinatal Database ~ 50 facilities

Home Births

Data Collection at PSBC

BC Vital Stats

BC Ministry of Health

BCPDR ~700,000 + births

Data outputs

The BCPDR – Data Use

Data widely utilized by PSBC and external stakeholders for:

- Planning
- Surveillance
- Clinical practice assessment
- Guidelines
- Research and more

Data Quality and the BCPDR

Routine quality checks
- Data collection and analysis (hospital-level)
- Consolidation and quality assurance (provincial-level)

Validation studies
- Historical - small-scale studies focussed on specific geographies or data quality issues
- Current – evaluation of all data fields (≥10% complete)
  - Reliability & validity
  - Missing data
  - Comprehensiveness

PSBC Data Field Evaluation Framework

Evaluation Attributes

1. Reliability/Validity
   - Are the data reproducible?
   - Measure agreement between PDR and re-abstracted data
2. Completeness
   - What is the extent of missing data?
   - Measure proportion of missing or unknown data

Compare existing BCPDR data to re-abstracted data for sample of records

3. Comprehensiveness
   - Is the scope/coverage appropriate and relevant?
   - Identify redundancies and gaps

Provincial Chart Re-Abstraction Project

Multi-stage stratified random sample

- Stage #1: Facility-level sample
  - Maternity care facilities (n=52) + home births
  - Stratified by peer group and Health Authority + place of original abstraction for home births = 15 possible strata
  - Randomly selected facilities within each stratum

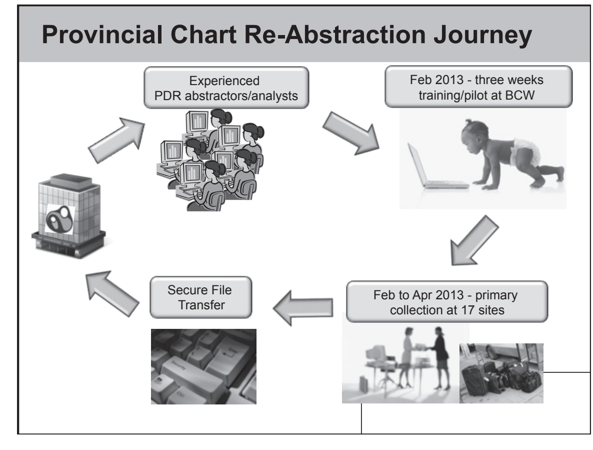
Provincial Chart Re-Abstraction Project

Multi-stage stratified random sample (cont.)

- Stage #2: Chart-level sample
  - Delivery and newborn episodes charts
  - Discharge dates from April 1/10 to March 31/12
  - Oversampled more complex cases based on total length of stay and hospital transfer
  - Disproportional random sampling from facility
  - 1,110 maternal charts + 1,164 baby charts = 2,264 total charts

BMI variables

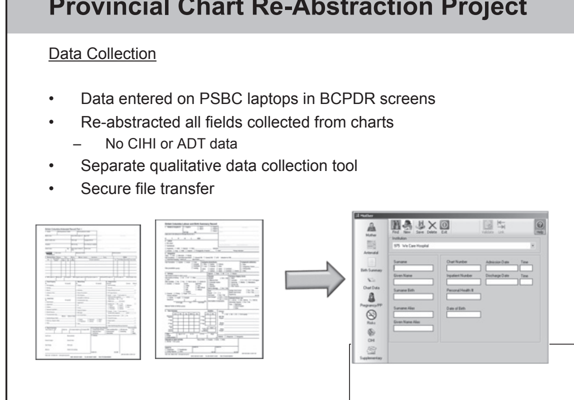
Provincial Chart Re-Abstraction Journey



Provincial Chart Re-Abstraction Project

Data Collection

- Data entered on PSBC laptops in BCPDR screens
- Re-abstracted all fields collected from charts
  - No CIHI or ADT data
- Separate qualitative data collection tool
- Secure file transfer



Validation of pre-pregnancy BMI

Why BMI?

- Public health importance
  - Increasing prevalence of overweight and obesity as well as excess gestational weight gain in women of reproductive age
  - Increased risk for poor maternal and infant outcomes
  - May increase risk of early childhood and adult obesity in offspring
- Data
  - Used for routine surveillance and frequently requested by researchers
  - **Data must be valid to effectively inform action**

Validation of pre-pregnancy BMI

Assessing validity of BMI in re-abstraction project

- Re-abstraction of pre-pregnancy weight and height
  - Antenatal Record I and II forms
  - Triage and Assessment form
- 1,089 maternal charts (98% response rate)
  - 46% charts from complex cases (TLOS>=5 days or transfer out)
- Original BCPDR compared to re-abstracted data
  - Agreement: intra-class correlation coefficient (continuous data)
  - Proportion of missing values
  - Unweighted analysis
- Thematic analysis of qualitative feedback from re-abstractors

Validation of pre-pregnancy BMI

Results

Table 1. Agreement and percent missing for pre-pregnancy weight and height

	ICC (95% CI)	% missing	
		BCPDR (Original)	Re-abstraction
Pre-pregnancy weight	0.96 (0.96-0.97)	27.9	18.5
Height	0.89 (0.88-0.91)	23.9	18.0

- Excellent agreement (≥0.8 ICC) for all variables
  - Limitation: ICC measures only records where value was provided in both BCPDR and re-abstracted database (~70%)

Validation of pre-pregnancy BMI

Results

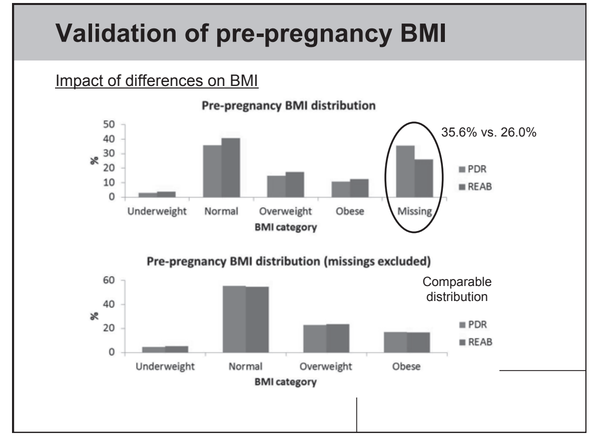
Table 2. Percent missing for pre-pregnancy weight and height

	% missing		
	Both databases	BCPDR only	Re-abstraction only
Pre-pregnancy weight	12.7	11.2	5.3
Height	15.8	12.1	2.8

- Both databases = "true" missing values
- BCPDR only = values missing in BCPDR only
- Re-abstraction only = values missing in re-abstraction only
- Re-abstraction more complete than BCPDR for both variables

Validation of pre-pregnancy BMI

Impact of differences on BMI



Validation of pre-pregnancy BMI

Challenges with chart documentation

- Information not available in chart or found elsewhere in chart
  - E.g., weight found on NB Consultation Report instead of on Antenatal Record or Triage & Assessment forms
- Inconsistent values found in chart; documented in multiple places
  - E.g., Antenatal Record I – 200 lbs; Antenatal Record II – 175 lbs
- Range given instead of precise measurement
  - E.g., 165-175 lbs
- Legibility of documentation

Validation of BMI

Discussion

- From the re-abstraction, pre-pregnancy BMI appears valid, albeit incomplete
  - Results in loss of records in analysis or imputation
- % of pre-pregnancy BMI missing in the BCPDR as a whole has decreased in the last five years (separate analysis)
  - 35.4% in 2008/09 → 24.6% in 2012/13 (preliminary)
- But completeness can be further improved as indicated by higher completion in the re-abstraction vs. BCPDR
- Results will inform strategies to improve abstraction of pre-pregnancy weight and height

Thank you!

Questions?

B3iii

Standard Lecture | Quality Improvement

Characteristics of Women in Robson Group 1, British Columbia 2008/2009 to 2012/2013

Brooke Kinniburgh, Lily Lee

Author #1
Brooke Kinniburgh
Epidemiologist
Perinatal Services BC

Author #2
Gillian Frosst
Epidemiologist
Perinatal Services BC

Author #3
Lily Lee
Provincial Lead, Surveillance
Perinatal Services BC

In British Columbia, nulliparous women at term with a singleton vertex pregnancy with spontaneous labour (Robson group 1) are a larger contributor to the cesarean delivery rate than similar women with induced or no labour (Robson group 2). Using hospital deliveries from the British Columbia Perinatal Data Registry (BCPDR), we describe the health, labour, and delivery characteristics of women and infants in Group 1 discharged between April 1, 2008 and March 31, 2013.

The cesarean delivery rate in Group 1 increased from 19.7% in 2008 to 21.6% in 2012 ($p<0.01$). Over the same period among Group 1 deliveries, the proportion of women <25 years of age at delivery decreased (29.0% to 21.7%, $p<0.01$) as did the proportion of women receiving oxytocin for augmentation (35.7% to 33.1%, $p<0.01$). The proportions of women aged 35+ at delivery, with pre-pregnancy BMI >25, or with gestational hypertension were unchanged. Cesarean deliveries were increasingly performed for fetal distress (25.7% to 34.2%, $p<0.0001$) and decreasingly performed for dystocia or malposition (66.0% to 57.7%, $p<0.0001$). The proportion of infants born large for gestational age decreased from 8.8% to 7.5% ($p<0.01$) and the proportion of infants with a five minute Apgar <7 increased from 1.8% to 2.4% ($p=0.003$). There was no change in in-hospital perinatal mortality.

The cesarean delivery rate among Group 1 continues to increase in BC despite relatively stable maternal characteristics. Data from the BCPDR suggest that fetal distress is increasingly cited as the reason for cesarean delivery among this low risk group.

Synopsis

The Robson Ten Classification is increasingly used in Canada to assess which groups of women contribute disproportionately to the cesarean delivery rate. This presentation will discuss the characteristics of women in Group 1; the group with the second highest contribution to the cesarean delivery rate in British Columbia.

Learning Objectives

1. Participants will be able to describe the general characteristics of women in Robson Group 1.
2. Participants will appreciate how the Robson Ten Group Classification can be used to inform hospital-level assessment of the cesarean delivery rate.

Biographies

Brooke Kinniburgh joined Perinatal Services BC as an epidemiologist in 2011. She earned her masters degree in public health with concentration in maternal and child health in 2004. Brooke brings experience from the federal, state, and provincial levels having worked both in the United States and Canada. She has previously worked at the Canadian Institute for Health Information and is an alumna of the Canadian Field Epidemiology Program.

Lily Lee is the Provincial Lead, Surveillance, responsible for providing strategic leadership in the ongoing development, coordination, monitoring, and analysis of data for Perinatal Services BC. Lily has over 30 years experience in perinatal care and has held many leadership roles in advanced practice, education, management, and policy & program development.

Robson, M.S., *Classification of caesarean sections.* Fetal and Maternal Medicine Review, 2001. **12**(1): p. 23-9.

Brennan, D.J., et al., *The singleton, cephalic, nulliparous woman after 36 weeks of gestation: contribution to overall cesarean delivery rates.* Obstet Gynecol, 2011. 117(2 Pt 1): p. 273-9.

Farine D and Shepherd D. Classification of caesarean sections in Canada: the modified robson criteria. J Obstet Gynaecol Can. 2012 Oct;34(10):976-9.