Healthy Mothers and Healthy Babies: New Research and Best Practice Conference

February 21 - 22, 2014 | Vancouver, BC

SYLLABUS
Public Health Prenatal Programs in Two Health Authorities in BC

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Healthy Mothers and Healthy Babies Conference: February 21, 2014

Disclosure

- We do not have an affiliation (financial or otherwise) with a pharmaceutical, medical or communications organization.
- No conflict of interest to disclose

Learning Objectives

- Understand the provincial public health service goals for pregnant women, both universal and enhanced, including why women may benefit from public health support during pregnancy
- Be able to describe how women in NH and VCH can access public health prenatal services, and what services are available
- Have increased knowledge of the role of public health nurses supporting pregnant women

Healthy Families BC

- Healthy Start
- Healthy Eating
- Healthy Communities
- Healthy Lifestyles

Provincial Healthy Start Initiative
Role of the Public Health Nurse (PHN)

- PH efforts shifted “upstream” for improvements to maternal, child and family health
- PHNs meet women where they are at...providing them with information and resources to support them in making healthier choices
- PHNs employ an equity lens to focus interventions toward vulnerable women (women who may be at risk for poor outcomes associated with lifestyle/behavioral, psychosocial or environmental risk factors and concerns)
- Improve early access to community prenatal supports and services

NH Prenatal Services - the Prenatal Registry

**NH Goal:** Prenatal registration and connection to a public health nurse for all pregnant women to increase access to perinatal care and education
NH PRP Health Promotion & Education

NH PRP Screening & Assessment

NH PRP Interventions & Referral

VCH Prenatal Services

What are we doing?

Care Pathways of Support

VCH Goal

To have contact with all pregnant women under 25 prior to delivery in order to assess eligibility and interest in the BC Healthy Connections Program

To provide a means for women to connect with public health in pregnancy for health promotion, screening and intervention

VCH Prenatal Services

Women who may have concerns regarding:

- Mental health (such as history of, or current perinatal depression and/or anxiety);
- Alcohol, substance and/or tobacco use;
- Lack of support and/or isolation;
- Finances or housing;
- Diet (including access to healthy food);
- Age (adolescents or women under 25 years of age with other concerns);
- Other women who may benefit from public health support

NH PRP Interventions & Referral

Enhanced Family Visiting

- BC Healthy Connections Project Referral
- PHN/Client Connection specific to vulnerabilities
- Care coordination

Perinatal Depression

- PND Screening
- Self-Support
- Information & Education
- Referral

Tobacco Reduction

- Brief Intervention
- Quitnow.ca
- Healthlink BC
- 811

What are we doing?

Shifting from having our first contact with most clients in the days postpartum to having contact with specific populations during pregnancy.

Support During Your Pregnancy

Prenatal Registry Questionnaire

Women who need to have contact with the pregnant women prior to delivery in order to assess eligibility and interest in the BC Healthy Connections Program.

Women who need to connect with public health in pregnancy for health promotion, screening and intervention.

Women who may benefit from public health support.
How will VCH Access Pregnant Women??

Prenatal Telephone Access Line
1-855-550-2229

PHN Assessment and Intervention

Capacity Building - promote ability to meet health and basic needs (food security, housing, access to health care)

Care Coordination - complex clients with multiple services

Communicable disease prevention

VCH Prenatal Services

Summary

• Health Authorities are providing collaborative prenatal services in conjunction with the perinatal care team

• Requirements to provide Provincial Public Health Prenatal Services are met through different approaches in NH and VCH

• Public Health is well-positioned to build therapeutic relationships with pregnant women and families through women-centered care practices
Thank You!

For further contact information:

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Joanne Wooldridge, Regional Leader, Early Childhood Development, VCH
Joanne.wooldridge@vch.ca

References

BC Ministry of Health Services (2005) - A framework for core functions in public health Index - Core Public Health Functions - Core Public Health Functions for BC - Ministry of Health - Province of British Columbia


Geneva, World Health Organization

Ministry of Health (April 2013) Healthy Start Initiative: Provincial Perinatal, Child and Family Public Health Services

A First for First Nations Mothers: Perinatal Services from the First Nations Health Authority
Gerry Kasten, Suzanne Johnson, Rebecca Sovdi

Healthy Mothers and Healthy Babies: New Research and Best Practice
February 21st, 2014
Gerry Kasten, RD, MSc, FDC
Rebecca Sovdi, RD, CDE, MPH
Suzanne Johnson, RD

Learning Objectives
Participants will, upon program completion, be able to:

- Specify tools for appropriate growth monitoring of First Nations Infants
- Specify criteria for referral to screening for diabetes in pregnancy
- Itemize issues pertaining to perinatal health arising from colonization and the legacy of residential schools

Why do we routinely track children’s growth?

- Confirms healthy growth and development
- Identifies early potential nutrition or health problem
- Respond early

Disturbances in health and nutrition in infants and young children almost always affect growth

WHO Growth Charts
- WHO introduced in 2006
- In 2010, they were recommended for use in Canada, in a joint statement, by:
  - Dietitians of Canada
  - Canadian Paediatric Society
  - The College of Family Physicians of Canada
  - Community Health Nurses Association of Canada
- Growth Standards (birth – 5 years) –
  - Represent gold standard (how children should grow vs. how a group of children grew)

WHO Growth Standards
**WHO Growth Charts**

**Development of WHO Growth Standards (Birth – 5 years)**

Product of the Multicentre Growth Reference Study, 1997-2003:

- **8,440 children** from different ethnic backgrounds – 6 sites
- **Children** lived in socioeconomic and environmental conditions favourable to growth, geographically stable etc.

**WHO Multicentre Growth Reference Study (WHO-2006)**

- **Singleton term births**, 37 to less than 42 weeks
- **Absence of significant morbidity** in the newborn
- **Moms** followed health & feeding recommendations:
  - Non-smoking mother
  - Exclusive or predominant breastfeeding in first 4 months or longer
  - Introduce complimentary foods 4-6 months
  - Partial breastfeeding until or longer than 12 months
  - Immunizations and routine paediatric care

**Differences Between WHO and CDC Growth Standards**

<table>
<thead>
<tr>
<th>WHO Growth Standards – Birth to 5 years of age</th>
<th>CDC Growth Reference – Birth to 5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Based on a predominantly breastfed population</td>
<td>Only 50% of infants sampled were breastfed</td>
</tr>
<tr>
<td>Generally a lighter, longer/taller sample of children</td>
<td>Existing children sampled in a population that has issues of overweight/obesity</td>
</tr>
<tr>
<td>Portrays how children “should” grow – longitudinal data collected in a single study, with children raised in optimal environments</td>
<td>Portrays how children “did” grow (descriptive) – cross-sectional data collected from various studies; each child was only measured once</td>
</tr>
<tr>
<td>Data set is international (Brazil, Ghana, India, Norway, Oman, and USA) – can be used to measure different ethnicities</td>
<td>Data set is US children only</td>
</tr>
<tr>
<td>Percentiles as follows: 5th, 10th, 25th, 50th, 75th, 90th, and 97th</td>
<td>Percentiles as follows: 3rd, 5th, 10th, 25th, 50th, 75th, 90th, 95th, and 97th</td>
</tr>
</tbody>
</table>
WHO Charts & CDC Charts aligned at 50th percentile at birth

Recommenda2ons for Canada:
By: Dietitians of Canada, Canadian Paediatric Society, The College of Family Physicians & Community Health Nurses of Canada

- Adoption of the WHO growth charts, replacing CDC charts
- Growth monitoring part of routine health care
- *Interpretation should consider various factors*
- Health Professionals teach parents/caregivers how to interpret individual growth patterns & involve them in decision making
- Use for population health surveillance

Findings

Minimal differences in the rates of linear growth observed among the 6 countries
- 70% of variance was due to individuals
- 3% of differences among countries (minimal)

Conclusion

Children of all ethnic backgrounds have similar potential for growth when raised in conditions favourable for growth

Applicability

for

First Nations, Inuit and Métis infants

Recommendations for Canada:
By: Dietitians of Canada, Canadian Paediatric Society, The College of Family Physicians & Community Health Nurses of Canada

"Interpretation should consider various factors"

Feedback from the Canadian Paediatric Society, FN, Inuit & Métis Health Committee

- Applicable to First Nations, Metis and Inuit population
- Issues to be aware of:
  - Larger number of FN children identified as obese or overweight ("moved up" in the growth curve)
  - May cause problems with the diagnosis of FASD
- The First Nations, Inuit and Métis Health Committee will likely revise or propose a new position statement in 201?
Do the WHO growth charts apply to Canada’s First Nations, Inuit and Métis population?

The Canadian Paediatric Society First Nations, Inuit and Métis Health Committee provided feedback on the Collaborative Statement as part of the review process and concluded that the WHO Growth curves are applicable to the First Nations, Métis, and Inuit population for the same reasons that they apply to other cultural groups. The Committee has since retired its past position statement on growth charts for First Nations, Inuit and Métis populations. They have suggested three issues that may arise in the application and interpretation of the growth charts with this population group:

a) Practitioners should recognize that in interpreting the WHO Growth Charts, a larger number of First Nations children will be “moved up” on the growth curve causing them to be classified as obese or overweight, whereas previously they would have been borderline normal in weight or BMI.

b) Secondly, the new WHO curves may cause problems with the diagnosis of Fetal Alcohol Spectrum Disorder (FASD) that is based on growth retardation. The cut-off currently is the 10th percentile line.

c) There will be a need for multiple growth charts in the nursing stations and health centres. Previously only one chart up to 3 years was needed, then another one for 3 years onwards. Having more growth charts may make it more difficult to track growth and require more paper in the medical chart.
Conclusion

1. Growth monitoring is important
2. There are important differences to note between the CDC and WHO charts
3. WHO charts are appropriate for First Nations, Inuit and Metis
4. There are many factors to consider in interpreting growth charts, including the applicability of cut-off points.
5. Accurate measuring and weighing are an important component of growth assessment
6. Communicate with parents/caregivers about both growth that maintains trajectories and growth that diverges from prior trajectories.
7. Implement plans to maintain or change current feeding practices

References and Resources


Learning objectives

- Understand diabetes prevalence in Aboriginal women and their offspring
- Understand risk factors for diabetes in Aboriginal women
- Understand the impact of intergenerational effects of diabetes in Aboriginal communities
- Specify criteria for referral to screening for diabetes in pregnancy and gestational diabetes
- Make recommendations for screening and care for Aboriginal women, families, and communities

The context

- The prevalence of Type 2 Diabetes and GDM is higher among Aboriginal women compared to non-Aboriginal women
- In First Nations, diabetes has become a disease of the young, rather than a disease of the old
Why are there higher rates?

Risk factors for type 2 diabetes

- Poverty and Low Socio-Economic Status
- Decreased rates of physical activity
- Stress
- Dietary acculturation and an unhealthy diet
- Obesity/metabolic syndrome
- High rates of diabetes during pregnancy

Poverty refers to a state of resource deficiency where survival is threatened. It is a multidimensional concept that includes economic resources and social determinants. 

Poverty is often associated with other health and social problems, such as inadequate housing, food insecurity, and limited access to health care.

The Cause of DM in Aboriginal Groups is Complex

Genes

Social Stressors

Lifestyle

Short term health consequences of high blood glucose during pregnancy

- Infant
  - Macrosomia
  - Birth trauma
  - Shoulder dystocia
  - Neonatal hypoglycaemia
  - Neonatal hyperbilirubinemia
  - Respiratory Distress Syndrome
  - Fetal hyperinsulinaemia

- Mother
  - Hypertension
  - Preterm delivery
  - Caesarean delivery

Long term health consequences

- Higher risk for diabetes
- Higher risk for obesity

Diabetes in Pregnancy Tele-form Project

Collect new, community-specific data on:

- Incidence of pre-existing diabetes and gestational diabetes mellitus (GDM)
- Access to health services on-reserve
- Implementation of Clinical Practice Guidelines
- Possible relationships between preconception, prenatal, and postnatal health measures and pregnancy outcomes

Six First Nations communities across Canada participated

Teleforms
Results:
Community Based Results

Average Maternal Age at Workup Visit

Average Gestational Age at Workup Visit

Pre-natal Multivitamin Prescription
Average Number of Previous Pregnancies

<table>
<thead>
<tr>
<th>Number of Pregnancies</th>
<th>All Communities</th>
<th>Comm A</th>
<th>Comm B</th>
<th>Comm C</th>
<th>Comm D</th>
<th>Comm E</th>
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<td>0</td>
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<td>3.4</td>
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Average Pre-pregnancy BMI

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<tr>
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<th>Comm A</th>
<th>Comm B</th>
<th>Comm C</th>
<th>Comm D</th>
<th>Comm E</th>
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<tr>
<td>5.7</td>
<td>19.2</td>
<td>19.8</td>
<td>19.3</td>
<td>19.5</td>
<td>19.4</td>
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Pre-pregnancy BMI by Weight Category

<table>
<thead>
<tr>
<th>Weight Category</th>
<th>All Communities</th>
<th>Comm A</th>
<th>Comm B</th>
<th>Comm C</th>
<th>Comm D</th>
<th>Comm E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight (&lt;18.5)</td>
<td>2.4%</td>
<td>2.4%</td>
<td>2.4%</td>
<td>2.4%</td>
<td>2.4%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Normal (18.5-24.9)</td>
<td>43.4%</td>
<td>43.4%</td>
<td>43.4%</td>
<td>43.4%</td>
<td>43.4%</td>
<td>43.4%</td>
</tr>
<tr>
<td>Overweight (25-29.9)</td>
<td>29.4%</td>
<td>29.4%</td>
<td>29.4%</td>
<td>29.4%</td>
<td>29.4%</td>
<td>29.4%</td>
</tr>
<tr>
<td>Obese (&gt;30)</td>
<td>25.8%</td>
<td>25.8%</td>
<td>25.8%</td>
<td>25.8%</td>
<td>25.8%</td>
<td>25.8%</td>
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</table>

Average Prenatal Weight Gain

<table>
<thead>
<tr>
<th>Weight (kg)</th>
<th>All Communities</th>
<th>Comm A</th>
<th>Comm B</th>
<th>Comm C</th>
<th>Comm D</th>
<th>Comm E</th>
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<tr>
<td>5.71</td>
<td>11.4</td>
<td>11.4</td>
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<tr>
<td>6.3</td>
<td>9.4</td>
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<td>9.4</td>
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<td>9.4</td>
</tr>
</tbody>
</table>

Previous Diagnosis of Diabetes

<table>
<thead>
<tr>
<th>Number of Clients</th>
<th>Type 1</th>
<th>Type 2</th>
<th>GDM</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>6</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

GDMs Screening by Trimester

<table>
<thead>
<tr>
<th>Trimester</th>
<th>All Communities</th>
<th>Seabird</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>27.7%</td>
<td>27.7%</td>
</tr>
<tr>
<td>2nd</td>
<td>26.5%</td>
<td>26.5%</td>
</tr>
<tr>
<td>3rd</td>
<td>23.2%</td>
<td>23.2%</td>
</tr>
</tbody>
</table>
Pre-pregnancy BMI and High Birth weight

- Normal BMI
- Overweight
- Obese

Participant (#)

Pre-pregnancy BMI

Diabetes and Pregnancy

“Vicious Cycle”

INTRA-GENERATIONAL EFFECTS

- Increased risk of recurrent Gestational Diabetes
- Type 2 Diabetes in Mother
- Increased risk of Type 2 Diabetes in Offspring


Gestational Diabetes (GDM) Diagnosis

- Universal screening for GDM @ 24-28 weeks Gestational Age (GA)
- Screen earlier if risk factors for GDM:
  - Previous GDM
  - BMI ≥ 30 kg/m²
  - Prediabetes
  - Polycystic ovarian syndrome
  - High risk population (Aboriginal, Hispanic, South Asian, Asian, African)
  - Current fetal macrosomia or polyhydramnios
  - Age ≥ 35 years
  - History of macrosomic infant
  - Corticosteroid use
  - Acanthosis nigricans

Postpartum GDM Management Checklist

1. Encourage Breastfeeding
2. 75g OGTT between 6 weeks - 6 months postpartum to detect prediabetes or diabetes (every 1-2 years)
3. Discuss increased long-term risk of diabetes

**Screening for all Aboriginal people with >1 additional risk factor should become the norm (every 1-2 years)**

References

A Birth Story

My first breath of life came with the helpful assistance of a qualified person trained in a Cree culture... [She] was knowledgeable, experienced, and confident in her abilities. For her it was a way of life. It was also spiritual and communal. Babies were not just delivered. Babies were prayed into this world. It was a sacred undertaking. It was a family affair and a community event. 

— Chief Ovide Mercredi, Misipawistik Cree Nation

Residential Schools

It is estimated that about 150,000 aboriginal, Inuit and Métis children were removed from their communities and forced to attend residential schools.

Impacts

- Health
  - Depression & anxiety
  - Psychosomatic ailments
  - Suicidal behaviour
  - Intra-familial conflict
  - Substance abuse
  - Antisocial behaviour

Intergenerational Impact of Residential School

- Generations of people who:
  - Haven’t been able to connect
  - Haven’t had a sense of spirituality
  - Haven’t been able to make firm attachments with caregivers
  - Experience intergenerational trauma
Inter-generational Effects on Professional First Nations Women Whose Mothers are Residential School Survivors

http://www.fnha.ca/program_aboriginal_digitalStories.htm

“Turning it Around”
- understanding the Intergenerational Impacts of Residential School and other impacts of colonization
- healing
- building strength and capacity.
- rebuilding our cultures in contemporary contexts

Tripartite Aboriginal Doula Initiative


Aboriginal Midwifery

WORDS IN OUR LANGUAGES FOR ‘MIDWIFE’:
- “She who can do everything” (Nuu-chah-nulth)
- “To watch, to care” (Coast Salish)
- “The one who waits for the birth” (Inuktitut)
- “The helper” (Inuktitut)
- “The one who delivers” (Cree)
- “She’s pulling the baby out of the water, or out of the earth” (Mohawk)

References
- Roberta Stout, Sheryl Peters (2011) kiskinohamâtîtlâpânsîk: Inter-generational Effects on Professional First Nations Women Whose Mothers are Residential School Survivors, project #236 of Prairie Women’s Health Centre of Excellence, website: www.pwhce.ca
- National Aboriginal Council of Midwives
  - http://www.aboriginalmidwives.ca
Thank You!
Learning Objectives

- To appreciate the complexities of working across disciplines and working across acute and community services in perinatal care
- To articulate the roles of each of the players in perinatal health services in order to collaborate more effectively
- To create seamless transitions for mothers throughout their perinatal journey

Background

Since perinatal services are provided by a series of different healthcare providers in different settings, there is a need to pay particular attention to the transitions between these providers to ensure a woman’s perinatal journey is seamless. The Seamless Perinatal Healthcare Initiative at Fraser Health was created to address priority gaps in perinatal care across acute and community services, with particular focus on vulnerable women and their families from pregnancy to 8 weeks postpartum. Improvements in the “3 Cs” of communication, coordination, and collaboration are intended to result in improved outcomes for the mother and infant as well as an experience of “seamless care” across various care providers.

Based on findings from a review of FH’s former hospital liaison role, a literature review, gap analysis, and surveys of health care providers and clients, a new model of a Seamless Perinatal Transition Teams, comprising antepartum nurses, public health nurses, hospital social workers, and primary care was...
developed. The model was prototyped in a large tertiary hospital (Royal Columbia Hospital) and a smaller community hospital (Langley Memorial Hospital).

The prototyping process allowed teams to operationalize the model, exploring what worked well in each site and test ways of dealing with various challenges. A developmental evaluation process was undertaken during the prototype project to surface learnings to inform the roll out of Seamless Perinatal Healthcare at all eight maternity hospitals in Fraser Health, which is currently underway.

**Evaluation Findings**

As expected, there were considerable differences between the two prototype sites (e.g., patient volumes, acuity, socioeconomic vulnerabilities, prenatal Best Beginnings registration rates) that affect the way in which Seamless Perinatal Healthcare was operationalized at each site. Formal structures for the project (e.g., Steering Committee, Implementation Planning Team, project manager), inclusivity of a broad cross section of stakeholders on the committees, and leadership support helped facilitate the work. In addition, ongoing monitoring and evaluation throughout the prototype led to refinements in processes and forms. As well, the work helped to crystallize the role of the Seamless Perinatal Transition Team (i.e., to triage referrals to the most appropriate providers, coordinate care among the providers who are already responsible for providing care, and communicate this information to ensure all involved providers have a full picture of the care plan) and the roles of the different care providers. The Seamless Perinatal Healthcare Initiative is not about providing new services, it is about coordinating such that patients are connected to appropriate services and that information is communicated to all relevant care providers in order to ensure they are all kept in the loop.

Some key outcomes from the project included:

- development of relationships between care providers who did not previously have those relationships, which resulted in care providers gaining an understanding of, and appreciation for, the work done by the other disciplines and a more holistic view of the client
- staff reported better communication between acute and community providers and a better understanding of one another’s roles, leading them to be able to work together as one team to complement one another’s work rather than duplicating services
- having information in advance allows for more efficient service provision (e.g., booking a Public Health breastfeeding clinic appointment before the client even leaves the hospital; hospital nurses knowing in advance that a client is seeing Reproductive Mental Health or is willing to talk to a social worker when they deliver)
- prenatal identification of vulnerabilities can reduce variability of workload, as work can be done in advance, rather than scrambling to put resources in place when a vulnerability is discovered after a client has been delivered

Ultimately, these outcomes lead to the provision of more seamless care for vulnerable clients.

In terms of patient outcomes, very soon into the prototype, the Seamless team started picking up patients who would have fallen through the cracks without the Seamless team being in place. For example, mothers who had a normal birth and were discharged with no issues, but then were readmitted to hospital. Prior to the Seamless prototype, Public Health would not have been notified that mothers such as these were readmitted and thus would not know when they returned home or know about what issues they faced that resulted in readmission.
Some stories from the Seamless team:

A patient who had received no prenatal care was identified by the Seamless team. When speaking with the Seamless PHN at the hospital, she revealed her inability to keep her baby, as the PHN had discussed with her what resources she had ready for her return home. She had not previously revealed this to any other care providers, but was now able to discuss options and resources with her care team.

A couple whose unborn baby was identified as having a anencephaly (lacking significant portions of the brain), and thus would not be able to survive after birth, was referred to the Seamless Team. The couple had though that they would not be eligible to receive any postpartum support because they would not be going home with a baby. Together with all the care providers who would be involved in their care, the couple was able to make a care plan, including being on the Pediatrics ward (instead of on the maternity ward surrounding by well babies) and including postpartum support for the mother. All care providers has a copy of the plan and were able to make this situation less traumatic than it might otherwise have been.

A patient who delivered her baby at Peace Arch Hospital was transferred to RCH due to cardiac issues and experienced cardiac arrest during the transfer. The mother was taken to the ICU and the baby went to the Pediatric unit. Despite neither mother nor baby setting foot in the maternity unit, Seamless team was alerted and all of the information about the mother and baby’s stay at RCH was provided to PH in White Rock upon their return home to their community. Prior to Seamless, White Rock PH would have received only a liaison form that said “mom and baby transferred to RCH”.

A patient reported intimate partner violence to their obstetrician, who called the Seamless team at the hospital and was able to speak with the Seamless PHN who was there that day to explore ways to support the patient. Prior to Seamless, the obstetrician would not have known how to get this type of support.
As with any complex initiative, there were a number of challenges faced during the prototype, including challenges with engagement, logistics, communications, timelines, and balance.

- Having broad inclusion of stakeholders on the various committees and groups, while important to the success of the project, resulted in logistical challenges (e.g., to coordinate meetings, orient new members). This was complicated by high turnover in leadership during the prototype. Moreover, engaging physicians in the planning was complex. Strong project management helped to deal with these challenges.

- The cross-disciplinary nature of the project presented challenges related to different disciplines having different foci (e.g., acute care staff and primary care providers tend to focus on a medical model, Public Health staff focus on a population health lens), cultures, language, and systems. As well, each group uses different records and where IT systems exist, they are not compatible with each other. Working together face-to-face allowed teams to learn about each other’s ways of working and to develop a shared culture and language.

- The nature of the prototype project, where a high-level model was created and then testing and refinement occurred on the front-line, was challenging for a number of reasons. Prototyping is a very different way of working than most people are used to, involving change, uncertainty, and complexity, which can be uncomfortable, especially when one is not used to it. It was difficult, especially in the beginning, to understand exactly what Seamless Perinatal was going to look like on the ground, which made it difficult for those involved to explain it to others. Some of the key messages about Seamless Perinatal did not crystallize until the model became more concrete through the prototyping process. As well, there is a need to balance the quick changes inherent to a prototype, as elements are tested and tweaked, with (a) not overwhelming and confusing participants with too many changes and (b) clear communication of the changes. As well, systems within the health authority are much slower than a prototype (e.g., the turnaround time for a privacy impact assessment is so long that by the time it is reviewed and approved, the prototype has changed so much as to need an amendment).

**Recommendations**

- Be inclusive of all the relevant disciplines in working groups, advisory committees, and prototyping teams and ensure you have strong project management to handle the associated challenges. Working together is beneficial because it:
  - requires each discipline to be able to articulate its role to the other disciplines and role clarity is key to the process running smoothly
  - allows disciplines to see where their roles overlap, compliment, or conflict with one another, which can help reduce both duplication of efforts and reduce gaps in care
  - allows staff from the different disciplines to build relationships, which improves communication and ability to coordinate care
  - discover their common purpose of improving the experience and outcomes for the mother and her baby

- Collectively, this helps break down the silos, as staff start to see that they are working together for a common purpose and start to think about the patient and their journey more holistically.

- Work upstream wherever possible. Earlier identification of vulnerabilities can help reduce variability in workload and make the experience less stressful for staff and clients alike.
Learning Objectives
1. Increase understanding about the effects of violence and trauma on women during the perinatal and neonatal period and how this can influence the care of pregnant women and their newborns.
2. Illustrate concrete strategies and application of principles of trauma-informed care for healthcare professionals who provide care in the perinatal and neonatal period.
3. Facilitate discussion regarding approaches, innovations, and challenges for individuals and organizations shifting towards becoming more ‘trauma-informed’.

Overview of Trauma and Perinatal/Neonatal Services
Trauma can result from early experiences in life such as child abuse, neglect, and witnessing violence as well as later experiences such as violence, accidents, natural disaster, war, and sudden unexpected loss.

- Trauma results from experiences that overwhelm an individual’s capacity to cope
- Post-Traumatic Stress Disorder (PTSD) is a diagnosis used to describe one type of mental health response that can result from trauma

PTSD has been linked with a number of concerns during pregnancy, including high risk behaviors, such as tobacco and alcohol use, complications such as miscarriage, ectopic pregnancy, hyperemesis gravidarum, preterm contractions that do not lead to preterm delivery, and the adverse outcomes of lower birth weight, and shorter gestation (Bell and Seng, 2013).

Definition of Perinatal Trauma: “Perinatal trauma refers to psychological trauma related to pregnancy, birth, or the postpartum period. Childbearing women might have a number of experiences that lead to acute stress disorder or posttraumatic stress disorder (PTSD): prior childbearing loss, which could include miscarriage, fetal or neonatal death, or abortion; life-threatening complications during pregnancy; a difficult or life-threatening birth experience; or infant complications, such as preterm delivery or infant illness or disability. Labor and delivery are often the context for trauma symptoms that can cause PTSD.” (Kendall-Tackett, 2012)

What do Trauma-Informed Services Look Like?
- Trauma-informed services take into account an understanding of trauma in all aspects of service delivery and place priority on the individual’s safety, choice, and control (Harris and Fallot, 2001).
- Utilizing a trauma-informed approach does not necessarily require disclosure of trauma. Rather, services are provided in ways that recognize the need for physical and emotional safety, as well as choice and control in decisions affecting one’s treatment.
- Trauma-informed practice is more about the overall essence of the approach, or way of being in the relationship, than a specific treatment strategy or method.
- In trauma-informed services, safety and empowerment for the service user are central, and are embedded in policies, practices, and staff relational approaches. Service providers cultivate safety in every interaction and avoid confrontational approaches.
Trauma-Informed vs. Trauma-Specific

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<th>Trauma-informed services:</th>
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<td>• Embed an understanding of trauma in all aspects of service delivery</td>
<td>• Directly address the impact of trauma</td>
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<td>• Place priority on trauma survivor’s safety, choice and control</td>
<td>• Directly facilitate trauma recovery and healing</td>
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<td>• Create a treatment culture of nonviolence, learning, and collaboration</td>
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Moving Towards Trauma-Informed Systems

Many researchers and service providers have developed principles of care for trauma-informed systems - bringing together individual approaches with organizational change (see resources). When working with women in a trauma-informed system it is important to have an understanding that:

- There are multiple and complex links between trauma, mental health and addiction;
- Trauma related “symptoms” are attempts to cope;
- A woman will not have to disclose a trauma history to receive trauma-sensitive services. All services will be trauma sensitive;
- All staff will be knowledgeable about impact of violence and trained to behave in ways that are not re-traumatizing; and
- Women will have access to trauma specific services.

Case Example: NICUs – Why do They Need to be Trauma-Informed?

- Many traumatic experiences – (a) environment - is an unknown, frightening, no control for parents, no privacy; (b) pregnancy and birth related traumas, in particular a sick and/or premature infant. Trauma may be a universal NICU experience for parents
- Need to consider vicarious or secondary trauma for team members who constantly deal with critical clinical and ethical situations
- Many triggers and retraumatizing practices happen as a part of routine everyday care:
  - Triggers - Feeling lonely, not being listened to, feeling isolated, lack of privacy, being stared at, not having control, being touched
  - Re-traumatizing practices: Dark rooms and flashlights, panicked staff, security officers in uniforms, standing over someone while they are sitting, loud/sudden noises, surprises (someone coming up from behind)

Resources on Trauma-Informed Care

Trauma Informed Practice (TIP) Guide
Developed by the BC Centre of Excellence for Women’s Health, this guide is intended to support the translation of trauma-informed principles into practice. Included are concrete strategies to guide the professional work of practitioners assisting clients with mental health and substance use concerns in British Columbia

Trauma Matters: Guidelines for Trauma-Informed Practices in Women's Substance Use Services
http://www.jeantweed.com/LinkClick.aspx?fileticket=3-jaLM6hb8Y%3d&ttabid=107&mid=514
This resource on trauma-informed practices were developed by the Jean Tweed Centre and provide guidelines to help substance use services provide safe environments that respond effectively to the interconnections between trauma and substance use, including utilize safe, sound, respectful, trauma-informed practices in their work.

**Guiding as Practice: Motivational Interviewing and Trauma-Informed Work with Survivors of Intimate Partner Violence**
http://www.mitrainingtoday.com/article.pdf
This article describes trauma-informed services and the potential that Motivational Interviewing (MI), an evidence-based, client-centered, and guiding communication style, holds for utilization within trauma-informed work. A case vignette is provided which demonstrates primary MI skills that can be used to create a climate of safety and trust, and effectively elicit and strengthen clients’ motivation for change.

**Centre for Addiction and Mental Health. Bridging Responses: A Front-Line Worker’s Guide to Supporting Women Who Have Post-Traumatic Stress.**
http://www.camhx.ca/Publications/CAMH_Publications/bridging_responses.html
Many women who seek help from front-line services have experienced past violence and trauma but may not recognize that many of their difficulties might be associated with responses to complex post traumatic stress. This resource for front-line staff who work with women offers information and tools to help recognize responses to post-traumatic stress in women’s lives, and to establish a level of confidence that encourages women who have survived abuse and violence to consider referrals to appropriate services or resources.

**Coalescing on Women and Substance Use: Trauma-informed Online Tool**
This virtual toolkit on trauma-informed approaches in Canada provides an overview of key issues and themes in practice and policy, and highlights promising practices, and tensions. It also provides links to recommended readings, curricula and training resources, and web resources for working with women, understanding the connections between substance use, mental health and trauma, and strategies for developing trauma-informed practices and services.

Released in June 2013, these consensus guideline describe cultural safety as it applies to Aboriginal peoples’ sexual and reproductive health, and pregnancy care. Intended for an audience of First Nations, Inuit and Métis women, social services workers, health navigators, community health workers, cultural-liaison workers, health services researchers, and other stakeholders.

**Vermont Oxford Network**
http://www.vtoxford.org/
A non-profit voluntary collaboration of health care professionals dedicated to improving the quality and safety of medical care for newborn infants and their families. The group has recently completed a review of trauma-informed principles for the neonatal intensive care setting.
References


Early Identification of Risk and Protective Prenatal and Postnatal Factors Influencing Mother-infant Attachment

Presented by:
Dr. Deborah Bell, R.Psych. & Dr. Sonya Vellet, R.Psych.
Vancouver, British Columbia
February 21, 2014

Learning Objectives
1) To identify key risk and protective factors influencing the mother-infant attachment relationship.
2) To become familiar with a model to assist in decision-making regarding the needs of high risk families.
3) To gain awareness of parent-infant interventions designed to support healthy attachments.

Infant Mental Health
• Infant mental health refers to social and emotional development during the first five years of life. Including:
  – The emerging ability to focus attention, regulate behaviour, and manage emotions.
  – The ability to form close emotional ties to others
  – The ability to play, explore, and learn

Attachment and Infant Mental Health
• Forming at least one close emotional tie with a consistent, and sensitively responsive caregiver is critical
• Infant uses attachment figure to regulate distress
• If there is interference with the healthy attachment relationship, it elevates stress for the infant and increases risk.
• Intergenerational transmission of attachment experiences (80%)

Understanding Accumulating Risk (DeKlyen & Greenberg)

Key Risk and Protective Factors
- Infant/Child: Temperament, prenatal exposure, developmental progress
- Caregiver: History of trauma and/or loss, historical & current use of services, wellbeing and mental health
- Attachment: Is the infant/child able to use the caregiver to calm when distressed?
- Context: Stress, other adversity (e.g., domestic violence), resources, support
Facts About Risk Factors

• Not all risk factors are created equally.
  – Certain risk factors are more serious than others (see chart).
• Risk factors are cumulative but are not causal.
• This means that the more risk factors that a client has, the risk increases exponentially.
• However, it is important to be thinking about how each individual parent-child dyad might be impacted by the level of risk and protective factors.

Case Example – High Risk

• 28-year old woman, history of severe childhood physical and sexual abuse, homelessness, domestic violence, and diagnosed with Dissociative Identity Disorder
• Two older children had been apprehended (and adopted) due to physical maltreatment by mother
• Initially presented with significant concerns about challenges in parent-infant attachment relationship with 9-month old son, including maternal fear of maltreating infant.

Key Risk and Protective Factors Decision Model

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Key Risk and Protective Factors: Mother-Infant (1) - High Risk

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Key Risk and Protective Factors: Mother-Infant (2) - Moderate Risk

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Case Example – Moderate Risk

• Provided COS over two-year period with subsequently-born daughter during infancy and toddler years: Parent-child attachment relationship initially Insecure (AV) ->Secure
Case Example – Low Risk

- Parent-child attachment relationship with subsequently-born daughter during infancy: Secure

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Interventions

- Sensitive Responsiveness Training (e.g., van den Boom)
- Attachment & BehaviouralCatch-up (Dozier)
- Watch, Wait, and Wonder (Cohen & Lojacsek)
- Modified Interaction Guidance (Benoit)
- Circle of Security (Powell, Cooper, Hoffman, & Marvin)
- Child-Parent Psychotherapy (Lieberman & Van Horn)
- Power to Parent (Neufeld)

References

- Harvard Centre for the Developing Child (developingchild.harvard.edu)
- Zero to Three (http://www.zerotothree.org)
Learning Objectives:
Learning objectives of the presentation will include improving understanding of: 1) therapist-assisted internet cognitive behaviour therapy (TAICBT); 2) content, format, and outcomes of a specialized TAICBT program for women with postpartum depression; 3) therapeutic strategies used to facilitate internet therapeutic alliance; 4) strategies for garnering community interest in the TAICBT program; and 5) barriers and facilitators of offering TAICBT to treat PPD.

Summary
Postpartum depression (PPD) impacts up to 15% of Canadian women following childbirth. Many women suffering from PPD do not receive appropriate treatment for reasons including stigma associated with receiving mental health treatment, difficulty arranging childcare, transportation challenges, and time and financial constraints (Vesga-Lopez, Blanco, Keyes, Olfsen, & Grant, 2008). The integration of Internet technology with the practice of psychotherapy is an innovative method for increasing accessibility and affordability in the provision of mental health treatment. According to reports by Statistics Canada, over 80% of all households in Canada have Internet access, and approximately 70% of Canadians use the Internet to seek medical or health related information (Statistics Canada, 2010). Given that PPD is vastly under-treated and multiple treatment barriers have been identified with receiving in-person therapy for PPD, utilizing the Internet may be a novel modality to treat women afflicted with PPD who might otherwise not receive treatment.

There are an increasing number of controlled trials in Internet therapy in various fields such as mood disorders, anxiety disorders, and health conditions (Andersson, Ljotsson, & Weise, 2011; Cuijpers, Donker, van Straten, & Andersson, 2010). Internet therapy may be particularly well suited to treat PPD, as it potentially addresses many of the barriers identified with in-person PPD treatment. For instance, women can complete the therapy from the convenience of their home at any time, thereby addressing mobility and childcare challenges. Moreover, Internet therapy offers the potential reach women residing in rural or remote areas who might otherwise not receive treatment due to transportation challenges. Receiving treatment via the Internet from a client’s home is also likely beneficial when a woman is breastfeeding, as she can complete the therapy between feedings. Internet therapy can also be completed when the infant is sleeping.

A recent study conducted by Sheeber and colleagues (2012) reported that online CBT offered with telephone coach assistance was more efficacious for economically disadvantaged mothers than a waitlist control condition. The online program, however, was geared toward mothers of children less than five years of age and was not exclusively targeted to treat depression in the postpartum period. Given hormonal fluctuations and the pronounced sleep deprivation evident in the postpartum period, it is possible that women struggling with PPD may respond differently to online therapy. This investigation developed and piloted the efficacy of a therapist-assisted ICBT (TAICBT) program for women in Saskatchewan afflicted with PPD who have children less than one year of age. To our knowledge, this was the first Canadian TAICBT program tailored for women afflicted with PPD. The program was based on an adult Depression Online program (Hadjistavropoulos et al., 2011) and the adaptations were informed by the work of Milgrom, Martin, and Negri’s group PPD treatment (1999).
Using a randomized control design, women ($N = 50$) scoring above 10 on the Edinburgh Postnatal Depression Scale (EPDS) were randomly assigned to receive either TAICBT or waitlist control (WLC). The efficacy of the treatment was investigated at baseline and at seven- to 10-week follow-up. Treatment satisfaction, therapeutic alliance, and open-ended questions regarding participant experiences with the program were explored at post-treatment. For a longer-term follow-up, TAICBT participants were contacted four-weeks following treatment completion. Analyses included multi-level mixed models, clinical significance testing, multiple regressions, and thematic content analysis of the open-ended responses. Results indicated that symptoms of PPD tended to decrease more quickly over time for participants in the TAICBT group compared to those in the WLC group, and these results were clinically significant, reliable, and maintained at four-week follow-up. Secondary analyses indicated that TAICBT participants demonstrated a greater reduction in symptoms of postnatal anxiety, general stress, and parental distress and an increase in psychological and environmental quality of life when compared to the WLC participants. Study implications, limitations, and future research directions are discussed.

Selected References:

Biography:
Nicole Pugh is a Clinical Psychology Resident at Vancouver Coastal Health. She received her MA in Clinical Psychology at the University of Regina and continued into the PhD program (expected graduation fall, 2014). Nicole’s clinical and research interests are in the area of perinatal mental health and Internet therapy. She has been an active member of the MotherFirst provincial working group that has developed policy recommendations to address gaps related to maternal mental health, including screening and treatment, in Saskatchewan. Nicole was involved in the creation and implementation of the Online Therapy User Program- one of the first therapist assisted Internet cognitive behaviour therapy unit’s in Canada. Nicole has published and presented her research widely and received research funding through the Canadian Institute of Health Research, Saskatchewan Health Research Foundation, and the University of Regina.
Severe Maternal Morbidity Associated with Early-and Late-onset Preeclampsia

Sarka Lisonkova

Abstract
BACKGROUND: Preeclampsia has been increasingly recognized as two different conditions, early- and late-onset disease (onset at <34 vs >=34 weeks gestation).

OBJECTIVE: To understand the impact of early- vs late-onset preeclampsia on severe maternal morbidity.

STUDY DESIGN: The study included all singleton deliveries in Washington state, USA, 2000-2008 (N=670120). Preeclampsia onset was determined from hospital records linked to birth certificates. Logistic regression was used to obtain adjusted odds ratios (AOR) and 95% confidence intervals (95% CI).

RESULTS: The preeclampsia rate was 3.02%; rates of early- and late-onset disease were 0.35% and 2.72%, respectively. Women with early- vs late-onset preeclampsia had higher rates of maternal death (4.2 vs 1.1 per 10,000 deliveries, respectively). The rate of severe maternal morbidity (excluding obstetric trauma) was 14.8 per 100 deliveries in the early-onset group (AOR 2.22, 95% CI 1.96-2.51), 11.7 per 100 deliveries in the late-onset group (AOR 1.80, 95% CI 1.71-1.89) and approximately 6 per 100 deliveries in women without preeclampsia. Early-onset preeclampsia conferred a substantially higher risk of cardiovascular, respiratory, central nervous system, renal, hepatic, and other morbidity. However, rates of obstetric trauma were lower among women with preeclampsia. Rates of blood transfusion were significantly increased among women with early-onset preeclampsia (AOR 9.33, 95% CI 7.51-11.5) and also those with late-onset disease (AOR 4.21, 95% CI 3.72-4.76).

CONCLUSION: Preeclampsia substantially increases rates of cardiovascular, respiratory, central nervous system, renal, hepatic, and other maternal morbidity, and women with early-onset disease have significantly higher rates of specific maternal morbidity.

Learning Objectives
At the end of the presentation, the audience should be able to recognize that preeclampsia constitutes two different conditions and that preeclampsia, especially the early-onset disease, is associated with high severe maternal morbidity and mortality.

The audience should also be able to recognize that women with signs of preeclampsia should be transferred and delivered at tertiary care centres with an intensive care unit availability.

Synopsis
Preeclampsia is one of the leading causes of maternal morbidity in the industrialized countries. It has been increasingly recognized as two different conditions depending on the onset of symptoms, early- and late-onset disease (onset at <34 vs >=34 weeks gestation). Early-onset preeclampsia has far worse implications not only for the baby, but also for the mother.
Evans, M., Kaptein, S., McTavish, Liscombe, L., Banerjee, A., Feig, D., Lowe, L.

Gestational diabetes mellitus (GDM) is an abnormal carbohydrate tolerance diagnosed or first recognized during pregnancy and occurs in 1% to 14% of all pregnancies (Kim et al., 2006) with an increasing prevalence among multiethnic groups (Ferrara, 2007). Risk factors for GDM include maternal age, race/ethnicity, parity, body mass index, hypertension and smoking status (Lawrence, 2011). Although GDM typically resolves immediately after delivery, women with a history of GDM are at increased risk for type 2 diabetes and almost 20% will develop diabetes within nine years postpartum (Bellamy, Casas, Hingorani, & Williams, 2009; Feig, Zinman, Wang, & Hux, 2008).

A diagnosis of GDM presents health challenges requiring adjustments to a woman’s usual pregnancy and postpartum trajectory but also provides health providers an opportunity to identify ‘at risk’ women and promote long-term health behaviour changes. Diabetes management during pregnancy is particularly stressful for women and their families (Persson, Winkvist, & Mogren, 2010; Kaptein, Evans, McTavish, Banerjee, Lowe, Liscombe, 2014 in review), as they are primarily concerned about the well-being of their expected child (Evans & O’Brien, 2005). However, knowing their risk for developing diabetes could act as a catalyst towards women making healthy lifestyle changes post-partum (Evans, Patrick, & Wellington, 2010).

There is evidence that diabetes can be prevented through lifestyle changes, such as diet and physical activity. Clinical practice guidelines recommend universal screening and treatment of GDM during pregnancy and maternal diabetes screening and lifestyle modification counselling postpartum (Canadian Diabetes Association, 2013). However, few studies have assessed the extent to which women with GDM recognize their risk and need to make lifestyle modifications. One survey study showed that lifestyle counselling during pregnancy was largely ineffective at producing post-partum lifestyle changes (Kim, 2007). New mothers express experiencing challenges with engaging and maintaining healthy lifestyle postpartum. Furthermore women with previous GDM have shown a low adherence to recommended guidelines for lifestyle behavioural changes (Kaiser, & Razurel, 2013).

The ability to make lifestyle changes is influenced by a women’s mental well-being, perceived stress, role expectations, social support networks and cultural beliefs (Razee et al., 2010; Stark & Brinkley, 2007; Bandyopadhyay, Small, Davey, Oats, Forster & Aylward, 2011). Women’s perceptions of an ‘at risk’ pregnancy is related to their present health status, past experiences, personal beliefs and values (Devine, Bove & Olsen, 2000) and may influence their engagement in healthy behaviours (Fehler, Kennedy, McCargar, Bell, & Ryan, 2007; Lawrence, 2011; Stage, Ronneby & Damm, 2004). Thus, in order to optimize healthy behavioural change interventions aimed at women with recent GDM need to be context based to help address unique barriers they experience. To optimize the ‘window of opportunity’ of a GDM pregnancy and promote health behaviour changes, we first need to understand the barriers and facilitators faced by women in maintaining a healthy lifestyle. The purpose of this qualitative descriptive study of women with GDM was to gain insight into the experiences of women with GDM including factors associated with diabetes prevention practices, healthy behavioral change, and their perceptions regarding their health status, risk for diabetes and need for lifestyle modification. A semi-structured interview guide based on Andersen’s model of health behaviour (Phillips, Morrison, Andersen & Aday, 1998) which identifies predisposing, enabling and need factors that may influence a woman’s readiness to engage in health behaviour change was developed for this study.
A purposive sample of 16 women between 3-12 months postpartum (part of a larger longitudinal cohort group) were recruited for this study. The women had previously attended one of two separate diabetes-in-pregnancy clinics located in Toronto, Ontario during GDM care. Data collection continued until no new information emerged from the data and theme saturation was reached. Telephone interviews were conducted with all participants, subsequently transcribed verbatim, checked for accuracy and entered into Nvivo 9 for analysis. All transcripts were analyzed using qualitative content analysis. Results have policy and practice implications for enhancing maternal health promotion programs specifically to help address the increasing rate of diabetes in this high risk population. Many women expressed knowledge of their risk for future diabetes but only half indicated being overly worried about developing diabetes. The women reported adjusting to the demands of postpartum often took precedence rather than engaging in more healthy behaviours. Preventive interventions and postpartum programs are needed to provide social support, flexibility and consider women’s individual circumstances need to be developed to decrease the burden of diabetes in mothers with previous GDM.

Learning Objectives

1. To describe facilitators and barriers that impact lifestyle modifications by women with gestational diabetes

2. To gain an understanding of the ongoing postpartum needs of women with gestational diabetes

3. To discuss implications for best practices, health policy and future research concerning diabetes prevention in at risk women

References


Fetal Death and Stillbirth: Rationalizing Definitions and Procedures for Optimizing Clinical Care and Public Health

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Contemporary stillbirth registration and other legal requirements for dealing with stillbirths represent the vestiges of a bygone era. There is concern that these archaic rules sometimes cause psycho-social distress to mothers and families, increase work and costs for health care institutions, artifactually increase stillbirth rates in countries such as Canada and bias international comparisons of stillbirth rates. We propose to highlight these issues through a Panel Discussion that will describe problems with

a) The definition of stillbirth as recommended by the World Health Organization and as used for stillbirth registration in countries such as Australia, Canada, the United Kingdom and the United States.

b) The public health surveillance of stillbirths that arise due to the inclusion of fetal reductions and late pregnancy terminations in stillbirth counts.

c) Clinical care caused by the need for parents and health care providers to deal with outdated legal requirements including extensive paperwork and procedures specifying the appropriate disposal of fetal remains.

The Panel will also discuss recommendations to rationalize the stillbirth definition and procedures associated with stillbirth including whether

1. Stillbirth registration criteria should be based on birth weight, gestational age at fetal death or gestational age at delivery of the expired fetus.

2. The definition of stillbirth should specifically exclude cases of pregnancy termination that fulfill the stillbirth definition.

3. By default, the onus for stillbirth registration, burial arrangements and related procedures should fall on the health care provider and the hospital.

Learning Objectives

At the end of the Panel Discussion, members of the audience should be able to

1) List the shortcomings of contemporary definitions of stillbirth.

2) State how current stillbirth registration and other legal requirements may create problems in clinical care and public health surveillance.

3) Identify potential alternatives to current stillbirth registration and related requirements.