

Perinatal Services BC, an agency of the Provincial Health Services Authority, provides leadership, support, and coordination for the strategic planning of perinatal services in British Columbia in collaboration with the Ministry of Health, health authorities, and other key stakeholders.

#### **Vision**

Healthy women having healthy pregnancies and infants.

#### Mission

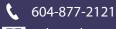
Through partnerships and collaboration and by building a high-quality system of care across the continuum, we will optimize pregnancy and birth outcomes as a foundation for a healthy population.

Our key responsibilities include:

- improving health outcomes of pregnant women and newborns;
- implementing prenatal and newborn screening programs;
- developing evidence-based policies, practice standards and guidelines, and forms for healthcare providers;
- collecting and monitoring data for surveillance and using that data to inform and evaluate programs; and
- providing training to healthcare providers in areas such as breastfeeding, neonatal resuscitation, fetal health surveillance, Aboriginal doula, and infant safe sleep.

Perinatal Services BC is the central source in the province for evidence-based perinatal information.

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We continue to work towards improving the health of pregnant women and infants as a foundation for improved population health across BC.

### Introduction

#### Message from the Provincial Executive Director

am pleased to provide this annual report highlighting many of the activities Perinatal Services BC has led or partnered in over the last year. We continue to work towards improving the health of pregnant women and infants as a foundation for improved population health across BC. Our initiatives span the continuum of perinatal care from health promotion and prevention to primary care to acute care at all tiers of service.

Our successes can be accredited to our passionate and multidisciplinary team who remain committed to ensuring due diligence and strict criteria for obtaining and maintaining clean data. Our extensive BC Perinatal Data Registry provides the basis for good evidence-informed outputs, such as clinical resources, guidelines, and support tools and enables our agency to provide broad surveillance products which are relevant and accessible in a timely fashion. All these support quality improvement initiatives, system planning, and ultimately improved health outcomes.

As well as supporting maternal and newborn health locally, Perinatal Services BC team members have been asked by a number of organizations across Canada and globally to present on various initiatives. In all cases, it was a privilege to share our project successes and challenges with healthcare providers outside British Columbia.

Kim Williams

**Provincial Executive Director** 

Kim Williams

Perinatal Services BC

#### **Acknowledgements**

Perinatal Services BC would like to acknowledge and thank the Ministry of Health, BC Women's Hospital & Health Centre, regional health authorities, the First Nations Health Authority, professional associations, and clinicians and care providers from all areas of the province for their continued support and collaborative efforts.



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## Quality & Education

Perinatal Services BC (PSBC) collaborates with provincial stakeholders and frontline leaders to promote the application and integration of evidence-based practices designed to increase the effectiveness, efficiency, accountability, and sustainability of clinical activities in maternal, fetal, and newborn health across British Columbia.

#### Breast Pump Kits for Multiple Use

SBC facilitated consultations to address the recommendation made by breast pump kit manufacturers that breast pump kits should be single use products. PSBC met with the Provincial Infection Control Network of British Columbia, Health Canada, and other groups over many months to discuss the issue and provide guidance to mothers who use

breast pump kits. Based on current evidence and information, Perinatal Services BC continues to support the reuse of single use breast pump kits by the same mother in healthcare settings following appropriate cleaning between uses. In October 2013, PSBC released a discussion paper containing seven recommendations, which was shared widely across Canada.

PSBC facilitated consultations to address the recommendation made by breast pump kit manufacturers that breast pump kits should be single use products.

"Fantastic diversity
of the [conference]
program. Well done!
Good balance between
biological and
psychosocial."

- Physician

#### Healthy Mothers and Healthy Babies Conference

n February 2014, Perinatal Services BC hosted an inaugural conference, Healthy Mothers and Healthy Babies: New Research and **Best Practice.** It was an opportunity for healthcare professionals interested in the care of pregnant women and their newborns to be updated on new research and best practices across the continuum of perinatal and newborn care. The conference aimed to engage healthcare professionals from a wide range of disciplines in knowledge transfer and interprofessional collaboration in order to provide the best care possible and ensure healthy mothers and babies.

The following were objectives of the conference:

- provide information on what is new across the continuum of care from conception to postpartum;
- facilitate learning about surveillance and system

- improvement in perinatal services;
- create an opportunity for perinatal and neonatal care providers to learn from researchers, experts, and each other; and
- provide an opportunity to network with interdisciplinary colleagues.

The format of the two-day conference included plenaries, breakout sessions, and poster sessions. There were 267 participants, including 65 from other provinces. Nurses comprised 29 per cent of participants, followed by 13 per cent administrators/managers, 12 per cent students, seven per cent educators, four per cent researchers, four per cent physicians, and 30 per cent other occupations. Participants evaluated the conference overall as positive.

Planning is already underway for the next conference in 2016.



#### Neonatal Resuscitation Program

SBC's Neonatal Outreach Coordinator continues to coordinate multi-disciplinary teams to deliver education and provides support for neonatal resuscitation to healthcare providers across the province.

Based on changes made to the Newborn Resuscitation Program (NRP) guidelines in 2011, feedback from NRP instructor workshops, and input from regional health authorities, we revised the following documents:

- Standards for Newborn Resuscitation;
- Newborn Resuscitation Record; and
- Guide for Completion of the Newborn Resuscitation Record.

Perinatal Services BC is working with the Neonatal Program at BC Women's Hospital & Health Centre to develop an online neonatal resuscitation documentation module featuring simulated neonatal resuscitation scenarios.

We also continue to strengthen our NRP regional instructor group and train new instructors. In the 2013/14 fiscal year, we held three New NRP Instructor workshops, which were attended by 38 participants, including five physicians, 26 registered nurses, three midwives, and four respiratory therapists.

#### **ACoRN**

n 2013/14, we held 13 two-day
Acute Care of At-Risk Newborns
(ACoRN) workshops with 214
participants across BC (152 nurses,
34 physicians, 23 midwives,
and five other professions). We
subsequently revised the format
of the workshop to include
simulation, and to accommodate
this type of learning environment,
we reduced the workshop size
from 18 to 16 participants.

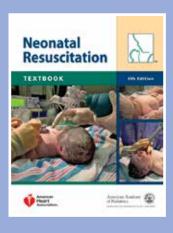
#### **Fetal Health Surveillance**

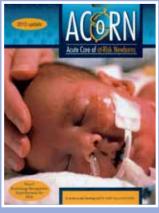
Perinatal Services BC led a national advisory group to convert *The Fundamentals of Fetal Health Surveillance: A Self Learning Manual* into an online format. The manual was originally developed by the Canadian Perinatal Programs Coalition in 2009 based on the Fetal Health Surveillance Guideline from the Society of Obstetricians & Gynaecologists of Canada.

The national advisory group decided which concepts from the manual would benefit from animation, and a medical illustrator was hired to create interactive animations and make the manual come alive. PSBC developed a partnership with the Centre of Excellence in Simulation Education and Innovation (CESEI) at the University of British Columbia, who inputted the manual's content into an online learning management system.

The work was completed in just six months. Scheduled to go live in June 2014, the FHS manual

Numerous helpful educational resources, like these publications, can be ordered from the PSBC website.







The Breastfeeding
Experience, a 20-hour
online breastfeeding
course developed by the
BC Institute of Technology
and PSBC aims to enhance
capacity to support
breastfeeding.



is now in an enhanced online format, and participants have the opportunity to use auditory, visual, and kinesthetic tools to meet their learning needs.

#### Tea & Talk

P SBC hosted four provincial Tea & Talk videoconference education sessions with up to 28 sites across the province participating via Telehealth. Topics were:

- Supporting Breastfeeding through Best Practices;
- Evaluating the BC Perinatal Data Registry;
- Biliary Atresia Home Screening Program; and
- Population and Public Health Prenatal Care Pathway.

All videos are posted on PSBC's website to enable access for those who were not able to attend.

#### Breastfeeding: Online Training

The Breastfeeding Experience, a 20-hour online breastfeeding course developed by the BC Institute of Technology and PSBC aims to enhance capacity to support breastfeeding by the healthcare professionals who provide care and support women and their families through the perinatal period and beyond. The course was available for registration beginning April 2013.

PSBC hosted four provincial Tea & Talk videoconference education sessions with up to 28 sites across the province.



PSBC worked with the Ministry of Health and the Public Health Agency of Canada to create the Breastfeeding Buddy, a web-based app with tips, tools, videos, and links to health resources in the community. It helps the mother keep track of breastfeeding, her schedule for expressing breast milk or alternate feedings, and baby's sleep schedules and diaper changes. The Breastfeeding Buddy was awarded a Gold Marcom Award for excellence in marketing and communication.

In addition to the Breastfeeding Buddy, PSBC worked with the Ministry of Health along with other partners to produce videos to accompany breastfeeding information on the Healthy Families BC website. The website articles were also translated into the three most commonly spoken languages in BC.

#### Mental Health Disorders in the Perinatal Period

n May 2013, the Canadian Task Force on Preventive Care on Screening for Depression in Adults recommended against universal screening for depression, including screening of subpopulations at increased risk of depression, such as women in the perinatal period. This recommendation led to a reexamination of BC's guidance to BC healthcare professionals on perinatal depression screening, which supports screening all women for depression twice during the perinatal period.

PSBC facilitated a forum in January 2014 that brought together clinical and public health experts as well as researchers from across Canada to present evidence to key provincial decision-makers and discuss the benefits and harms of depression screening in perinatal women. Based on the forum, an Expert Panel sub-group developed a consensus statement that recommended continuation of current practice in BC to screen all women for depression at least twice during the perinatal period (once in the antenatal and once in the postpartum period). The consensus statement also recommended advocating for opportunities and resources to conduct high-quality research that advances our knowledge about the benefits and harms of universal screening in the perinatal population. Research findings will help inform future practice recommendations.

Perinatal Services BC was also involved in the development of Best Practice Guidelines for Mental Health Disorders in the Perinatal Period, a collaboration among BC Mental Health & Substance Use Services, Perinatal Services BC, and the Ministry of Health. These guidelines support healthcare clinicians with early detection and treatment of mental health disorders in pregnant and postpartum women. The risks of untreated mental health disorders include compromised prenatal care, increased risk of obstetrical complications, self-medication or substance use, compromised mother/infant interactions, and cognitive, emotional, and behavioural impairments in the developing child.

The guidelines include:

- an overview of mental health disorders in the perinatal period;
- four common disorders: depression, anxiety disorders, bipolar disorder, and psychotic disorders, including postpartum psychosis; and
- education and prevention, screening and diagnosis, treatment, and recommendations for each disorder.

The BC Expert
Panel consensus
recommends
continuing with
current practice in BC
to screen all women
for depression at
least twice during the
perinatal period.



PSBC has led the development and implementation of many initiatives that promote healthy pregnancies and healthy infants.

# Health Promotion & Prevention

PSBC has collaborated with frontline leaders in community, primary care, and acute care settings across the province, as well as the Ministry of Health and national organizations to lead the development and implementation of a number of best practice initiatives that promote healthy pregnancies and healthy infants.

#### Safe Infant Sleep in First Nations and Aboriginal Communities

n behalf of the Tripartite Aboriginal Safe Sleep Working Group, Perinatal Services BC launched a new safe sleep education toolkit during Sudden Infant Death Syndrome (SIDS) Awareness Month in October 2013.

The toolkit, Honouring Our Babies: Safe Sleep Cards & Guide, helps service providers discuss safe infant sleep practices with First Nations and Aboriginal families to reduce the risk of SIDS and Sudden Unexplained Death in Infancy (SUDI). The toolkit is interactive, evidence-informed, and incorporates cultural beliefs, practices, and issues specific to First Nations and Aboriginal communities. It includes a deck of 21 discussion cards and seven illustrated cards that can be used to prompt and guide discussions with families about safe infant sleep. The toolkit also contains a facilitator's

On behalf of the
Tripartite Aboriginal
Safe Sleep Working
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The Population and
Public Health Prenatal
Care Pathway is a health
promotion practice support
tool for public health nurses
working with pregnant
women and their families.



guide with more information on each card's topic, research, resources, and graphics.

The Tripartite Aboriginal Safe Sleep Working Group was an initiative of the Tripartite First Nations and Aboriginal Maternal and Child Health Committee and was formed among the First Nations Health Authority, Government of Canada, and Government of BC. The toolkit was developed based on PSBC's Safe Sleep Environment for Infants 0-12 Months Guideline, with input from First Nations and Aboriginal Elders, community members, and content experts. PSBC distributed the toolkit widely across the province and trained 320 service providers in person or by webinar.

#### Population and Public Health Prenatal Care Pathway

n March 2014, Perinatal Services
BC published the new Population
and Public Health Prenatal Care
Pathway. The pathway is a health
promotion practice support tool
for public health nurses working
with pregnant women and their
families within the prenatal period.
The pathway provides information
about norm/normal variation, client
education, variance, interventions,
resources and tools for women
and families, and resources for
practitioners in nine key areas of
prenatal support.

It has been informed by evidence, practice, and framed in the public health principles of population health, health promotion, and health equity. Within this framework, the pathway focuses on the provincial public health priority areas for the prenatal period:

- healthcare and physical well-being;
- 2. nutrition;
- 3. psychosocial health;
- 4. healthy lifestyles;
- 5. healthy relationships;
- 6. resources;
- 7. injury prevention;
- 8. preparation for birth; and
- 9. preparation for parenthood.

These assessment areas align with and complement other maternal-child health related public health nursing and primary healthcare services. While the pathway was developed with public health nurses as the primary audience, it may also be used to support the practice of other maternity care providers.

The pathway was developed by Perinatal Services BC and the Ministry of Health's Healthy Development and Women's Health Branch in collaboration with regional health authorities, including public health nurses, allied health professionals, and health planners and administrators. Subject matter experts provided critical review, and primary healthcare providers provided clinical consultation to support working across the perinatal service delivery continuum.

#### Healthy Weights in Pregnancy

A growing body of research indicates that excessive gestational weight gain is a contributing factor to obesity in mothers and their babies. Thus, the perinatal period has been identified as a critical window for primary prevention of obesity.

PSBC is participating in a national working group to develop a set of practice tools to support primary maternity providers to counsel women on healthy gestational weight gain. The tools, called 5 As of Healthy Pregnancy Weight Gain, have been adapted from the Canadian Obesity Network's 5 As of Obesity Management tools and are based on a well-tested framework for behavioural counselling used to improve patient outcomes known as the 5 As (ask, advise, assess, assist, and arrange).

The five As framework includes:

- assessing the patient's health risk;
- assessing current behavior and readiness to change;
- advising the patient to change specific behaviors and collaboratively setting goals;
- assisting the patient in addressing barriers and securing support; and
- · arranging for follow-up.

The content of the practice support tools has been drafted and has undergone extensive review by subject matter experts. An evaluation strategy also has been developed in partnership with national colleagues and has received ethics approval.

With funding from PHSA's Population and Public Health Program, PSBC is leading the 5 As of Healthy Pregnancy Weight Gain project in BC in collaboration with provincial partners. PSBC will be engaging a wide range of primary maternity care providers in BC through an online survey and key informant interviews to assess the usability and feasibility of the new tools. Information on preferred training mechanisms will also be collected and used to inform the training strategy that PSBC will implement over the next two years.

PSBC was invited by the Canada Fetal Alcohol Spectrum Disorder Research Network (CanFASD) to present at a workshop aimed at developing a national, coordinated plan for the prevention of FASD. As part of the epidemiology theme of the agenda, Adam King, Provincial Lead, Health Promotion and Prevention, PSBC provided an overview of the alcoholrelated variables captured in the BC Perinatal Data Registry as well as some of the key challenges and opportunities.





Perinatal Services BC recognizes the values of and celebrates Aboriginal cultures and traditions.

### Aboriginal Health

Perinatal Services BC recognizes the values of and celebrates Aboriginal cultures and traditions. Our Provincial Lead, Aboriginal Health continues to lead efforts to foster culturally appropriate and inclusive perinatal services for Aboriginal peoples across the province and to ensure that an Aboriginal perspective of health is addressed throughout any program.

#### **Aboriginal Doula Initiative**

ed by Perinatal Services BC, the Tripartite Aboriginal Doula Initiative demonstration project ended in December 2013. There were many accomplishments to celebrate, including:

- provision of culturally appropriate doula training for 31 Aboriginal women in the Interior (13) and Vancouver Island (18);
- provision of a .5FTE Doula Liaison in each region to help participants work towards becoming certified as a doula, network, and apply their skills to support pregnant women in their regions;
- development and provision of additional curriculum focused on supporting pregnant women and families impacted by trauma to supplement standard doula training;

The Aboriginal Doula Initiative provided culturally appropriare doula training for 31 Aboriginal women. Lucy Barney, Provincial
Lead, Aboriginal
Health, PSBC was
invited to speak at the
Third International
Meeting on Indigenous
Women's Health.
She delivered the
traditional welcome
from Canada, spoke
about the Aboriginal
Doula Initiative in
BC, and facilitated
a discussion on
empowering women.

- development and implementation of a doula awareness campaign targeting community engagement hubs, First Nations health directors, and regional health authority staff to increase understanding of and an appreciation for the role and scope of practice of doulas among other healthcare providers;
- creation of a DVD that helped raise awareness among different stakeholders about the initiative and the role and importance of doulas in supporting pregnant women before, during, and after birth;
- development of a guidebook to support culturally appropriate health education

- training approaches with First Nations communities; and
- completion of a process evaluation report that identified successes, challenges, and recommendations to move towards a sustainable doula service model for BC.

Based on the evaluation report and working group discussions regarding the sustainability of the initiative, a number of recommendations to support ongoing doula training were developed. The recommendations will be reviewed by the First Nations Health Authority, Ministry of Health, BC Association of Aboriginal Friendship Centres, and Perinatal Services BC with a plan to develop next steps.



#### Preventing Low Blood Sugar in Babies

A genetic variant called CPT1a may increase the chances of a baby or young child having low blood sugar. Healthy babies and young children are not at risk for low blood sugar when they are feeding regularly. However, if they are having feeding problems, they may be at risk for low blood sugar. Very low blood sugar can cause brain injury in infants and young children.

Along the coast of BC and Vancouver Island, one in five First Nations babies is born with this gene variant. In the Interior, one in 25 First Nations babies is born with the variant. To raise awareness among First Nations communities, PSBC, the Ministry of Health, First Nations Health Authority, Island Health, and researchers from BC Children's Hospital collaborated on the development of guidelines for healthcare providers and a First Nations parent brochure.

#### **An Aboriginal Lens**

As part of the SOGC Aboriginal Health Initiative Committee, Lucy was one of the principal authors of Health Professionals Working with First Nations, Inuit and Metis Consensus Guideline, which equips healthcare professionals in Canada with the knowledge and tools to provide culturally safe care to First Nations, Inuit, and Métis women and their families in order to improve their health.





Our successes can be accredited to our passionate and multidisciplinary team who remain committed to ensuring due diligence and strict criteria for obtaining and maintaining clean data.

## Perinatal Surveillance & Informatics

PSBC's mandate is directly supported by the operation and maintenance of the BC Perinatal Data Registry (PDR). Data from the PDR are widely used for surveillance and research purposes and to support healthcare providers, researchers, and policy makers in their work to improve neonatal, maternal, and fetal health outcomes as well as to enhance the delivery and quality of perinatal services in BC.

#### **Data Warehouse**

Since going live in 2013, our Surveillance and Informatics teams have been busy enhancing the PSBC data warehouse. The data warehouse is a key element of our business intelligence focus to provide a single source of comprehensive historical and current data. Many data sources are loaded into the data warehouse where they are transformed into a

standardized structure and format to facilitate ad hoc investigations and regular surveillance reporting.

Enhancements in the last year include:

 creation of over 100 new calculated field specifications and programming into the data warehouse that, while a time-consuming and resource heavy process, contributes The data warehouse is a key element of our business intelligence focus to provide a single source of comprehensive historical and current data.

Data from the BC Perinatal
Data Registry (PDR) are
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policy makers.



- great benefits of efficiency and standardization of analysis;
- development of an automated annual indicators report running off the data warehouse, which is being tested on an internal SharePoint 2013 platform;
- development of a linkage strategy combining multiple data sources, including prenatal genetic screening and cytogenetic databases;
- linkage of maternal and newborn events to create single patient files and longitudinal events;
- refinement of import packages;
- development of automated manual data cleanup processes; and
- early development of a robust metadata repository that will eventually include a data dictionary, field specifications, and other documentation.

#### New Perinatal Data Registry

Developing a new webbased registry system is an extensive undertaking. Before programming can commence, a lot of work goes into planning, analysis, and documentation. The ultimate goal is to create a suite of electronic data collection forms to capture and link data across the full continuum of perinatal care. We have accomplished the following to date:

- developed high-level business requirements for the proposed web-based perinatal registry;
- completed a business case for review by the IMITS Architecture Review Board;
- performed detailed analyses on the manual business process for automation and re-engineering activities;
- developed a conceptual privacy impact assessment;
- analyzed the Decoupled legacy invoicing system;
- performed analyses of Health Shared Services of BC's enterprise architecture standards for internal system development compliance procedures;
- developed a project charter and related documents;
- performed preliminary requirements verification with internal stakeholders;
- began engaging external stakeholders for core perinatal dataset;
- developed standards documents, such as source control guidelines and conceptual, logical, and physical design standards;

- identified physical deployment architecture requirements;
   and
- began investigating external data sources which can be used to enrich the Perinatal Data Registry.

#### PDR Data Field Evaluation Project

The Data Field Evaluation
Project is a quality assurance
project with the overall objective
to evaluate the validity of data
contained in the current PDR.
Specific objectives are to:

- evaluate and measure the reliability of data;
- describe the extent and implications of missing data;
- evaluate the comprehensiveness of data fields across the perinatal continuum, including identifying and consolidating redundancies and identifying gaps; and
- make recommendations for a minimum dataset to be integrated into the new system as a benchmark against which to measure future quality of data elements.

This project has been divided into two phases:

 Phase I is a validation study comprised of a provincial re-abstraction project to

- measure reliability and extent of missing data in the PDR and was completed in 2013; and
- Phase II spans 2013 to 2014 and involves internal and external stakeholder engagement to address comprehensiveness of data fields and to solidify a minimum dataset to be included in the new database.

#### Revised PDR Reference Manual

The PDR Reference Manual was revised with the goal of enhancing data quality. It now contains improved examples and definitions with more user-friendly formatting. The revised manual was rolled out in March 2014 with two education webinars for health information management data coders across the province.

#### Publicly Reported Facility-Level Indicators

With extensive engagement and support from regional health authority stakeholders and community partners, we made five facility-level maternal and neonatal indicators available to the public through our website in the fall of 2013.

The five indicators were selected because they are important to the health and well-being of mothers and babies, measurable, and based on solid evidence that supports the best approach to care.

The Data Field Evaluation
Project is a quality assurance
project with the overall
objective to evaluate the
validity of data contained in
the current PDR.



#### Special Reports and Publications

PSBC's Surveillance team sets priorities for special projects based on identified trends from surveillance data, undertaking in-depth analyses and communicating the results through PSBC reports, presentations, and peer-reviewed journals. The following were published in 2013/14:

Hutcheon JA, Joseph KS, Kinniburgh B, Lee L. Maternal, Care Provider, and Institutional-Level Risk Factors for Early Term Elective Repeat Cesarean Delivery: A Population-Based Cohort Study. Matern Child Health J. 2014; 18:22-28.

Joseph KS, Kinniburgh B, Hutcheon J, Mehrabadi A, Basso M, Davies C, Lee L. *Determinants* of increases in stillbirth rates from 2000 to 2010. CMAJ. 2013 May; 185:E345-E351.

Mehrabadi A, Hutcheon JA, Lee L, Kramer MS, Liston RM, Joseph KS. *Epidemiologic* investigation of a temporal increase in atonic postpartum hemorrhage: a population-based retrospective cohort study. BJOG. 2013 June; 120:853-862.

Perinatal Services BC. Robson Ten Classification Groups Table for BC (an update to the Robson report released in 2012). 2014. The indicators are:

- Vaginal delivery rate for nulliparous women aged 20 to 39 years with a singleton vertex pregnancy at term;
- Early term repeat cesarean delivery without labour;
- 3. Post-date induction before 41+0 weeks gestation for women under 40 years of age at time of delivery;
- Exclusive use of intermittent auscultation in labouring women without risk factors who delivered vaginally; and
- Healthy term singletons receiving exclusive breast milk from birth to discharge.

Hospitals that deliver similar numbers of babies each year were assigned to peer groups, and each hospital's rate is presented alongside the peer group rate and the provincial rate.

These data can help expectant mothers and their families stay informed about the health services they receive and help them prepare for their birth experience by having informed conversations with their doctors, midwives, or nurse practitioners about their labour and delivery options.

Healthcare teams can use this information to continue to improve quality of care and safety and support the best outcomes for

mothers and babies across the province.

The website also provides definitions of the indicators, reasons why they are important, a list of frequently asked questions and answers for healthcare providers, and an explanation about how to understand the data.

#### BC Electronic Antenatal Record Pilot

PSBC has been working with the OSCAR EMR community in a pilot to enhance the electronic BC Antenatal Record. The goal is to improve practitioner use of high-quality clinical practice guidelines and pathways for antenatal care.

Benefits of the new BC Electronic Antenatal Record include:

- evidence-based care enhancement to guide practice;
- expanded space for input of information;
- a single continuous form; and
- improved workflow efficiency.

We conducted the BC Electronic Antenatal Record Pilot in 2013 with three clinics: South Community Birth Program and Bayswater Family Practice in Vancouver Coastal Health and Crossroads Family Practice in Fraser Health. The pilot users are in the process of providing feedback and evaluation. Lessons learned from the pilot will form the basis of information and specifications for EMR developers in pregnancy care.

# Prenatal & Newborn Screening

As we continue to strengthen our current prenatal and newborn screening programs, we launched a new newborn screening program that is done at home by parents.

#### Biliary Atresia Home Screening Program

erinatal Services BC implemented a new screening program for biliary atresia, a rare but fatal liver disease affecting newborns. Biliary atresia results from a blockage of the bile duct, which prevents bile from leaving the liver. This leads to damage and scarring and death by the age of two if not treated.

A surgical method can re-establish bile flow from the liver to the intestine, but effectiveness depends on timing. If performed in the first two months of life, it has an 80 per cent chance of success. But after three months, it drops to 20 per cent. If the procedure is unsuccessful, a liver transplant is required.

That is why detecting biliary atresia early is key to a newborn's survival. Signs of the disease are prolonged jaundice as well as pale yellow, chalk white, or clay-coloured stools. There is no single blood test for biliary atresia, so stool colour is the main tool for early detection.

As part of our new Biliary Atresia Home Screening Program, after Perinatal Services
BC implemented
a new screening
program for
biliary atresia, a
rare but fatal liver
disease affecting
newborns.

As part of our new Biliary Atresia Home Screening Program, after the birth of the baby...parents are given a stool colour card that contains photos of normal and abnormal infant stool colours.

the birth of the baby and before mom and baby leave the hospital, parents are given a stool colour card that contains photos of normal and abnormal infant stool colours. Mothers who have a home birth are given the stool colour card by their midwives. Parents are asked to check their newborn's stool colour against the colour card every day for the first month after birth. If they see an abnormal stool colour, they are to contact the Biliary Atresia Home Screening Program directly.

The stool colour card also has a Quick Response code, so parents can scan it with their smartphones and sign up for weekly text or email reminders to check their baby's stool colour. Reminders are available in English and 11 other languages.

PSBC distributed colour cards to and trained nurses at maternity sites in Vancouver Coastal Health and Fraser Health in the summer of 2013 and Island Health, Interior Health, and Northern Health in early 2014.

BC is the first province in Canada to implement this type of screening program—at home, family-centred, no samples to be collected. The program is based on best practices in Taiwan as well as research conducted in BC and Quebec involving more than 9,500 families.



#### **BC Prenatal Genetic Screening Program**

ptake and utilization data for prenatal genetic screening in BC in 2013/14 shows a continual decline in the use of second trimester Quad screening (<25 per cent of all screens) across all health authorities. In addition, more healthcare providers and women who choose screening are opting for integrated (first and second trimester) screening (>75 per cent), which speaks to the success of ongoing education and marketing strategies of our BC Prenatal Genetic Screening Program in various regions in BC.

In February 2014, we updated the PSBC Guideline for Prenatal Screening for Down Syndrome, Trisomy 18, and Open Neural Tube Defects (last revision was 2011) and all accompanying resources for healthcare providers and patients. Key changes include timing of the first trimester blood collection, indications for maternal serum alpha-fetoprotein screening, serum analyte cut-offs to better predict obstetrical risk, and self-pay availability of non-invasive prenatal testing (NIPT). To improve patient and family access to information, we translated patient pamphlets into two additional languages (Korean and Vietnamese), making program information now available in seven languages.

There are nine providers in BC that now offer three different US-based NIPT tests on a self-pay basis. The largest NIPT coordination is being done by the medical genetics departments at BC Women's Hospital & Health Centre and Victoria General Hospital, who are offering NIPT counselling and self-pay blood shipment as a non-invasive option for high-risk women in lieu of an amniocentesis. Low-risk women (not eligible for amniocentesis) and their primary healthcare provider can independently access self-pay NIPT through various private testing companies.

#### BC Newborn Screening Program

s part of the BC Newborn Screening Program, the **Newborn Screening Laboratory** at BC Children's Hospital and BC Women's Hospital & Health Centre screens for 22 newborn conditions and continues to have a higher positive predictive value (51 per cent) than the targeted 30 per cent rate due to the successful strategy of focusing on second tier screening methodology. Two new mass spectrometer instruments were added to the lab in 2014, which has resulted in a successful reduction in turnaround time from sample receipt to reporting (72 hours down to 53 hours).

In November 2013, the Newborn Screening Program Advisory Committee endorsed the addition of Severe Combined Immunodeficiency Disorder (SCID) to the screening panel. SCID is a group of rare congenital syndromes characterized by little, if any, immune responses, resulting in frequent recurring infections.

More healthcare providers and women who choose prenatal genetic screening are opting for integrated first and second trimester screening, which speaks to the success of our ongoing education and promotional strategies in various regions of BC.

In Canada, SCID is estimated to affect 1.5 in 100,000 births but with a three times higher incidence in First Nations, Metis, and Inuit populations than the general Canadian population.

Biotinidase Deficiency is also planned for panel addition. Caused by a lack of the enzyme biotinidase, this disorder can lead to seizures, developmental delay, eczema, and hearing loss.

Biotinidase Deficiency affects one in 80,000 infants born in Canada.

A new Canadian task force, chaired by Ontario, is being developed with representation from each of the province's newborn screening programs with a mandate of streamlining the disorders each provinces screens for, the sharing of testing methodologies, and ultimately sharing efficiencies.



In November 2013, the Newborn Screening Program Advisory Committee endorsed the addition of Severe Combined Immunodeficiency Disorder (SCID) to the screening panel.

### System Planning

We continue to work with stakeholders across the province to develop and implement a number of initiatives designed to improve planning within the perinatal healthcare system.

#### Neonatal Daily Classification

We are working in partnership with health authorities to expand the use of the Neonatal Daily Classification tool to include all newborns born in or transferred to facilities with planned maternity services. The tool helps nurses classify newborns on a daily basis as Level 1a (normal), 1b, 2a, 2b, 3a, or 3b based on their acuity, risk, and the services they require. Historically, only the neonatal intensive care units (NICU) have been using this tool to classify

their patients. However, we know that sites without a NICU often care for infants who may have more needs than a healthy term infant.

Classifying all infants will support clinical decision-making by facilitating discussion among care providers to ensure that the appropriate and best possible care is being provided given available resources and patient needs. Information will also help support requirements for daily operations at local sites. In addition, as complete and reliable data from

We know that maternity sites without a neonatal intensive care unit often care for infants who may have more needs than a healthy term infant.

PSBC has been working with provincial stakeholders to develop the Tiers of Service for maternal and newborn care. the tool become available, we will be able to use that data for provincial system planning.

#### Maternal/Fetal and Neonatal Tiers of Service Framework

PSBC has been working with provincial stakeholders to develop the Tiers of Service for maternal and newborn care. Tiers of Service is an organizing framework for defining, planning, and coordinating acute maternal and newborn healthcare services. The framework describes responsibilities and minimum requirements for each tier of service:

#### Responsibilities

- clinical services
- knowledge sharing and transfer/training
- quality improvement/research

#### Minimum requirements

- · facilities
- clinical support services
- · minimum service volumes
- interdependencies

The expectation is that there will be a match between responsibilities and minimum requirements, which are based on patient needs identified in our classification tools and builds on (and will subsequently replace) the Perinatal Levels of Care document developed in 2005. This work is intended to align with the planning being done by Child Health BC and is adapted from the planning framework used in Queensland, Australia.

The benefits of using a province-wide framework for tiers of service are:

 streamlined planning, coordination, and integration of services and allocation of resources:



- facilitation of a common understanding of the expectations and relative capabilities of each level of service and service providers;
- facilitation of transfers of pregnant women and infants from one service to another, across the continuum and across levels of care; and
- support the availability of appropriate funding and other resources for services to be able to fulfill their roles and responsibilities.

PSBC and stakeholders are working to populate the responsibilities and requirements for each tier of service and are developing the self-evaluation documents that will support each site/region/health authority in identifying what services they are currently providing. This will provide us all with the information we need to plan for future services that best meet the needs of pregnant women and newborns within our provincial network of care.

#### Maternal and Newborn Transfer

The Provincial Maternal Newborn Transfer Committee continues to meet regularly to ensure timely and safe triage and transfer of pregnant women and newborns. This group also provided input into Patient Transfer Network processes that will impact this population.

Maternal and Newborn Transfer Principles and Processes were completed in the spring of 2014. The purpose of the document is to:

- provide clear principles and processes on which to build an effective and efficient provincial perinatal consultation and transfer service that satisfies the needs of newborns, women, and perinatal care provider teams;
- 2. establish effective communication pathways, processes, and protocols to support healthcare providers with timely direct access to support and consultation services of the perinatal transfer physician specialists in maternal-fetal medicine and neonatology;
- 3. articulate the collaborative commitment to maternal and neonatal acute and repatriation provincial flow coordination principles, processes, and acknowledged operational implications; and
- identify comprehensive integrated data collection and reporting mechanisms required for the purposes of maternal newborn transfer network service assessment, planning, quality improvement, and evaluation.

The Provincial Maternal
Newborn Transfer
Committee continues to
meet regularly to ensure
timely and safe triage and
transfer of pregnant women
and newborns.



Rural maternity services have system stresses and are particularly vulnerable to shifts in provider supply or availability for intra-partum care. One specific challenge is meeting the perinatal surgical needs of rural women.

#### **Needs-Based Planning**

\\ \ ork has continued on a needs-based plan for maternal and newborn services in BC. Needs-based planning is a continuous, multi-cycle process and capacity that potentially enables an organization to document the needs of clients, formulate the most optimal response to those needs, translate that response into required resources, formalize the required resource allocation (money, human resources, IT support, facilities, etc.) in strategic and operational plans, and then assess the optimality of the response relative to emerging needs.

We have identified functional and specific needs and validated them with groups of pregnant and postpartum women and their partners through focus groups, an online survey, and speaking to women at drop-in clinics. We are working with the Health and Human Resources Planning Committee at the Ministry of Health and shared the framework methodology to help inform their processes.

We will use an optimality framework with local communities and groups to identify optimal responses based on a list of potential responses to need. Data from many sources, including the BC Perinatal Data Registry, Vital Statistics, Socio Economic Status Reports, and others, are being used to identify unique populations.

#### Rural and Remote Maternity/Surgical Planning

Rural maternity services have system stresses and are particularly vulnerable to shifts in provider supply or availability for intra-partum care. One specific challenge is meeting the perinatal surgical needs (i.e. Cesarean section) of rural women.

Recognizing the importance of sustained availability of C-section capacity in preserving the small maternity services, the Ministry of Health asked Perinatal Services BC to begin multi-stakeholder consultations to explore the development of potential responses to this ongoing issue. Although the issue has been discussed and written about extensively for the last two decades, sustainable solutions have not been developed or implemented.

In March 2014, Perinatal Services BC convened a forum to begin understanding the complexity of the situation and explore opportunities for action. Bringing together those responsible for surgical care in BC with those leading maternity care provided an opportunity to openly discuss the intersection of these programs.

Four action areas were identified:

 current process being considered for privileging physician groups needs to take into account the unique situations in rural and remote communities;

- strategic human resource planning, including examining the education needed to support enhanced surgical skills for physicians, nursing in rural communities, expanded scope of midwifery;
- planning should include networks of clinical care as well as administrative networks to 'cross-pollinate' the planning work of many groups; and
- 4. pilot projects for rural care.

The key success of the forum was the development of a shared vision and goals by groups that had not previously worked together. Beginning the development of relationships and the establishment of joint commitment was a good first step. A follow-up meeting is scheduled for June 2014.

#### **Divisions of Family Practice**

octors of BC continues to work with the General **Practitioners Services Committee** to support Divisions of Family Practice throughout the province. PSBC has begun work with some of the divisions whose priority action areas focus on maternal and newborn care. The Vancouver Division developed two reference sheets on prenatal and postpartum care for family physicians who do not practice the full scope of maternity care. The reference sheets are based on PSBC's Maternity Care Pathway, and our team provided input and feedback during the development. We have

since modified it slightly with the division's permission and will be making it available to all providers in BC. We are also partnering with the division to provide members with continuing medical education (CME) in primary maternity care.

The Comox Valley Division invited PSBC to work with them on a perinatal needs assessment project, which includes reviewing service needs in the community, excluding acute care services provided in hospital but including transitions from community to hospital and hospital to community. We presented the needs-based planning framework to a core working group in July 2013 and returned in April 2014 to share it with a broader group. We will continue to work with them over the next year.

#### Collaborative Primary Maternity Care

Perinatal Services BC helped support collaborative primary maternity care practices in various communities across the province. We partnered with the South Community Birth Program in Vancouver to share program start up, challenges, successes, and outcomes with those interested in adopting the model. A family practice physician, midwife, and nurse collaborated with PSBC to present a workshop introducing both collaborative practice and the connecting pregnancy model of care to interested clinicians. Held in 2013, the workshop was attended by more than 50 midwives,

HealthLink BC, the Ministry of Health, and PSBC worked with a multidisciplinary committee to develop a Fetal Ultrasound Health File based on the PSBC Obstetrical Ultrasound Assessment Standards. Committee members represented radiologists, ultrasonographers, midwives, maternal fetal medicine specialists, obstetricians, general practitioners, and genetic counsellors.



Rim Williams,
Provincial Executive
Director, PSBC
was invited by the
Newfoundland
Perinatal Health
Program to present our
maternal and neonatal
classifications and tiers
of service planning
framework as part of
the program's planning
for maternal and
newborn services in
Newfoundland.

physicians, and nurses and sparked interest to start the development of collaborative practice in four different communities, three of which are in rural areas of the province. This will help improve access to primary maternity care for women in those communities.

Since the workshop, we have continued to work with members of the South Community
Birth Program to support the growing interest in establishing collaborative primary maternity care in rural BC. We have been working closely with the team in Nelson as they come together to start their interdisciplinary group practice.



## Policy & Privacy

PSBC works continuously to improve the quality and security of the personal information we collect by evaluating information privacy policies, procedures, and processes for both new and existing initiatives.

#### **Data Access**

Perinatal Services BC supports healthcare providers, leaders, researchers, and policymakers in their work to improve maternal, fetal, and neonatal health. We are committed to providing access to the personal information in the custody of PSBC for bona fide, public-interest research purposes, surveillance, program delivery, and evaluation, while at the same time ensuring the protection of the privacy and confidentiality of individuals.

To better serve our stakeholders, we updated our data access policies and procedures, including a streamlined request process. We provided more detailed information on the Data Requests section of our website, including the process, aggregate data requests, research requests, metadata on available variables, and documentation required to submit requests.

We are committed to providing access to the personal information in the custody of PSBC for bona fide, publicinterest research purposes, surveillance, program delivery, and evaluation, while at the same time ensuring the protection of the privacy and confidentiality of individuals.

We have strengthened the privacy of participants' personal information collected during our education registration process.

#### **Information Sharing**

ur new Policy and Privacy
Advisor facilitated and
negotiated various information
sharing agreements to acquire
access to additional sources of
data, including sources from the
Ministry of Health and the Coroners
Service of British Columbia, to meet
program deliverables.

#### **Privacy**

We have strengthened the privacy of participants'

personal information collected during our education registration process, including a privacy statement, consent forms, and correct notification of collection of information. In addition to the privacy training mandated for all employees of our health authority (Provincial Health Services Authority), we launched privacy training for new PSBC staff as well as annual privacy refreshes for all PSBC staff.



### Communications

Our communications priorities are to share information effectively and build strong relationships with our internal and external stakeholders. With the addition of a full-time Communications Officer, we developed and implemented a communications strategy to address these priorities.

### Stakeholder Newsletter

We undertook an exercise with our stakeholders to understand how we could improve communication. One of the suggestions was a regular newsletter that provided information and updates on projects and activities at Perinatal Services BC. In January 2014, we launched *Perispectives*, a quarterly e-newsletter to provide information and updates on PSBC initiatives and activities to healthcare professionals who are involved in

the care of pregnant women and their newborns. More than 400 stakeholders across the province are subscribed to the newsletter. We encourage all our stakeholders to subscribe online.

#### Website

We continuously look for ways to improve the accessibility and content of our website (www.perinatalservicesbc.ca), including resources for healthcare In January 2014,
we launched
Perispectives, a
quarterly e-newsletter
to provide healthcare
professionals with
information and
updates on PSBC
initiatives and
activities.

To further engage our existing stakeholders in a two-way dialogue as well as reach new stakeholders who are not connected by our regular networks, we developed a specific strategy for social media, with a focus on Twitter.

providers, such as guidelines and forms, surveillance reports, and video presentations. We also update our What's New page several times a week when new or revised resources have been uploaded or when an education session is available for registration, among other updates.

members. Among other activities, the newsletter has improved the flow of information within Perinatal Services BC, improved communication with staff, and increased staff levels of engagement.

### Social Media

o further engage our existing stakeholders in a twoway dialogue as well as reach new stakeholders who are not connected by our regular networks, we developed a specific strategy for social media, with a focus on Twitter. PSBC's presence on Twitter also fills a gap as there is no other organization in BC that focuses on the perinatal period in healthcare. Consequently, there are no information or conversations available on social media that is dedicated to perinatal statistics, trends, guidelines, or other resources for perinatal healthcare providers. Since our Twitter profile launched in February 2014, 145 users have followed us, with new users being added every week. We encourage all our stakeholders to follow us @perinatalbc.

### **Staff Engagement**

Our communications strategy also addresses staff engagement. We implemented a monthly staff newsletter that highlights projects and accomplishments for each department and profiles individual staff

### Looking Ahead

Following a review of Perinatal Services BC in 2013, we are looking forward to working with a new Provincial Steering Committee and with a renewed Terms of Reference focusing on the continuum of perinatal care. We anticipate having our first meeting in July 2014.

s well, we will be working Mwith our internal team and provincial stakeholders to develop an operational plan that will support the PHSA Service Plan informed by the Ministry of Health's Health System Strategy. Our Vision, Mission, and Logic Model align well with the Ministry's priorities and strategies. These include supporting health prevention and promotion activities, standardizing care in primary and acute care, and improving access and quality in acute care and diagnostic

services—all with an overarching commitment to patient-centred care.

We will participate in the development of electronic charting systems to ensure data currently collected in our Perinatal Data Registry are reflected in the electronic fields.

We will also focus on improving relationships with our research community by finding ways to improve access to data while adhering to provincial privacy rules.

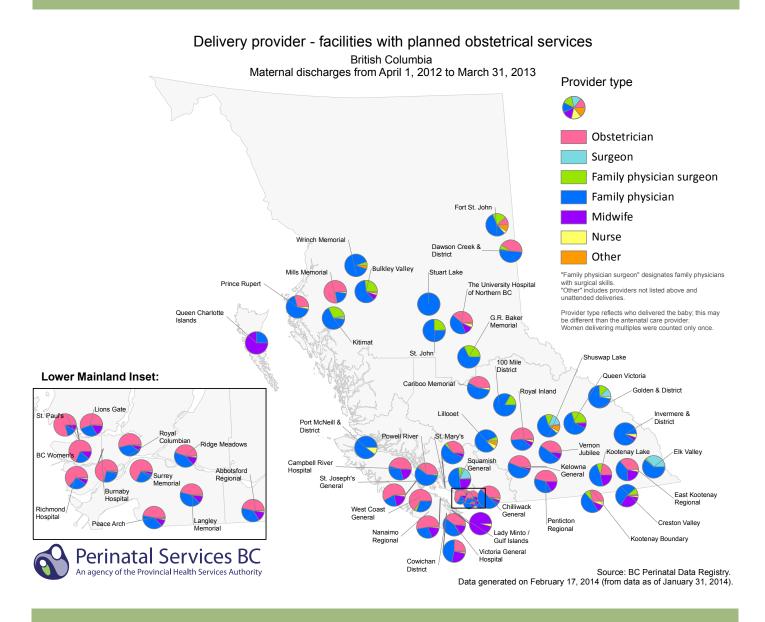
Our Vision, Mission, and Logic Model align well with the Ministry's priorities and strategies. We will continue to work closely with primary care providers in planning for maternal and newborn services across the continuum and in all regions of the province.



We will continue to work closely with primary care providers in planning for maternal and newborn services across the continuum and in all regions of the province. This will also include working in partnership with the First Nations Health Authority to improve access to maternity care for First Nations and Aboriginal women in rural and remote regions.

We are excited about the many opportunities to continue working towards our vision of healthy women having healthy pregnancies and healthy infants.

# **Appendix 1: Service Delivery Map**



### **Appendix 2: Quarterly Report**



### **CORE SURVEILLANCE QUARTERLY REPORT**

Indicators		2012/2013							:	2013/2014*		
indicators	08/09	09/10	10/11	11/12	Q1	Q2	Q3	Q4	YTD	Q1	Q2	YTD
Deliveries (Mothers)-Number	44,058	44,377	43,355	43,586	11,000	11,489	10,862	10,546	43,897	10,702	10,992	21,694
Labour Induction (rate per 100 deliveries)	20.5	20.9	21.4	21.2	19.7	19.5	20.3	21.9	20.4	21.6	21.0	21.3
Caesarean Delivery (rate per 100 deliveries)	30.2	30.2	30.7	30.9	31.1	31.0	31.3	31.7	31.3	31.1	32.6	31.8
Postpartum hemorrhage + Transfusion (rate per 1000 deliveries)	4.9	4.5	4.8	4.9	4.3	4.0	5.1	4.8	4.5	5.2	5.5	5.3
Postpartum hemorrhage + Hysterectomy* (rate per 1000 deliveries)	0.7	0.4	0.4	0.4	0.2	0.3	0.5	0.3	0.3	0.2	0.2	0.2
Eclampsia (rate per 1000 deliveries)	0.6	0.4	0.6	0.4	0.4	0.4	0.2	1.2	0.5	0.3	0.0	0.1
Puerperal sepsis (rate per 1000 deliveries)	1.0	0.8	0.6	0.8	1.1	0.7	0.8	0.8	8.0	1.0	0.4	0.7
Maternal transfers to higher level of care (rate per 1000 deliveries)	4.4	4.1	5.1	5.7	4.8	4.7	5.0	5.5	5.0	5.8	3.8	4.8
Births (Babies)-Number	44,742	45,130	44,044	44,331	11,163	11,670	11,053	10,738	44,624	10,900	11,206	22,106
Stillbirth Rate (rate per 1000 total births)	9.3	10.5	10.3	9.8	8.5	10.4	8.1	10.5	9.4	10.6	10.3	10.4
Antepartum	7.6	7.9	8.2	8.1	7.7	8.6	6.5	8.8	7.9	9.2	8.9	9.0
Intrapartum	0.4	0.6	0.6	0.6	0.2	0.8	0.5	0.6	0.5	0.6	0.5	0.5
Unknown	1.3	2.1	1.5	1.1	0.6	1.0	1.0	1.2	1.0	0.8	0.8	0.8
Live Births by weeks (%)***												
<30	0.7	0.7	0.7	0.7	0.7	0.8	0.7	8.0	0.8	0.9	0.8	0.9
30-31	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.5
32-33	1.1	1.2	1.1	1.2	1.1	1.2	1.1	1.1	1.1	1.1	1.1	1.1
34-36	6.9	7.3	7.1	7.2	7.8	7.3	7.4	8.2	7.7	8.1	7.6	7.8
<u>&gt;</u> 37	90.8	90.4	90.6	90.5	90.0	90.2	90.2	89.4	90.0	89.3	89.9	89.7
Unknown	0.2	0.2	0.03	0.04	0.0	0.0	0.03	0.01	0.01	0.03	0.06	0.05
Preterm NICU admissions (rate per 1000 live births)	42.7	43.6	38.0	34.2	33.5	34.9	35.3	37.0	35.2	36.5	21.8	29.1
>2 day stay	33.1	33.4	29.8	25.5	24.8	24.6	25.4	27.6	25.5	28.1	16.6	22.3
Sepsis	1.9	1.8	1.6	1.0	1.4	1.6	0.5	1.8	1.3	1.3	0.7	1.0
Ventilatory support	9.6	8.1	7.7	6.8	6.1	7.1	6.2	7.1	6.6	6.9	4.8	5.9
Term NICU admissions (rate per 1000 live births)	43.8	40.5	34.3	23.1	25.9	24.1	22.9	24.1	24.3	24.5	21.6	23.1
>2 day stay	14.5	13.0	9.8	6.3	6.3	5.6	5.7	6.9	6.1	8.2	8.3	8.3
Sepsis	1.2	1.3	0.9	0.6	0.2	0.5	0.3	0.4	0.3	0.5	0.5	0.5
Ventilatory support	2.6	2.1	2.1	1.9	3.0	2.0	2.0	2.4	2.3	2.6	2.0	2.3
Newborn transfers to higher level of care (rate per 1000 live births)	10.2	8.5	10.5	11.4	10.8	11.8	10.9	11.0	11.2	11.2	10.1	10.7
Newborn deaths following birth (rate per 1000 live births)	2.5	2.4	2.7	3.0	2.5	2.8	3.2	2.3	2.7	3.4	2.0	2.7
Data Source: BC Perinatal Data Registry	Data Source: BC Perinatal Data Registry  Report Data Generated: March 7, 20									ch 7, 2014		

Data for 2013/2014 are preliminary. \*Postpartum Hemorrhage + Hysterectomy - revised effective April 1, 2013 - Hysterectomy performed as a consequence of postpartum hemorrhage.

<sup>\*\*</sup>Maternal transfers to higher level of care - added Surrey Memorial Hospital to 2nd Tier Hospitals effective April 1, 2013 discharges.

<sup>\*\*\*</sup>Gestational Age Calculation - revised effective April 1, 2013.

Please refer to Technical Notes for methodology, limitations and descriptions of indicators.

## **Appendix 3: Provincial Committees**

### **Provincial Oversight Council**

The Oversight Council will be replaced by a new Provincial Steering Committee in July 2014. During the 2013/14 year, the Oversight Council provided strategic leadership to Perinatal Services BC by establishing and setting the direction of priorities for the provision of perinatal services, and assuming responsibilities for specific duties as delegated to it by the PSBC's Executive Director or by PHSA. The Oversight Council was an integral part of PSBC and was involved in recommending solutions to perinatal issues involving access to care, quality and safety of care, and efficient resource allocation and utilization within the continuum of care spectrum with a consistent best-evidence approach.

### **Perinatal Mortality Review Committee**

The Perinatal Mortality Review Committee is designated in British Columbia (Regulation 363/95, paragraph (c) of 51(1) of the Evidence Act) for the purpose of quality review of perinatal, neonatal, and maternal morbidity and mortality. The committee studies and investigates maternal and perinatal mortality and morbidity to identify provincial issues and recommend strategies to address these concerns.

### **Maternal Newborn Transfer Committee**

The Maternal Newborn Transfer Committee examines utilization and transfer issues within the perinatal network. Members review transfer data to establish trends and transfer patterns. The committee is responsible for guiding principles and processes for acute, low-risk, and repatriation of maternal and newborn transfers.

#### **Provincial Perinatal Guidelines Committee**

The Provincial Perinatal Guidelines Committee provides oversight to perinatal guideline development, including a guideline production plan, quality requirements, and monitoring progress of working committees. The committee also provides advice/oversight to guideline implementation and evaluation.

### **Prenatal Genetic Screening Advisory Committee**

The Prenatal Genetic Screening Advisory Committee provides opinion, analysis, and direction to the BC Prenatal Genetic Screening Program (PGSP) regarding possible issues, concerns, and challenges that may arise involving the provision of prenatal genetic screening and diagnostic testing in BC. The committee oversees and ensures that the PGSP is meeting its mandate.

#### **Newborn Screening Advisory Committee**

The Newborn Screening Advisory Committee establishes newborn screening standards, policies, and guidelines. The committee regularly reviews disorders for which infants could potentially be screened according to an agreed upon framework; advises the Newborn Screening Program on the implementation, modification, and where necessary, the cessation of newborn screening tests; monitors, reviews, and responds to emerging clinical evidence and research in newborn screening; and maintains linkages and communication with newborn screening programs across Canada.

### **Appendix 4: Logic Model**

Vision: Healthy women having healthy pregnancies and infants.

**Mission:** Through partnerships and collaboration and by building a high-quality system of care across the continuum, we will optimize pregnancy and birth outcomes as a foundation for a healthy population.

INPUTS	Vision & leadership  Planning/coordination of bed capacity/distribution - NICU - Level 1-3 Maternity - primary - tertiary  Maternity - tertiary  Transport system - capacity/ responsiveness (BCAS, BC Bedline)  Responsive service continuum - from public health to primary care to hospital care - community home-based supports especially in rural areas
ACTIVITIES	Agency provider processes  Agency practice policies  Agency practice policies  Agency practice policies  - with health authorities - with mental health & addictions - with primary care - with public health
OUTPUTS	Policies/protocols/ guidelines for dissemination/uptake by stakeholders  Service provision across continuum: - Level 1-3 NICU - maternal newborn Level 1-3 - integrating with services provided by other stakeholders  Optimal utilization of provincial NICU & maternity capacity
OUTCOMES	Healthy pregnancies and full-term infants/ minimal maternal/ infant morbidity  Safe/close to home as possible, deliveries/ minimal client risk/maximum client satisfaction  Timely appropriate interventions informed by individual biological and social determinants  Optimal provider practices (cesarean rates, perinatal infections, etc.)
IMPACT	Healthy populations start with positive birthing outcomes  Population's reproductive (maternal & infant) health is optimized  Positive birthing outcomes enable optimal early childhood development  Positive birthing outcomes minimize downstream health and social service impacts



Effective workforce (HR planning) Quantity/distribution/ skills/models of care Shared province-wide client-centric philosophy

Education

- converting evidence into curriculum
- knowledge transfer of best practice guidelines/info dissemination

Prevention & promotion initiatives

- genetic antenatal screening
- newborn screening

Information infrastructure

- BC Perinatal Data
- Registry
- monitoring & surveillance

Timely information – gathering & conversion to intelligence for strategic management, surveillance & performance monitoring **Education processes** 

- specialized for physicians/nurses
- ongoing for providers across the continuum & geography
- appropriate & accessible for public

Liaising mechanisms with provincial networks, professional bodies and research groups.

Supports to clients and stakeholders

Reporting internally/ externally

Surveillance/research to set directions for quality improvement

Value driven, client centric culture

Improved integration system-wide due to accountable stakeholder partnerships Positive human capital development

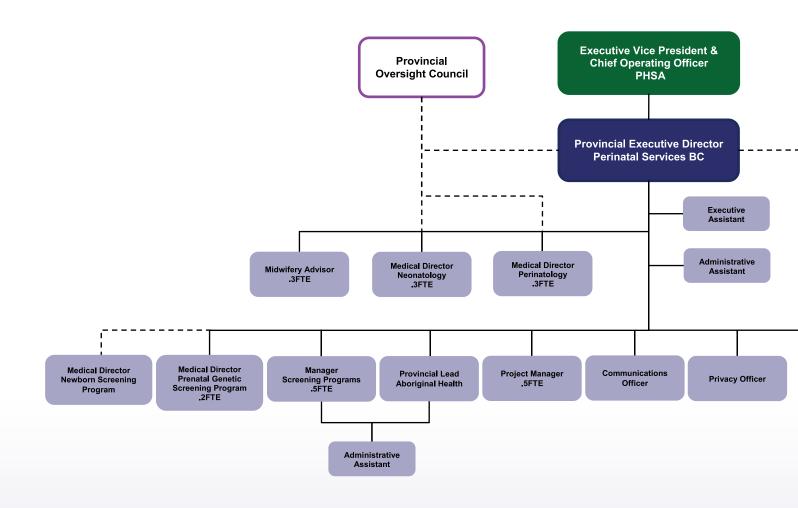
Optimal client satisfaction

Clinical & fiscal accountability ensures sustainability

Optimal quality generates high public satisfaction, confidence and support

Positive birthing outcomes heighten workforce morale and recruitment/ retention efforts Comprehensive longitudinal intelligence informs strategic management of enterprise in response to population needs

## Appendix 5: Organizational Chart for 2013/14





( Provincial Perinatal Leads

