Facility-Level Indicators

Indicator Explanations

2019/20

Perinatal Services BC

Provincial Health Services Authority

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Introduction

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

PSBC collects comprehensive perinatal information through the BC Perinatal Data Registry, a quality-controlled database containing clinical information on all births collected from acute care facilities and deliveries at home attended by registered health care providers.

In partnership with regional health authorities, PSBC publishes six facility-level indicators on its website. The six indicators were selected based on widespread relevance and validity of data from facilities.

Indicator	Short Title
1. Vaginal delivery rate for eligible nulliparous women aged 20 to 39 years with a singleton vertex pregnancy at term	Vaginal Delivery for Eligible First-Time Mothers
2. Early term repeat cesarean delivery without medical indication	Early Repeat Cesarean Delivery
3. Post-date induction before 41+0 weeks gestation for women under 40 years of age at time of delivery	Post-Date Inductions Done Early
4. Exclusive use of intermittent auscultation in labouring women without risk factors who delivered vaginally	Only Intermittent Auscultation in Low-Risk Deliveries
5. Healthy term singletons receiving exclusive breast milk from birth to discharge	Healthy Babies Fed Only Breast Milk
6. Attempted vaginal birth rate for eligible parous women under 40 years of age with a history of cesarean and a singleton vertex pregnancy at term	Attempted VBAC for Eligible Women

The data may help to inform expectant mothers and families about the health services they receive and prepare for their birth experience. Women and their families with questions or concerns are encouraged to discuss them with their health care providers.

Perinatal Services BC and regional health authorities use the data to learn from each other and share best practices in order to ensure that maternity and newborn care meets the highest possible quality and safety standards.

Indicator 1: Vaginal Delivery for Eligible First-Time Mothers

Detailed Title
Vaginal delivery rate for eligible nulliparous women aged 20 to 39 years with a singleton vertex pregnancy at term.

Definition
The proportion of nulliparous women without a medical contraindication to vaginal delivery 20 to 39 years of age with a term, singleton infant in a vertex position who deliver vaginally.

The rate is determined by the numerator divided by the denominator:

> Denominator = Nulliparous women aged 20-39 years with an estimated gestational age of 37+0 or more weeks, a singleton infant with the head as the presenting part, and who have no documented pre-existing medical conditions, pregnancy, or obstetric complications that contraindicate vaginal delivery. See the Technical Documentation for complete inclusion and exclusion criteria.
>
> Numerator = The number of women described above who deliver vaginally.

Importance
Women who deliver vaginally recover faster after birth than women who deliver by cesarean section, and babies delivered vaginally are less likely to be admitted to neonatal intensive care units than cesarean newborns. However, the vaginal delivery rate for first-time mothers with a singleton, vertex pregnancy at term (who account for nearly 40% of all deliveries in BC) has decreased from 71% in 2015/16 to 67% in 2019/20. Increasing vaginal birth rates would improve mother and baby health outcomes. This indicator may be used to monitor, support, and promote initiatives to normalize the labour and birth process and experience, thus increasing vaginal birth rates.

Indicator 2. Early Repeat Cesarean Delivery

Detailed Title
Early term repeat cesarean delivery without medical indication

Definition
Among women with a history of cesarean delivery who deliver at term by repeat cesarean without labour, the proportion who deliver between 37+0 and 38+6 weeks gestation (early term). Women with a medical indication for early delivery are excluded from this indicator.

The rate is determined by the numerator divided by the denominator:

> Denominator = Women with a history of cesarean delivery who, in the current pregnancy, delivered by cesarean without labour at or after 37+0 weeks gestation, excluding women with a condition which might warrant early delivery.
>
> Numerator = The number of women described above who delivered between 37+0 and 38+6 weeks gestation (early term).

Importance
Scheduling an early repeat cesarean delivery by choice without medical or obstetric reasons has no clear benefit to the mother or infant. Such early deliveries are associated with adverse outcomes for the infant, such as increased risk of breathing problems, admission to intensive care, infections, and feeding problems.

A pregnant woman who is healthy and has no medical reasons for delivering early benefits from staying pregnant to at least 39 weeks as the baby's lungs and brain are still developing in the last weeks of pregnancy.

It is important for pregnant women to seek early and regular prenatal care from a primary maternity care provider (doctor, midwife, or nurse practitioner) and have an accurate assessment of the expected due date.

If a pregnant woman is planning for a repeat cesarean section, she should discuss with her primary maternity care provider to schedule it as close to 39 weeks as possible.

Access to operating room and staff are important considerations for a planned cesarean section. The woman is advised to discuss the availability of these resources with her primary maternity care provider as these can differ between hospitals and can affect the scheduling of the cesarean section.

Indicator 3. Post-Date Inductions Done Early

Detailed Title
Post-date induction before 41+0 weeks gestation for women under 40 years of age at time of delivery

Definition
The proportion of women under age 40 whose labour was induced citing the reason that the pregnancy was 41 weeks and over ('post-date') but whose gestational age was actually fewer than 41 weeks.

The rate is determined by the numerator divided by the denominator:

> Denominator = All women under the age of 40 who deliver a single infant at term (i.e., 37+0 or more weeks gestational age).
>
> Numerator = The number of women described above whose labour was induced for 'post-dates' but gestational age at delivery was fewer than 41+0 weeks.

Importance
Post-date pregnancies may be associated with higher rates of mother and baby complications, including abnormal heart rate of the baby during labour, assisted vaginal delivery (forceps or vacuum extraction) or cesarean delivery, excessive birth weight, shoulder dystocia, and birth injury.

The Society of Obstetricians and Gynaecologists of Canada recommends that induction of labour be offered at 41+0 to 42+0 weeks to decrease complications for mothers and babies without increasing the risk of cesarean delivery.

While pregnancies that continue past 41+0 weeks gestation are of genuine concern to women and their providers, "post-date" is not a valid indication for induction when the pregnancy has not reached at least 41+0 weeks gestation.

It is important for pregnant women to seek early and regular prenatal care from a primary maternity care provider (doctor, midwife, or nurse practitioner) and have an accurate assessment of the expected due date.

Indicator 4. Only Intermittent Auscultation in Low-Risk Deliveries

Detailed Title
Exclusive use of intermittent auscultation in labouring women without risk factors who delivered vaginally

Definition
The proportion of women with a vaginal delivery, but without specific risk factors, whose labour was monitored only using intermittent auscultation (listening to the fetal heart beats at specified intervals during labour).

The rate is determined by the numerator divided by the denominator:

> Denominator = Women with unaugmented spontaneous labour that led to vaginal delivery of a single infant with the head as the presenting part at 37+0 to 41+6 weeks gestation (women with selected pregnancy characteristics are excluded).
>
> Numerator = The number of women described above whose labour was monitored only with intermittent auscultation (women with internal or external electronic fetal monitoring at any point during labour are excluded from the numerator).

Importance
The goal of fetal monitoring during labour is to prevent injury or death to the fetus through early detection of fetal distress and subsequent clinical intervention. Fetal heart rate and rhythm provide information on how well the fetus is tolerating labour, and abnormal results may lead to changes in the management of labour and delivery processes. Early detection through methods such as intermittent auscultation (IA) increases opportunity for clinical intervention.

Research comparing IA and external electronic fetal monitoring (EEFM) has shown that EEFM does not decrease injury or death to the baby but rather leads to increased use of interventions such as anesthesia, assisted vaginal delivery (forceps or vacuum extraction), and cesarean delivery.

The Society of Obstetricians and Gynaecologists of Canada recommends IA as the method for fetal monitoring during labour for low risk women.

Indicator 5. Healthy Babies Fed Only Breast Milk

Detailed Title
Healthy term singletons receiving exclusive breast milk from birth to discharge

Definition
The proportion of healthy term babies that were fed only breast milk (milk from the breast or expressed breast milk from the mother or a donor) from birth to discharge.

The rate is determined by the numerator divided by the denominator:

> Denominator = All healthy single infants with a gestational age of at least 37+0 weeks (infants with a medical indication for formula supplementation are excluded).
>
> Numerator = The number of infants described above who were fed only breast milk from birth to discharge.

Importance
Breastfed infants have lower rates of stomach and respiratory infection and may be less likely to develop allergies. Furthermore, women who breastfeed their infants have delayed return of their periods, which can contribute to increased birth spacing, increased iron stores, and more rapid weight loss compared to mothers who feed their infants with formula.

The World Health Organisation, as part of the Baby-Friendly Hospital Initiative, recommends that mothers begin breastfeeding within thirty minutes of delivery.

Indicator 6. Attempted VBAC for Eligible Women

Detailed Title
Attempted vaginal birth rate for eligible parous women under 40 years of age with a history of cesarean and a singleton vertex pregnancy at term.

Definition
The proportion of eligible parous women under 40 years of age with a history of cesarean and a term, singleton infant with a vertex presentation who attempt to give birth vaginally.

The rate is determined by the numerator divided by the denominator:

> Denominator = Parous women under 40 years of age with a history of cesarean delivery, an estimated gestational age of 37+0 or more weeks, and a singleton infant with the head as the presenting part. Women with pre-existing medical conditions, pregnancy, or obstetric complications that contraindicate vaginal delivery are excluded, as are women whose obstetric history increases their risk of uterine rupture.
>
> Numerator = The number of women described above who attempt to deliver vaginally.

Importance
Women who deliver vaginally recover faster after birth than women who deliver by cesarean section, and babies delivered vaginally are less likely to be admitted to neonatal intensive care units than babies delivered by cesarean section. Increasing vaginal birth rates would improve mother and baby health outcomes.

Among deliveries in BC, one in seven (14%) are infants born to women with at least one previous cesarean delivery, and 83% of these women deliver by repeat cesarean. While most women with a history of cesarean will have a repeat cesarean, many are medically eligible to attempt a vaginal delivery in subsequent pregnancies. Based on BC data from 2019/20, approximately 70% of women who were eligible for and attempted a VBAC had a vaginal delivery.

This indicator may be used to monitor, support, and promote initiatives to increase access to vaginal birth after cesarean.