Perinatal Forms Guideline — A Guide for Completion of the British Columbia Maternal and Fetal Levels of Service Classification Tool (PSBC 1589)

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Perinatal Services BC
West Tower, 3rd Floor
555 West 12th Avenue
Vancouver, BC Canada V5Z 3X7
Tel: (604) 877-2121
www.perinatalservicesbc.ca

Perinatal Services BC
An agency of the Provincial Health Services Authority

While every attempt has been made to ensure that the information contained herein is clinically accurate and current, Perinatal Services BC acknowledges that many issues remain controversial, and therefore may be subject to practice interpretation.

Introduction

The British Columbia Maternal and Fetal Levels of Service Classification Tool is a form developed to facilitate the assessment and triage of a laboring woman, who may require transfer to another site for a more appropriate level of care.

Guiding Principles

Several key principles guided the design and development of this tool:

- Be applicable for all primary care providers offering perinatal care
- Facilitate early recognition, timely communication and intervention for changes in labor progress and/or maternal/fetal conditions
- Utilize standardized terminology and abbreviations
- Focus on support for high risk birth process
- Support use by multidisciplinary care providers

General Guidelines

Begin by assessing the mother, complete the antenatal assessment record, then, focusing on the **highlighted top row of the tool,** establish the highest acuity of need for the mother and for the fetus by identifying the clinical indicators below that most accurately captures the highest needs. As the health care status changes, reassessment and reclassification is indicated. An individual diagnosis might appear in multiple columns, varying on the severity, gestational age and/or corresponding impact anticipated on the well being of mother/fetus

When in doubt, classify at the higher level of care and plan to reassess as indicated. E.g. severe pre-eclampsia can result in only minor morbidity but can also be associated with severe IUGR or even maternal pulmonary edema.

Consultation with an obstetrician or a perinatologist through BC Bedline may be helpful in establishing a shared consistent understanding of the level and/or to determine if a maternal transfer is indicated.

Some conditions may only be anticipated to be of short duration although they are of high acuity. Levels of acuity of needs change over time and will require re-classification accordingly.

* Please note that although the Neonatal Levels of Service tool is a companion document, it remains separate. Therefore once a baby is born, he or she should be classified using the neonatal tool, and treatment/transfer decisions made accordingly.

1.0 Demographics and Background

Completed by/date

Check the box to indicate your role; this will help determine the practitioner most widely utilizing this form. Enter the date in the upper left hand area.

Biographical Patient Data

Patient Demographics

Addressograph this form; it is a medical-legal document and becomes part of the medical chart.

Gestational age on admission

Gestational age is the time measured from the first day of the woman's last menstrual cycle to the current date. It is measured in weeks. A normal pregnancy range: 38 to 42 weeks.

2.0 LOS: Level of Service Assignment

Assigning the woman and fetus to an accurate Level of Service is critical for planning where she would receive the most appropriate care, as close to home and as safely possible. This row should be the focus of the assessment. The rest of the tool assists in completing this row. When in doubt, please refer to the bolded line under each level of this row to determine a woman's classification.

3.0 Maternal: Normal, Level 1, Level 2a, Level 2b, Level 3, Level 3+

Normal

Maternal age

A maternal age between 16 and 40 years is known as having the lowest complication rates.

Term pregnancy

Term pregnancy is defined as 37^{0}-41^{6} completed weeks.

Anticipated normal spontaneous vaginal delivery (NSVD) and postpartum progress

Body mass index (BMI)

BMI is an equation: $\frac{\text{Patient's pre-pregnant weight in kgs}}{\text{Height in meters}^2}$

BMI needs to be calculated for each patient using the formula.

- Underweight BMI – <18.5
- Normal BMI – 18.5 – 24.9
- Overweight BMI – 25.0 – 29.9
- Class I obese – 30 – 34.9
- Class II obese – 35 – 39.9
- Class III obese – > 40

For the purposes of this "Normal" classification, we will include BMI: 18.5 – 30

Assessment and care of women < 20 weeks (i.e. spontaneous abortion)

Level 1

Any maternal issue that is **not anticipated to impact the well being of mother.**

Maternal age

An age of < 16 or > 40 years has been associated with increased risk of medical obstetrical and surgical complications.

Preterm labour

Labour is defined as regular contractions, moderate intensity, 2 in 10 minutes or 4 in 20 minutes. This should be associated with a change in length or dilation of the cervix to comply with the definition. If a patient comes with regular contractions and already has a shortened cervical length of less than 1 cm and a dilation ≥ 2 cm, the patient will be deemed to be in **preterm labour** to allow initiation of treatment. It is always essential to think of performing an initial speculum exam to take a swab for fFN as well as cultures before performing a digital exam.

Post-term

For the purpose of this classification**, post-dates** will be set as of 41^{+6} weeks of gestation. This does not comply with the standard definition but it is at this gestational age at which increased fetal surveillance is initiated. Post-term is ≥42 weeks.

VBAC

Any planned VBAC should be at least a Level 1. The level of classification could be increased depending on the gestational age at which the patient presents in labour.

PROM

When rupture of membranes occurs before the onset of labour

BMI between 30 – 38

A BMI of between 30 and 38 will be restricted to level 1. The upper limit of 38 was a consensus of anesthesiologists who consider that any facility with an operating room capability should be able to handle a pregnant woman with a pre-existing BMI of up to 38. This is in accordance with the College of Physicians and Surgeons of BC.

Chronic health need

A health need that was previously diagnosed, is stable, and is one that is not anticipated to impact well-being should be classified in Level 1. As an example, you may have a patient with mild asthma that is controlled with or without the help of medication and that has never had any admission for the underlying health condition.

Mental Health

A **stable mental health, substance use or psychosocial event** including **intimate partner violence** is classified in Level 1 only after appropriate evaluation.

GDM, diet controlled

Gestational diabetes mellitus as identified by a positive glucose tolerance test (GTT), controlled by diet

Level 2a

Any maternal issue that **could impact her well being.**

Previous preterm birth

A previous preterm birth is defined as a previous pregnancy delivered below 37 weeks of gestation. This is considered only if was a spontaneous preterm labour and birth. Patients requiring preterm delivery for maternal or fetal indication would not necessarily be at higher risk of spontaneous preterm birth.

Previous history of preterm labour

A **previous preterm labour** episode during the current pregnancy, although resolved, may require a higher level of service especially if there have been cervical changes.

Confirmed preterm premature rupture of membranes (PPROM)

PPROM is confirmed with a history of fluid loss and an objective examination with sterile speculum exam with analysis of the fluid with positive ferning on microscopic exam. Nitrizine positive is not acceptable alone.

Antepartum hemmorhage (APH)

Any significant bleeding > 20 weeks gestation

Maternal BMI > 38

A BMI of greater than 38 requires a higher level of service.

Gestational hypertension without adverse features

Gestational HTN is well described in the SOGC guidelines. This is defined as a blood pressure of 140/90 mmHg without any adverse features such as proteinuria, headache etc.

Preexisting hypertension with no systemic involvement

Preexisting HTN is diagnosed when there is a blood pressure of 140/90 prior to 20 weeks of gestation. Women on anti-hypertensives may have normal blood pressures but are still considered to have preexisting HTN.

Gestational diabetes, insulin controlled

Gestational diabetes that requires insulin for adequate control is considered Level 2a.

Acute/episodic health concerns

Refers to the presence of a significant medical condition that may affect the pregnancy or which may adversely be affected by the pregnancy. This may include a new medical disorder which appears during the pregnancy or it may be an acute attack or exacerbation of a pre-existing medical disorder. This includes examples such as kidney stones or UTI.

Level 2b

Any maternal issue that is **impacting wellbeing of the pregnancy but is not life threatening** should be considered under 2b.

Severe gestational hypertension

Severe gestational HTN is considered when the hypertension is 160/110.

Pre-existing hypertension

Pre-existing HTN requiring medication and/or with mild systemic involvement usually mild renal impairment

Pre-pregnancy diabetes requiring insulin

Pre-existing insulin-dependent diabetes with either IUGR or significant macrosomia but no maternal systemic involvement such as retinopathy or nephropathy.

Diagnosed chronic health needs; unstable

A disease that has a prolonged course (> 3 months), does not resolve spontaneously, rarely is completely resolved, and impacts the well-being of the woman or her fetus e.g. diabetes or the mild renal effects of lupus.

Level 3

These maternal issues are ones that are **seriously impacting** wellbeing but are **not anticipated to be life threatening.**

Pre-eclampsia (Severe gestational hypertension with adverse features)

Severe pre-eclampsia is a blood pressure of 160 / 110 or higher, heavy proteinuria, persistent or new headache, visual disturbances, persistent abdominal or RUQ pain, severe nausea or vomiting, chest pain or dsypnea. Adverse features require much higher level of attention. Significant maternal morbidity is seen in about 15% of women with severe pre-eclampsia.

HELLP Syndrome

HELLP Syndrome complicates 10 – 20 % of cases with severe pre–eclampsia. Assess for very low platelets, epigastric or RUQ pain, headache, visual changes, nausea/vomiting.

Serious Medical and/or Surgical conditions

Any **medical condition requiring admission** for further management example: cardiac disease, Lupus.

Pre-pregnancy diabetes

Pre-existing diabetes with significant maternal systemic involvement and usually multisystemic involvement i.e.: progressing retinopathy and/or nephropathy in pregnancy.

Requiring emergency rescue cerclage

When considering a rescue cerclage below 24 weeks of gestation a higher level of expertise is required.

Level 3+

This level is reserved for **critical and life threatening conditions**. These conditions require the upmost urgency in a high level acuity.

Higher order multiple pregnancy

This is defined as ≥ 4 fetuses.

Pulmonary embolism

A pulmonary embolism is considered Level 3+, usually requiring ICU admission.

Level 1 trauma

Level 1 is the highest acuity in a trauma classification, unlike this maternal (and also neonatal) classification where the highest level is 3+.

Intubation/ventilation

Patients requiring **intubation and ventilation** because of a medical or surgical condition require much higher level of attention.

4.0 Fetal: Normal, Level 1, Level 2a, Level 2b, Level 3, Level 3+

Normal

Gestational age

Normal will include a gestational age of 37^{0} weeks and greater.

Singleton

Only singleton pregnancies in cephalic presentation are considered Normal.

Normal fetal health surveillance

Level 1

Any fetal issue that is **not anticipated to impact the well being of the fetus.**

Gestational age

Level 1 will include gestational ages of 36 to 36^{+6} weeks.

Singleton

Only **singleton pregnancies in cephalic presentation** are considered Level 1.

Fetal anomaly

For the purpose of classification a simple fetal anomaly is one that has been previously diagnosed that will not require any specific immediate care after birth at term. As an example, an isolated single lower limb clubfoot.

Mild Intrauterine Growth Restriction (IUGR)

A diagnosis of mild IUGR will be considered usually if most of the parameters of biometry are above the 10^{th} percentile, but the fetal abdominal circumference (AC) is between the 5^{th} and the 10^{th} percentile.

Uncomplicated Dichorionic-diamniontic twins

Uncomplicated dichorionic-diamniotic twins are ones where there is normal growth and normal fetal well-being up to 36 weeks of gestation. This could also mean that the first twin is cephalic.

Meconium

Any staining of amniotic fluid will be considered at least level 1. Depending on gestational age and thickness, the level could be increased.

Level 2a

Any fetal issue that **could impact its well being.**

Gestational age

Level 2a includes gestational ages of 32 – 35^{+6} weeks

Breech presentation

A breech presentation at term with desired vaginal delivery.

Moderate IUGR

Moderate IUGR is considered when the fetal abdominal circumference is between 1 – 4.9th percentiles. Other biometry parameters should not be below the 5th percentiles.

Dichorionic-diamniontic twins

Dichorionic-diamniotic twin pregnancies presenting due to other obstetrical concerns: i.e. PTL.

Moderate polyhydramnios

Moderate polyhydramnios is considered when a single vertical pocket is between 8-10 cm on ultrasound assessment.

Moderate oligohydramnios

Moderate oligohydramnios is amniotic fluid index is less than 5 cm but there is a deep vertical pocket of at least 2 cm.

Level 2b

Any fetal issue that is **impacting wellbeing of the pregnancy** but is **not life threatening** should be considered under 2b.

Gestational age

Level 2b includes gestational ages of 30 – 31^{+6} weeks.

Fetal anomalies requiring evaluation after birth

2b fetal anomalies are those requiring attention after birth but are not life threatening

Eg. Atrial/Ventricular Septal Defect.

Breech preterm

A preterm fetus i.e. below 37 weeks with an estimated fetal weight > 2500 g, in breech presentation is considered Level 2b if considered for vaginal delivery.

Complicated dichorionic-diamniotic

An example of complicated dichorionic-diamniotic twins are those with intrauterine growth restriction of either one or both fetuses.

Monochorionic-diamniotic

Monochorionic-diamniotic twins require a higher level of surveillance because of a seven-fold increase in complications compared to dichorionic-diamniotic twin pregnancies.

Severe IUGR

Present when the fetal AC < 1st percentile

Severe polyhydramnios

Severe polyhydramnios is diagnosed when a single vertical pocket of amniotic fluid is > 10 cm on ultrasound.

Severe oligohydramnios

Severe oligohydramnios is defined as an amniotic fluid index < 5 cm and a deepest vertical pocket of < 2 cm on ultrasound.

Level 3

These fetal issues are ones that are **seriously impacting wellbeing** but are **not anticipated to be life threatening.**

Gestational age

Level 3 includes gestational ages of < 30 weeks.

Fetal anomalies requiring immediate care at birth

Any anomaly that requires corrective surgery or any other anomaly that has a major effect on growth and development or quality of life.

Complicated monochorionic-diamniotic

Complicated monochorionic-diamniotic twins such as suspicion of twin-to-twin transfusion syndrome or selective IUGR of one twin.

Uncomplicated triplets

Triplets fall under level 3. Normal growth, amniotic fluid volume, closed normal length cervix.

Level 3+

This level is reserved for **critical and life threatening conditions**. These conditions require the upmost urgency in a high level acuity.

Gestational age

Any gestational age when there is a critical condition that is life threatening.

Complicated multiples

Complicated multiples of > 3 fetuses.

Twin-twin transfusion syndrome

Twin-Twin transfusion syndrome requiring in utero intervention such as amnio decompression or laser ablation.

In utero interventions

Any in utero intervention such as intrauterine transfusions, shunt placements, treatment for irregular FHR, etc.

Hydrops

Fetuses exhibiting ***hydrops*** are at highest risk.

Congenital Diaphragmatic Hernia and Gastroschisis

Congenital Diaphragmatic Hernia and Gastroschisis are two neonatal surgical diagnoses which require immediate level 3+ neonatal care.

Glossary of Abbreviations

AC	Fetal abdominal circumference
APH	antepartum hemorrhage
BMI	body mass index
fFN	fetal fibronectin
GDM	gestational diabetes mellitus
GHTN	gestational hypertension
HELLP	Hemolysis, Elevated Liver enzymes, Low Platelet syndrome
HTN	hypertension
IPV	intimate partner violence
IUGR	intrauterine growth restriction
MEC	Meconium staining of amniotic fluid
NSVD	normal spontaneous vaginal delivery.
PROM	premature rupture of membranes
PPROM	preterm premature rupture of membranes
PTB	preterm birth/delivery
PTL	preterm labour
VBAC	vaginal birth after cesarean

References

Guidelines for the management of Pregnancy at 41^{+0} – 42 weeks
www.sogc.org/guidelines/documents/gui214CPG0809.pdf

Guidelines for Vaginal Birth After C/S www.sogc.org/guidelines/public/155E-CPG-February2005.pdf

Diagnosis, Evlauation and Management, and of Hypertension Disorders of Pregnancy.
http://www.sogc.org/guidelines/documents/gui206CPG0803hypertensioncorrection.pdf

Steegers, E.A., et al. (2010). Pre-eclampsia. *The Lancet*, vol 376: 631 – 644.

Obesity in Pregnancy www.sogc.org/guidelines/documents/gui239ECPG1002.pdf

Maternal Overweight, Obesity & Excess Gestational Weight Gain; Identification of Maternal & Perinatal Implications & Primary Maternity Care Providers' Opportunities for Interventions to Improve Health Outcomes.
http://www.healthypregnancybc.ca/sites/healthyweight/files/maternal_weight_FINAL_mar5_09.pdf

Substance Use in Pregnancy www.sogc.org/guidelines/documents/gui256CPG1104E.pdf

Twins Part 1 http://www.sogc.org/guidelines/public/91E-CONS1-July2000.pdf

Twins Part 2 http://www.sogc.org/guidelines/public/93E-CONS2-August2000.pdf

Diabetes in pregnancy see pages S168 – S18http://www.diabetes.ca/for-professionals/resources/2008-cpg/

Vaginal Birth of Breech Presentation www.sogc.org/guidelines/documents/gui226CPG0906.pdf

Obstetrical Complications Associated with Abnormal Maternal Serum Markers Analytes
www.sogc.org/guidelines/documents/gui217CPG0810.pdf

Preterm Labour
http://www.perinatalservicesbc.ca//sites/bcrcp/files/Guidelines/Obstetrics/MasterOB2APTLMarch2005.pdf

Trauma in Pregnancy
http://www.uptodate.com/contents/trauma-in-pregnancy?source=search_result&selectedTitle=1%7E150

Obtaining copies of the BC Maternal/Fetal Levels of Service Classification tool

- Individual practitioners may obtain copies of the forms from the local hospital.
- Facilities will order forms through RR Donnelly. Refer to the website link: http://www.perinatalservicesbc.ca/Forms.htm for the order form.
- Contact Perinatal Services BC (PSBC) at 604-877-2121 regarding any feedback or questions about the perinatal forms.

Development Committee

NORTHERN HEALTH AUTHORITY

REPRESENTATIVE	DISCIPLINE
Linda Davies	CPL Maternity
Brian Galliford	OB/GYN
Glen Hamill	Primary Care Physician
Rose Perrin	Perinatal Program Executive Lead

INTERIOR HEALTH AUTHORITY

Deborah Chaplain	Director of Patient Care
Virginia Clark	Primary Care Physician
Ann Crawford	Manager, Women's Health and Neonatal Services
Catherine Gerarda Cronin	Medical Director, Perinatal & Child Health
Ruth Johnson	Network Director, Perinatal and Child Health Services
Shelley Laberge	OB/GYN
Kim Mason	Perinatal Clinical Nurse Educator
Lynn Popien	Regional Education Coordinator
Beverley Sieker	Manager, Children & Women's Services

FRASER HEALTH AUTHORITY

Maged Bakhet	OB/GYN
Peter Beresford	Head of OB/GYN
Gary Jackson	OB/GYN
Loraine Jenkins	Program Director
Susan Lockhart	Hospital Administrator
Tamara Nahhas	Midwife
Lynne Palmer	Clinical Nurse Specialist: Maternity
Jan Radford	Project Manager, Medical Administration and Quality Outcomes Perinatal Lead Maternal Infant Child and Youth Program
Tamara van Tent	Program Director

VANCOUVER COASTAL HEALTH AUTHORITY

Diane Bissenden	Director, Population & Family Health
Patty Keith	Regional Director of Planning, Maternal/Child, Regional Programs and Service Integration
Louise Martin	Primary Care Physician
Brenda Wagner	Regional Medical Planning Leader

PROVINCIAL HEALTH SERVICES AUTHORITY

Michelle Belanger	OB/GYN
Ruth Comfort	Assistant Department Head, Midwifery
Ruth Dueckman	Manager, Birthing & Surgery
Linda Knox	Acting Dept. Head, Midwifery
David Lea	OB/ Anesthetist
Pam O'Sullivan	VP, Acute Perinatal Program and Perinatal Lead
Denise Pugash	Radiologist

VANCOUVER ISLAND HEALTH AUTHORITY

Robert Burns	Medical Executive Lead
Jerome Dansereau	Perinatologist
Bill Ehman	Primary Care Physician
Michele Fryer	Director, Acute Services Child Youth and Family Health
Patti Nicks	Regional Perinatal Educator
Erin O'Sullivan	Leader: Perinatal Program Development and Evaluation

PERINATAL SERVICES BC

Taslin Janmohamed-Velani	Coordinator, Knowledge Translation
Gerry Marquette	Medical Director, Perinatology
Janet E. Walker	Provincial Lead, Education and Quality
Kim Williams	Provincial Executive Director
Marty Willms	Provincial Lead, Provincial Networks

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