ICD-10-CA | CCI

A Guide to Obstetrical Coding

Updated September 2022

Canadian Institute for Health Information
Institut canadien d'information sur la santé

Production of this document is made possible by financial contributions from Health Canada and provincial and territorial governments. The views expressed herein do not necessarily represent the views of Health Canada or any provincial or territorial government.

Unless otherwise indicated, this product uses data provided by Canada's provinces and territories.

Canadian Institute for Health Information
495 Richmond Road, Suite 600
Ottawa, Ontario K2A 4H6
Phone: 613-241-7860
Fax: 613-241-8120
cihi.ca
copyright@cihi.ca

How to cite this document:
Canadian Institute for Health Information. *A Guide to Obstetrical Coding*. Ottawa, ON: CIHI; September 2022.

Cette publication est aussi disponible en français sous le titre *Guide de codification des données en obstétrique*.

Table of contents

About CIHI

The Canadian Institute for Health Information (CIHI) is an independent, not-for-profit organization that provides essential information on Canada's health systems and the health of Canadians.

We provide comparable and actionable data and information that are used to accelerate improvements in health care, health system performance and population health across Canada. Our stakeholders use our broad range of health system databases, measurements and standards, together with our evidence-based reports and analyses, in their decision-making processes. We protect the privacy of Canadians by ensuring the confidentiality and integrity of the health care information we provide.

Chapter 1: Introduction

Guide overview

Introduction

A Guide to Obstetrical Coding is a resource that addresses some of the more complex and challenging areas of obstetrical coding using the *International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Canada (ICD-10-CA)* and the *Canadian Classification of Health Interventions (CCI)*. Prior to publication of this guide, its content was part of the eLearning course Obstetrical Coding — Moving Beyond the Basics. Each chapter will include relevant clinical information, a review of the applicable coding standards and the ICD-10-CA and CCI codes. At the end of each chapter, participants will have an opportunity to apply the information presented in the chapter to a case study.

What is the purpose of this guide?

Obstetrical discharges represent a significant portion of the abstracts in the Discharge Abstract Database (DAD). Obstetrical patients are unique from other acute care patients in hospital as they are not “sick” per se. This makes the coding and assignment of diagnosis typing in the obstetrical population somewhat different from that of the general population. To add to this, documentation is often a problem on obstetrical charts — lack of a diagnostic statement, conflicting information, inappropriate application of definitions, etc. For these reasons, the selection of codes for obstetrics is often based on criteria as set out in the *Canadian Coding Standards for Version 2022 ICD-10-CA and CCI* (coding standards). The coding standards and the information in this guide have been written in close consultation with the Society of Obstetricians and Gynaecologists of Canada (SOGC).

The main purposes of this guide are

- To provide readers with basic information of the clinical picture so that they can better understand chart documentation and the structure of the codes in the classifications, and pose the appropriate questions to physicians when clarification is required;
- To review relevant coding standards to ensure consistent interpretation and application;
- To standardize coding practices to ensure accurate, consistent and comparable obstetrical data in the DAD;
- To bring together the clinical picture, the applicable coding standards and the classifications by completing case studies; and
- To recognize that it is the health care provider’s responsibility to ensure that the diagnoses and procedures are recorded accurately — coding standards cannot provide direction in the case of incomplete and inconsistent documentation.

Who should use this guide?

This guide is intended for health information management professionals working with the DAD who are responsible for coding obstetrical patient records, data submission to CIHI and/or analysis of clinical health data. A basic understanding of the coding standards pertaining to obstetrical coding and of the ICD-10-CA and CCI classification tools is necessary.

Guide overview

In addition to this introduction and overview component, this guide is broken into nine chapters. Each chapter contains a series of smaller sections.

The nine chapters are

- False labor and preterm labor
- Premature rupture of membranes
- Cervical ripening, induction and augmentation of labor
- Dystocia and failure to progress
- Operative vaginal delivery
- Breech presentation and extraction
- Cesarean section
- Postpartum hemorrhage
- Fetal distress

Chapter 2: False and preterm labor

Chapter overview

In this chapter, we will discuss the differences between false labor and true labor. We will also discuss the essentials of diagnosis and the management of preterm labor. We will look at the applicable coding standards and codes within ICD-10-CA and CCI and bring these together with chart documentation by completing one case study.

This chapter consists of the following five sections:

- Section 2.1: Stages of labor
- Section 2.2: False labor
- Section 2.3: Preterm labor
- Section 2.4: Threatened preterm labor
- Section 2.5: Management of preterm labor

There is a series of exercise questions and a case study at the end of the chapter that can be completed to ensure a thorough understanding of this chapter has been achieved. Check the answers in Appendix A to determine how well you did.

2.1 Stages of labor

Labor is divided into three **stages.**

First stage

- The interval between the onset of labor and full dilation of the cervix.
- Typically lasts 6 to 18 hours in primiparas, and 2 to 10 hours in multiparas.
- Consists of 2 **phases**.

  Latent phase

  - Begins with the onset of labor and lasts until the beginning of the active phase of cervical dilation.
  - Effacement and dilation of the cervix from 0 cm to 3 cm or 4 cm.
  - Little appears to be happening but contractions are becoming coordinated, stronger and more efficient.
  - The cervix becomes softer, pliable and more elastic.
  - Average latent phase lasts 8.6 hours in primiparas and 5.3 hours in multiparas. If it lasts longer than 20 hours in a primipara or 14 hours in a multipara it is considered prolonged."

Tip

Latent labor is not false labor.

Active phase

- Lasts from the end of the latent phase to full dilation of the cervix.
- Begins when dilation of the cervix has reached 3 cm to 4 cm.
- Cervix becomes more responsive and dilation proceeds rapidly.
- Contractions are usually very strong and regular — occurring every two to three minutes.
- Steady fetal descent begins in the later part of the active phase with the greatest degree of descent near full dilation.
- Once descent begins it should be progressive.
- Descent of less than 1 cm per hour in a primipara and 2 cm per hour in a multipara is abnormal and investigation is indicated.
- Average active phase is 5.8 hours in primiparas and 2.5 hours in multiparas.

Second stage

- The interval between full cervical dilation and delivery of the infant.
- Typically lasts 30 minutes to 3 hours in primiparas and 5 to 30 minutes in multiparas.

Third stage

- The period between the delivery of the infant and the delivery of the placenta.
- Typically lasts 5 to 30 minutes.

Literature also refers to a **fourth stage** of labor, meaning the first two hours following delivery of the placenta, during which time uterine tone is established.

Onset of labor

Because it is difficult in many cases to be certain exactly when labor began, there is no unanimously accepted definition of the onset of labor.[1] This results in variations as to the time of onset that is recorded on the patient chart, which in turn presents challenges for coders in calculating duration of labor, particularly duration of the first stage and precipitate labor.

What time should the coder use to calculate the duration of labor? The SOGC has informed CIHI that the coder should take the time of onset that has been documented on the delivery record at “face value” and use it to calculate the duration of labor.

2.2 False labor

False labor is defined as ineffective contractions that resemble labor pains but are **not accompanied by effacement and dilation of the cervix**. Unlike the contractions of true labor, these contractions are irregular and follow no discernible pattern. They are non-progressive; they don't become stronger, longer or more frequent. These contractions, also called Braxton-Hicks contractions, tone the uterus in preparation for true labor. Braxton-Hicks contractions are a common cause of false labor.[2]

There are many signs that would indicate the patient is in true labor as opposed to false labor. **True labor** usually presents with one or more of the following:

Signs of true labor:[1]

- Pain at regular intervals
- Intervals gradually shorten
- Duration and severity increase
- Pain usually starts in the back and moves to the front
- Walking increases intensity
- Association between the degree of uterine hardening and the intensity of pain
- Bloody show often present
- Cervix effaced and dilated
- Descent of the presenting part
- Head is fixed between pains (versus head remains free)
- Sedation does not stop true labor

Irritable uterus

The term "irritable uterus" is typically used to describe irregular contractions that occur during pregnancy prior to the onset of labor. These contractions are usually an indication of Braxton-Hicks contractions (the uterine muscle practising for labor) or they may indicate labor contractions that, left untreated, may lead to delivery. As long as these contractions are not affecting the cervix there is no risk of preterm labor (i.e., this would be false labor).

2.3 Preterm labor

Preterm labor is the presence of contractions occurring before 37 completed weeks of gestation, of sufficient strength and frequency to effect progressive effacement and dilation of the cervix.

Essentials of diagnosis

Estimated gestational age is less than 37 weeks.

Regular uterine contractions at **frequent** intervals.

Documented **cervical change** or appreciable **cervical dilation** or **effacement**.

Although there is no strict definition in the literature regarding the amount of uterine contraction required for preterm labor, there is consensus that contractions need to be **regular** and at **frequent** intervals and that there must be demonstrated **cervical effacement or dilation**.[2]

> When labor occurs before 37 completed weeks of pregnancy, assign a code from category O60 *Preterm labour and delivery*. Labor may be spontaneous or induced and can be followed by vaginal or surgical delivery.
>
> *Canadian Coding Standards for Version 2022 ICD-10-CA and CCI — Preterm Labor*

O60 Preterm labour and delivery

Includes: onset (spontaneous) of labour before 37 completed weeks of gestation

O60.0 Preterm labour without delivery

Includes: preterm labour:
– induced
– spontaneous

O60.003 Preterm labour without delivery, antepartum condition or complication

O60.1 Preterm spontaneous labour with preterm delivery

O60.101 Preterm spontaneous labour with preterm delivery, with or without mention of antepartum condition

Preterm labour with delivery NOS

Preterm spontaneous labour with preterm delivery by caesarean section

Excludes: preterm induced labour with preterm delivery (O60.3)

O60.2 Preterm spontaneous labour with term delivery

O60.201 Preterm spontaneous labour with term delivery, with or without mention of antepartum condition

Preterm labour (medically) delayed for term delivery

Preterm spontaneous labour with term delivery by caesarean section

O60.3 Preterm delivery without spontaneous labour

O60.301 Preterm delivery without spontaneous labour, with or without mention of antepartum condition

Preterm delivery by:
– caesarean section, without spontaneous labour
– induction

The fetal fibronectin test

Preterm labor can be predicted with the fetal fibronectin test. Fetal fibronectin is a protein that can be detected in the cervicovaginal secretions of normal pregnancies prior to 20 weeks' gestation and near term. The presence of the protein between 20 and 34 weeks' gestation has been associated with preterm birth. More importantly, its absence has been associated with a low risk of preterm delivery. When women between 20 and 34 weeks are tested and the test is negative for fetal fibronectin, physicians theorize that there is a low risk of preterm delivery and no treatment is required.

2.4 Threatened preterm labor

When contractions occur prior to 37 weeks' gestation, a clinical distinction has to be made between "true" preterm labor contractions and "false" or "threatened" preterm uterine contractions. Preterm uterine contractions without cervical change generally resolve spontaneously and require no intervention.

Threatened (false) preterm labor is classified to O47.003 *False labour before 37 completed weeks of gestation, antepartum condition or complication* per the following alphabetical index lookup:

Threatened

– labor (see also Labor, false) O47.903

Labor

– false O47.903
– – at or after 37 completed weeks of gestation O47.103
– – before 37 completed weeks of gestation O47.003

The diagnosis of preterm labor poses some dilemmas for the physician. Clinically, it is often difficult to distinguish women with “true” preterm labor contractions from women with “threatened” or “false” preterm contractions. On the one hand, if therapy is withheld until there is evidence of “true” preterm labor (i.e., progressive cervical dilation), the process may advance to the degree that therapy is unlikely to be effective in stopping or delaying the preterm labor. On the other hand, unnecessary drug therapy with potential side effects to the mother and/or fetus is unwarranted if there is only marginal evidence of preterm labor.[1]

Tip

“Threatened preterm labor” with an extended length of stay, with treatment using tocolysis (drugs given to inhibit uterine contractions) or with transfer to another (higher level) institution would be indications that the patient is in “true” preterm labor and likely should be classified to category O60– *Preterm labour and delivery* rather than O47.003 *False labour before 37 completed weeks of gestation, antepartum condition or complication*.

2.5 Management of preterm labor

Management of preterm labor depends on fetal age and size and whether or not there are other indications in the mom or baby that it would be best to allow labor to continue (e.g., hemorrhage, severe hypertension, fetal distress).

Management will fall into two categories:

Expectant management

- Observation, bed rest, hydration (wait and see).

Intervention in preterm labor

- Corticosteroids: Given to accelerate fetal lung maturity.
- Tocolysis: Given to suppress labor; inhibition of uterine contractions using drugs such as magnesium sulphate or indomethacin (Indocid).
  - 20 to 24 weeks and <600 grams: Associated high morbidity rate and increased threat to mother with prolonged tocolysis.
  - 34 to 37 weeks and >2,500 grams: No benefit to tocolysis.
  - Short-term goal is to postpone delivery for 48 hours so that corticosteroids can reach their maximum effect.
  - Long-term goal is to continue pregnancy beyond 34 to 37 weeks.

Tips

- Suppression of latent labor using pharmaceutical agents is classified to 5.LC.32.^^ *Suppression, latent labour*. A code(s) from this rubric is assigned, optionally, when the patient does not go on to active labor and/or delivery in this episode of care. If labor is not specified as "latent," code to "active labour" (5.LD.32.^^ *Suppression, active labour*).
- Suppression of active labor using pharmaceutical agents is classified to 5.LD.32.^^ *Suppression, active labour*. A code(s) from this rubric is assigned, optionally, when the patient is determined to be in active labor.
- You may code all agents that apply from rubrics 5.LC.32.^^ and 5.LD.32.^^.

  If the same agent is given by different routes of administration, use column 2 from the table (combined routes of administration).

2.6 Exercises

The following exercises demonstrate how to apply the information contained in this chapter. Check your answers with those given in Appendix A: Answers to case studies and practice exercises.

2.6.1 Mom is admitted at 30 weeks' gestation with contractions. The cervix is noted to be 1 cm dilated and approximately 3 cm long. The contractions subside and there is no significant cervical change. Mom receives an injection of Betamethasone 12 mg IM. She is observed for 24 hours and then sent home. The final diagnosis is recorded as Threatened Preterm Labor. Would this be classified to false labor or preterm labor? Provide the rationale for your response.

Please enter your answer in the space below:

2.6.2 How would you code a final diagnosis of Braxton-Hicks contractions? Patient is at 38 weeks' gestation.

Please enter your answer in the space below:

2.6.3 Patient is admitted in early labor. She is 2 cm dilated. After a short period of observation, she is discharged and instructed to return when labor becomes more advanced. This is her first pregnancy. The final diagnosis is stated as latent labor. Is this false labor?

Please enter your answer in the space below:

2.7 Chapter summary

In this chapter, the differences between false labor and true labor were discussed, along with the essentials in the diagnosis and management of preterm labor. Some key points are the following:

- Contractions that occur in false labor are not strong enough or frequent enough to cause changes in the cervix.
- Preterm labor is the presence of contractions, prior to 37 completed weeks of gestation, sufficient enough to cause effacement and dilation of the cervix.
- The term “threatened” preterm labor may mean either false labor or preterm labor.
- Extended length of stay, treatment with tocolysis and/or transfer to an institution with a higher level of care would be indications of true preterm labor.
- CCI codes for suppression of labor are optional reporting.
- Corticosteroids are given to promote fetal lung maturity, not for labor suppression.

2.8 Case study

You will now have the opportunity to apply what you have learned in this chapter to chart documentation. Read through the case study and determine the diagnoses and procedures to be coded. Include the appropriate diagnosis types and identify the principal procedure.

2.8.1 Case study

Admission date: October 28, 2018

Discharge date: November 1, 2018

Most responsible diagnosis: Threatened PTL @ 30 weeks

Procedures: SVD @ 30 weeks, 4 days. No episiotomy or tears.

Summary of significant findings or events of hospital stay: Patient admitted to hospital with preterm labor. Patient received steroids (IM Betamethasone). Patient went on to delivery three days later. She had an uncomplicated postpartum course.

Please enter your notes in the space below:

Chapter 3: Premature rupture of membranes

Chapter overview

In this chapter, we will present the clinical picture of premature rupture of membranes and discuss its management. We will look at the applicable coding standards and associated codes within ICD-10-CA and CCI and bring these together with chart documentation by completing one case study.

This chapter consists of the following five sections:

- Section 3.1: The clinical picture of premature rupture of membranes
- Section 3.2: Management of premature rupture of membranes
- Section 3.3: Classifying premature rupture of membranes
- Section 3.4: Classifying oligohydramnios and chorioamnionitis with PROM
- Section 3.5: Classifying delayed delivery after spontaneous or unspecified rupture of membrane with PROM

There is a series of exercise questions and a case study at the end of the chapter that can be completed to ensure a thorough understanding of this chapter has been achieved. Check the answers in Appendix A to determine how well you did.

3.1 The clinical picture of premature rupture of membranes

The normal course of events in labor is the onset of contractions followed by rupture of the amniotic sac (membranes). When the membranes rupture prior to the onset of contractions, the condition is said to be that of premature rupture of membranes (PROM).

PROM is further divided into **term** premature rupture of membranes (rupture after 37 completed weeks) and **preterm** premature rupture of membranes (PPROM) (rupture before 37 completed weeks). PROM becomes a problem if the fetus is preterm and/or if the membranes are ruptured for a prolonged period of time before the onset of labor (i.e., >24 hours).

Caution

Within the term “premature rupture of membranes,” the word “premature” should not be confused with “preterm.” Premature means that the membranes ruptured prior to the onset of labor. Preterm refers to gestational age at the time of rupture.

PROM complicates approximately 10% of term pregnancies and about 30% of preterm pregnancies. Between 50% and 70% of patients will go into labor within 48 hours. In 80% to 90% of cases, labor begins within 24 hours if the gestational age is near term. However, if gestational age is less than 36 weeks, only 35% to 50% of cases will spontaneously begin labor within 24 hours.

Assign a code from category O42 *Premature rupture of membranes* when there is **spontaneous** rupture of the amniotic sac **more than one hour prior to the onset of labor**. Select codes within the category O42 according to the length of time between rupture of the membranes and the onset of labor with a second axis of **term or preterm gestational age at the time of rupture**.

Note: To determine the onset of labor, use the time that is documented on the delivery record.

Canadian Coding Standards for Version 2022 ICD-10-CA and CCI — Premature Rupture of Membranes

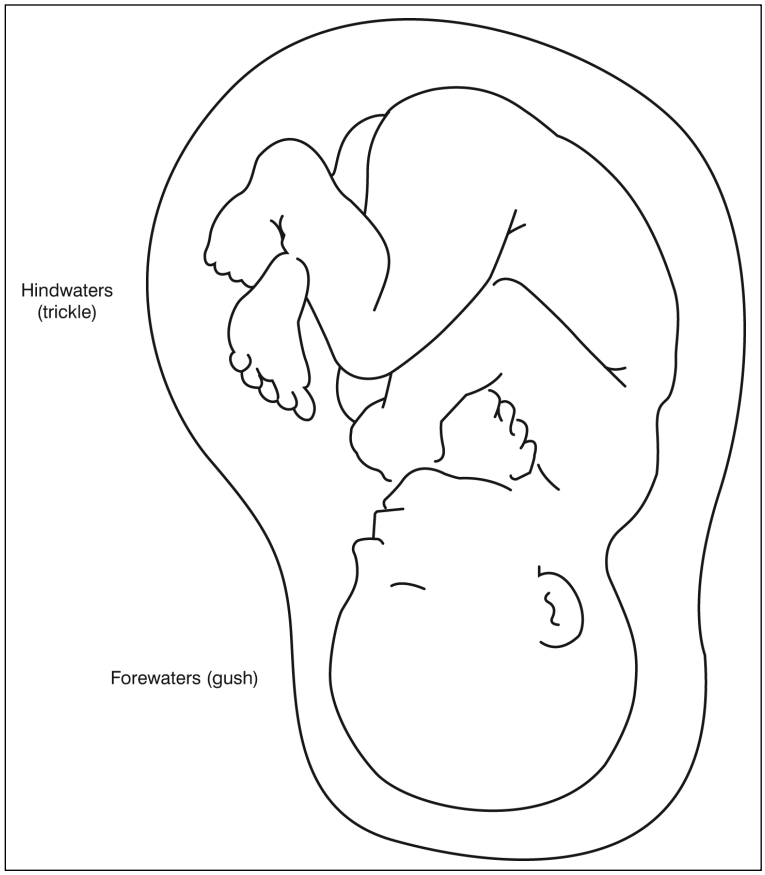
Consequences of PROM

- Preterm labor
- Cord prolapse
- Placental abruption
- Amnionitis
- Malpresentation, particularly breech
- Neonatal sepsis

Hindwaters and forewaters

As the baby’s head moves downward and engages, it fits into the pelvis and separates the amniotic sac into two parts, one in front of the head (forewaters) and the other around the body (hindwaters). If the forewaters break there is an unmistakable gush of fluid. If the hindwaters break, there is an intermittent trickling of amniotic fluid that may be very difficult to distinguish from the leakage of urine.

Amniotic sac



Amniotic fluid has a neutral pH. The upper vagina is normally acidic. Therefore, a positive nitrazine pH test is indicative of ruptured membranes. It is usually confirmed by a fern test, where vaginal fluid is placed on a slide and allowed to dry. The slide is then examined under a high-power microscope. Sodium chloride from the amniotic fluid will crystallize and form a fern pattern — this confirms that the membranes have, in fact, ruptured.

Question: A patient is admitted with preterm premature rupture of membranes. The physician's notes state that the hindwaters have ruptured and she decides to induce labor by artificially rupturing the forewaters. Labor begins within 24 hours of the time of rupture. Can you code O42.011 *Premature rupture of membranes, onset of labour within 24 hours, preterm, delivered, with or without mention of antepartum condition* with 5.AC.30.AP *Induction of labour using artificial rupture of membranes* or would this look like the chart was coded incorrectly?

Answer: Yes, it is possible to have PROM with induction of labor by artificial rupture of membranes. It is mandatory to code the induction of labor in this case.

3.2 Management of premature rupture of membranes[2]

The management of PROM depends upon gestational age and the presence or absence of amnionitis (invasion of the amniotic cavity with micro-organisms). The presence of amnionitis puts the fetus at great risk of developing sepsis. Preterm babies are the most susceptible to this life-threatening infection.

PROM in term or preterm pregnancy with amnionitis

If amnionitis is present, it is safer for the fetus to be delivered than to remain in utero, **regardless of gestational age**.

PROM in term pregnancy without amnionitis

Pregnancy at term without evidence of amnionitis may be managed either expectantly (await spontaneous labor) or actively (induction or augmentation of labor). Expectant management is an acceptable initial course of treatment, but if the patient does not begin to show signs of labor spontaneously within a reasonable time frame then labor will be induced. The aim is to have delivery occur within 24 hours of rupture of membranes. If delivery does not happen within 24 hours of rupture of membranes, then it also becomes a problem of prolonged rupture of membranes (delayed delivery).

PROM in preterm pregnancy without amnionitis

PROM with gestation between 33 and 36 completed weeks: May be managed the same as a term pregnancy. There is no evidence that antibiotics, corticosteroids or tocolytics (drugs that inhibit uterine contractions) improve outcome in these patients. As long as there is no evidence of amnionitis, these patients may be managed expectantly.

PROM prior to 24 weeks: Has a very low rate of fetal survival and also carries considerable maternal risks. There is no proven benefit to steroids, tocolytics and antibiotics at such an early gestational age. Therefore, these patients may also be treated expectantly or offered termination of pregnancy.

PROM with gestation between 24 and 32 completed weeks: Therapy with antibiotics, corticosteroids and tocolytics have been shown to prolong pregnancy and improve outcomes; therefore, this group of patients will likely be treated actively.

Outpatient management

In some cases, patients who remain undelivered may be candidates for outpatient management. The patient may be discharged home if leakage stops, there is no fever and no evidence of uterine irritability. These patients must be monitored very closely for the development of amnionitis.

3.3 Classifying premature rupture of membranes

Membranes rupturing prior to the onset of contractions is classified to category O42 *Premature rupture of membranes*.

ICD-10-CA provides sub-classifications to identify the length of time between the rupture of membranes and the onset of labor (within 24 hours or after 24 hours of rupture) at the fourth-digit level. Gestation of pregnancy at the time of rupture (preterm, full term, unspecified whether preterm or full term) is captured at the fifth-digit level.

O42 Premature rupture of membranes	**Delivered, with or without mention of antepartum condition**	**Antepartum condition or complication**	**Unspecified as to episode of care, or not applicable**
O42.01 Premature rupture of membranes, onset of labour within 24 hours, preterm	O42.011	O42.013	O42.019
O42.02 Premature rupture of membranes, onset of labour within 24 hours, full term	O42.021	O42.023	O42.029
O42.09 Premature rupture of membranes, onset of labour within 24 hours, unspecified whether preterm or full term	O42.091	O42.093	O42.099
O42.11 Premature rupture of membranes, onset of labour after 24 hours, preterm Excludes: with labour delayed by therapy (O42.2)	O42.111	O42.113	O42.119
O42.12 Premature rupture of membranes, onset of labour after 24 hours, full term Excludes: with labour delayed by therapy (O42.2)	O42.121	O42.123	O42.129
O42.19 Premature rupture of membranes, onset of labour after 24 hours, unspecified whether preterm or full term Excludes: with labour delayed by therapy (O42.2)	O42.191	O42.193	O42.199

O42 Premature rupture of membranes	Delivered, with or without mention of antepartum condition	Antepartum condition or complication	Unspecified as to episode of care, or not applicable
O42.2 Premature rupture of membranes, labour delayed by therapy	—	O42.203	O42.209
O42.9 Premature rupture of membranes, unspecified Includes: Premature rupture of membranes without onset of labour	O42.901	O42.903	O42.909

O42.2 *Premature rupture of membranes, labour delayed by therapy*

The code O42.203 *Premature rupture of membranes, labour delayed by therapy, antepartum condition or complication* is used when therapy is successful in delaying the onset of labor and the patient is discharged home for outpatient management. If labor and delivery occur during the current admission, then select the appropriate code indicating "onset of labor…" even if labor was successfully delayed for a period of time during the current admission.

Rupture, ruptured

– membranes (spontaneous)

– – premature O42.9

– – – onset of labor

– – – – after 24 hours (code to fifth character specification of preterm or term pregnancy) O42.19

– – – – delayed by therapy O42.2 **(i.e., there was no onset of labor because it was successfully delayed)**

– – – – within 24 hours (code to fifth character specification of preterm or term pregnancy) O42.09–

O42.9– *Premature rupture of membranes, unspecified*

O42.9– includes "Premature rupture of membranes without onset of labour."

O42.903 is selected if the patient was transferred to another facility with PROM with no onset of labor. At this point one does not know when the onset of labor will be (within 24 hours or after 24 hours) or if labor will even begin prior to delivery (e.g., in the event of Cesarean section).

When the patient presents with PROM, the decision may be made to go directly to Cesarean section due to an urgent/emergent circumstance, for example fetal distress. When the Cesarean section occurs prior to the onset of labor (i.e., no labor has begun prior to the intervention), O42.901 is selected.

Question: If a patient delivers at 36 weeks' gestation and also has premature rupture of membranes, are we required to code both PROM and preterm delivery? Since "preterm" is inherent in the wording at O42.01– and O42.11– do we also have to code O60.– *Preterm labour and delivery*?

Answer: Preterm delivery is identified in codes O42.01– and O42.11–; however, the coding standard *Preterm Labor* states that category *O60 Preterm labour and delivery* should be used when the delivery of an infant occurs before completion of 37 weeks of pregnancy. This being the case, both O42.01– or O42.11– AND O60.101 *Preterm spontaneous labour with preterm delivery, with or without mention of antepartum condition* should be coded. Note that **preterm** in category O42 refers to gestation at the **time of rupture** of membranes while at category O60 *Preterm* refers to weeks' gestation at the **time of delivery**.

3.4 Classifying oligohydramnios and chorioamnionitis without PROM

Oligohydramnios and chorioamnionitis are classified to category O41 *Other disorders of amniotic fluid and membranes*.

O41 **Other disorders of amniotic fluid and membranes**
Excludes: premature rupture of membranes (O42.–)

O41.01 Oligohydramnios, first trimester ++

O41.02 Oligohydramnios, second trimester ++

O41.03 Oligohydramnios, third trimester ++

O41.09 Oligohydramnios, unspecified trimester ++

++ Includes: Oligohydramnios without mention of rupture of membranes

O41.11 Infection of amniotic sac and membranes, first trimester ++

O41.12 Infection of amniotic sac and membranes, second trimester ++

O41.13 Infection of amniotic sac and membranes, third trimester ++

O41.19 Infection of amniotic sac and membranes, unspecified trimester ++

++ Includes:
Amnionitis
Chorioamnionitis
Membranitis
Placentitis

O41.81 Other specified disorders of amniotic fluid and membranes, first trimester

O41.82 Other specified disorders of amniotic fluid and membranes, second trimester

O41.83 Other specified disorders of amniotic fluid and membranes, third trimester

O41.89 Other specified disorders of amniotic fluid and membranes, unspecified trimester

O41.9 Disorder of amniotic fluid and membranes, unspecified

Caution

The "includes" note at O41.0– *Oligohydramnios* indicates that oligohydramnios (the presence of less than the normal amount of amniotic fluid) due to PROM is **not** coded here. Generally, oligohydramnios (O41.0–) and PROM (O42) should not be coded together on the same abstract.

Note

Trimesters

For the purposes of this classification, trimesters shall be defined as follows:

- First trimester is less than and equal to the 13th week of gestation (≤13 weeks);
- Second trimester is the 14th week up to and including the 26th week (14 to 26 weeks); and
- Third trimester is more than 26 weeks gestation (>26 weeks).

Question: Does the "excludes" note at O41 *Other disorders of amniotic fluid and membranes* mean that you cannot code PROM and amnionitis together on the same abstract?

Answer: The excludes note at O41 is saying, "Although it looks like PROM might be coded within category O41 *Other disorders of amniotic fluid and membranes*, it is not. PROM actually has its own category at O42 *Premature rupture of membranes*." The excludes note at O41 does not mean that you cannot code O41 and O42 together when both conditions exist.

Caution

Chorioamnionitis or funisitis may be an incidental placental pathological finding only. Without documentation of a diagnosis of fever or other signs of infection, a pathological finding of either of these conditions would not be considered significant. A pathological diagnosis of chorioamnionitis only does not preclude the assignment of Z37.0– *Single live birth* as the MRDx.

3.5 Classifying delayed delivery after spontaneous or unspecified rupture of membrane with PROM

O75.601 *Delayed delivery after spontaneous or unspecified rupture of membrane, delivered, with or without mention of antepartum condition* refers to the time between rupture of membranes and **delivery**. O42 *Premature rupture of membranes* refers to the time between rupture of membranes and **onset of labor**.

> When delivery occurs more than 24 hours after premature rupture of membranes, assign as an additional code O75.601 *Delayed delivery after spontaneous or unspecified rupture of membranes, delivered with or without mention of antepartum condition*.
>
> *Canadian Coding Standards for Version 2022 ICD-10-CA and CCI — Premature Rupture of Membranes*

3.6 Exercises

The following exercises demonstrate how to apply the information contained in this chapter. Check your answers with those given in Appendix A: Answers to case studies and practice exercises.

3.6.1 Patient presents to emergency with preterm premature rupture of membranes (ruptured for two hours) and is transferred to another acute care institution. There is no onset of labor. What is the correct code from category O42 for this scenario?

Please enter your answer in the space below:

3.6.2 Patient is admitted at 33 weeks' gestation with leaking membranes. Patient is placed on bed rest. The leaking stops after four days and there are no signs of labor. The patient is sent home with instructions to take her temperature every four hours and to return immediately if she should develop a fever. What is the correct code from category O42 for this scenario?

Please enter your answer in the space below:

3.6.3 Patient is admitted for induction of labor at 41 weeks of gestation. The doctor artificially ruptures her membranes and she is given Prostin gel. She goes into labor two hours later. Does a code from category O42 apply to this scenario?

Please enter your answer in the space below:

3.6.4 Mom comes into hospital with PROM at 35 weeks' gestation. She is kept in hospital and does not deliver until she is 37 weeks' gestation. Should the code for PROM be O42.111 *Premature rupture of membranes, onset of labour after 24 hours,* ***preterm*** or should it be O42.121 *Premature rupture of membranes, onset of labour after 24 hours,* ***full term****, delivered, with or without mention of antepartum condition*?

Please enter your answer in the space below:

3.6.5 Patient undergoes a Cesarean section following preterm PROM. There is no labor. The membranes were ruptured for four hours prior to the Cesarean section. Can a code from O42 still be selected?

Please enter your answer in the space below:

3.7 Chapter summary

In this chapter, the definition of premature rupture of membranes and its management were discussed. Some key points are the following:

- Premature rupture of membranes means that the membranes ruptured prior to the onset of labor.
- Premature rupture of membranes becomes a problem if the fetus is preterm and/or if the membranes are ruptured for a prolonged period of time before the onset of labor (i.e., >24 hours).
- The management of premature rupture of membranes depends on gestational age and the presence or absence of amnionitis.
- The codes from category O42 are selected according to the length of time between rupture of the membranes and the onset of labor with a second axis of term or preterm **gestational age at the time of rupture**.
- Oligohydramnios due to premature rupture of membranes should not be coded to O41.0–.
- Amnionitis may be coded in addition to premature rupture of membranes if both conditions are present.
- When **delivery** occurs more than 24 hours after premature rupture of membranes, an additional code for delayed delivery (O75.601) is also assigned.

3.8 Case study

You will now have the opportunity to apply what you have learned in this chapter to chart documentation. Read through the case study and determine the diagnoses and procedures to be coded. Include the appropriate diagnosis types and identify the principal procedure.

3.8.1 Case study

Final diagnosis: Preterm premature rupture of membranes
Induction of labor
Vaginal delivery

Course in hospital: This 29-year-old primigravida female presented at 35 weeks, 5 days' gestation with spontaneous rupture of membranes that occurred at 01:30 on December 8. Her pregnancy had been uneventful to date.

She was examined and her blood pressure and vital signs were stable. The baby was in longitudinal lie with vertex presentation. Fetal heart tones were audible. Rupture of membranes was confirmed.

She received IV Syntocinon induction at 10:17 on December 8 and labor started shortly thereafter at 11:15. At 18:43 on December 8 she had a spontaneous vaginal delivery of a male infant. There was no episiotomy but there was a first-degree laceration that was repaired. The baby had Apgars of 9 and 9 at 1 and 5 minutes and weighed 3,284 grams.

Her postpartum course was uneventful and she was discharged home with instructions to follow up with her family physician in six weeks.

Please enter your notes in the space below:

Chapter 4: Cervical ripening, induction and augmentation of labor

Chapter overview

In this chapter, we will discuss the difference between cervical ripening, induction of labor and augmentation of labor. We will also discuss some of the different methods of cervical ripening and inducing labor and review the definition of failed induction. We will look at the applicable coding standards and codes within ICD-10-CA and CCI and bring these together with chart documentation by completing two case studies.

This chapter consists of the following six sections:

- Section 4.1: Cervical ripening
- Section 4.2: Methods of cervical ripening
- Section 4.3: Induction of labor
- Section 4.4: Methods of inducing labor
- Section 4.5: Augmentation of labor
- Section 4.6: Failed induction of labor

There is a series of exercise questions and two case studies at the end of the chapter that can be completed to ensure a thorough understanding of this chapter has been achieved. Check the answers in Appendix A to determine how well you did.

4.1 Cervical ripening

During the normal process of labor, the cervix softens and dilates in preparation for delivery. This is known as “cervical ripening.” If induction is being considered, the cervix is evaluated to determine if intervention is required to further prepare the cervix prior to initiating the induction process.

Evaluation of the cervix is important in predicting the success of induction. Bishop’s score is a pre-labor scoring system that assists in predicting whether an induction will be successful. The total score is achieved by assessing fetal station along with effacement, dilation, consistency and position of the cervix. This assessment of the cervix determines whether the cervix is “favorable” (i.e., bishop score >6, ready to proceed with induction) or “unfavorable” (i.e., bishop score ≤6, cervical ripening is recommended).

There are several methods of promoting cervical ripening, which range from non-pharmacological (nipple stimulation, castor oil) to mechanical (Foley catheter) to pharmacological (prostaglandin). A ripened cervix is one that will respond favorably to uterine activity and with which induction of labor can proceed. It is mandatory to capture cervical ripening by balloon catheter or Laminaria insertion. All other methods of cervical ripening are optional to code in the DAD.

When cervical ripening is performed by balloon catheter or insertion of Laminaria, assign, mandatory, 5.AC.24.CK-BD *Preparation by dilating cervix (for), labour, using per orifice (ripening) by balloon catheter* and/or 5.AC.24.CK-W6 *Preparation by dilating cervix (for), labour, using per orifice insertion of laminaria*.

Note: Use the Intervention Pre-Admit Flag to capture that cervical ripening by balloon catheter or insertion of Laminaria was performed prior to admission. See Group 11, Field 20 in the *DAD Abstracting Manual* for specific instructions for applying the flag for interventions initiated prior to admission.

Canadian Coding Standards for Version 2022 ICD-10-CA and CCI — Interventions Associated With Delivery

5.AC.24.^^ Preparation by dilating cervix (for), labour

Includes: Cervical ripening to prepare for induction

Interventions to ripen the cervix where the intent is to deliver a live fetus or expel an already dead fetus (i.e. intrauterine death, missed abortion)

Excludes: cervical dilation in non-pregnant state (see 1.RN.50.^^) that being performed for termination of pregnancy (see 5.CA.^^.^^)

5.AC.24.AN using membrane stripping

Includes: Membrane sweeping

5.AC.24.AZ using nipple stimulation

5.AC.24.CA-Z9 using oral administration of non-pharmaceutical agent [e.g. herbal preparation, castor oil]

5.AC.24.CK-BD using per orifice (ripening) by balloon catheter

5.AC.24.CK-W6 using per orifice insertion of laminaria

4.2 Methods of cervical ripening

Sweeping (stripping) of membranes — 5.AC.24.AN — A finger is placed through the internal cervical os and then swept in a circumferential motion to separate the amniotic membrane from the lower uterine segment. It is felt to increase local prostaglandin production, thereby leading to a ripened cervix and eventual onset of labor. This is not the method of choice if urgent induction is required.

Nipple stimulation — 5.AC.24.AZ — Breast massage and nipple stimulation cause the posterior pituitary gland to release oxytocin. This may lead to cervical ripening and, in some cases, uterine contractions.

Herbal supplements — 5.AC.24.CA-Z9 — Commonly prescribed herbal supplements include evening primrose oil, borage oil, castor oil, black haw, black and blue cohosh and red raspberry leaves. These supplements have varying effects. Evening primrose oil is most commonly used by midwives.

Foley balloon catheter — 5.AC.24.CK-BD — A Foley catheter with a balloon is passed into the endocervix above the internal os. The balloon is inflated with sterile saline and the catheter is withdrawn to the level of the internal cervical os. This should induce ripening over 8 to 12 hours. The cervix will be 2 cm to 3 cm dilated when the balloon falls out.

Laminaria — 5.AC.24.CK-W6 — Laminaria tents are made from the desiccated stems of seaweed. They are placed in the endocervix for 6 to 12 hours. The Laminaria will increase in diameter by extracting water from cervical tissues, gradually dilating the cervical canal.

4.3 Induction of labor

Induction of labor is the artificial **initiation** of labor before its spontaneous onset for the purpose of delivery of the fetoplacental unit. Intervention in the latent phase of labor is considered to be induction, since the labor has not yet progressed to the active stage.

When active labor does not begin spontaneously and requires initiation by artificial methods, assign a code, **mandatory**, from the rubric 5.AC.30.^^ *Induction of labour*. Code all methods that apply **including those that were initiated or performed prior to admission**.

Note: Use the Intervention Pre-Admit Flag to capture that induction of labor was performed prior to admission. See Group 11, Field 20 in the *DAD Abstracting Manual* for specific instructions for applying the flag for interventions initiated prior to admission.

Canadian Coding Standards for Version 2022 ICD-10-CA and CCI — Interventions Associated With Delivery

5.AC.30.^^ Induction of labour

Includes: Interventions to induce labour where the intent is to deliver a live fetus or expel an already dead fetus (i.e. intrauterine death, missed abortion) that being performed prior to commencement of labour

Excludes: after beginning of labor (see 5.LD.31.^^)
that being performed for termination of pregnancy (see 5.CA.^^.^^)

Note: Code all methods that apply.

5.AC.30.AP using artificial rupture of membranes

Includes: Amniotomy

5.AC.30.CA-I2 using oral administration of uterotonic agent

Includes: Use of oral prostaglandin (e.g. misoprostol)

5.AC.30.CK-I2 using per orifice (intra cervical/vaginal) administration of uterotonic agent

Includes: Use of intravaginal prostaglandin (e.g. cervidil, prostin gel)

5.AC.30.HA-I2 using percutaneous infusion of uterotonic agent

Includes: Use of oxytocin, syntocinon

5.AC.30.YA-I2 using administration of uterotonic agent route NEC

Indications

Generally, induction should be performed in response to specific indications. Common indications include the following:

- Prolonged pregnancy (gestation of at least 41 completed weeks);
- PROM;
- Rh isoimmunization;
- Placental insufficiency;
- Fetal compromise such as IUGR, non-reassuring fetal surveillance, fetal demise;
- Maternal compromise such as type 1 diabetes mellitus, renal disease, preeclampsia; and
- Social/geographic reasons.

Certain obstetrical interventions **do not** preclude the use of a code from subcategory Z37.0– *Single live birth* as the MRDx (e.g., **induction for convenience**, artificial rupture of membranes and/or episiotomy). In a case where a Cesarean section is requested by a mother who has not had a previous Cesarean section, and it is done in the absence of any indications, a code from subcategory Z37.0– may still be used as the MRDx.

Canadian Coding Standards for Version 2022 ICD-10-CA and CCI — Delivery in a Normal Case

Risks

Increased rate of

- Excessive uterine activity;
- Operative vaginal delivery;
- Cesarean section;
- Fetal heart rate anomalies;
- Uterine rupture; and
- Delivery of preterm infant due to incorrect estimation of gestational age.

Question: If an induction is performed prior to admission, can it be coded on the inpatient abstract?

Answer: Yes, all methods used to induce a patient's labor are to be coded on the inpatient abstract. Those methods performed prior to admission will be flagged using the Intervention Pre-Admit Flag; those performed after admission will be captured without the flag.

4.4 Methods of inducing labor[2]

Medical induction

Prostaglandin — 5.AC.30.CK-I2 — Pharmacological use of prostaglandins is often for the initial purpose of achieving cervical ripening. These agents, however, produce several other effects, including dilatation of the cervix and initiation of uterine contractions. In some cases, prostaglandin is all that is required for a pregnant woman to progress to active labor and eventually deliver. For this reason, although the documentation may state "for cervical ripening," prostaglandins are included within the rubric "induction of labour." The use of prostaglandins reduces the likelihood of not being delivered in 24 hours and decreases the use of intravenous oxytocin.

Available in Canada as

- Intracervical PGE2 (prostaglandin E synthase 2) gel (dinoprostone: Prepidil) 0.5 mg
- Intravaginal PGE2 gel (dinoprostone: Prostin) 1 mg and 2 mg

Controlled-release prostaglandin — 5.AC.30.CK-I2 — An insert consisting of a polymer base containing 10 mg of dinoprostone with a polyester retrieval string. The insert releases 0.3 mg per hour of prostaglandin E2 over a 12-hour period. It is placed in the posterior fornix of the vagina and is removed with the onset of labor, spontaneous rupture of membranes, excessive uterine activity or after 12 hours.

Available in Canada as

- Cervidil (vaginal insert)

Misoprostol — 5.AC.30.CA-I2 — Is a synthetic prostaglandin E1. Studies suggest that oral misoprostol is an effective uterotonic agent.

Oxytocin (Syntocinon, Pitocin) — 5.AC.30.HA-I2 — IV oxytocin is the most effective medical means of inducing labor. The smallest possible effective dose must be determined for each patient and then utilized to initiate and maintain labor.

Surgical induction

Amniotomy — 5.AC.30.AP — Artificial rupture of membranes (ARM) may be an effective method of inducing labor. Release of the amniotic fluid shortens the muscle bundles of the uterus, thereby increasing the strength and duration of the contraction. ARM is often performed with medical induction. Studies show that those who receive oxytocin from the time of ARM are more likely to be delivered within 24 hours than those with ARM alone and were less likely to have operative delivery.[2]

4.5 Augmentation of labor

Augmentation of labor is the **artificial** stimulation of contractions after the onset of **active** labor. Labor that has been induced, either surgically or medically, can at times require further augmentation — the same as labor that begins naturally. When this is the case, the codes for induction of labor and augmentation of labor may be used together on the same abstract.

Caution

- When an intravenous (IV) uterotonic agent is used to induce labor, any subsequent administration of an IV uterotonic agent is a continuation of the induction and is not considered to be augmentation. This direction applies regardless of whether the IV uterotonic agent was administered continuously or was stopped and restarted after labor began.
- When the patient is in the latent phase of labor and an intervention is performed to progress to the active phase of labor, the intervention is classified to “induction of labour,” not augmentation.

It is mandatory to capture augmentation of labor in the DAD.

5.LD.31.^^	**Augmentation of labour**
	Includes: that being performed after labour has commenced
	Note: Code all methods that apply.
5.LD.31.AP	using artificial rupture of membranes
	Includes: Amniotomy
5.LD.31.CA-I2	using oral administration of uterotonic agent
	Includes: Use of oral prostaglandin (e.g. misoprostol)
5.LD.31.CK-I2	using (intra) vaginal administration of uterotonic agent
	Includes: Use of intravaginal prostaglandin (e.g. cervidil, prostin gel)
5.LD.31.HA-I2	using infusion of uterotonic agent
	Includes: Use of oxytocin, syntocinon

4.6 Failed induction of labor

> O61 *Failed induction of labour* is assigned when an induction of labor procedure is performed but no active labor begins. When an induction of labor procedure is performed and no active labor begins, and the patient is either discharged or has a Cesarean section, assign a code from O61 *Failed induction of labour*.
>
> *Canadian Coding Standards for Version 2022 ICD-10-CA and CCI — Interventions Associated With Delivery*

Multiple attempts at induction during a single admission that eventually result in labor and vaginal delivery are **not** classified as failed induction.

Even if an attempt at induction fails it must still be captured as an intervention. The induction was in fact performed; it was just not successful.

Note

When there is a failed induction and the patient proceeds to Cesarean section, sequence the **indication for the induction before** O61 *Failed induction of labour*.

Rationale: Failure of the induction does not become the indication for the Cesarean section. The fact that the first delivery method failed does not change the original indication for expediting the delivery. Failed medical induction is captured as an additional type (1) diagnosis.

4.7 Exercises

The following exercises demonstrate how to apply the information contained in this chapter. Check your answers with those given in Appendix A: Answers to case studies and practice exercises.

4.7.1 What is the key difference between an induction of labor and an augmentation of labor?

Please enter your answer in the space below:

4.7.2 A patient with moderate preeclampsia is admitted for IV oxytocin induction. After five hours no labor ensues, and due to increasing concerns for rising blood pressure in the mother a Cesarean section is performed and the physician documents failed induction. What is the MRDx for this scenario?

Please enter your answer in the space below:

4.8 Chapter summary

In this chapter, the differences between cervical ripening, induction of labor and augmentation of labor were discussed. The various methods of induction and augmentation were explained and the definition of failed induction was reviewed. Some key points are the following:

- An intervention to promote cervical ripening is performed prior to induction if the cervix is deemed “unfavorable.”
- It is mandatory to capture cervical ripening by balloon catheter or Laminaria insertion.
- Induction of labor is the artificial **initiation** of labor before its spontaneous onset.
- It is mandatory to code induction of labor.
- IV oxytocin is the most effective medical means of inducing labor.
- Artificial rupture of membranes is often performed with medical induction.
- Augmentation of labor is the artificial stimulation of contractions after labor has commenced to increase the frequency, duration and strength of contractions.
- Labor that has been induced may require further augmentation; therefore, induction and augmentation may be used together on the same abstract — be guided by physician documentation.
- It is mandatory to capture augmentation of labor.
- Failed induction of labor means that active labor did not begin and the patient was either discharged home or proceeded to Cesarean section.
- If induction of labor fails, the intervention is still mandatory to capture.

4.9 Case study

You will now have the opportunity to apply what you have learned in this chapter to chart documentation. Read through each case study and determine the diagnoses and procedures to be coded. Include the appropriate diagnosis types and identify the principal procedure.

4.9.1 Case study 1

Admitted: May 2, 2018

May 1, 2018 @ 21:30, 24-year-old, G1, P0 at 40 weeks plus 6 days with contractions since 17:00 hours on April 30. Got much worse by 01:30 today (May 1). Seen this a.m. at 09:00, 2 cm dilated, 50% effaced. On examination, cervix is now 3 cm, 90% effaced, station — 3.

Impression: Prolonged latent phase

Plan: Admit. Epidural. Follow for good progress.

May 1, 2018 @ 22:10 Patient contracting every three minutes at this time. Complains of a lot of back pain with contractions.

May 1, 2018 @ 23:05 Epidural in and coping well. 3–4 cm, 100% effaced. Station — 2.

Discharge note: This 24-year-old, G1, PO woman was admitted in labor at 40 weeks' gestation on May 2. She reached full dilation at 11:45 hours on May 2 and began pushing at 11:55 hours. The patient pushed for two and a half hours despite adequate IV Syntocinon augmentation. She became quite exhausted and in discussion consented to a vacuum-assisted delivery. The epidural was topped up. The vacuum cup was applied to the +2 to +3 station, ROA, vertex. Over 13 minutes and approximately 8 contractions, the baby was delivered at 14:48 hours.

Delivery record

Type of labor: Spontaneous

Augmentation: IV oxytocin (May 2 @ 06:45)

Onset of labor: May 2 @ 02:00

Fully dilated: May 2 @ 11:45

Pushing: May 2 @ 11:55

Delivery: May 2 @ 14:48

Vaginal delivery: Vacuum station +2 to +3

Episiotomy: None

Indication: Maternal exhaustion

Please enter your notes in the space below:

4.9.2 Case study 2

Diagnosis: Post-dates intrauterine gestation
Large for gestational age infant
Failed induction

Procedure performed: Primary lower-segment Cesarean section

Intraoperative findings: A healthy male infant in cephalic position. He had Apgar scores of 9 and 9 at one and five minutes, respectively, and weighed 4,926 grams.

History: The patient is a 28-year-old gravida 1, para 0 who presented to the labor and delivery unit at 41 plus 5 weeks' gestational age with an estimated fetal weight of 5.3 kg. The patient was offered Cesarean section versus induction and decided to proceed with an induction after discussion of the risks of vaginal delivery with a possible large for gestational age infant and shoulder dystocia versus the risk of Cesarean section. The patient received Cervidil for 24 hours and subsequently started on Syntocinon with no contractions felt at 20 mU of Syntocinon for three hours. Obstetrics was consulted at this time and again the discussion was had regarding the option of continuing on with the induction by increasing the Syntocinon versus a Cesarean section. At this point in time, the patient decided to proceed with Cesarean section.

Please enter your notes in the space below:

Chapter 5: Dystocia and failure to progress

Chapter overview

In this chapter, we will review the definitions of presentation, position, lie and attitude. We will discuss the mechanisms of normal labor and delivery and then look at specific factors that may lead to difficult or complicated labor. We will look at the applicable coding standards and codes within ICD-10-CA and CCI and bring these together with chart documentation by completing two case studies.

This chapter consists of the following seven sections:

- Section 5.1: Fetopelvic relationships
- Section 5.2: Mechanisms of normal labor
- Section 5.3: Dystocia, failure to progress and obstructed labor
- Section 5.4: Problems with the passenger — Malposition and malpresentation, incomplete rotation of the fetal head
- Section 5.5: Problems with the passage — Cephalopelvic disproportion (CPD)
- Section 5.6: Other obstructed labor (O66)
- Section 5.7: Problems with the forces — Uterine inertia and maternal fatigue

There is a series of exercise questions and two case studies at the end of the chapter that can be completed to ensure a thorough understanding of this chapter has been achieved. Check the answers in Appendix A to determine how well you did.

5.1 Fetopelvic relationships

Presentation

The part of the fetus that is first entering the birth canal.

There are five presentations:

- Cephalic or vertex — Normal
- Brow
- Face
- Breech — Buttocks, feet, knees
- Shoulder

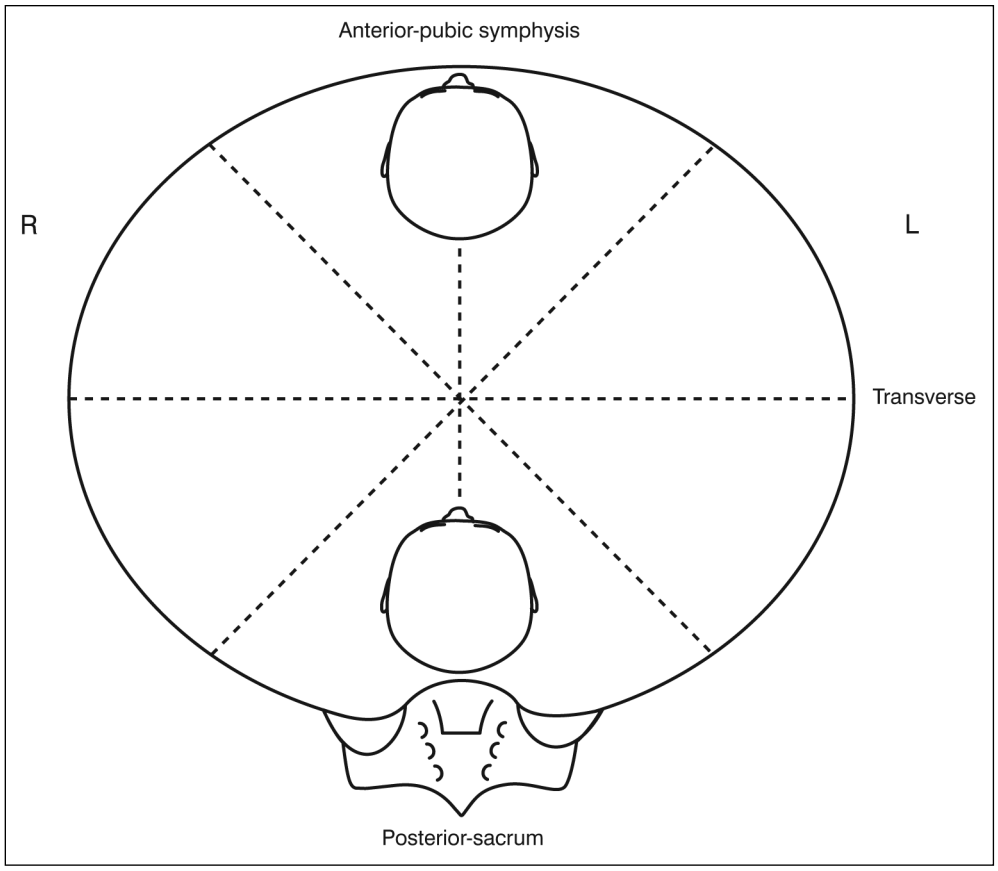
Position

The relationship of a fetal reference point to a specific point on the right or left of the maternal pelvis. The reference point depends upon the presenting part:

- Cephalic presentation — Occiput
- Face presentation — Chin (mentum)
- Brow presentation — Brow (fronto)
- Breech presentation — Sacrum
- Shoulder presentation — Scapula

This diagram demonstrates an occipitoposterior position — where the back of the baby's head is pointing directly toward the mother's back (or sacrum) — and a mentum anterior position — where the baby's chin is pointing directly toward the mother's front (or symphysis pubis).

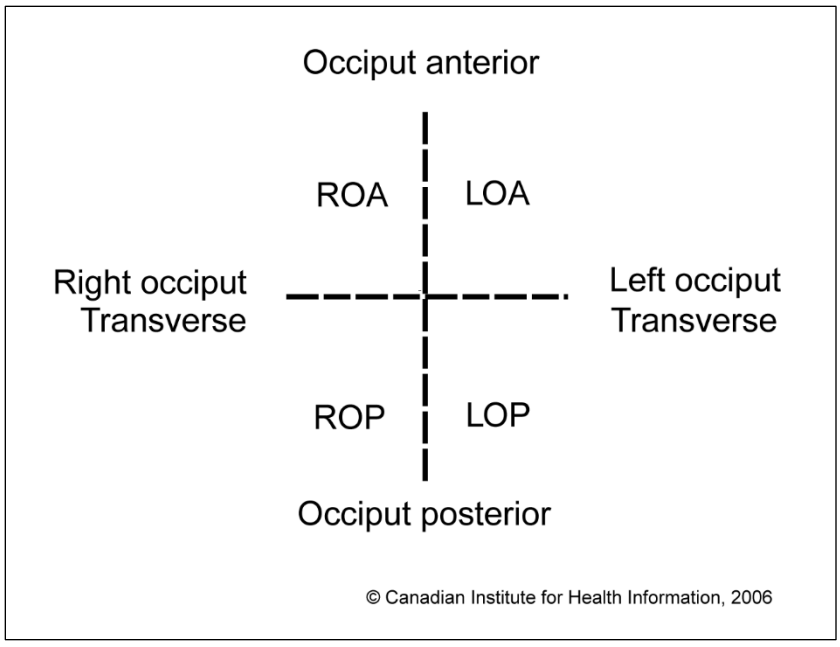
Fetal skull



Positions in cephalic presentation

- Occipitoanterior — Occiput is directed toward the right (ROA) or left (LOA) anterior quadrant of the maternal pelvis.
- Occipitoposterior — Occiput is directed toward the right (ROP) or left (LOP) posterior quadrant of the maternal pelvis.
- Occipitotransverse — Occiput is directed toward the right (ROT) or left (LOT) iliac fossa of the maternal pelvis.
- Direct occipitoposterior — Occiput is pointing directly toward the mother's back, not pointing toward either the right or left posterior quadrant.
- Direct occipitoanterior — Occiput is pointing directly toward the mother's front, not pointing toward either the right of left anterior quadrant.

Fetal position in cephalic presentation. The orientation of the presenting vertex within the maternal pelvis.

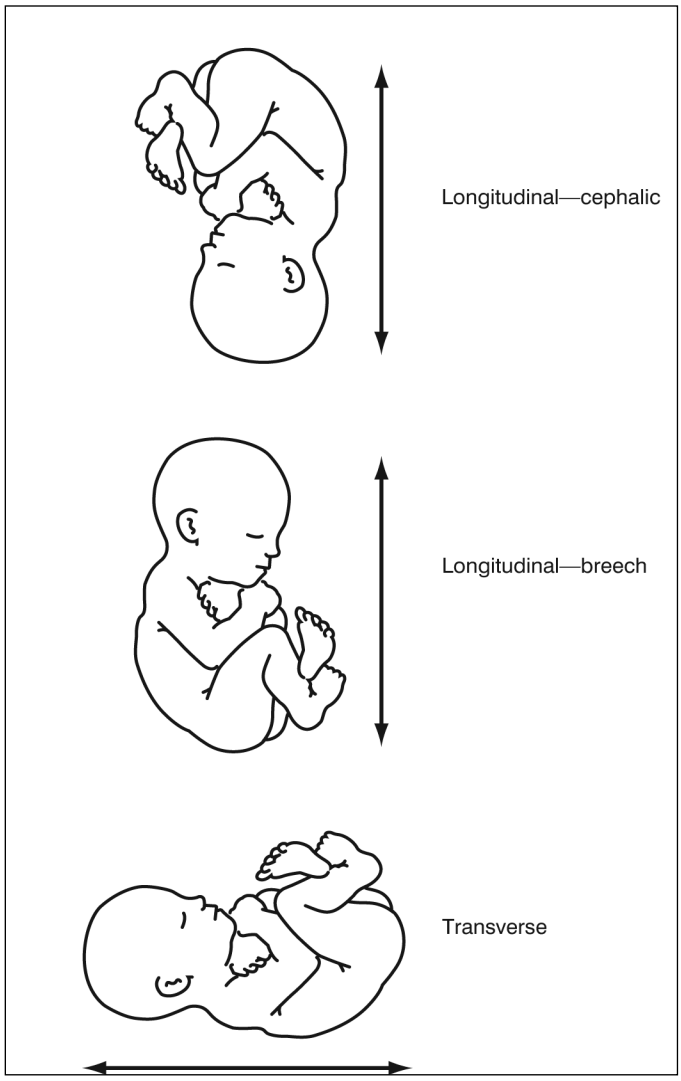


Lie

The relationship of the long axis of the fetus to the long axis of the mother

- Longitudinal — The long axis of the fetus is parallel to the long axis of the mother
- Transverse — The long axis of the fetus is perpendicular to the long axis of the mother
- Oblique — The long axis of the fetus is diagonal to the long axis of the mother

This diagram demonstrates a (cephalic and breech presentation) longitudinal lie and a transverse lie.



Note

The long axis of the body is the imaginary straight line projected on a median plane through the neck, thorax, abdomen and pelvis.

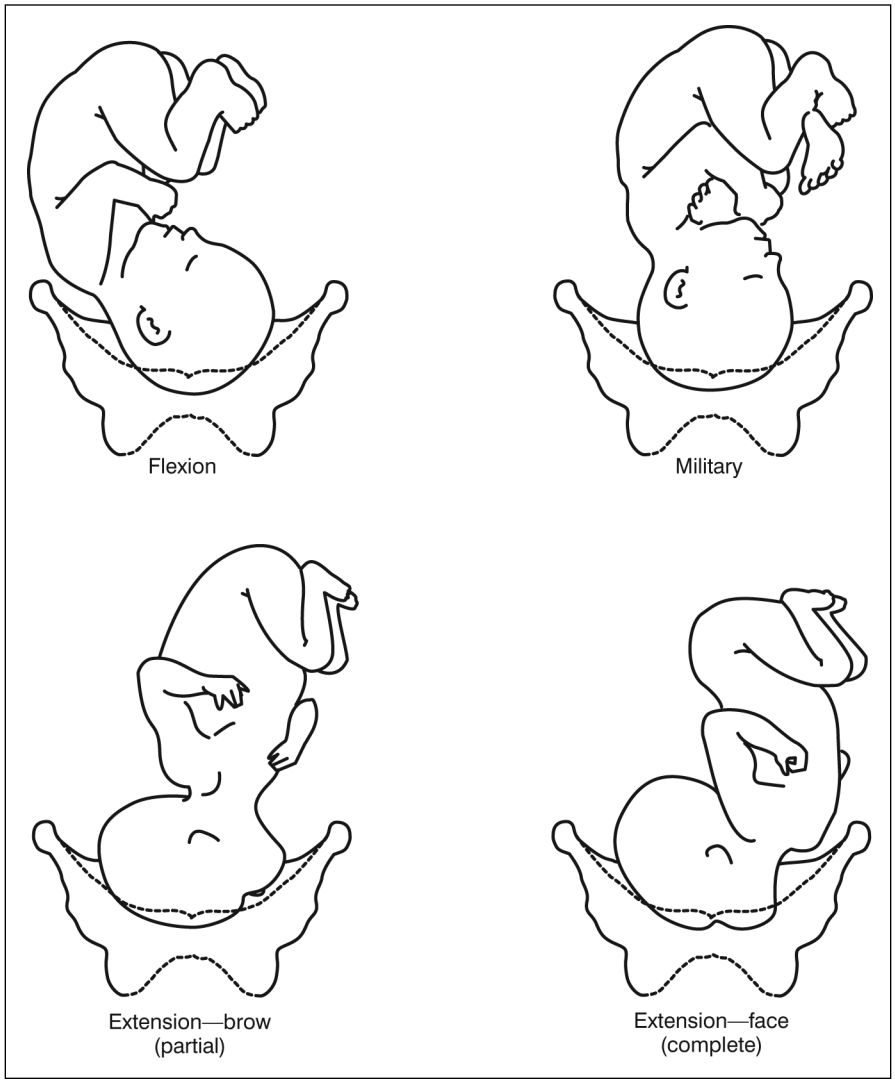
Caution

Do not confuse a transverse lie with transverse position.

Attitude

Relation of the fetal parts to each other. The basic attitudes are flexion and extension. The fetal head is in flexion when the chin is pointing toward the chest. It is in extension when the occiput points toward the fetal back. The typical fetal attitude in the uterus is flexion, with the head bent into the chest, the arms and legs folded in front of the body and the back slightly curved forward. Military attitude occurs when the head is in a neutral position, neither flexed nor extended.

This diagram demonstrates the following attitudes: flexion, military and a brow (or partial) and a face (or complete) extension.



5.2 Mechanisms of normal labor[1]

When trying to envision the normal mechanism of labor and delivery, think of a “key and lock” analogy. The fetus is the key that must fit through the maternal pelvis (the lock).

The mechanisms of labor in the **vertex position** consist of the following:

Engagement

Engagement occurs when the widest diameter of the presenting part has passed through the pelvic inlet.

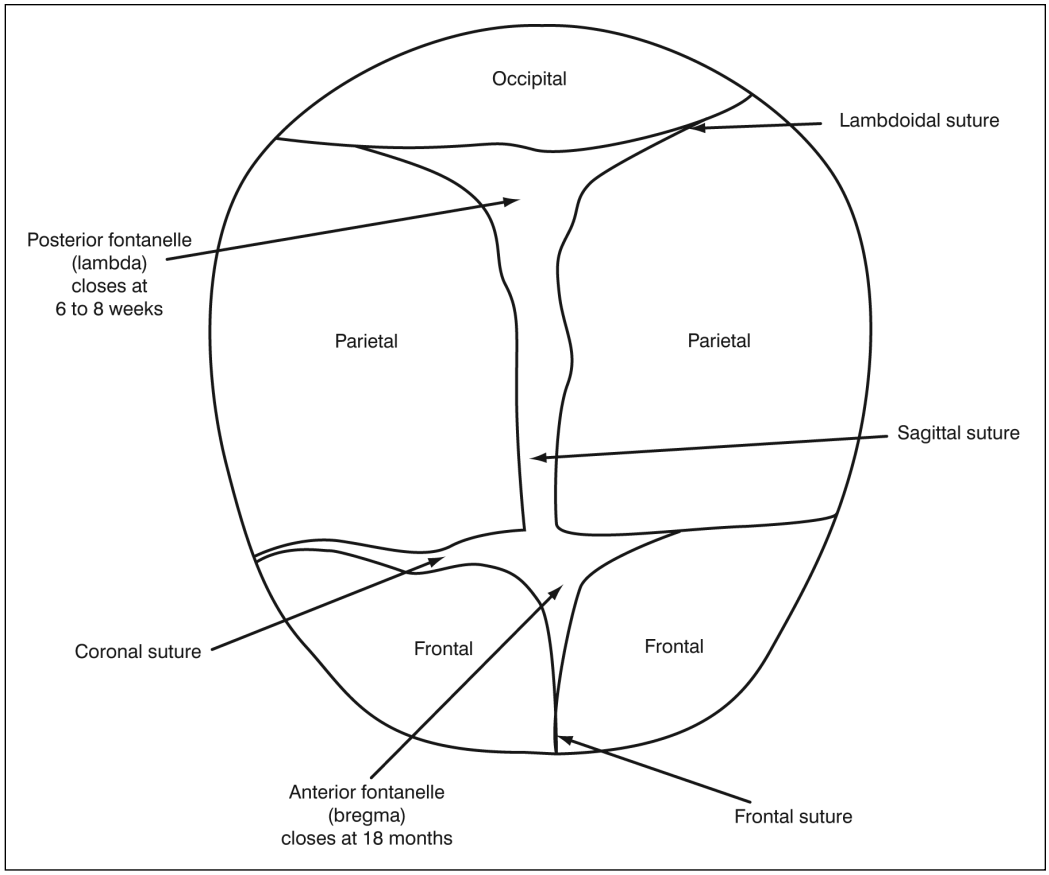
Flexion

Flexion of the neck allows the occiput (the smallest possible diameter) to lead downward through the pelvis. In normal cephalic presentation the fetal head is flexed down onto the chest. If the head is improperly fixed there may be a degree of deflexion or even extension.

Descent

Descent is slowly progressive and continues until the fetus is delivered. Descent is brought about by the downward pressure of the uterine contractions and by bearing down (in the second stage). Descent is also affected by forces of labor and pelvic configuration. In essence, the greater the pelvic resistance or the poorer the contractions, the slower the descent.

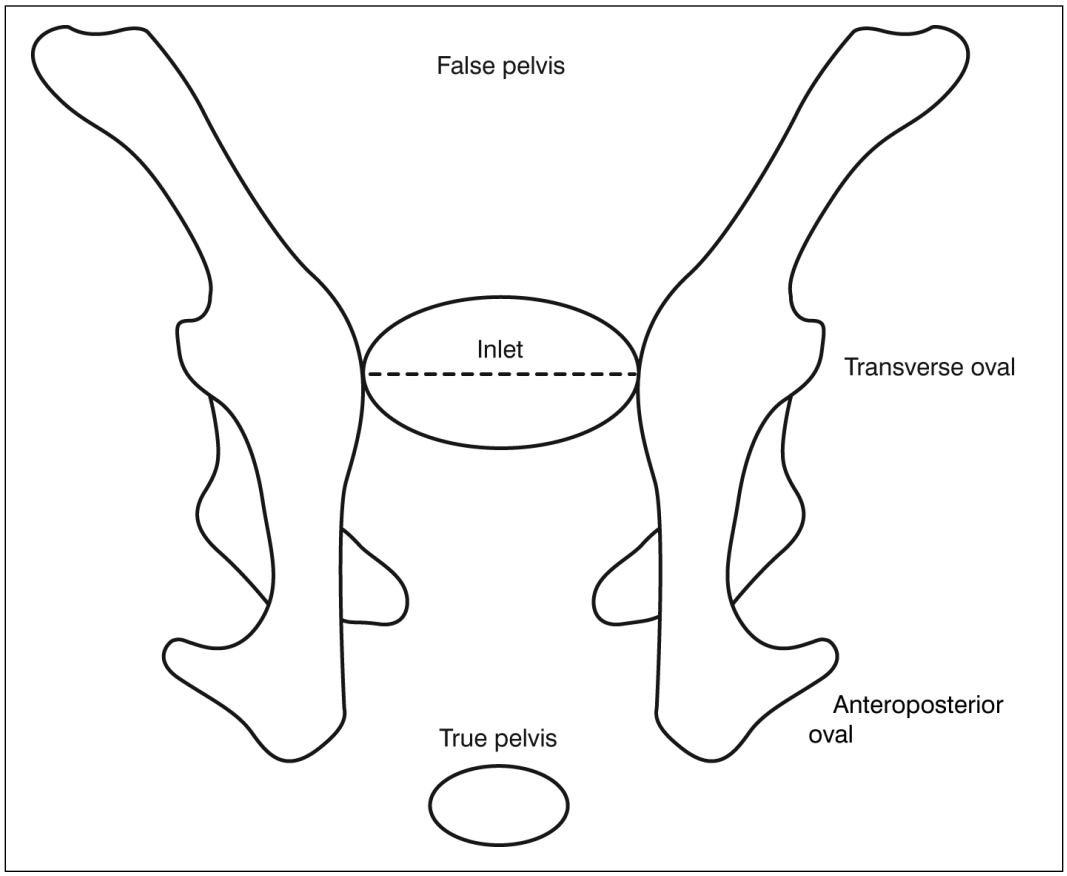
The fetal skull makes molding possible. During a pelvic examination it is possible to diagnose the position of the fetal head in the maternal pelvis by feeling the sutures and fontanelles.



Internal rotation

As the fetus descends the fetal head spontaneously rotates. The pelvic **inlet** is a transverse oval; therefore, when the head enters the pelvic inlet it is usually in the occiput transverse position — LOT is most common. The pelvic **outlet** is an anteroposterior oval. The fetal head is also an anteroposterior oval. The long axis of the fetal head must fit into the long axis of the maternal pelvis. Therefore, the head, which has entered the pelvis in the transverse or oblique diameter, must rotate internally to the anteroposterior diameter in order to be born (i.e., LOT to LOA to OA or LOA to OA).

Pelvis



Caution

Position should be based on the position of the fetal head at the time of delivery, not on the position at entry into the pelvic inlet.

Extension

The vaginal outlet is directed upward and forward; therefore, extension of the head must occur before the head can pass through it. Extension is complete with delivery of the head.

External rotation (restitution)

The delivered head rotates (restitutes) back to the position it originally occupied at engagement (i.e., OA to LOA). This allows the shoulders to rotate internally to an anterior–posterior position for delivery. The body of the baby is then delivered.

5.3 Dystocia, failure to progress and obstructed labor

"Dystocia" is defined as abnormal or difficult labor. It may be associated with factors involving

- The passenger (fetus): Malposition, malpresentation, large fetus;
- The passage (maternal pelvis): CPD, abnormality of pelvic organs;
- The forces (powers): Inertia and maternal expulsive efforts; or
- A combination of these factors.[2]

In ICD-10-CA, dystocia is classified according to the influencing factors. When a combination of factors exists, multiple codes may be selected.

Dystocia NOS is classified to O66.9– *Obstructed labour, unspecified*.

"Failure to progress" is a nebulous term used to mean that the patient's labor becomes stalled before full dilation and there is no progress for two to three hours. It is often used as an indication for Cesarean section.

Failure to progress may result from factors such as cephalopelvic disproportion, malposition, malpresentation, ineffective uterine contractions or large baby, and should be classified accordingly.

Failure to progress NOS is classified to O62.2– *Other uterine inertia*.

Caution

Failure to progress NOS is not necessarily an indication that labor is obstructed. It is an inclusion term at O62.2– *Other uterine inertia*.

"Obstructed labor" is labor that has become hindered by some mechanical obstruction. Influencing factors range from disproportion through malpresentation/malposition to neoplasms blocking the birth canal. As labor proceeds and the uterus tries to overcome the obstruction, the contractions become more frequent and stronger. There is progressive retraction of the upper segment with stretching and thinning of the lower part of the uterus.

The normal physiological retraction ring becomes the pathologic Bandl ring. The round ligaments become tense and the pain is severe. If the obstruction is not relieved and the contractions go on, rupture of the lower uterine segment is the final outcome.[1]

Note

Codes within categories O64 *Obstructed labour due to malposition and malpresentation*, O65 *Obstructed labour due to maternal pelvic abnormalit*y and O66 *Other obstructed labour* may not represent an obstruction per se, but that measures (e.g., maneuvers, instrumentation, Cesarean section) were undertaken to prevent obstruction. An obstructed labor may sometimes end in a vaginal delivery.

Classify labor as obstructed when abnormalities occur that prevent a spontaneous vaginal delivery.

- Ensure there is documentation that the patient is in labor before assigning a code from the range O64–O66.
- Code obstructed labor when the physician states that labor was obstructed or when the alphabetical index leads to an obstructed labor code (e.g., shoulder dystocia, persistent occipitotransverse position).
- Look for documentation of obstructed labor when emergency Cesarean section is performed for maternal indications.

Canadian Coding Standards for Version 2022 ICD-10-CA and CCI — Obstructed Labor

Select a code from the range O32–O34 when

- The condition is noted prior to the onset of labor and an elective Cesarean section is performed;
- Interventions to correct a potentially obstructing factor (rotation, version) are performed prior to the onset of labor; or
- A malpresentation or malposition delivers via a spontaneous vaginal delivery (e.g., without any fetal manipulation or instrumentation) even if the malpresentation or malposition is not noted until after the onset of labor.

When labor has begun, but medical intervention is required due to malpresentation/malposition, disproportion or abnormality of maternal pelvic organs, assign a code from the range O64–O66 to classify as obstructed labor.

Canadian Coding Standards for Version 2022 ICD-10-CA and CCI — Maternal Care Related to the Fetus, Amniotic Cavity and Possible Delivery Problems

When an obstructing factor is resolved by version and/or rotation at time of delivery or by certain other maneuvers (e.g., Rubin, Wood's) and the result is a vaginal delivery, assign a code

- From the range O64–O66; and
- For the intervention leading to the resolution of the obstruction.

Note: Maternal positioning classified to rubric 5.MD.16.^^ *Maternal positions for delivery (assistance)* (e.g., McRoberts) may alleviate some obstructions; however, it is not mandatory to assign a code for these interventions.

Canadian Coding Standards for Version 2022 ICD-10-CA and CCI — Obstructed Labor

5.4 Problems with the passenger — Malposition and malpresentation, incomplete rotation of the fetal head

When the head fails to spontaneously rotate to an OA position, obstruction may occur. This is referred to as persistent OP, persistent OT or deep transverse arrest.

Occipitoposterior position[1]

- Incidence is 15% to 30%.
- ROP is five times more common than LOP.
- ROP or LOP may spontaneously rotate anteriorly (most often) to become OA or posteriorly to become direct OP.

Scenarios in occipitoposterior position:

- Anterior rotation
  - Rotates 135 degrees ROP to OA
  - Rotates 90 degrees ROP to ROA
  - Rotates 45 degrees ROP to ROT (deep transverse arrest)
- No rotation — POP
- Posterior rotation ROP to OP

Spontaneous delivery can occur after

- Anterior rotation to OA
- Posterior rotation to OP

Arrest (obstruction) can occur

- High in the pelvis: Failure of the head to engage;
- In the mid-pelvis: Deep transverse arrest (ROT), ROP, OP; or
- At the outlet.

Tips

- If the head spontaneously rotates from an OP position to an OA position, then this is considered a normal delivery and does not preclude the selection of Z37.0– as the MRDx.
- Spontaneous vaginal delivery from a direct OP position is possible but this should not be considered a normal delivery and should be classified to O32.8– *Maternal care for other malpresentation of fetus* per the following alphabetical index lookup:

  Persistence, persistent (congenital)

  – occipitoposterior (position) O32.8

  – – causing obstructed labour O64.0
- If the fetus persists in an ROP or LOP position (i.e., doesn't spontaneously rotate to an OA position during labor) vaginal delivery is not possible without the performance of some type of intervention to assist with delivery. Persistent ROP or LOP is classified to O64.0– *Obstructed labour due to incomplete rotation of fetal head*.

Occipitotransverse position[1]

- LOT is the most common position at engagement.
- Most fetuses that begin labor in LOT spontaneously rotate 90 degrees LOT to LOA to OA.
- From this position, a spontaneous vaginal delivery can take place.

Tips

- An OT position that delivers without mention of any interventions must have spontaneously rotated to an OA position. This scenario is classified to Z37.0–.
- Spontaneous vaginal delivery is not possible if the fetus persists in an LOT or ROT position. Some type of intervention would be required in order to effect a vaginal delivery. This scenario would be classified to O64.0– *Obstructed labour due to incomplete rotation of fetal head*.

The following terms, when used in the absence of any other documentation to suggest otherwise, indicate a spontaneous delivery without complication:

- Spontaneous vertex delivery
- Left occiput anterior (LOA)
- Right occiput anterior (ROA)
- Single term liveborn
- Healthy mother delivered
- Occiput transverse position during labor that spontaneously rotates to OA at delivery
- Occiput posterior position during labor that spontaneously rotates to OA at delivery
- No fetal manipulation or instrumentation (e.g., forceps)
- Periurethral, first-degree or second-degree unsutured perineal lacerations
- Chorioamnionitis or funisitis as an incidental placental pathological finding only, without documentation of a diagnosis of fever or other symptoms of infection
- Nuchal cord (loose) or other cord entanglement, without mention of compression or intervention

Canadian Coding Standards for Version 2022 ICD-10-CA and CCI — Delivery in a Normal Case

The following presentations/positions are regarded as abnormal and are not considered normal cases. Code the listed condition when it requires care during pregnancy or is present during labor or at delivery:

- Breech presentation
- Brow presentation
- Compound presentation (nuchal arm/hand)
- Cord presentation
- Deep transverse arrest
- Face presentation
- Persistent occipitoposterior position (face-to-pubes, direct OP)
- Persistent occipitotransverse position
- Prolapsed arm
- Transverse/oblique lie
- Unstable lie

Multiple gestation with malpresentation of one fetus or more

A planned Cesarean section for multiple gestation with malpresentation of one fetus or more is classified to O32.5– *Maternal care for multiple gestation with malpresentation of one fetus or more*.

If attempting a vaginal delivery and labor becomes obstructed, then this is classified to category O64 *Obstructed labour due to malposition and malpresentation of fetus*.

Malposition

– fetus NEC (see also Presentation, fetal) O32.9

– – in multiple gestation (of one fetus or more) O32.5

– – – causing obstructed labor O64.8

Caution

Although the above alphabetical index lookup leads to O64.8– *Obstructed labour due to other malposition and malpresentation*, a more specific code from within this category that describes the type of malpresentation or malposition may be selected over O64.8–. An additional code from category O30 *Multiple gestation* is also assigned.

Rationale: Codes should never be assigned directly from the alphabetical index. If the index leads to an **other** or **unspecified** code, then the tabular list should be reviewed to see if a more specific code from within the same three-digit category could be assigned.

5.5 Problems with the passage — Cephalopelvic disproportion (CPD)

CPD refers to the inability of the fetus to pass through the pelvis. Extreme cases of CPD may be identified before the onset of labor but in other cases a trial of labor is required to make a definitive diagnosis.

CPD is divided into

- **Absolute** — Under no circumstances can the baby pass through the birth canal.
- **Relative** — May be able to pass through the birth canal if other conditions are favorable (i.e., efficient contractions, favorable attitude, presentation and position, etc.). Reduced size (contraction) may occur at any level (plane):
  - **Inlet** (pelvic brim, upper inlet) — Anterior–posterior diameter is less than 10 cm or the transverse diameter is less than 12 cm. Head often fails to engage.
  - **Mid-pelvis** — Reduction in the plane of least dimensions and the most difficult to assess and manage.
  - **Outlet** (lower outlet) — Distance between the ischial tuberosities is less than 8 cm.
  - **All planes** — Generally contracted pelvis.

Tips

- When the mother is undergoing a planned Cesarean section for known disproportion, the case is classified to O33 *Maternal care for known or suspected disproportion*.
- When disproportion is not diagnosed until after a trial of labor and the mother undergoes emergency (unplanned) Cesarean section, the case is classified to O65 *Obstructed labour due to maternal pelvic abnormality*.

5.6 Other obstructed labor (O66)

Shoulder dystocia (stuck or impacted shoulders)

- Shoulder dystocia is the situation in which there is inability to deliver the shoulders after the head is delivered.
- After delivery of the head the chin presses tightly against the perineum as the anterior shoulder becomes impacted behind the pubic symphysis.
- Shoulder dystocia cannot be predicted and diagnosis can only be made after delivery of the head.
- Should dystocia is an **acute obstetric emergency** requiring prompt and skillful management.

Management of shoulder dystocia

- McRoberts maneuver (5.MD.16.LL)
  - Used initially, resolves 42% of cases
  - Maternal legs are hyperflexed onto the maternal abdomen
  - Optional to code
- Rubin or Wood's maneuver (5.MD.40.LH)
  - Internal rotation of the shoulders in a corkscrew fashion
  - Mandatory to code
- Deliberate fracture of the fetal clavicle (5.MD.45.QC)
  - Mandatory to code
- If all else fails, Zavanelli maneuver may be performed (5.MD.46.LP)
  - Fetal head is replaced in anticipation of Cesarean section
  - Mandatory to code

Tip

Documented shoulder dystocia should always be classified to O66.0– *Obstructed labour due to shoulder dystocia*. Shoulder dystocia always represents "obstruction" per se and maneuvers are likely taken even if not so documented. The alphabetical index lookup for shoulder dystocia directs you to code O66.0– only. There is no other option given.

Dystocia
– shoulder (girdle) O66.0
– – causing obstructed labor O66.0

Further resources

Baxley EG, Gobbo RW. Shoulder dystocia. *American Family Physician*. 2004.

5.7 Problems with the forces — Uterine inertia and maternal fatigue

"Uterine inertia" is defined as the failure of the uterus to contract with normal strength and duration and at normal intervals during labor, thus impeding cervical dilation and descent of the fetus (also called uterine atony). Many cases of uterine inertia are resolved by oxytocin infusion, but if not, Cesarean section is indicated.

Uterine inertia is divided into the following:

Primary inadequate contractions (O62.0–)

Abnormally slow dilation of the cervix in the latent phase (0 cm to 4 cm): Some women just take a long time to dilate in the latent phase; little can be done to speed up the progress in this phase.

Includes

- Failure of cervical dilation;
- Primary hypotonic uterine dysfunction;
- Primary inadequate contractions; and
- Prolonged latent phase (0 cm to 4 cm).

Secondary uterine inertia (O62.1–)

During the active phase, previously advancing dilation of the cervix stops.

Good contractions were established but then become feeble, infrequent, irregular or stop altogether and progress ceases.

This condition is caused by a state of myometrial fatigue and is often associated with prolonged obstructed labor.

Includes

- Arrested active phase of labor;
- Secondary hypotonic uterine dysfunction;
- Secondary inadequate contractions;
- Secondary arrest of dilation; and
- Dysfunction and weakness of contractions during the active stage of labor.

Failure to progress NOS (O62.2–)

Failure to progress without documentation of a cause is classified to O62.2– *Other uterine inertia*.

Arrest NOS during the second stage of labor (after full dilation) is also classified here.

Maternal exhaustion/fatigue

"Maternal exhaustion" is a term used to describe a clinical condition, consisting of dehydration and exhaustion during prolonged labor. It should not be confused with pain, anxiety or shock. Signs of maternal exhaustion include tachycardia, pyrexia and ketonuria. Ketonuria is an extremely acidic condition and may cause the baby's pH to turn acidic as well. When this happens, the blood carries less oxygen and can lead to fetal distress due to hypoxia. Effects on the mother include inadequate progress of labor due to poor uterine action in the first stage of labor, and poor maternal effort in bearing down in the second stage.[3]

Maternal exhaustion is classified to O75.88– *Other specified complications of labour and delivery*.

Exhaustion
– maternal, complicating delivery O75.88

5.8 Exercises

The following exercises demonstrate how to apply the information contained in this chapter. Check your answers with those given in Appendix A: Answers to case studies and practice exercises.

5.8.1 What condition(s) must be met in order to assign an obstructed labor code from ICD-10-CA?

Please enter your answer in the space below:

5.8.2 A patient is admitted in labor, with membranes ruptured, at 38 weeks' gestation. After several hours the cervix is assessed and found to be at 4 cm. Oxytocin is administered intravenously; the patient is reassessed after two additional hours and still found to be at 4 cm dilation. After discussion with the patient regarding failure to progress, the physician decides to proceed to a Cesarean section. What is the correct code from category O62 for this scenario?

Please enter your answer in the space below:

5.9 Chapter summary

In this chapter, some important definitions related to the relationship between the fetus and the maternal pelvis were reviewed. The mechanisms of normal labor and delivery and influencing factors that may cause abnormal labor were discussed. Some key points are the following:

- Understanding the relationship between the fetus and the maternal pelvis is essential to correctly interpret chart documentation and the codes within ICD-10-CA.
- Understanding what happens during normal labor and delivery is essential in recognizing chart documentation describing abnormal labor and delivery.
- The term “dystocia” simply means difficult or abnormal labor. It may be caused by any number of influencing factors. When the factors are identified they should be coded accordingly. When the factors are not identified O66.9 *Obstructed labour, unspecified* is selected.
- The term “failure to progress” means that labor becomes stalled. When the influencing factors are identified they should be coded accordingly. When the factors are not identified O62.2– *Other uterine inertia* is selected.
- Codes in categories O64–O66 may not represent an obstruction per se, but that measures (e.g., maneuvers, instrumentation, Cesarean section) were undertaken to prevent obstruction.
- The fetal head is often in an OP or OT position at the beginning of labor but usually spontaneously rotates during labor to an OA position. Therefore, position should be based on the position of the fetal head at the time of delivery, not on the position at entry into the pelvic inlet.
- Shoulder dystocia (O66.0– *Obstructed labour due to shoulder dystocia*) is mandatory to code even if no interventions are documented.
- Primary uterine inertia is failure of the cervix to dilate in the latent phase (0 cm to 4 cm).
- Secondary uterine inertia is arrest of cervical dilation during the active phase of labor (beyond 4 cm).
- Maternal exhaustion is classified to O75.88– *Other specified complications of labour and delivery*.

5.10 Case studies

You will now have the opportunity to apply what you have learned in this chapter to chart documentation. Read through each case study and determine the diagnoses and procedures to be coded. Include the appropriate diagnosis types and identify the principal procedure.

5.10.1 Case study 1

Admitted: January 1, 2018

Discharged: January 2, 2018

Final diagnosis: Occipitoposterior position
Vacuum delivery due to delay in second stage

This primigravida was admitted in labor with spontaneous rupture of membranes at the gestational age of 37 weeks and 2 days.

Course in hospital: At the time of admission, vaginal findings confirmed that the cervix was 5 cm dilated, 80% effaced and vertex was presenting at +1. The membranes had ruptured spontaneously. She became fully dilated on January 1, 2018, at 12:45. However, there was delay in second stage with no descent after 55 minutes of maternal pushing. Occipitoposterior position was diagnosed; therefore, it was decided to give her assistance with vacuum. Once again, vaginal exam confirmed that she was fully dilated with vertex presenting at +2, and occipitoposterior position. The membranes were absent.

Silastic vacuum was easily applied. With gentle traction the baby was delivered in good condition in face-to-pubes, therefore confirming the occipitoposterior position. Vaginal examination confirmed a second-degree perineal tear which was sutured with catgut.

Labor and birth summary

Labor: Spontaneous

Onset of labor: January 1, 2018 @ 08:00

Membranes ruptured: Spontaneous January 1, 2018 @ 10:00

Full dilation: January 1, 2018 @ 12:45

Pushing: January 1, 2018 @ 12:47

Delivery of infant: January 1, 2018 @ 13:57

Vaginal delivery: Vacuum assisted, low with 1 pull

Indication for vaginal operative delivery: Delayed second stage

Anesthetic: None

Episiotomy: None

Please enter your notes in the space below:

5.10.1 Case study 2

Admitted: February 7, 2018

Discharged: February 11, 2018

Final diagnosis: Emergency Cesarean section for dystocia
Large for gestational age infant

History of present illness: This 21-year-old primigravida presented in labor at term gestation. She progressed to 7–8 cm; however, did not have any further progress for greater than three hours despite appropriate analgesia with epidural and Syntocinon augmentation. A decision was made to proceed with Cesarean section.

Course in hospital: She was taken to the operating room for an emergency lower-segment Cesarean section. She delivered a viable male infant with Apgars of 8 and 9 and appropriate gas pHs. The weight was 4,870 grams. A Bandl ring was noted on the uterus at the time of the procedure.

She had an uncomplicated intraoperative course and post-operatively did well. She was discharged on day four to see me in the office in six weeks' time.

Labor and birth summary

Augmented: ARM and IV oxytocin

Presentation: Cephalic

Onset of labor: February 7, 2018 @ 16:30

ARM: February 7, 2018 @ 22:15

Delivery of infant: February 8, 2018 @ 02:39

Indication for Cesarean section: Failure to progress and dystocia

Weight: 4,870 grams

Please enter your notes in the space below:

Chapter 6: Operative vaginal delivery

Chapter overview

In this chapter, we will discuss forceps and vacuum delivery, including failed application. We will look at the applicable coding standards and codes within ICD-10-CA and CCI and bring these together with chart documentation by completing two case studies.

This chapter consists of the following six sections:

- Section 6.1: Definitions related to operative vaginal delivery
- Section 6.2: Indications for operative vaginal delivery
- Section 6.3: Forceps delivery
- Section 6.4: Vacuum delivery
- Section 6.5: Failed forceps and vacuum
- Section 6.6: Application of forceps or vacuum through Cesarean section incision

There is a series of exercise questions and two case studies at the end of the chapter that can be completed to ensure a thorough understanding of this chapter has been achieved. Check the answers in Appendix A to determine how well you did.

6.1 Definitions related to operative vaginal delivery

“Operative vaginal delivery” refers to forceps or vacuum-assisted delivery. Manual rotation, episiotomy and, rarely, symphysiotomy can also be used to effect a vaginal birth.

Manual rotation

The purpose of manual rotation is the same as for forceps rotation: to turn the fetal head to an occiput anterior position, thus making the presenting diameter of the fetal head smaller. If rotation to an OA position does not occur spontaneously, then manual rotation with or without instrumentation may facilitate vaginal delivery.

5.MD.40.^^ Version and/or rotation at time of delivery

Excludes: Version or rotation done prior to commencement of labour (see 5.AC.40.^^)

Code Also: Type of delivery (e.g. manually assisted delivery 5.MD.50.^^, forceps delivery 5.MD.53.^^, vacuum delivery 5.MD.54.^^, combined forceps and vacuum 5.MD.55.^^, breech delivery 5.MD.56.^^ or Cesarean section 5.MD.60.^^)

5.MD.40.JA by external cephalic version

Includes: that for delivery of second twin

5.MD.40.JB by internal podalic version

Includes: turning the fetus in utero, with the hand or fingers inside the uterus, to a breech presentation

5.MD.40.JC by manual rotation of fetal head (e.g. Pomeroy maneuver)

Excludes: Pomeroy technique of tubal ligation (see 1.RF.51.^^)

5.MD.40.LH corkscrew maneuver (e.g. Rubin maneuver, Wood's maneuver)

Includes: Internal rotation of shoulder (i.e. for shoulder dystocia)

Version and rotation

Version — The manual conversion or changing of the polarity of the fetus in reference to the mother (i.e., changing the presentation).

External version — Manipulation of the fetal body applied through the abdominal wall of the mother.

Cephalic version — Version in which the fetal head is brought down into the maternal pelvis.

Internal version — Turning of the fetus effected by the hand or fingers inserted through the dilated cervix.

Podalic version — Version in which one or both of the legs of the fetus are brought down into the maternal pelvis.

Rotation — The turning of the fetal head through 90 degrees during labor so that the long diameter of the head corresponds with the long diameter of the pelvic outlet. It should occur naturally, but if it does not the rotation may be accomplished manually or instrumentally by the obstetrician (i.e., changing the position).

Episiotomy

Routine episiotomy has not been demonstrated to be an effective way to shorten the second stage of labor (unless the perineum is preventing delivery — episiotomy rather than forceps/vacuum). Episiotomy does not reduce and may in fact increase the incidence of maternal trauma. Midline episiotomies increase the risk of third and fourth degree tears in both SVD and operative delivery.

Symphysiotomy

Symphysiotomy is the division of the fibrocartilage of the symphysis pubis, in order to facilitate delivery, by increasing the diameter of the pelvis.

5.MD.47.^^ Surgical incisions (to facilitate delivery)

Includes: Hysteromatotomy (to facilitate delivery)
Pubiotomy (to facilitate delivery)

Excludes: Episiotomy (see 5.MD.50.^^, 5.MD.53.^^, 5.MD.54.^^)

Code Also: Type of delivery (see 5.MD.53.^^ or 5.MD.54.^^ or 5.MD.55.^^ or 5.MD.56.^^)

5.MD.47.GJ incision of cervix

Includes: Hysteromatotomy
Radial incisions [e.g. Duhrssen incision]

5.MD.47.GK symphysiotomy

Includes: Pubiotomy

5.MD.47.GL episioproctotomy

Includes: that with subsequent repair

5.MD.47.GU incision of vagina

6.2 Indications for operative vaginal delivery

The SOGC guidelines state that clear documentation of instrumentation is important throughout labor and birth. Elements required for documentation of instrumental birth:

- Indication for intervention;
- Record of discussion with the woman of the risks, benefits and options;
- Position and station of the fetal head;
- Amount of molding or caput;
- Assessment of maternal pelvis;
- Assessment of fetal heart rate and contractions;
- Number of attempts and ease of application;
- Duration of traction and force used; and
- Description of maternal and neonatal injuries.

Indications for instrumentation include circumstances in which continuation of the second stage of labor poses a significant threat to the mother or baby, as well as those circumstances in which the mother can no longer satisfactorily assist in delivering the infant. A code reflecting an indication for the use of vacuum or forceps should always be captured on the abstract.

> In cases within the expected length of stay where a Cesarean section or instrumentation (i.e., forceps or vacuum) has been used, assign the diagnosis stating the indication for the intervention as the MRDx.
>
> In cases where there is failed vacuum and/or forceps leading to subsequent Cesarean section, assign the underlying maternal or fetal condition that was the indication for the forceps or vacuum as the MRDx.
>
> *Canadian Coding Standards for Version 2022 ICD-10-CA and CCI — Sequencing Obstetrical Diagnosis Codes*

Note

ICD-10-CA does not provide a code for forceps or vacuum extractor delivery without mention of indication. If the indication or station is not documented the coder is justified in sending the chart back to the physician for proper documentation.

Maternal indications

- Maternal disease, such as cardiac disease that obviates the need for prolonged bearing-down efforts
- Maternal exhaustion
- Failure of descent
- Failure of internal rotation

Fetal indications

- Non-reassuring fetal status

6.3 Forceps delivery

The primary functions of the forceps are the following:

- **Traction** — To help with descent; and
- **Rotation** — To realign the position of the fetal head.

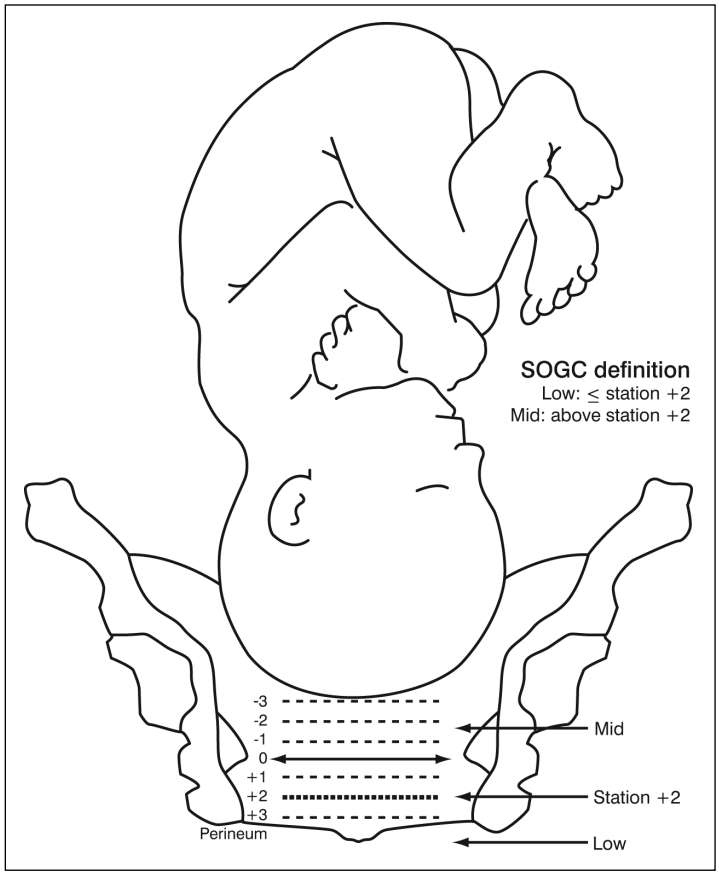
Forceps are divided into two groups:

- **Classic forceps** — Those with the usual cephalic and pelvic curves such as Simpson, Elliot.
- **Special forceps** — Those designed to solve specific problems such as Piper (delivery of aftercoming head in breech extraction), Kielland (adapt to the sides of the head when it lies with its long diameter in the transverse diameter of the pelvis) and Barton (deep transverse arrest).

Station

Descent of the fetus is evaluated by measuring the relationship of the bony portion of the fetal skull to the level of the maternal ischial spines. When the skull is at the level of the ischial spines, the station is 0. When above the ischial spines the station is expressed as a negative value (e.g., -3). When below the ischial spines the value is expressed as a positive value (e.g., +3).

Fetal stations



5.MD.53.^^ Forceps traction and rotation delivery

Excludes: Failed forceps delivery proceeding to Cesarean delivery (see 5.MD.60.^^) those deliveries that require a combination of forceps and vacuum traction (see 5.MD.55.^^)

Code Also: Any surgical incision other than episiotomy done to facilitate delivery (see 5.MD.47.^^). When coding the surgical incision it should be the principle procedure and then choose from this table to show forceps without episiotomy.

Note: Forceps definitions found in the notes at the code level are as defined in the guidelines published by the Society of Obstetricians and Gynaecologists of Canada.

5.MD.53.^^ Forceps traction and rotation delivery	with episiotomy (including midline or mediolateral)	without episiotomy
double application of forceps [e.g. Scanzoni maneuver]	5.MD.53.KS	5.MD.53.KP
forceps rotation only with manually assisted delivery (e.g. DeLee key-in-lock maneuver)	5.MD.53.JE	5.MD.53.JD
low forceps (e.g. Pajot maneuver)	5.MD.53.KL ++	5.MD.53.KK ++
mid forceps	5.MD.53.KN ++	5.MD.53.KM ++
outlet forceps	5.MD.53.KJ ++	5.MD.53.KH ++

Vacuum and forceps deliveries are classified by the station of the leading bony point of the fetal head and the degree of rotation of the sagittal suture from the midline.

Note

The following definitions also apply to vacuum delivery.

Outlet forceps

- Fetal scalp is visible at the introitus without separating the labia.
- Fetal scalp has reached the pelvic floor.
- Sagittal suture is in anteroposterior diameter, right/left occiput anterior or posterior position (rotation does not exceed 45 degrees).
- Fetal head is at or on the perineum.

Low forceps

- Leading point of the skull is at station lesser than or equal to plus 2 cm, and not on pelvic floor.
- Two subdivisions:
  - Rotation of 45 degrees or less
  - Rotation more than 45 degrees

Mid-forceps

- Head is engaged.
- Leading point of the skull is above station plus 2 cm.

Note

Mid-forceps is much more difficult than outlet or low forceps and is usually performed in an operating room with emergency Cesarean capability in case it fails. Classify documentation of low–mid forceps to mid-forceps.

High forceps

High forceps is defined as the application of forceps at any time prior to engagement of the fetal head. This procedure is no longer performed in modern obstetrics and has been replaced with Cesarean section. Therefore, there is no CCI code for high forceps.

Double application

Forceps are used to rotate the fetal occiput, removed and then reapplied for the actual delivery (e.g., Scanzoni maneuver).

6.4 Vacuum delivery

The vacuum extractor has the following components:

- A specially designed suction cup (plastic or metal [plastic have a lower injury rate], different sizes);
- A hose connecting the suction cup to a suction pump; and
- A chain inside the hose that connects the suction cup to a crossbar for traction.

The primary function of vacuum is **traction**.

Note

Vacuum is not currently used for rotation. The vacuum has been designed to produce traction, not to expedite rotation. Rotation of malposition of the head should be allowed to take place spontaneously as traction is applied. When used to actively rotate the fetus, torsion can result in severe injury to the scalp.

Application

- The largest cup that can be easily introduced is selected and applied.
- Traction is made intermittently with the uterine contractions and supplemented by mother's bearing-down efforts.
- Traction is discontinued between contractions.
- In general, three to five pulls should be sufficient.
- If no descent occurs or the cup slips off after two or three pulls, then Cesarean section is indicated as this may imply cephalopelvic disproportion.
- The cup should not be allowed to remain in place for more than 30 minutes.

Vacuum cannot be used for face presentations or on the aftercoming head in breech presentation. In rare circumstances it can be used when the cervix is not completely dilated or the head is not engaged.

5.MD.54.^^ Vacuum traction delivery

Excludes: failed vacuum traction proceeding to Cesarean delivery (see 5.MD.60.^^) those deliveries that require a combination of forceps and vacuum traction (see 5.MD.55.^^)

Code Also: Any surgical incision other than episiotomy done to facilitate delivery (see 5.MD.47.^^). When coding the surgical incision it should be the principle procedure and then choose from this table to show vacuum without episiotomy.

5.MD.54.^^ Vacuum traction delivery	with episiotomy (e.g. midline, mediolateral)	without episiotomy
outlet vacuum traction	5.MD.54.KJ ++	5.MD.54.KH ++
low vacuum traction	5.MD.54.KL ++	5.MD.54.KK ++
mid vacuum traction	5.MD.54.KN ++	5.MD.54.KM ++
vacuum traction NOS	5.MD.54.NF	5.MD.54.NE

Combined vacuum with forceps

5.MD.55.^^ Combination of vacuum and forceps delivery

Includes: Attempted (failed) trial of vacuum followed by application of forceps

Excludes: "failed" trial of vacuum/forceps proceeding to Cesarean section (see 5.MD.60.^^)

5.MD.55.^^ Combination of vacuum and forceps delivery	with episiotomy	without episiotomy
mid vacuum/forceps	5.MD.55.KN	5.MD.55.KM
low vacuum/forceps	5.MD.55.KL	5.MD.55.KK
outlet vacuum/forceps	5.MD.55.KJ	5.MD.55.KH
vacuum with forceps NOS	5.MD.55.KR	5.MD.55.KQ

Caution

Vacuum with subsequent use of forceps is not always indicative that the vacuum failed. Vacuum can be used for descent and then forceps used for rotation and/or further traction for extraction.

6.5 Failed forceps and vacuum

Failed forceps

Failed forceps denotes an unsuccessful attempt at forceps delivery and abandonment of this effort in favor of Cesarean section.

According to the World Health Organization (WHO), forceps have failed if

- The fetal head does not advance with each pull;
- The fetus is undelivered after three pulls with no descent.[4]

Note

The SOGC says that most operative deliveries, including vacuum, should be considered a trial. Unless the practitioner is certain that an operative vaginal delivery is going to be successful, the possibility of failure needs to be anticipated. Alternative plans must be in place and implemented promptly if the planned operative (instrumental) birth is unsuccessful.

Failed vacuum

Failed vacuum denotes unsuccessful attempt at vacuum extraction and abandonment of this effort in favor of forceps delivery or Cesarean section. Every application should be considered a trial of vacuum extraction.

According to the WHO, vacuum extraction is failed if

- The head does not advance with each pull;
- The fetus is undelivered after three pulls with no descent;
- The cup slips off the head twice at the proper direction of pull with a maximum negative pressure.[4]

Notes

- The SOGC says that if delivery has not occurred after four contractions, the intended method of delivery should be reassessed.
- When there is a failed vacuum and/or forceps and the patient proceeds to an alternate delivery method such as Cesarean section, sequence the **indication for the instrumentation before** O66.5– *Failed application of vacuum extractor and forceps, unspecified*.

  Rationale: Failure of vacuum or forceps does not become the indication for the Cesarean section. The Cesarean section is being performed to address the underlying maternal or fetal condition. The fact that the first delivery method failed does not change the original indication for expediting the delivery. Failed vacuum or forceps will be captured as an additional type (1) diagnosis.

6.6 Application of forceps or vacuum through Cesarean section incision

Sometimes the use of vacuum and forceps is necessary at the time of Cesarean section. Use of forceps or vacuum prior to proceeding to Cesarean section or application through the Cesarean section incision is captured using codes from either column 2 or 3 of the table found at category 5.MD.60.^^ *Cesarean section delivery*. If both forceps and traction were tried (unsuccessfully), select a code from column 5 “with use of both vacuum and forceps.” The extent attribute may also be applied, if desired (see note in extent attribute box).

E50 Application of Instrumentation With C Section

01 Single application (of instruments)

02 Double application (of instruments) during trial of labour and then during C section

Note: Select “single application” if vacuum and/or forceps are used prior to proceeding to Cesarean section or if application is through the Cesarean incision only.

Select “double application” if vacuum and/or forceps are used both prior to proceeding to the Cesarean section and through the Cesarean incision.

Caution

Do not confuse the term “double application” in the extent attribute box with double application of forceps in rubric 5.MD.53.^^ *Forceps traction and rotation delivery*.

Example: Failed vacuum with subsequent lower-segment Cesarean section

O66.501 (1) Failed application of vacuum extractor and forceps, unspecified

5.MD.60.JX Cesarean section delivery, lower segment transverse incision with use of vacuum

Extent — 01 Single application (of instruments)

Example: Lower-segment Cesarean section with forceps through incision only

5.MD.60.JW Cesarean section delivery, lower segment transverse incision with use of forceps

Extent — 01 Single application (of instruments)

Example: Failed forceps with subsequent lower-segment Cesarean section. Forceps were also used through the Cesarean section incision.

O66.501 (1)	Failed application of vacuum extractor and forceps, unspecified
5.MD.60.JW	Cesarean section delivery, lower segment transverse incision with use of forceps

Extent — 02 Double application (of instruments) during trial of labour and then during C section

Notes

- The presence of O66.5– with extent attribute of 01 applied to 5.MD.60.^^ would be an indication that the instruments were applied before Cesarean section.
- The absence of O66.5– with the extent attribute of 01 applied to 5.MD.60.^^ would be an indication that the instrumentation was applied through the Cesarean section incision only.
- Extent attribute 02 applied to 5.MD.60.^^ would be an indication that the instruments were applied both prior to Cesarean section and through the incision.

6.7 Exercises

The following exercises demonstrate how to apply the information contained in this chapter. Check your answers with those given in Appendix A: Answers to case studies and practice exercises.

6.7.1. If the documentation states the fetal head is at station plus 2 and forceps were used, what CCI code would you select for the type of forceps: low, mid or outlet?

Please enter your answer in the space below:

6.7.2. During delivery, the physician attempts to deliver the fetus with the use of a vacuum. After 30 minutes this proves unsuccessful. After discussion with the patient the decision is made to proceed to a Cesarean section. Are two CCI codes required to capture that a vacuum was applied and a Cesarean section was performed?

Please enter your answer in the space below:

6.8 Chapter summary

In this chapter, the SOGC definitions of forceps and vacuum-assisted delivery as well as common indications for their use were reviewed. The concept of failed vacuum and forceps and use of instruments through the Cesarean section incision were discussed. Some key points are the following:

- Operative vaginal delivery refers to forceps or vacuum-assisted delivery.
- The SOGC guidelines state that clear documentation of instrumentation is important and that indications, station and number of attempts should all be documented on the chart.
- The indication for vacuum or forceps should always be coded.
- The primary functions of the forceps are traction and rotation.
- The primary function of vacuum is traction.
- Vacuum and forceps deliveries are classified by the station of the leading bony point of the fetal head and the degree of rotation of the sagittal suture from the midline — outlet, low, mid.
- The definitions for outlet, low and mid apply to both forceps and vacuum and are defined in the guidelines published by the SOGC.
- Failed forceps denotes an unsuccessful attempt at forceps delivery and abandonment of this effort in favor of Cesarean section.
- Failed vacuum denotes unsuccessful attempt at vacuum extraction and abandonment of this effort in favor of forceps delivery or Cesarean section.
- The use of forceps or vacuum prior to proceeding to Cesarean section or through the Cesarean section incision is captured by using the appropriate qualifiers within rubric 5.MD.60.^^ Cesarean section delivery.

6.9 Case studies

You will now have the opportunity to apply what you have learned in this chapter to chart documentation. Read through each case study and determine the diagnoses and procedures to be coded. Include the appropriate diagnosis types and identify the principal procedure.

6.9.1 Case study 1

Diagnosis: Failed forceps delivery
Prolonged second stage

Procedures performed:

Attempted forceps delivery — Low–mid forceps rotation with Kielland forceps

Attempted forceps delivery with Simpson forceps

Cesarean section

Estimated blood loss: 650 cc

Findings: Male infant in cephalic presentation

Preamble: This 38-year-old G4, P0 presented in spontaneous labor. She progressed well in the first stage of labor without augmentation or analgesia. In the second stage, the patient was examined and the fetal presenting part was noted to be 0 station, direct OA.

The patient was reassessed approximately 1.5 hours later and there was still little descent. The patient was given some IV fentanyl and was reassessed afterwards. When reassessed, the fetal head was noted to have progressed to +1 station. It was now LOT. Epidural anesthesia was then given to the patient.

Kielland forceps were used to allow rotation of the fetal head. They were applied with direct application. Gentle rotation force was used and the infant's head was easily manipulated to direct OA. The Kielland forceps where then removed and Simpson forceps were applied without complication. Position was adequately confirmed.

Over three contractions and with maternal pushing effort, the forceps were attempted to deliver the fetal head. After the third contraction, as per protocol, it was decided to abandon the forceps and to progress to Cesarean section. The lower uterine segment was incised in a transverse fashion. The infant's head was delivered without complication.

Please enter your notes in the space below:

6.9.2 Case study 2

Diagnosis: Previous Cesarean section
Arrest of progress in the second stage of labor

Procedure: Mid-cavity forceps delivery

The patient is a 33-year-old gravida 3, para 1 lady at 40 weeks' gestation. She underwent spontaneous onset of labor. She achieved full dilation and pushed well. However, after two hours she had only brought the fetal vertex down to station plus 1. The fetal position was occiput anterior. The patient still was able to push well but rather than prolonging the second stage with the uterine scar the decision was made to proceed to delivery. The patient consented to forceps delivery. Her epidural was topped up. With reconfirmation of fetal position to be direct OA, head well flexed and at station plus two, the forceps were applied in the usual manner. Over one contraction the vertex was down to crowning level and the forceps were removed. The remainder of the delivery was carried out as for normal spontaneous vaginal delivery from that point onwards. It was a liveborn female with Apgar scores of 9 at one minute and 9 at five minutes. Birth weight was 3,520 grams. The third stage was normal with spontaneous delivery of the placenta, which was intact with a three-vessel cord.

Please enter your notes in the space below:

Chapter 7: Breech presentation and extraction

Chapter overview

In this chapter, we will discuss the different types of breech presentation and the special maneuvers that are specific to breech extraction. We will look at the applicable ICD-10-CA and CCI codes and complete one case study.

This chapter consists of the following three sections:

- Section 7.1: Breech presentation
- Section 7.2: Breech delivery
- Section 7.3: Internal podalic version and breech extraction in transverse lie

There is a series of exercise questions and a case study at the end of the chapter that can be completed to ensure a thorough understanding of this chapter has been achieved. Check the answers in Appendix A to determine how well you did.

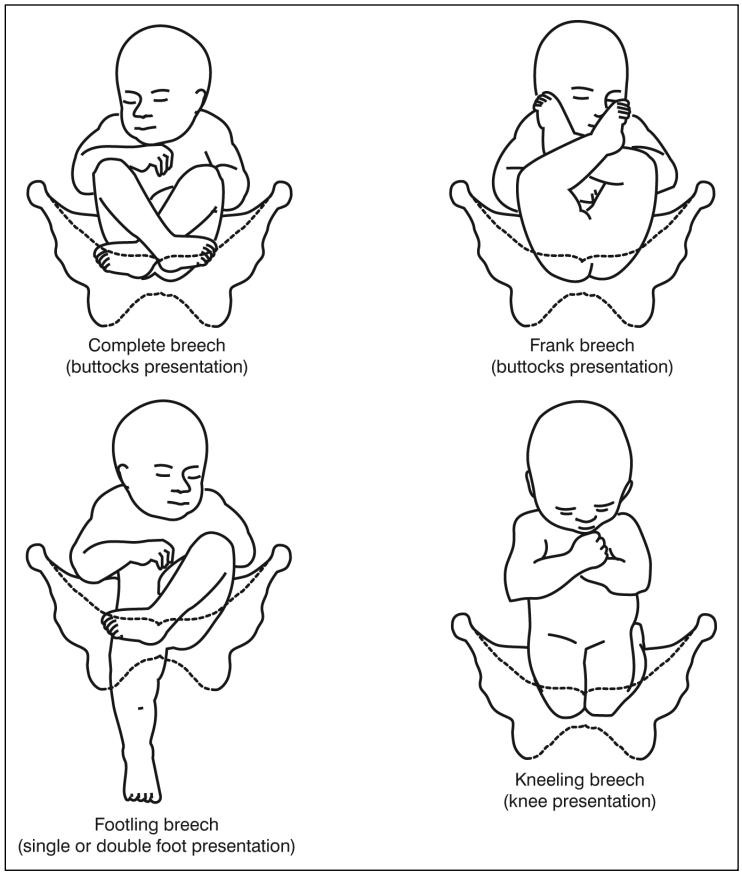
7.1 Breech presentation

Prior to 28 weeks, the fetus is small enough that it can readily change positions. As the fetus grows larger it usually assumes a cephalic presentation to better accommodate the bulkier lower body into the roomier fundal portion of the uterus. Breech presentation occurs when spontaneous version to cephalic presentation does not occur.

Types of breech presentation

- **Frank breech** — Hips are flexed and the knees are extended bilaterally (legs are pointing straight upwards). This is the most common variety and includes almost two-thirds of breech presentations. The buttocks are the presenting part.
- **Complete breech** — Both the hips and the knees are flexed. The legs are folded and the fetus in essence is in the same attitude as in vertex presentation except that polarity is reversed. The buttocks are the presenting part.
- **Footling breech** — One (single footling) or both (double footling) feet are extending downwards below the buttocks. The foot is the presenting part.
- **Kneeling breech** — Single or double with extension at the thighs and flexion at the knees. The knee is the presenting part.

Breech presentations



Causes of breech presentation include

- Oligohydramnios
- Hydramnios
- Uterine anomalies
- Pelvic tumors
- Abnormal location of placenta
- Grand multiparity
- Contracted maternal pelvis
- Multiple gestation (fetuses prevent each other from turning)
- Congenital malformation
- Low birth weight (incidence of breech presentation is closely associated with weight)

7.2 Breech delivery

Before 1975, almost all singleton breech presentations were delivered vaginally. However, these infants had a five-times higher mortality rate in comparison to cephalic presentations.

Cesarean delivery is now much more common in breech presentation, with lower morbidity and mortality rates. Many breech presentations can still be delivered vaginally without significant risk of injury or death. The risks to the mother with Cesarean section (i.e., blood loss, infection, anesthesia) must be weighed against the risk to the fetus with vaginal delivery (asphyxia, injury).

5.MD.56.^^ Breech delivery

Includes: those done with suprapubic pressure [Kristellar maneuver]

Code Also: Any concomitant surgical intervention done to mother to facilitate delivery (see 5.MD.47.^^).

Note: Breech delivery definitions found in the notes at the code level are as defined in Oxorn-Foote, *Human Labor and Birth*, 1986.

5.MD.56.^^ Breech delivery	with spontaneous delivery of head	with assisted delivery of aftercoming head	with forceps to aftercoming head [e.g. Piper]
without episiotomy			
spontaneous breech delivery	5.MD.56.AA ++	—	—
partial breech extraction [assisted breech delivery]	5.MD.56.NL ++	5.MD.56.NM ++	5.MD.56.NN ++
total breech extraction	5.MD.56.NP ++	5.MD.56.NQ ++	5.MD.56.NR ++
unspecified breech extraction	5.MD.56.NU	5.MD.56.NV ++	5.MD.56.NW

5.MD.56.^^ Breech delivery	with spontaneous delivery of head	with assisted delivery of aftercoming head	with forceps to aftercoming head [e.g. Piper]
with episiotomy			
spontaneous breech delivery	5.MD.56.GH ++	—	—
partial breech extraction [assisted breech delivery]	5.MD.56.PA ++	5.MD.56.PB ++	5.MD.56.PC ++
total breech extraction	5.MD.56.PD ++	5.MD.56.PE ++	5.MD.56.PF ++
unspecified breech extraction	5.MD.56.PG	5.MD.56.PH ++	5.MD.56.PJ

Spontaneous vaginal breech delivery

The entire infant is expelled by the natural forces of the mother, with no assistance other than support of the baby as it is being born.

Tip

Breech presentation with spontaneous breech delivery is classified to O32.101 *Maternal care for breech presentation, delivered, with or without mention of antepartum condition*.

Partial breech extraction (assisted breech delivery)

The body is delivered by the natural forces of the mother as far as the umbilicus and the remainder of the birth is assisted.

The physician may elect to manually assist in delivery of the head by performing the Mauriceau-Smellie-Veit maneuver (partial breech extraction with assisted delivery of aftercoming head).

Piper forceps may be used to assist with the aftercoming head or when the Mauriceau-Smellie-Veit maneuver fails (partial breech extraction with forceps to aftercoming head).

If, after delivery of the body, the spine remains in the posterior position and rotation is unsuccessful, extraction of the head may be accomplished by using the modified Prague maneuver.

If delivery is still not accomplished, radial incisions (Duhrssen incisions) into the cervix may be necessary to facilitate delivery and to preserve the life of the fetus. This intervention is captured at 5.MD.47.GJ *Surgical incisions (to facilitate delivery), incision of cervix*. Code also the type of delivery.

Total breech extraction

The entire body is manually extracted by a health professional.

Total breech extraction has been virtually replaced by Cesarean delivery and is only performed occasionally when expeditious delivery is indicated (i.e., fetal distress) or for the delivery of a second twin.

Pinard maneuver is included at total breech extraction.

Tip

Breech presentation requiring partial or total breech extraction is classified to O64.101 *Obstructed labour due to breech presentation, delivered, with or without mention of antepartum condition*.

Maneuvers associated with breech extraction

Maneuvers specific to partial breech extraction

Maneuver	Description
Bracht	The breech is allowed to spontaneously deliver up to the umbilicus. The body and extended legs are held together with both hands maintaining the upward and anterior rotation of the fetal body. When the anterior rotation is nearly complete, the fetal body is held against the mother's symphysis. Maintenance in this position can lead to spontaneous completion of delivery.
Loveset	Extraction of the arms in a breech delivery.
Van Horn	Partial breech extraction.

Maneuvers specific to total breech extraction

Maneuver	Description
Pinard	In frank breech presentation it may be impossible for the physician to reach the feet. With a hand in the uterus, pressure is made by the fingers against the popliteal fossa in a backward and outward direction. This brings about flexion of the knee so that the foot can be grasped and brought down.

Maneuvers specific to delivery of aftercoming head

Maneuver	Description
Mauriceau-Smellie-Veit	A method of delivering the aftercoming head in cases of breech presentation: the infant's body rests on the physician's palm and forearm with index and middle fingers over the maxilla to flex the head while the other hand is placed on the infant's shoulders to apply traction.
Prague	A method in breech presentation of delivering the head when the fetal back is posterior, by bringing down the breech and making traction on the head with the finger, which is hooked over the nape of the neck.

Maneuver	Description
Modified Prague	A method in breech presentation of delivering the head when the fetal back is posterior. One hand of the physician supports the shoulders from below while the other hand elevates the body upward toward the maternal abdomen. This flexes the head within the birth canal and results in delivery of the occiput over the perineum.
Wigand Martin	The body of the baby is placed on the arm of the operator, with the middle finger on the hand of that arm placed in the baby's mouth and the index and ring fingers on the malar bones. The purpose of the finger in the mouth is not for traction but to encourage and maintain flexion. With the other hand the obstetrician exerts suprapubic pressure on the head through the mother's abdomen.

5.MD.56.^^ Breech delivery	with spontaneous delivery of head	with assisted delivery of aftercoming head	with forceps to aftercoming head (e.g. Piper)
Partial breech extraction and total breech extraction — Simplified			
Partial (assisted) breech extraction	Includes: Bracht, Loveset, Van Horn	Includes: Bracht, Loveset, Van Horn WITH Prague, modified Prague, Mauriceau-Smellie-Veit, Wigand Martin	Includes: Any maneuvers in column 2 and 3 WITH Piper forceps
Total breech extraction	Includes: Pinard	Includes: Pinard WITH Prague, modified Prague, Mauriceau-Smellie-Veit, Wigand Martin	Includes: Any maneuvers in column 2 and 3 WITH Piper forceps

Caution

Select only one code from rubric 5.MD.56.^^ *Breech delivery*. For example, if a Loveset maneuver is performed with a Mauriceau-Smellie-Veit maneuver the code will be selected from the column "with assisted delivery of the aftercoming head." If there is also forceps to the aftercoming head then you will move to the column "with forceps to aftercoming head."

7.3 Internal podalic version and breech extraction in transverse lie

In transverse lie, internal podalic version is used to turn the baby to a footling breech and delivering it as a breech extraction. This is a dangerous procedure for both mother and fetus and is considered only in the following circumstances:

- When the baby is extremely premature and has a low chance of viability and the risk to the mother of Cesarean section is not justified.
- Delivery of a second twin.
- When the membranes are intact, the cervix is fully dilated and Cesarean section cannot be performed immediately.[1]

Note

A transverse lie may be delivered by breech extraction.

Caution

Do not confuse transverse lie (baby is lying sideways) with transverse position (baby is cephalic in presentation but the occiput is pointing sideways).

7.4 Exercises

The following exercises demonstrate how to apply the information contained in this chapter. Check your answers with those given in Appendix A: Answers to case studies and practice exercises.

7.4.1 A patient is admitted to hospital in labor at 38 weeks. The physician assesses the patient and finds the fetus to be in breech presentation. The patient is taken to the OR for a Cesarean section. What is the appropriate ICD-10-CA code to assign for this breech presentation: O32.101 *Maternal care for breech presentation, delivered, with or without mention of antepartum condition* **or** O64.101 *Obstructed labour due to breech presentation, delivered, with or without mention of antepartum condition*?

Please enter your answer in the space below:

7.4.2 During delivery, the fetus is noted to be breech and the physician performs the Loveset maneuver in order to facilitate delivery. An episiotomy is not done. What CCI code from rubric 5.MD.56.^^ *Breech delivery* would you assign for this scenario?

Please enter your answer in the space below:

7.5 Chapter summary

In this chapter, the types of breech presentation, the definitions of breech extraction and the special maneuvers that are used to assist breech delivery were reviewed. Some key points are the following:

- Breech presentation occurs when spontaneous version to cephalic presentation does not occur.
- There are four types of breech presentations — frank, complete, footling and kneeling — with frank breech being the most common variety.
- Breech presentation with spontaneous breech delivery is classified to O32.101 *Maternal care for breech presentation, delivered, with or without mention of antepartum condition*.
- Breech presentation requiring partial or total breech extraction is classified to O64.101 *Obstructed labour due to breech presentation, delivered, with or without mention of antepartum condition*.
- Breech presentations are often delivered by Cesarean section but they can also be delivered by spontaneous breech delivery or partial or total breech extraction.
- Only one code from rubric 5.MD.56.^^ *Breech delivery* should be selected.
- In transverse lie, internal podalic version may be used to turn the baby to a footling breech and then deliver it as a breech extraction.

7.6 Case study

You will now have the opportunity to apply what you have learned in this chapter to chart documentation. Read through the case study and determine the diagnoses and procedures to be coded. Include the appropriate diagnosis types and identify the principal procedure.

7.6.1 Case study

Diagnosis: 37 plus one week intrauterine pregnancy
Monochorionic diamniotic twins
Vaginal delivery of twin A, Breech extraction of twin B

Findings: Twin A was a male infant in cephalic presentation. Twin B was initially in vertex presentation and then changed to transverse lie. This enabled us to do a breech extraction.

Procedure: The patient was examined and found to be fully dilated with twin A. Twin A was delivered in the usual cephalic fashion without complication.

We then felt inside the uterus and found twin B to be in a transverse lie. We were able to grasp one foot of twin B and rupture the membranes. We brought this one foot down and then were able to grab the second foot. We then delivered twin B in a breech extraction using the Mauriceau-Smellie-Veit method.

Please enter your notes in the space below:

Chapter 8: Cesarean section

Chapter overview

In this chapter, we will discuss the indications for Cesarean section, the different types of Cesarean sections and common complications of Cesarean section. We will also discuss the three coding scenarios surrounding repeat Cesarean section and the importance of identifying previous Cesarean section on the DAD abstract. We will look at the applicable coding standards and codes within ICD-10-CA and CCI and bring these together with chart documentation by completing one case study.

This chapter consists of the following four sections:

- Section 8.1: Indications for Cesarean section
- Section 8.2: Types of Cesarean section
- Section 8.3: Complications of Cesarean section
- Section 8.4: Previous Cesarean section

There is a series of exercise questions and a case study at the end of the chapter that can be completed to ensure a thorough understanding of this chapter has been achieved. Check the answers in Appendix A to determine how well you did.

8.1 Indications for Cesarean section

Indications are either

- **Absolute** — Condition makes vaginal delivery impossible.
- **Relative** — Vaginal birth is possible but Cesarean section is safer for the mother, the baby or both.

Common indications:

- Fetopelvic disproportion
- Malpresentation and malposition
- Uterine dysfunction
- Neoplasms
- Failure to progress
- Previous uterine surgery — including previous Cesarean section, hysterotomy, myomectomy
- Placenta previa and abruption

- Toxemia of pregnancy
- Fetal distress
- Cord prolapse
- Intrauterine growth restriction (IUGR)
- Maternal diabetes mellitus
- Rhesus incompatibility

In cases within the expected length of stay where a **Cesarean section** or instrumentation (i.e., forceps or vacuum) has been used, assign the diagnosis stating the indication for the intervention as the MRDx.

In cases where there is failed vacuum and/or forceps leading to subsequent Cesarean section, assign the underlying maternal or fetal condition that was the indication for the forceps or vacuum as the MRDx.

Canadian Coding Standards for Version 2022 ICD-10-CA and CCI — Sequencing Obstetrical Diagnosis Codes

In a case where a Cesarean section is requested by a mother who has not had a previous Cesarean section and it is done in the absence of any indications, a code from subcategory Z37.0– may still be used as the MRDx.

Coding Standards for Version 2022 ICD-10-CA and CCI — Delivery in a Normal Case

8.2 Types of Cesarean section

Development of the lower segment

The uterus is divided into

- **Fundus** — The part above the fallopian tubes.
- **Body (corpus)** — The main part of the uterus lying between the tubal openings and the isthmus; it is the main contractile portion.
- **Isthmus** — The small constricted region of the uterus lying above the internal os of the cervix.
- **Cervix** — A canal, about 2.5 cm in length, with an internal os in the upper portion (separates the cervix from the uterine cavity) and an external os in the lower portion (closes off the cervix from the vagina).

In most cases, the ovum implants in the upper part of the uterus. By about three months the enlarging embryo grows into the isthmus, which unfolds and expands to make room for the fetus. As this process continues, the isthmus is gradually incorporated into the general uterine cavity, and the shape of the uterus becomes globular. The expanded isthmus forms the lower uterine segment of the uterus during labor and at the onset of labor it comprises about one-third of the whole uterus. The contractions in this part of the uterus are much weaker than those of the body of the uterus.[1]

5.MD.60.^^ Cesarean section delivery

Includes: Manual removal of placenta at same operative episode

Excludes: that for surgical termination of pregnancy (see 5.CA.89.^^)

Code Also: Any concomitant tubal ligation (see 1.RF.51.^^).

Note: Use of forceps or vacuum prior to proceeding to Cesarean section or application through the Cesarean section incision is captured using codes from either column 2 or 3 of this table. If both forceps and traction were tried (unsuccessfully), select a code from column 5 “with use of both vacuum and forceps.” The extent attribute may also be applied, if desired (see note in attribute box).

5.MD.60.^^ Cesarean section delivery	with use of forceps	with use of vacuum	without instrumentation	with use of both vacuum and forceps
Cesarean hysterectomy	5.MD.60.RC	5.MD.60.RD	5.MD.60.KE	5.MD.60.CB
classical section [vertical incision in upper segment]	5.MD.60.JZ	5.MD.60.KA	5.MD.60.JY	5.MD.60.CC
extraperitoneal section	5.MD.60.KC	5.MD.60.KD	5.MD.60.KB	5.MD.60.CD
inverted T incision	5.MD.60.RA	5.MD.60.RB	5.MD.60.KG	5.MD.60.CE
laparotomy [for abdominal pregnancy]	5.MD.60.RE	5.MD.60.RF	5.MD.60.KF	—
lower segment transverse incision	5.MD.60.JW	5.MD.60.JX	5.MD.60.AA Includes: Cesarean section NOS	5.MD.60.CF
other type of Cesarean section NEC	5.MD.60.RG Includes: De Lee (combined upper and lower vertical incision), J incision, vaginal incision	5.MD.60.RH Includes: De Lee (combined upper and lower vertical incision), J incision, vaginal incision	5.MD.60.KT Includes: De Lee (combined upper and lower vertical incision), J incision, vaginal incision	5.MD.60.CG Includes: De Lee (combined upper and lower vertical incision), J incision, vaginal incision

Cesarean hysterectomy

This includes the performance of a Cesarean section followed by removal of the uterus.

Indications:

- Uncontrollable hemorrhage from uterine atony, placenta previa or abruptio placentae, extension of uterine incision into uterine vessels;
- Rupture of the uterus, not repairable;
- Placenta accreta — Abnormal adherence of part or all of the placenta to the uterine wall, with partial or incomplete absence of decidua;
- Large uterine myomas or cancer of the cervix or ovary; and
- Severe chorioamnionitis.

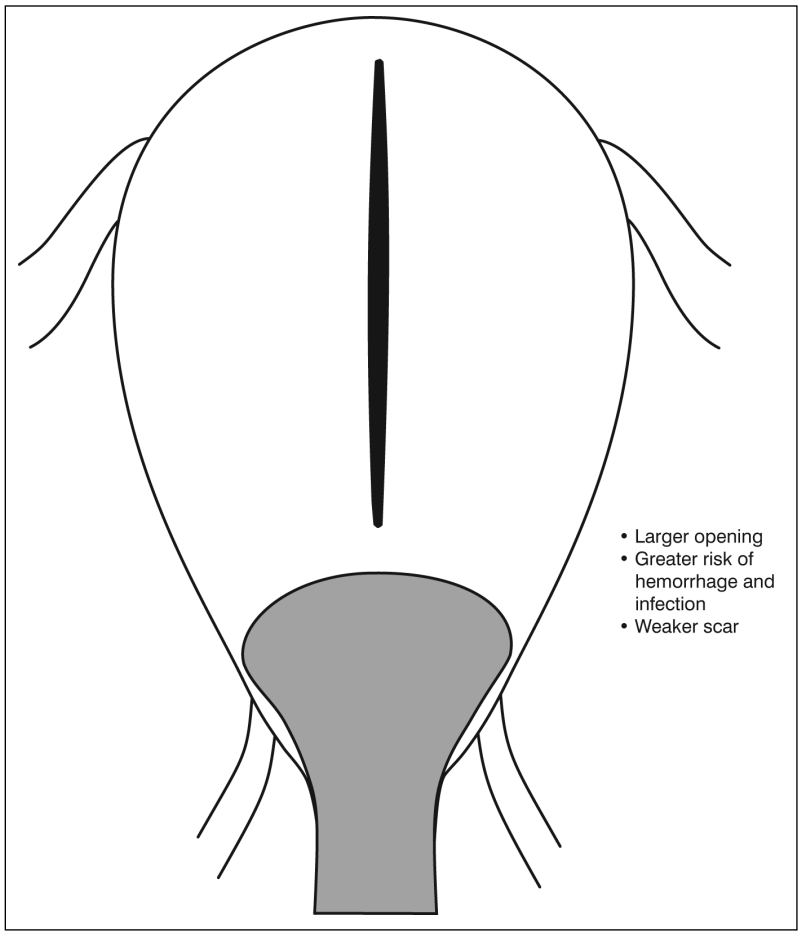
Classic Cesarean section

A vertical incision is made into the upper segment of the uterus. This type of Cesarean is the simplest to perform. The scar may rupture in subsequent pregnancy; therefore, this type of intervention requires repeat Cesarean section to be performed for any subsequent delivery.

Indications:

- Placenta previa — Incision into the upper segment avoids the low-lying placenta.
- Transverse lie — Better access to the baby.
- Premature delivery — The lower segment may not be well developed.
- Expeditious delivery — Quickest means of delivery.

Classical Cesarean section



Extraperitoneal Cesarean section

This type of Cesarean is performed without an incision of the peritoneum. The peritoneal fold is displaced upward and the bladder is displaced downward or to the midline. The uterus then can be opened by an incision in its lower segment.

Extraperitoneal Cesarean was designed for use in infected or potentially infected patients (of uterus) in the pre-antibiotic era.

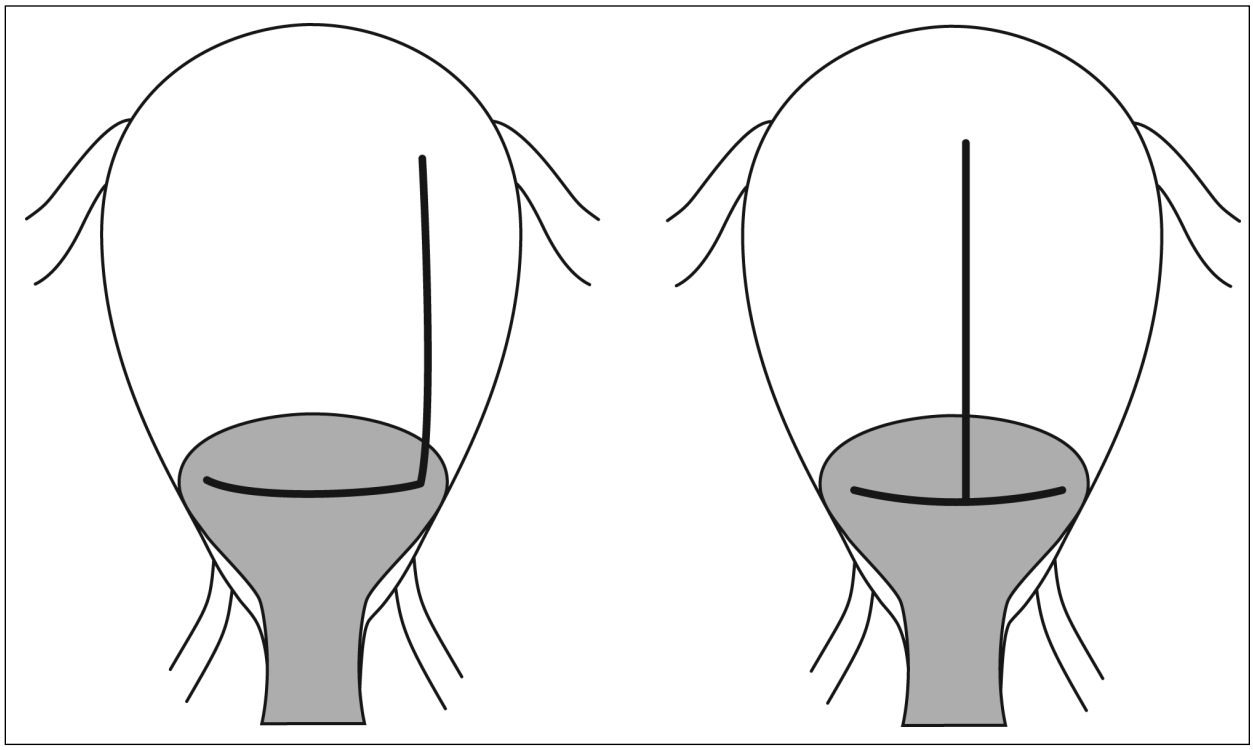
Today most physicians would perform a Cesarean hysterectomy if the uterus is frankly infected.

Inverted T incision and J incision

On rare occasions, because of a narrow lower uterine segment or a large baby, the infant cannot be delivered through a low transverse incision. To make room a T-shaped or J-shaped extension is necessary.

These incisions are avoided if possible because they weaken the uterus.

Cesarean section J and T incisions



Cesarean laparotomy

This includes delivery through an abdominal incision of a fetus lying in the abdominal cavity after secondary implantation or uterine rupture. Although primary abdominal pregnancies have been reported, most are secondary pregnancies from early tubal rupture with subsequent implantation in the bowel, omentum or mesentery.

Caution

Since delivery of a viable intra-abdominal pregnancy is extremely uncommon, Cesarean laparotomy should be used very rarely. Surgical removal of a nonviable ectopic pregnancy is classified to 5.CA.93.^^ *Surgical removal of extrauterine pregnancy*.

Example: A 1,150 gram child surviving a secondary abdominal pregnancy in the 30th week of gestation is delivered by Cesarean laparotomy.

O36.731 (M)	Maternal care for viable fetus in abdominal pregnancy, third trimester
Z37.000 (3)	Single live birth, pregnancy resulting from both spontaneous ovulation and conception
5.MD.60.KF	Cesarean section delivery, laparotomy [for abdominal pregnancy] without instrumentation

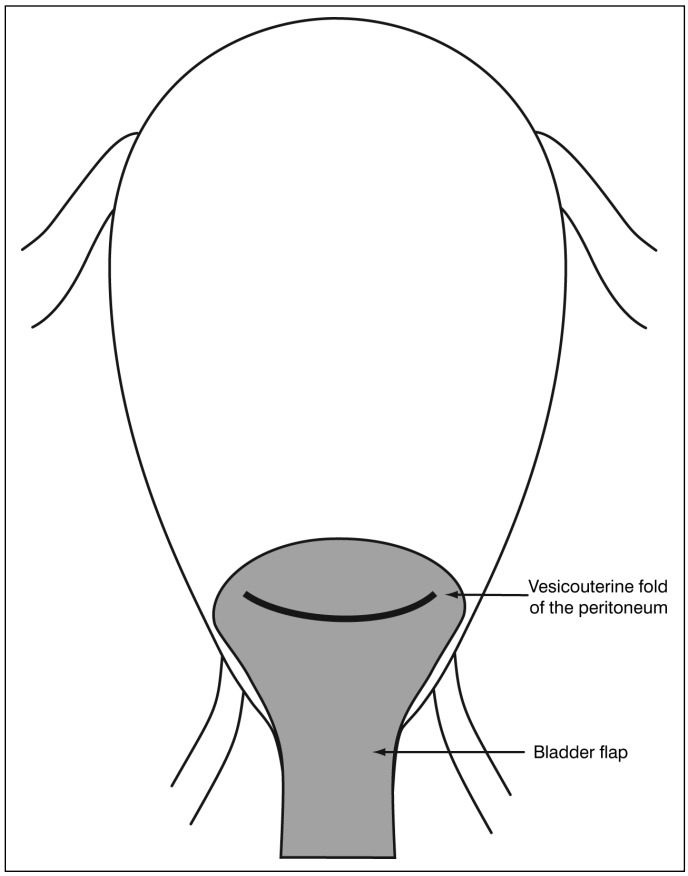
Example: A 39-year-old primigravida woman with a history of laparoscopic myomectomy was seen for acute abdominal symptoms at 33 weeks of gestation. Emergency Cesarean laparotomy confirmed a spontaneous rupture of the uterine fundus with extrusion of the intact fetal sac into the upper abdomen. A viable female infant was delivered.

O71.001 (M)	Dehiscence (without extension) of old uterine scar before onset of labour
Z37.000 (3)	Single live birth, pregnancy resulting from both spontaneous ovulation and conception
5.MD.60.KF	Cesarean section delivery, laparotomy [for abdominal pregnancy] without instrumentation

Lower transverse uterine segment Cesarean section

This type of Cesarean is accomplished via a transverse incision into the lower segment of the uterus. With this type of incision, it is possible to undergo a trial of labor in subsequent pregnancies. Lower-segment Cesarean section is the most common type of incision used today and therefore includes Cesarean section NOS.

Cesarean section: Lower-segment transverse



8.3 Complications of Cesarean section

Cesarean section is a major operation; therefore, serious complications may occur. These include

1. Hemorrhage — O72 Postpartum haemorrhage

Uterine atony

Difficulty removing placenta (adherent placenta)

2. Complications of the incision

O90.0– Disruption of cesarean section wound

O90.2– Haematoma of obstetric wound

O86.0– Infection of obstetric surgical wound

Tip

Extension of uterine incision

The extension of a Cesarean section incision is very common; in fact, it is almost always necessary to facilitate the delivery of the baby. The obstetrician will often use his or her fingers to extend the incision to deliver the baby. This is normal and should not be considered a complication. Uterine extensions should only be captured when other structures or organs are affected, for example, the tear extends into the uterine artery, the vagina and/or the cervix.

3. Thrombophlebitis

O87.0– Superficial thrombophlebitis in the puerperium

O87.1– Deep phlebothrombosis in the puerperium

4. Damage to the bladder or urethra

O71.5– Other obstetric injury to pelvic organs

Includes: Obstetric injury to bladder

Obstetric injury to urethra

5. Intestinal obstruction

O75.4– Other complications of obstetric surgery and procedures

K56.6 (3) Other and unspecified intestinal obstruction

Note

The coding standard *Post-Intervention Conditions* does not apply to obstetrical complications following a delivery intervention that are classified to Chapter XV — Pregnancy, childbirth and the puerperium (O00–O99).

8.4 Previous Cesarean section

The first Cesarean performed on a patient is known as a primary Cesarean section. Subsequent Cesarean sections are referred to as secondary, tertiary or simply as repeat Cesarean.

"Today, more than one in five births in Canada are delivered by cesarean section — a rate that has steadily increased since the mid-1990s. More women are having cesarean sections for the first time (primary cesarean section), and fewer women are delivering vaginally following previous cesarean section births. Relatively few expectant mothers (10.5% in 2001–2002) have had a cesarean section before. Among those without a history of cesarean sections in Canada in 2001–2002, just over 16% had a cesarean section delivery, up from 14% in 1998–1999. Canada's current primary cesarean section rate is comparable with that of other countries. The U.S., England and Wales, and Northern Ireland, for example, all report rates of 16 to 17%."[5]

Note

A history of previous Cesarean section must always be captured on the DAD abstract by selecting the appropriate code from ICD-10-CA. This code must always be assigned a diagnosis type (M) or (1).

The following information is needed:

- For correct CMG assignment;
- To calculate a national repeat Cesarean section rate;
- To calculate a national rate of successful vaginal births after previous Cesarean section (VBAC); and
- To calculate a national primary Cesarean section rate.

Cesarean section, repeat Cesarean section and VBAC rates are of great clinical interest and are widely reported on.

Three scenarios for previous Cesarean section

Previous Cesarean section will fall into one of the three scenarios presented below:

Scenario 1. Repeat planned Cesarean section: O34.201

One of the frequent indications for Cesarean section is previous Cesarean section. O34.201 *Uterine scar due to previous Cesarean section, delivered, with or without mention of antepartum condition* is used when a patient is admitted for a planned repeat Cesarean section (i.e., a pre-labor decision for repeat Cesarean section). Whether or not the patient is in labor; has a single lower-segment incision, other incision or multiple incisions; or there are other circumstances or conditions present that *escalate* the need for a Cesarean section (e.g., fetal distress) has no relevance on the assignment of this ICD-10-CA code. When the intervention is a **repeat, planned** intervention O34.201 is assigned.

Scenario 2. Failed trial of labor: O66.401 (repeat emergency Cesarean section)

O66.401 *Failed trial of labour following previous cesarean, delivered, with or without mention of antepartum condition* is used when a patient with a history of previous Cesarean section is given a trial of labor, this trial is not successful for vaginal delivery and mom is delivered by unplanned (emergent) repeat Cesarean section. The main indications for discontinuing the trial and performing a Cesarean section are

- Arrest of progress
- Fetal distress
- Suspicion of uterine rupture
- Recurrence of problem leading to the previous Cesarean section

Scenario 3. Vaginal delivery after previous Cesarean section (VBAC): O75.701

Fifty percent to 85% of all patients who undergo a trial of labor after previous Cesarean section have a successful vaginal delivery. A Canadian study reported a success rate of 76.6%.[6]

In any given region, the rate of birth by Cesarean section and the rate of VBAC tend to be inversely related. Health regions with higher VBAC rates tend to have lower overall Cesarean section rates.

The VBAC rate in Canada decreased from 35% in 1997–1998 to 27% in 2001–2002.

The Cesarean section rate in Canada is at an all-time high, reaching 22.5% in 2001–2002.

O75.701 *Vaginal delivery following previous cesarean section, delivered, with or without mention of antepartum condition* is used when a patient with a history of previous Cesarean section is given a trial of labor and she is successful in delivering the baby vaginally.

Indications for VBAC:

- A low transverse uterine incision was used.
- The original indication for Cesarean section is not present in current pregnancy.
- The current pregnancy is not complicated by macrosomia, malposition or multiple gestation.

Contraindications for VBAC:

- Classical uterine incision.
- Previous hysterotomy or myomectomy that entered the uterine cavity.
- Previous uterine rupture.
- Presence of contraindication to labor.

Biggest risk:

- Uterine rupture.

Further resources

Giving Birth in Canada

Giving Birth in Canada is a series of reports on the health and health care of Canada's mothers and infants. The information in these reports uses data from the Discharge Abstract Database.

When a delivery occurs during an episode of care and there is documentation of a previous Cesarean section, assign one of the following codes, mandatory:

- O75.701 *Vaginal delivery following previous caesarean section, delivered, with or without mention of antepartum condition*
- O66.401 *Failed trial of labour following previous caesarean, delivered, with or without mention of antepartum condition* and
- O34.201 *Uterine scar due to previous Caesarean section, delivered, with or without mention of antepartum condition*

Ensure that the above codes never appear together on the same abstract, as they are mutually exclusive.

Canadian Coding Standards for Version 2022 ICD-10-CA and CCI — Delivery With History of Cesarean Section

Classification edit

Error Number 10 00 66

Invalid combination diagnosis codes O75.701, O66.401 and O34.201

O75.701, O66.401 and O34.201 are mutually exclusive codes. Only one code of the three can be recorded on an abstract.

This is a warning message only. No change is made to the original data recorded on the abstract.

Discussion question

This is an example from the Discharge Abstract Database. Is this case coded correctly?

O66.401 (M)	Failed trial of labour following previous caesarean
O34.201 (1)	Uterine scar due to previous Caesarean section
O62.001 (1)	Primary inadequate contractions
O68.101 (1)	Labour and delivery complicated by meconium in amniotic fluid
Z37.000 (3)	Single live birth, pregnancy resulting from both spontaneous ovulation and conception
5.MD.60.AA	Cesarean section delivery using lower segment transverse incision

Answer: No, O34.201 should not be coded separately in this case.

Question: Mom had a previous Cesarean section two years ago and is now admitted with twins for a trial of labor. Twin A is born vaginally. Twin B is born two hours after Twin A via Cesarean section due to LOT position and abnormal fetal heart rate. Is it appropriate to select both O75.701 *Vaginal delivery following previous caesarean section, delivered, with or without mention of antepartum condition* and O66.401 *Failed trial of labour following previous caesarean section, delivered, with or without mention of antepartum condition* for this case?

Answer: Yes, you may select both codes in this instance. Doing so will generate an error message but this message is just a warning message. This instance of multiple birth is the reason the edit is a warning instead of a hard edit (i.e., it is the exception to the rule that only one ICD-10-CA code denoting history of previous Cesarean section appear on the abstract).

Status attribute for Cesarean section

In addition to selecting one of the three mandatory codes discussed above to identify patients who have had a previous Cesarean section, it is also mandatory to assign a status attribute for every Cesarean section intervention. The purpose of the mandatory status attribute at 5.MD.60.^^ *Cesarean section delivery* is to identify cases of emergency and planned Cesarean section and those cases where Cesarean section is performed without indication.

PA Primary, Indicated, Planned

PB Primary, Indicated, Emergent

PC Primary, Not indicated, Planned

RA Repeat, Indicated, Planned

RB Repeat, Indicated, Emergent

RC Repeat, Not indicated, Planned

Z Other (unknown)

The status attribute selections are based on three axes:

Cesarean section history identifies whether this is the first (primary) Cesarean section or a subsequent (repeat) Cesarean section.

Indication represents the documented clinical indication (reason) for the Cesarean section; for example, malpresentation or fetal distress. When there is no documented clinical reason for the Cesarean section, the intervention is considered to be “Not indicated.” When a Cesarean section is “Not indicated” the option for a vaginal delivery is still present. Two scenarios that are considered “Not indicated” are

- A primary elective Cesarean section (for convenience); and
- A repeat Cesarean section following one previous lower-segment incision Cesarean section (LSCS); that is, a vaginal birth after Cesarean (VBAC) was offered and declined.

Status at presentation is indicative of whether the Cesarean section was a planned Cesarean section or an emergent Cesarean section. A planned Cesarean section is one that is carried out as a prebooked intervention where the decision is made prior to the onset of labor. It excludes a change in plans due to emergency situation. An emergency Cesarean section is one that is required due to an emergency situation posing a threat to the maternal or fetal health. The mother may or may not be in labor.

Application of the status attribute

Use the following information to assist in the selection of the appropriate status attribute:

PA Primary, Indicated, Planned

Excludes

- Primary, indicated, planned where patient presents prior to scheduled date in labor, assign **PB**

PB Primary, Indicated, Emergent

Includes

- Primary, indicated, planned where patient presents prior to scheduled date in labor

PC Primary, Not indicated, Planned

Includes

- Primary, elective c/s at mother's request
- Primary, elective c/s for convenience
- Primary, not indicated, planned where patient presents prior to scheduled date in labor

RA Repeat, Indicated, Planned

Includes

- Repeat c/s for single uterine scar due to previous c/s with "other" incision (e.g., T incision, inverted T incision, classical incision)
- Repeat c/s for >1 uterine scar (patient has had greater than 1 previous c/s or prior uterine surgery)
- Repeat c/s due to clinical indication other than previous c/s as noted above

Excludes

- Repeat c/s following one previous LSCS with refusal of VBAC, assign **RC**
- Repeat, indicated, planned c/s where patient presents prior to scheduled date in labor, assign **RB**

RB Repeat, Indicated, Emergent

Includes

- Planned VBAC but decision made to proceed with c/s due to clinical indication
- Repeat, indicated, planned where patient presents prior to scheduled date in labor

Excludes

- Repeat, planned c/s following one previous LSCS where patient presents prior to scheduled date in labor, assign **RC**

RC Repeat, Not indicated, Planned

Includes

- Repeat c/s following one previous LSCS (single uterine scar) with refusal of VBAC

Excludes

- Repeat c/s for single uterine scar due to previous c/s with “other” incision (e.g., T incision, inverted T incision, classical incision), assign **RA**

8.5 Exercises

The following exercises demonstrate how to apply the information contained in this chapter. Check your answers with those given in Appendix A: Answers to case studies and practice exercises.

8.5.1 During labor, contractions are strongest in the lower segment of the uterus. True or False?

Please enter your answer in the space below:

8.5.2 This patient had two previous Cesarean sections and is booked for a repeat Cesarean section on June 19. She is admitted in labor on June 10 and is brought to the OR for a lower-segment transverse Cesarean section. What is the correct mandatory status attribute to assign to 5.MD.60.AA *Cesarean section delivery, lower segment transverse incision* in this scenario?

Please enter your answer in the space below:

8.6 Chapter summary

In this chapter, the common indications for Cesarean section, the different types of Cesarean section incisions and common complications of Cesarean section were discussed. The three scenarios surrounding repeat Cesarean section and the importance of identifying previous Cesarean section on the DAD abstract have been covered. Some key points are the following:

- In cases within the expected length of stay, where Cesarean section is performed, select the indication for the Cesarean section as the MRDx.
- Z37.0– may be assigned as the MRDx in a case where the only indication for a Cesarean section is the mother's request.
- Lower transverse uterine segment Cesarean section is the most common type of Cesarean section; therefore, Cesarean section not otherwise specified is classified here.
- Classical Cesarean section, J incision and T incisions may be performed if the lower segment is not fully developed.
- Cesarean laparotomy is a rare procedure; therefore, one should not expect to see too many occurrences of this code in the database. Indications for Cesarean laparotomy are delivery of an intra-abdominal pregnancy or uterine rupture where the fetus is in the abdominal cavity.
- Complications of Cesarean section are classified to Chapter XV — Pregnancy, childbirth and the puerperium rather than to Chapter XIX — Injury, poisoning and certain other consequences of external causes.
- It is mandatory to capture a history of previous Cesarean section with an ICD-10-CA code and to capture the mandatory status attribute at 5.MD.60.^^ *Cesarean section delivery*.
- The applicable ICD-10-CA code indicating a history of previous Cesarean section must be the MRDx or a type (1) diagnosis.
- The three codes describing previous Cesarean section are mutually exclusive and **generally** should not appear on the same abstract.

8.7 Case study

You will now have the opportunity to apply what you have learned in this chapter to chart documentation. Read through the case study and determine the diagnoses and procedures to be coded. Include the appropriate diagnosis types and identify the principal procedure.

8.7.1 Case study

Final diagnosis: Gestational diabetes
Previous Cesarean section
Induction of labor
Lower-segment Cesarean section for dystocia, failed trial of labor

History: 33-year-old gravida 2, para 1 lady who presented for induction of labor for postdates at 41 weeks 2 days. Her pregnancy had been complicated by gestational diabetes mellitus, which was controlled by diet. On admission to hospital there were no signs of labor. Fetal movements were adequate. She had a Cesarean section for dystocia in 2016.

Course in hospital: Induction of labor was performed. Artificial rupture of membranes and IV oxytocin were used. She received epidural for intrapartum analgesia. Unfortunately, she did not progress past 3 cm dilation, 80% effaced and station -1 with caput. A decision was therefore made to proceed with lower-segment Cesarean section with the indication of dystocia.

Postpartum she did suffer from a postpartum hemorrhage secondary to atony. She lost approximately 800 cc. Her postpartum hemorrhage was treated with IV oxytocin, rectal Cytotec and bimanual uterine massage. Subsequently her uterine tone improved and her bleeding subsided. Her postpartum hemoglobin was 108 g/litre.

Please enter your notes in the space below

Chapter 9: Postpartum hemorrhage

Chapter overview

In this chapter, we will review the definition of postpartum hemorrhage, discuss the main causes, the prevention and treatment. We will also discuss diagnosis typing of postpartum hemorrhage. We will look at the applicable coding standards and codes within ICD-10-CA and CCI and bring these together with chart documentation by completing one case study.

This chapter consists of the following five sections:

- Section 9.1: Definition of postpartum hemorrhage
- Section 9.2: Causes and classification of postpartum hemorrhage (4 Ts)
- Section 9.3: Diagnosis typing of postpartum hemorrhage
- Section 9.4: Preventing postpartum hemorrhage
- Section 9.5: Management of postpartum hemorrhage

There is a series of exercise questions and a case study at the end of the chapter that can be completed to ensure a thorough understanding of this chapter has been achieved. Check the answers in Appendix A to determine how well you did.

9.1 Definition of postpartum hemorrhage

For the purposes of ICD-10-CA code assignment, postpartum hemorrhage (PPH) is defined as blood loss of greater than 500 cc/ml after vaginal delivery or greater 1,000 cc/ml after Cesarean section. Blood loss during the first 24 hours following delivery constitutes early postpartum hemorrhage. Blood loss after 24 hours following delivery constitutes late (secondary or delayed) postpartum hemorrhage. Early postpartum hemorrhage generally involves heavier bleeding and greater morbidity than late postpartum hemorrhage.

Both the World Health Organization and the SOGC state that there are problems with the definition of postpartum hemorrhage:

- Estimates of blood loss are notoriously low, often half the actual loss.
- Certain women become compromised with relatively small blood loss (i.e., those with preeclampsia, anemia or dehydration and women of small stature).
- Bleeding may occur slowly, over several hours and the condition may not be recognized until the woman is in shock.

The SOGC *Clinical Practice Guidelines — Prevention and Management of Postpartum Hemorrhage* says that the diagnosis of PPH remains a subjective clinical assessment that includes any amount of blood loss that threatens the woman's hemodynamic stability. Therefore, a physician may document postpartum hemorrhage even though the blood loss does not meet the criteria stated in the coding standard. For this reason, the coding standards also state that PPH is coded when so documented by the physician even though the criteria are not met.[7]

Assign a code from category *O72 Postpartum haemorrhage* when at least one of the following criteria is met:

- Blood loss is excessive
  - Vaginal delivery with >500 cc/ml blood loss during third stage of labor, in immediate postpartum period or after 24 hours following delivery.
  - Cesarean delivery with >1,000 cc/ml blood loss.
- Documentation indicates uterine atony following delivery, regardless of the amount blood loss recorded.
- Physician documents postpartum hemorrhage, regardless of measures taken and/or the amount of blood loss recorded.

Canadian Coding Standards for Version 2022 ICD-10-CA and CCI — Postpartum Hemorrhage

O72 Postpartum haemorrhage

Includes: haemorrhage after delivery of fetus or infant

O72 Postpartum haemorrhage	Delivered, with mention of postpartum complication	Postpartum condition or complication	Unspecified as to episode of care, or not applicable
O72.0 Third-stage haemorrhage **Includes:** Haemorrhage associated with retained, trapped or adherent placenta Retained placenta NOS **Code Also:** any morbidly adherent placenta (O43.2.–)	O72.002	O72.004	O72.009
O72.1 Other immediate postpartum haemorrhage **Includes:** Haemorrhage following delivery of placenta Postpartum haemorrhage (atonic) NOS	O72.102	O72.104	O72.109

O72 Postpartum haemorrhage	Delivered, with mention of postpartum complication	Postpartum condition or complication	Unspecified as to episode of care, or not applicable
O72.2 Delayed and secondary postpartum haemorrhage **Includes:** Haemorrhage associated with retained portions of placenta or membranes Retained products of conception NOS, following delivery	O72.202	O72.204	O72.209
O72.3 Postpartum coagulation defects **Includes:** Postpartum afibrinogenaemia Postpartum fibrinolysis	O72.302	O72.304	O72.309

9.2 Causes and classification of postpartum hemorrhage (4 Ts)

"**Postpartum hemorrhage** describes an event rather than a diagnosis, and when encountered, its etiology must be determined."[8] Classification of postpartum hemorrhage in ICD-10-CA is based on its etiology (cause).

There are four main causes of PPH:

- Uterine atony (tone)
- Obstetric lacerations (trauma)
- Retained placental tissue (tissue)
- Coagulation defects (thrombin)[7]

Uterine atony

Postpartum bleeding is controlled by the contraction and retraction of myometrial fibres. This causes the blood vessels to constrict and cut off flow to the placental site. Uterine atony exists when the myometrium cannot contract. Uterine atony is the most common cause of PPH (50%).

Certain predisposing factors alert the physician of the possibility of uterine atony. These include uterine inertia, overdistension of the uterus, exhaustion from prolonged labor, multiparity and operative delivery.

Interventions such as additional oxytocin or Cytotec, uterine massage, etc. are undertaken immediately to manage bleeding.

Classification of postpartum hemorrhage due to uterine atony

Uterine atony is classified to O72.1– *Other immediate postpartum haemorrhage* regardless of the amount of blood loss or mention of hemorrhage, since measures are always taken to prevent excessive blood loss when atony is recognized. The physician does not wait for blood loss to exceed 500 cc before intervening.

This subcategory can be found using the following ICD-10-CA alphabetical index lookups:

Atonia, atony, atonic

– uterus

– – following delivery O72.1

Bleeding

– **atonic**, following delivery O72.1

Delivery

– complicated by

– – hemorrhage (uterine)

– – – postpartum NEC **(atonic)** (immediate) O72.1

Obstetric lacerations

Excessive bleeding from episiotomy or lacerations is the second most common cause of PPH (20%). Lacerations may occur in any delivery and may be more common in precipitous delivery or operative delivery. Lacerations of blood vessels result in hematomas where the bleeding may be concealed and unrecognized for several hours. Persistent bright red bleeding in the presence of a well-contracted uterus suggests bleeding from a laceration or episiotomy.

Classification of postpartum hemorrhage due to obstetric lacerations

Although trauma may account for the overall amount of blood loss in the postpartum period, blood loss due to trauma is not classified to category O72 *Postpartum haemorrhage*.

Note

Hemorrhage or excessive blood loss during the delivery process or immediately following the delivery that is secondary to an injury, including perineal lacerations, is classified as intrapartum hemorrhage, since the injury occurred prior to or during the delivery of the infant. It is classified to O67.8– *Other intrapartum haemorrhage*.

Canadian Coding Standards for Version 2022 ICD-10-CA and CCI — Postpartum Hemorrhage

Hemorrhage or excessive blood loss during the delivery process or immediately following the delivery that is secondary to an injury, including perineal lacerations, is classified as intrapartum hemorrhage, since the injury occurred prior to or during the delivery of the infant. It is classified to O67.8– *Other intrapartum haemorrhage*.

This subcategory can be found using the following ICD-10-CA alphabetical index lookups:

Hemorrhage, hemorrhagic
– complicating
– – delivery O67.9
– – – due to
– – – – **trauma** O67.8

Delivery (single)
– complicated (by) O75.90–
– – hemorrhage (uterine) O67.9
– – – due to
– – – – **trauma** (obstetric) O67.8

When a large or expanding hematoma is noted after delivery or a hemorrhage from an obstetrical wound manifests later in the postpartum period (i.e., the wound was not actively bleeding during the delivery), it is classified to *O90.2 Haematoma of obstetric wound*. O90.2– includes "hemorrhage of obstetric wound."

This subcategory can be found using the following ICD-10-CA alphabetical index lookups:

Hematoma (traumatic) (skin surface intact) (see also Injury, superficial) T14.0
– cesarean section wound O90.2
– episiotomy O90.2
– obstetrical surgical wound O90.2

Hemorrhage, hemorrhagic

– postpartum NEC (following delivery of placenta) O72.1

– – obstetric wound O90.2

Retained placental tissue

Five percent to 10% of PPH is caused by retained placental tissue and membranes. Retention of part or all of the placenta prevents the uterus from contracting effectively and leads to PPH. Retention of membranes may occur in

- Placenta accreta — The abnormal adherence of part or all of the placenta to the uterine wall, with partial or complete absence of the decidua. A layer of decidua normally separates the placental villi and the myometrium at the site of placental implantation. A placenta that directly adheres to the myometrium without an intervening decidual layer is termed "placenta accreta."
- If postpartum hemorrhage is due to a morbidly adherent placenta, that is placenta accreta, placenta increta or placenta percreta, a code from subcategory O43.2– *Morbidly adherent placenta* is assigned in addition to O72.0– *Third-stage haemorrhage*.
- Manual removal of placenta.
- Mismanagement of third stage — Improper traction/retraction of the cord.

Classification of hemorrhage due to retained placental tissue

Hemorrhage due to retained placental tissue is classified to either O72.0– *Third-stage haemorrhage* or O72.2– *Delayed and secondary postpartum haemorrhage*. The selection of the specific code depends upon the timeframe.

Selection of the code from category O72 is based upon etiology and time frame.

Cause	Time frame	Code
Retained, trapped or adherent placenta with excessive bleeding	During the third stage of labor	**O72.0–** Third stage haemorrhage
	Any time other than during the third stage of labor (regardless of time frame)	**O72.2–** Delayed and secondary postpartum haemorrhage
Uterine atony or unknown/not documented (i.e., PPH NOS), regardless of the amount of blood loss recorded	During the first 24 hours following the delivery	**O72.1–** Other immediate postpartum haemorrhage
	Between 24 hours and 6 weeks following delivery	**O72.2–** Delayed and secondary postpartum haemorrhage

Canadian Coding Standards for Version 2022 ICD-10-CA and CCI — Postpartum Hemorrhage

This subcategory can be found using the following ICD-10-CA alphabetical index lookups:

Retained (see Retention)

Retention, retained

– placenta (total) (with hemorrhage) O72.0

– – portions or fragments (with hemorrhage) O72.2

Placenta

– retention (with postpartum hemorrhage) O72.0

– – fragments, complicating puerperium (delayed hemorrhage) O72.2

Coagulation defects

Acquired coagulopathies are seen in association with certain obstetrical disorders, including

- Abruptio placentae
- Excess thromboplastin from retention of dead fetus
- Amniotic fluid embolism
- Severe preeclampsia
- Sepsis

Coagulation defects may be manifested by

- Thrombocytopenia
- Disseminated intravascular coagulation

Classification of hemorrhage due to coagulation defects

Coagulation defects can result in hemorrhage in the antepartum, intrapartum or postpartum period. Ensure that you are selecting the appropriate ICD-10-CA code for the postpartum period for any associated postpartum hemorrhage. PPH due to coagulation defects is classified to O72.3– *Postpartum coagulation defects*.

This subcategory can be found using the following ICD-10-CA alphabetical index lookups:

Defect, defective

– coagulation (factor) (see also Deficiency, factor) D68.9

– – **postpartum** O72.3

Defibrination (syndrome) D65

– **postpartum** O72.3

Deficiency, deficient

– coagulation D68.9

– – **postpartum** O72.3

Note: There are several other alphabetical index lookups for this subcategory that are dependent on the documentation of the specific coagulation disorder associated.

9.3 Diagnosis typing of PPH

Postpartum hemorrhage is a significant condition and, therefore, is always assigned a significant diagnosis type.

The SOGC clinical practice guideline entitled *Prevention and Management of Postpartum Haemorrhage* says, “In spite of marked improvements in management, early PPH remains a significant contributor to maternal morbidity and mortality both in developing countries and in hospitals equipped with all that modern medicine has to offer. This complication is among the most challenging which a clinician will face.”

Since pregnancy is not a disease, diagnosis typing definitions cannot be applied in the same way as with other cases.

Typically, diagnosis type (1) is applied to the O-code (obstetrical condition) that denotes a significant condition that occurs prior to or during delivery of the infant for the delivery episode of care, and diagnosis type (2) is applied to the O-code that denotes a significant condition that occurs following delivery of the infant.

Since postpartum hemorrhage (category O72) occurs *after* delivery of the infant, O72 is assigned a diagnosis type (2); however, if PPH is the only obstetrical condition applicable to the case, then O72 will be assigned MRDx.

Note: If PPH qualifies as the MRDx, it is not necessary to repeat PPH as a type (2). The sixth digit of “2” *Delivered, with mention of postpartum complication* identifies that this condition arose post-admission.

9.4 Preventing postpartum hemorrhage

Active management of the third stage of labor reduces the incidence of postpartum hemorrhage due to uterine atony.

Active management includes

- Prophylactic administration of uterotonic agents (agents that increase the tonus of the uterine muscle);
- Controlled cord traction; and
- Uterine massage after delivery of the placenta.[9]

Caution

- The administration of oxytocin after the delivery of the anterior shoulder is not an indication of postpartum hemorrhage. This is given as routine prophylaxis to reduce the risk of PPH.
- Mention of controlled cord traction is not an indication of retained placenta or manual delivery of the placenta.
- A sudden gush of blood from the vagina before delivery of the placenta is a normal finding and does not signify PPH. It is a sign that spontaneous delivery of the placenta is impending.

9.5 Management of postpartum hemorrhage

Treatment of PPH includes

- Early recognition
- Prompt attention to resuscitation
- Search for the cause
- Correction of the cause

5.PC.91.^^ Interventions to uterus (following delivery or abortion)

Excludes: Control of postpartum hemorrhage by embolization of pelvic vessels (see 1.RM.13.^^)
Control of postpartum hemorrhage by ligation of pelvic vessels (see 1.KT.51.^^)
Removal of blighted ovum (see 5.CA.89.^^)

Note: Code all that apply.

5.PC.91.GA dilation and curettage

5.PC.91.GC aspiration and curettage

5.PC.91.GD dilation and evacuation [D&E]

5.PC.91.HN manual removal of placenta from uterus (e.g. Brandt Andrews maneuver)
Omit Code: When only gentle traction on placenta from vagina is used

5.PC.91.HP manual correction of inverted uterus

5.PC.91.HQ surgical correction of inverted uterus

5.PC.91.HR manual exploration of uterine cavity

5.PC.91.HT uterine (and vaginal) packing
Includes: Tamponade (for control of postpartum hemorrhage) that with or without (temporary) cervical cerclage for retention of packing

5.PC.91.HU bimanual compression and massage
Includes: Non surgical control of postpartum hemorrhage

5.PC.91.HV compression using intrauterine balloon
Includes: that for control of postpartum hemorrhage

5.PC.91.LA suturing of uterus
Includes: B-Lynch suture (for postpartum hemorrhage)

Manual removal of placenta 5.PC.91.HN

Gentle cord traction on the placenta should not be coded. This is normal management of the third stage of labor.

Prolonged retention of the placenta is felt to increase the danger of infection and hemorrhage. Therefore, current practice is to remove the placenta manually if it does not deliver spontaneously within 30 minutes of the birth of the infant, provided bleeding is not excessive.

Caution

If hemorrhage is excessive the placenta is removed immediately.

Do not use this code for manual removal of placenta during Cesarean section.

Question: The placenta took 35 minutes to deliver but the blood loss was <500 cc. There is no mention of retained placenta by the physician and there are no interventions to aid in the delivery of the placenta. Should we be looking at the duration of third stage of labor on the delivery record and if over 30 minutes assign the code O73 *Retained placenta and membranes, without haemorrhage* with a post-admit significant diagnosis type?

Answer: Literature does support the fact that if the placenta does not deliver within 30 minutes then manual removal should be performed. In deciding whether or not this criterion applies to a particular case all aspects of the case will have to be taken into consideration. If there is no documentation to support the fact that there was a retained placenta, then it would not be appropriate to select a code from category *O73 Retained placenta and membranes, without hemorrhage*.

Manual exploration of uterus: 5.PC.91.HR

Manual exploration of the uterus is carried out when

- Examination of the placenta is inconclusive as to whether or not the placenta is intact; or
- There has been a traumatic delivery in order to rule out lacerations of the uterus.

Manual exploration is carried out by gently inserting the hand through the cervix while stabilizing the fundus with the other hand. The fingers are swept across the entire surface of the uterus. Any blood clots and fragments of placenta and membranes are removed.

Bimanual compression and massage: 5.PC.91.HU

The uterine fundus is massaged through the abdomen. In Cesarean section, the uterus is “delivered” and massaged directly.

Bimanual compression — One hand is placed in the vagina against the anterior wall of the uterus. Pressure is exerted against the posterior aspect of the uterus by the other hand on the abdomen. The uterus is compressed and massaged between the two hands. This provides twice the amount of uterine stimulation that can be achieved by abdominal massage alone.

Uterine packing (tamponade): 5.PC.91.HT

This technique involves packing the uterus completely and uniformly with gauze. Patients are given antibiotics and the pack is kept in place for 24 hours. Packing may be particularly useful when surgical treatment is not available or when the patient is too unstable to undergo surgery.

Caution

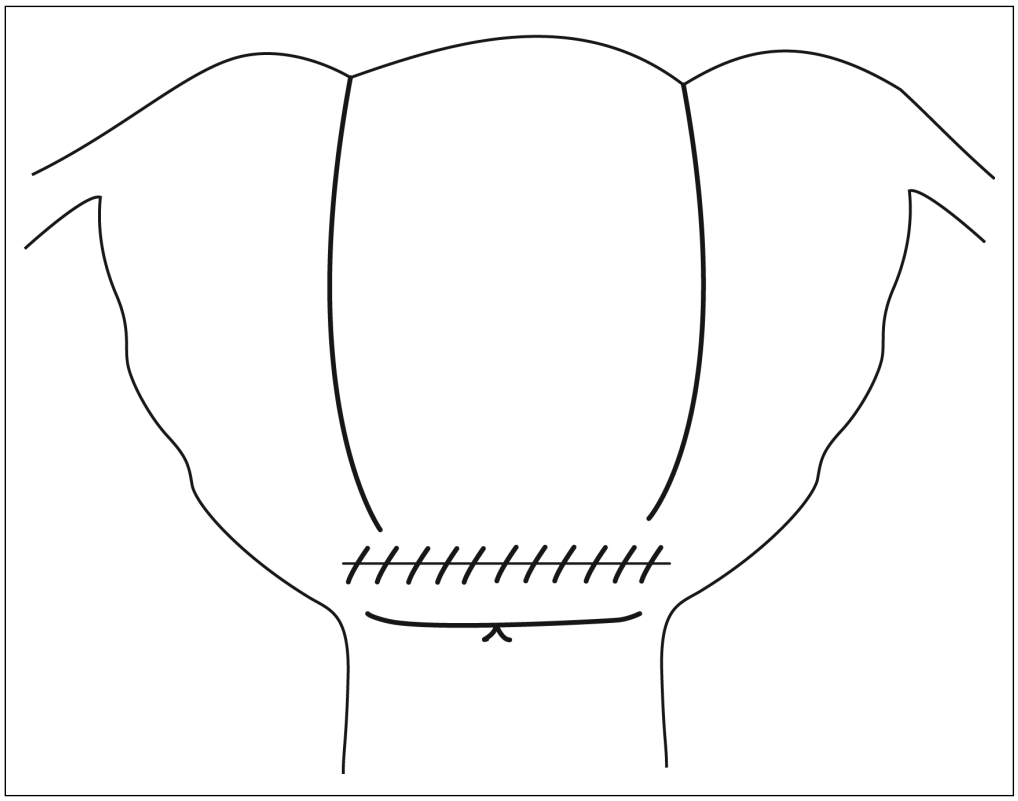
In some cases, a temporary cervical cerclage may be used in order to ensure the packing remains in place. This additional intervention is included in this code and is not classified separately.

B-Lynch brace *suture* : 5.PC.91.LA

An alternative to vessel ligation or hysterectomy is the placement of a brace suture to compress the uterus in cases of diffuse bleeding from atony and percreta.

The B-Lynch technique involves opening the lower segment and passing a suture through the posterior uterine wall and then over the fundus to be tied anteriorly.[10] A similar technique has been described without opening the uterus. A long, straight needle is passed anterior to posterior through the lower uterine segment; the suture is passed over the fundus and then tied anteriorly.[11] Both techniques use bilateral stitches. The most recent variant uses multiple stitches passed transmurally and tied anteriorly at various points over the uterine body. This technique may be focused in the area of the placental bed in cases of abnormal placentation. All of these procedures effectively produce tamponade by compressing together the anterior and posterior walls.[9]

B-Lynch compression suture



Uterotonic agents: 5.PC.20.^^-I2

Oxytocin, ergometrine or Hemabate (carboprost) may be given by intramuscular injection, IV infusion or intramyometrially in cases of circulatory collapse. This is optional reporting.

Radiographic embolization of pelvic vessels: 1.RM.13.GQ-GE/ 1.RM.13.GQ-W0

Embolization of pelvic and uterine vessels by angiographic techniques is increasingly common and has success rates from 85% to 90%. A catheter is placed in the aorta and fluoroscopy is used to identify the bleeding vessel. Pieces of absorbable gelatin sponge (Gelfoam) are injected into the damaged vessel, or into the internal iliac vessels if no specific site of bleeding can be identified.

1.RM.13.^^ Control of bleeding, uterus and surrounding structures

Includes: Embolization (transarterial),
uterus (for postpartum hemorrhage)
Packing, uterus
Tamponade, uterus
that for shrinkage of uterine fibroids

Excludes: packing, uterus for postpartum hemorrhage (see 5.PC.91.^^)
systemic pharmacotherapy for control of bleeding (see 1.ZZ.35.^^)
tamponade, uterus for postpartum hemorrhage (see 5.PC.91.^^)
that done by curettage (see 1.RM.87.^^)
that done by destruction or ablation of endometrium (see 1.RM.59.^^)
that done by ligation of the uterine artery or pelvic vessels (see 1.KT.51.^^)

1.RM.13.CA-BC using per orifice approach and balloon

Excludes: that for control of postpartum hemorrhage (see 5.PC.91.^^)

1.RM.13.CA-EP using per orifice approach and bag

Excludes: that for control of postpartum hemorrhage (see 5.PC.91.^^)

1.RM.13.CA-NP using per orifice approach and packing

Excludes: that for control of postpartum hemorrhage (see 5.PC.91.^^)

1.RM.13.GQ-C2 using percutaneous transluminal (transarterial) approach and antihemorrhagic agent

Includes: aminocaproic acid, aprotinin, phytonadione, thrombin, coagulation factor VIII

1.RM.13.GQ-GE using percutaneous (transarterial) approach and [detachable] coils

1.RM.13.GQ-W0 using percutaneous (transarterial) approach and synthetic agent
[e.g. gelfoam, microspheres, polystyrene, polyvinyl alcohol, contour particles]

Uterine artery ligation: 1.KT.51.^^ Occlusion, vessels of the pelvis, perineum and gluteal region

During pregnancy, 90% of the blood flow to the uterus is supplied by the uterine arteries. Direct ligation of these easily accessible vessels can successfully control hemorrhage in 75% to 90% of cases.

Internal iliac (hypogastric) artery ligation: (IIAL) 1.KT.51.^^ Occlusion, vessels of the pelvis, perineum and gluteal region

Bilateral internal iliac artery ligation is the surgical method most often used to control severe postpartum bleeding. Exposure can be difficult and failure rates can range as high as 57%, depending on the skill of the operator, the cause of the hemorrhage and the patient's condition before ligation is attempted.

1.KT.51.^^ Occlusion, vessels of the pelvis, perineum and gluteal region

Includes: Ligation of pelvic vessels (for postpartum hemorrhage)

Excludes: Banding, external hemorrhoids (see 1.NT.87.^^)
Banding, internal hemorrhoids (see 1.NQ.87.^^)
Control of bleeding within organ (see specified organ)
Embolization for control of bleeding, bladder (see 1.PM.13.^^)
Embolization for control of bleeding, uterus (see 1.RM.13.^^)
Embolization for control of bleeding, vagina (see 1.RS.13.^^)
Embolization for shrinkage of uterine fibroids (see 1.RM.13.^^)

1.KT.51.^^ Occlusion, vessels of the pelvis, perineum and gluteal region	open approach (e.g. venotomy)	percutaneous transluminal approach	endoscopic [laparoscopic] approach
using direct suture	1.KT.51.LA	1.KT.51.GQ	1.KT.51.DA
using fibrin glue	1.KT.51.LA-W3	1.KT.51.GQ-W3	—
using thrombosing agent	—	1.KT.51.GQ-C2 ++	—
using (detachable) coil	—	1.KT.51.GQ-GE	—
using synthetic agent [e.g. gelfoam, silicone, microspheres, polystyrene, polyvinyl alcohol, contour particles]	—	1.KT.51.GQ-W0	—
using vascular [nitinol mesh] plug	—	1.KT.51.GQ-GF	—
using clips	1.KT.51.LA-FF	—	1.KT.51.DA-FF

Tip

Control of PPH by **embolization** of pelvic vessels is captured at 1.RM.13.^^*Control of bleeding, uterus and surrounding structures*.

Control of PPH by **ligation** of pelvic vessel is captured at 1.KT.51.^^*Occlusion, vessels of the pelvis, perineum and gluteal region*.

All other methods are captured at 5.PC.91.^^ *Interventions to uterus (following delivery)*.

Hysterectomy 1.RM.87.^^ or 1.RM.89.^^

If other methods fail and bleeding continues, a hysterectomy must be performed. If performed concomitantly with Cesarean section, then this is classified as a Cesarean hysterectomy within rubric 5.MD.60.^^ *Cesarean section delivery*.

9.6 Exercises

The following exercises demonstrate how to apply the information contained in this chapter. Check your answers with those given in Appendix A: Answers to case studies and practice exercises.

9.6.1 On the labor and delivery record for a spontaneous vaginal delivery, the blood loss is recorded as 400 cc. The physician documents PPH on the discharge summary. Is an ICD-10-CA code for the PPH assigned for this case?

Please enter your answer in the space below:

9.6.2 Following a single, spontaneous vaginal delivery without any conditions complicating the pregnancy, this patient experiences blood loss of 600 cc and the physician documents PPH due to uterine atony. The code O72.102 *Other immediate postpartum haemorrhage, delivered, with mention of postpartum complication* is assigned as the MRDx. Should the postpartum hemorrhage be repeated as a diagnosis type (2)? Why or why not?

Please enter your answer in the space below:

9.7 Chapter summary

In this chapter, the definition of postpartum hemorrhage (PPH) and the four causes of PPH were explained, along with its prevention and treatment. Also covered was the diagnosis typing of postpartum hemorrhage. Some key points are the following:

- Postpartum hemorrhage is coded when the blood loss is >500 cc/ml for vaginal delivery, >1,000 cc/ml for Cesarean delivery or if so stated by the physician when the estimated blood loss is less than the stated criteria.
- The four main causes of postpartum hemorrhage are uterine atony (tone), obstetric lacerations (trauma), retained placental tissue (tissue) and coagulation defects (thrombin) — the four Ts.
- Blood loss or hemorrhage in pregnancy is classified according to the period of its occurrence (antepartum, intrapartum, postpartum) and the cause of the event (tone, trauma, tissue, thrombin).
- Postpartum hemorrhage is always considered a significant diagnosis.
- The administration of oxytocin after the delivery of the anterior shoulder is given as routine prophylaxis and is not an indication of postpartum hemorrhage.
- Control of PPH by embolization of pelvic vessels is captured at 1.RM.13.^^ *Control of bleeding, uterus and surrounding structures*.
- Control of PPH by ligation of pelvic vessel is captured at 1.KT.51.^^ *Occlusion, vessels of the pelvis, perineum and gluteal region*.
- All other methods are captured at 5.PC.91.^^ Interventions to uterus (following delivery).

9.8 Case study

You will now have the opportunity to apply what you have learned in this chapter to chart documentation. Read through the case study and determine the diagnoses and procedures to be coded. Include the appropriate diagnosis types and identify the principal procedure.

9.8.1 Case study

Diagnosis: Postpartum hemorrhage of approximately two litres

Postoperative diagnosis: Postpartum hemorrhage
Uterine atony
Labial and vaginal lacerations — actively bleeding

Procedures: Manual exploration of uterus
Management of uterine atony
Suturing of labial and vaginal lacerations

This 26-year-old gravida 2, para 1 female was brought in from home following a vaginal delivery approximately four hours previous. She had an uneventful pregnancy and uncomplicated labor and delivery. Approximately four hours after delivery, the patient did not do well and started to bleed very actively per vagina. She was therefore brought to hospital. A decision was made for examination under general anesthesia.

Findings: Slightly bulky uterus which did contract well with manual massage. The patient apparently had lost approximately 1 litre of blood prior to arrival in hospital and another 500 ml was immediately expressed on initial exam. On manual exploration of the uterus, there was a very small amount of placental and decidual tissue, but really very little. There was no evidence of uterine rupture and the scar was well felt. There was, however, an actively bleeding laceration in the right vaginal wall as well as the left labia.

The patient was taken to the operating room where general anesthesia was given and found to be adequate. The patient was then examined and another 400 to 500 cc of blood was expressed from the vagina. The uterus was explored and there was no significant residual placental or decidual tissue. We then had a very good look at the cervix and this was not lacerated or bleeding. Working our way out, there was a pumping laceration from a second-degree tear in the vaginal wall mucosa. There was also active bleeding from a left labial laceration.

We repaired the left labial laceration using 2-0 Vicryl in running locked fashion. This was effective in getting bleeding from this under control. We then repaired the second-degree tear in the usual fashion with 2-0 Vicryl. There was a labial tear on the right hand side that was not bleeding; however, we tacked this together with 3-0 chromic in interrupted fashion using approximately four sutures. We had another look at the vaginal vault and once again saw a pumping bleeder from the second-degree tear. A figure-of-eight suture using 2-0 Vicryl was placed here for good hemostasis.

The patient also received Syntocinon 40 units in 1 litre of ringer lactate times 2 as well as Hemabate 250 ug IM times 1.

Please enter your notes in the space below:

Chapter 10: Fetal distress

Chapter overview

In this chapter, we will discuss the indications of fetal distress. We will also review the SOGC criteria for substantiating a diagnosis of asphyxia (mother's abstract) and acidemia (newborn's abstract). We will look at the applicable coding standards and codes within ICD-10-CA and bring these together with chart documentation by selecting the appropriate diagnosis codes for two case studies — for both the mother and baby.

This chapter consists of the following five sections:

- Section 10.1: Passage of meconium in cephalic presentation
- Section 10.2: Fetal heart rate (FHR) anomalies
- Section 10.3: Classifying fetal distress — Mother
- Section 10.4: Fetal acidemia
- Section 10.5: Classifying acidemia — Newborn

There is a series of exercise questions and two case studies at the end of the chapter that can be completed to ensure a thorough understanding of this chapter has been achieved. Check the answers in Appendix A to determine how well you did.

10.1 Passage of meconium in cephalic presentation

The passage of intrapartum meconium or meconium-stained amniotic fluid when the fetal presentation is cephalic may be an indication of fetal distress. It is believed to result from relaxation of the rectal sphincter and increased peristalsis as a consequence of fetal hypoxia. Passage of meconium is a warning of the need for vigilance and the fetal heart must be observed closely. Should there be a significant alteration in the rate and rhythm of the fetal heart, immediate delivery may be necessary.[1]

In breech presentations, the passage of meconium is caused by pressure of the uterine contractions on the fetal intestines and is not a sign of distress unless it occurs in early labor.

10.2 Fetal heart rate (FHR) anomalies[12]

During contractions, the normal pattern is for the fetal heart rate to slow, and then to recover to normal as soon as the contraction ends. The heart rate is monitored during labor, to watch for certain fluctuations in this pattern, such as precipitous drops in the heart rate at the end of a contraction (late decelerations), as these changes can constitute a true life-or-death situation requiring immediate emergency delivery of the baby.

Reassuring FHR patterns

Normal baseline heart rate of 110–160 beats/minute (bpm). The baseline rate is defined as the average FHR rounded to increments of 5 bpm during a 10-minute segment.

Presence of accelerations — Periodic increases in the FHR. This is a normal fetal heart rate response to increased fetal activity. Accelerations are reassuring and almost always confirm that the fetus is not hypoxic.

Non-reassuring FHR patterns

Abnormal baseline heart rate

- **Tachycardia** — Baseline FHR >160 beats/minute — may be the result of fetal hypoxia, fetal anemia, fetal cardiac failure, prematurity, maternal fever, maternal anxiety, chorioamnionitis or administration of drugs during labor.
- **Bradycardia** — Baseline FHR <110 beats/minute — may be the result of fetal asphyxia, arrhythmia or administration of drugs during labor.

Presence of decelerations

- Variable decelerations with atypical features — Persistent decelerations to less than 70 bpm and lasting more than 60 seconds; associated with prolonged return to baseline.
- Late decelerations — A transient decrease in heart rate occurring at or after the peak of a uterine contraction. When occasional, late decelerations may represent a normal response. When persistent and repetitive, it is mandatory to act upon this pattern. Persistent late decelerations are a very concerning sign and are associated with high morbidity outcomes.

Note

Early decelerations (a transient decrease in heart rate that coincides with the onset of a contraction) and variable decelerations (a transient series of decelerations in heart rate that vary in duration, intensity and relation to uterine contractions) without atypical features are normal responses during a contraction.

Non-reassuring fetal heart rate patterns noted during labor and delivery are classified to category O68 *Labour and delivery complicated by fetal stress (distress)*.

Important note

This information has been obtained from the SOGC clinical practice guideline entitled *Fetal Surveillance in Labour* and is provided as educational material so that the coder may better understand the terminology seen on the chart. It is not provided to aid coders in interpreting the monitor strips.

10.3 Classifying fetal distress — Mother

Fetal asphyxia refers to pathological changes caused by a lack of oxygen while the fetus is in utero. The codes in category O68 *Labour and delivery complicated by fetal stress [distress]* identify the presence of possible indicators that the fetus **may be in danger of developing asphyxia**. Delivery interventions may be based on the presence of these indicators. Fortunately, despite the pre-delivery concerns, the delivery most often results in a completely normal infant.

O68 **Labour and delivery complicated by fetal stress [distress]**

Includes: fetal distress in labour or delivery due to drug administration

O68 Labour and delivery complicated by fetal stress [distress]	Delivered, with or without mention of antepartum condition	Antepartum condition or complication	Unspecified as to episode of care, or not applicable
O68.0 Labour and delivery complicated by fetal heart rate anomaly **Includes:** • Fetal bradycardia • Fetal heart rate irregularity • Fetal tachycardia • Non-reassuring fetal heart rate **Excludes:** • with meconium in amniotic fluid (O68.2)	O68.001	O68.003	O68.009
O68.1 Labour and delivery complicated by meconium in amniotic fluid **Excludes:** • with fetal heart rate anomaly (O68.2)	O68.101	O68.103	O68.109
O68.2 Labour and delivery complicated by fetal heart rate anomaly with meconium in amniotic fluid	O68.201	O68.203	O68.209
O68.3 Labour and delivery complicated by evidence of fetal asphyxia **Includes:** • Abnormal fetal acidaemia • Abnormal fetal acid-base balance	O68.301	O68.303	O68.309

Note

When signs of fetal asphyxia (fetal distress) are present prior to commencement of labor, select a code from O36.3– *Maternal care for signs of fetal asphyxia*.

The presence of intrapartum meconium is not a normal finding, and may be an indication that the fetus is under some type of stress. In the end the baby may be born as a normal healthy newborn. When meconium is present then possible problems with meconium aspiration may result, leading to asphyxia, respiratory distress syndrome, infections and pneumonia. Meconium is a warning of the need for vigilance and close observation and may be an indication for expedited delivery. When intrapartum meconium is noted assign O68.1– *Labour and delivery complicated by meconium in amniotic fluid*. If it is documented that the baby passes meconium at the time of delivery then the code O68.1– should be omitted.

Note

In breech presentation, it is normal for the fetus to pass meconium as the bottom is being delivered and the abdomen is squeezed by the birth canal. This is not a sign of distress unless it occurs in early labor. Passage of meconium at the time of breech delivery does not need to be coded.

Caution

- Codes in the range O68.0– to O68.2– may be assigned on the mother's abstract even when the fetus is delivered with **no substantial evidence** of acidemia or asphyxia.
- Assignment of O68.3– *Labour and delivery complicated by evidence of fetal asphyxia*; however, cannot be assigned **without lab evidence** that acidemia is (was) present. The assignment of this code is based on the documentation of lab values meeting the SOGC criteria for fetal acidemia.

The SOGC values for fetal acidemia:

- Umbilical cord arterial pH ≤7.0 and/or
- Umbilical cord arterial base deficit ≥12 mmol/L

Note

The SOGC recommends that cord blood gases be routinely drawn at birth.

When a diagnosis of fetal acidemia or fetal asphyxia has been substantiated by a documented abnormal acid-base balance (pH value for fetal acidemia as shown at category P20.– *Fetal acidaemia*), assign O68.3– *Labor and delivery complicated by evidence of fetal asphyxia*.

Canadian Coding Standards for Version 2022 ICD-10-CA and CCI — Labor and Delivery Complicated by Fetal Stress

The assignment of a code on the mother's abstract denoting "signs of" or "evidence of" fetal asphyxia does not mean that the fetus suffered any lasting harm. These codes are simply an indication that there was evidence of distress or fetal acidemia (and potentially asphyxia) as substantiated by lab values; the degree and duration, however, of any asphyxial insult is unknown.

10.4 Fetal acidemia

During labor, uterine contractions reduce placental blood flow and compress the umbilical cord. There is a transient decrease in oxygen supply and a buildup of carbon dioxide for which the normal fetus can readily compensate. However, if the blood or oxygen supply falls below critical levels, the fetus cannot compensate. Lactic acid accumulates and hypoxic acidemia ensues. Hypoxic acidemia of a sufficient degree and duration can cause brain damage with resultant neurological sequelae, other organ system damage or intrapartum or neonatal death.

In the normal newborn, two events occur almost simultaneously and within seconds of delivery:

- The arrest of umbilical circulation through the placenta; and
- Expansion of the lungs.

These events change the fetal circulation toward the adult type. Survival of the neonate depends primarily on prompt expansion of the lungs and establishment of effective ventilation.

10.5 Classifying acidemia — Newborn

P20 Fetal acidaemia

Note: Use this category only with documented arterial blood value of pH ≤7.00 and/or base deficit ≥12mmol/L

Includes: fetal acidosis
intrauterine acidosis

Use additional code to identify any associated manifestations such as hypoxic ischaemic encephalopathy of newborn (P91.6)

Excludes: diagnosis of asphyxia without substantiated blood values (P96.9)
intracranial haemorrhage due to anoxia or hypoxia (P52.–)

P20.0 Antepartum fetal acidaemia first noted before onset of labour
Cordocentesis arterial blood pH ≤7.00 and/or base deficit ≥12mmol/L

P20.1 Intrapartum fetal acidaemia first noted during labour and delivery
Scalp arterial blood pH ≤7.00 and/or base deficit ≥12 mmol/L

P20.2 Fetal acidaemia first noted at birth
Umbilical arterial cord blood pH ≤7.00 and/or base deficit ≥12 mmol/L

P20.9 Fetal acidaemia, unspecified when first noted

An arterial blood value of pH less than or equal to 7.00 and/or base deficit more than or equal to 12 mmol/L is indicative of fetal acidemia.

When pH and/or base deficit values indicative of fetal acidemia (acidosis) are documented on the chart, assign a code from P20.– *Fetal acidaemia*.

When a documented diagnosis of fetal asphyxia is substantiated by the pH and/or base deficit values, assign a code from P20.– *Fetal acidaemia*.

When neonatal findings indicative of neonatal harm (such as hypoxic ischemic encephalopathy [HIE], and/or organ failure) are documented, priority is given to the condition and it is sequenced before the code for acidemia.

When a documented diagnosis of fetal asphyxia is not substantiated by the pH and/or base deficit values, assign P96.9 *Condition originating in the perinatal period, unspecified.*

Canadian Coding Standards for Version 2022 ICD-10-CA and CCI — Fetal Acidemia

Important notes

- When the SOGC criteria are not met, a code from P20.– is not assigned. These codes are only assigned when these values (pH less than or equal to 7.00 and/or base deficit more than or equal to 12 mmol/L) are documented on the chart.
- In many cases, the physician may not document a diagnosis of “acidemia” or “acidosis” but will instead record the abnormal lab values. This is because these values convey more meaning “clinically” than the actual terminology in and of itself. When the values are present, a code from P20 *Fetal acidaemia* is assigned.

P20 *Fetal acidemia*

Fetal acidemia is not a diagnosis per se; it is a statement that is reflective of specific pH values only. When a fetus/newborn has an arterial pH less than or equal to 7.0 and/or base deficit greater than or equal to 12 mol/L, these values are used to define fetal acidemia for the purpose of classification.

Further detail is provided in the codes to describe when the acidemia is first noted, that is,

- Before the onset of labor (definitive diagnosis by blood gas analysis of cord blood obtained by cordocentesis or during Cesarean section prior to onset of labor);
- During labor and delivery (definitive diagnosis by blood gas analysis obtained by fetal scalp sampling during labor);

- At birth (definitive diagnosis by blood gas analysis obtained by umbilical cord blood taken at delivery); or
- Unspecified when first noted.

These babies may have a five-minute Apgar score of 0 to 5, but must have clinical evidence of acidemia; that is, documented arterial pH ≤7.0.

Causes that may decrease oxygen before birth or during the birth process include

- Inadequate O2 levels in mom's blood;
- Low blood pressure in mom;
- Inadequate relaxation of the uterus during labor, preventing the circulation of oxygen to the placenta;
- Placental abruption or previa;
- Umbilical cord compression; or
- Poor placental function due to post-term pregnancy or maternal conditions such as hypertension.

Other factors that may lead to a decrease in oxygen include

- Severe anemia, limiting the oxygen-carrying ability of the blood;
- Low blood pressure or shock;
- Respiratory disorders that limit oxygen intake;
- Heart or lung disease;
- Sepsis; or
- Prematurity.

Not every fetus/newborn with pH values indicative of fetal acidemia will suffer subsequent neonatal harm (e.g., asphyxia leading to neurological injury). Resulting neonatal harm is dependent upon the nature and duration of the insult and the vulnerability of the infant. Most otherwise healthy, term infants subject to hypoxia of short duration can compensate and will completely recover.

Important note

When there is documented evidence of fetal acidemia and findings indicative of neonatal harm, such as hypoxic ischemic encephalopathy (HIE) and/or organ failure, it is mandatory to assign an additional code(s) to identify the associated manifestations per the *use additional code* instruction at category P20 *Fetal acidaemia.*

10.6 Exercises

The following exercises demonstrate how to apply the information contained in this chapter. Check your answers with those given in Appendix A: Answers to case studies and practice exercises.

10.6.1 The baby's five-minute Apgar score is recorded as 3. Based on this information alone, would you assign an ICD-10-CA code for evidence of fetal asphyxia (O68.3–) on the mother's abstract?

Please enter your answer in the space below:

10.6.2 During the second stage of labor, the fetal heart rate tracing shows late decelerations. The baby is immediately delivered using forceps. Meconium is seen in the amniotic fluid. What ICD-10-CA code would you assign for the late decelerations on the mom's chart?

Please enter your answer in the space below:

10.7 Chapter summary

In this chapter, the signs of fetal distress were explained along with the SOGC criteria for substantiating a diagnosis of acidemia. Some key points are the following:

- The presence of intrapartum meconium should always be captured on the abstract.
- Non-reassuring fetal heart rate abnormalities are indicative of fetal distress.
- Signs of fetal distress first noted prior to the onset of labor are classified to O36.3– *Maternal care for signs of fetal asphyxia*.
- Signs of fetal distress first noted during labor and delivery are classified to O68.– *Labour and delivery complicated by fetal stress (distress)*.
- The assignment of an ICD-10-CA code for fetal acidemia must be substantiated by cord blood gases.

10.8 Case studies

You will now have the opportunity to apply what you have learned in this chapter to chart documentation. Read through each case study. For these case studies, we will focus only on selecting the appropriate fetal distress and acidemia codes for both the mother and the newborn abstract.

10.8.1 Case study 1

Final diagnosis: Intrauterine growth restriction
Perinatal asphyxia

The patient is a female infant born at 37 weeks and 6 days' gestation. There was an induction of labor for IUGR and gestational hypertension. Labor progressed quickly but late decelerations to 80 lasting for two minutes were noted. The baby was born with the cord tightly around the neck times 1. She was flat at birth with a heart rate of less than 100, and required positive pressure ventilation for 30 seconds. Her Apgars were 3 at one minute and 8 at five minutes. NICU arrived at four minutes of age.
Cord gases were arterial pH 6.91 and venous pH 6.97. Her birth weight was 2,360 g.

The baby was admitted to NICU for IUGR and asphyxia.

Please enter your notes in the space below:

10.8.2 Case study 2

Final diagnosis: 39-week female, 3,100 grams
Severe hypoxic ischemic encephalopathy

The day before birth there was noted to be decreased fetal movements. In the doctor's office the fetal heart was shown to be non-reassuring and a stat Cesarean section was performed. The baby was born without a heart rate or respiratory effort. Brief positive pressure ventilation was carried out and the baby was quickly intubated. A heart rate of over 100 was auscultated at seven minutes. Apgars were 0 at one minute, 0 at five minutes, 3 at 10 minutes, and 5 at 20 minutes. Cord pH arterial was 6.86 and venous was 7.04. The baby was transferred to NICU. A head ultrasound showed findings compatible with HIE and an electroencephalogram showed continuous electrographic seizures from multiple locations.

Please enter your notes in the space below:

Appendices

Appendix A: Answers to case studies and practice exercises

Introduction

This appendix provides the answers to the practice exercises and case studies. Every reasonable effort has been made to ensure accuracy of the answers.

Purpose

The main purpose of this appendix is to

- Provide answers specific to the case study presented; and
- Provide rationale for code selection where necessary.

Chapter 2: False labor and preterm labor

2.6.1 Exercise

This is classified to O47.003 *False labour before 37 completed weeks of gestation, antepartum condition or complication*. Betamethasone is not a labor suppressant. It is given to accelerate fetal lung maturity in case mom should go on to preterm delivery. There was no appreciable cervical change, so this is false labor.

2.6.2 Exercise

Braxton-Hicks contractions are classified to false labor. Therefore, the correct code for this case is O47.103 *False labour at or after 37 completed weeks of gestation, antepartum condition or complication*.

2.6.3 Exercise

This patient is in latent labor; therefore, this would not be classified to false labor. Latent labor is the first phase of “true” labor. The correct code for this case is Z34.0 *Supervision of normal first pregnancy*.

2.8.1 Case study

O60.101 (M) *Preterm spontaneous labour with preterm delivery, with or without mention of antepartum condition*

Z37.000 (3) *Single live birth, pregnancy resulting from both spontaneous ovulation and conception*

5.MD.50.AA *Manually assisted vaginal delivery (vertex) without episiotomy*

5.AC.20.HA-J2 *Antepartum (maternal and fetal) pharmacotherapy percutaneous approach corticosteroid (optional)*

Rationale: Corticosteroids are given to promote fetal lung maturity, not for labor suppression. Rubric 5.AC.20.^^ includes pharmacotherapy given to the mother but that which may have a direct effect on the fetus either for preventative or therapeutic outcomes.

Chapter 3: Premature rupture of membranes

3.6.1 Exercise

O42.903 *Premature rupture of membranes, unspecified, antepartum condition or complication*

Rationale: At this point there is no labor. O42.9– includes “Premature rupture of membranes without onset of labour.”

3.6.2 Exercise

O42.203 *Premature rupture of membranes, labour delayed by therapy, antepartum condition or complication*

Rationale: Labor was successfully delayed and the patient was discharged home undelivered. Conservative management of PROM may simply include bed rest, monitoring of temperature and white blood cell counts. The purpose of conservative management is to allow the fetus to reach a stage of maturity at which it can survive outside of the uterus.

3.6.3 Exercise

This is not PROM. A code from category O42 may only be selected when there is spontaneous rupture of membranes for more than one hour prior to the onset of labor. However, if delivery does not ensue within 24 hours of the ARM then this would be a delayed delivery after artificial rupture of membranes (O75.5–).

3.6.4 Exercise

O42.111 *Premature rupture of membranes, onset of labour after 24 hours,* ***preterm,*** *delivered, with or without mention of antepartum condition*

Rationale: PROM codes are selected based on the gestational age at the time of rupture of membranes. This would also be a prolonged rupture of membranes (O75.601).

3.6.5 Exercise

Since this patient did not go into labor, the appropriate code from category O42 is O42.901 *Premature rupture of membranes, unspecified, delivered, with or without mention of antepartum condition*. Per the includes note at this code, “Premature rupture of membranes without onset of labour” is classified here.

3.8.1 Case study

O42.011 (M) *Premature rupture of membranes, onset of labour within 24 hours, preterm, delivered, with or without mention of antepartum condition*

Rationale: Indication for the induction.

O60.301 (1) *Preterm delivery without spontaneous labour, with or without mention of antepartum condition*

Rationale: Preterm delivery is assigned as an additional code even though preterm is indicated in the title of O42. “Preterm” in category O42 refers to weeks’ gestation at the time of rupture of membranes, not gestational age at delivery.

O70.001 (1) *First degree perineal laceration during delivery, delivered, with or without mention of antepartum condition*

Z37.000 (3) *Single live birth, pregnancy resulting from both spontaneous ovulation and conception*

Operative episode 1

5.MD.50.AA *Manually assisted vaginal delivery (vertex) without episiotomy*

5.PC.80.JP *Surgical repair, postpartum of current obstetric laceration of pelvic floor, perineum, lower vagina or vulva*

Operative episode 2

5.AC.30.HA-I2 *Induction of labour using percutaneous infusion of uterotonic agent*

Rationale: It is mandatory to capture induction of labor.

Induction is captured as a separate operative episode because it would not have been performed in the delivery suite (i.e., there was a change in the intervention location). Refer to the *DAD Abstracting Manual*, Group 11, Field 01 “Intervention Episode Start Date” for further information. This PROM was treated with active/aggressive management rather than expectant/conservative management.

Chapter 4: Cervical ripening, induction and augmentation of labor

4.7.1 Exercise

An induction of labor is performed prior to commencement of labor; an augmentation of labor is performed after labor has already begun.

4.7.2 Exercise

O14.001 *Mild to moderate pre-eclampsia, delivered, with or without mention of antepartum condition* is the MRDx in this scenario.

Rationale: For cases that go on to have a Cesarean section the most responsible diagnosis is the indication for the Cesarean section — the underlying maternal or fetal condition. In this case, it is the preeclampsia. The diagnosis code for failed induction of labor is captured as diagnosis type (1).

4.9.1 Case study 1

O75.881 (M) *Other specified complications of labour and delivery, delivered, with or without mention of antepartum condition*

Rationale: Maternal exhaustion is the indication for vacuum. There is no antepartum condition responsible for an extended length of stay pre-delivery, so the indication for instrumental delivery is captured as the MRDx.

O62.001 (1) *Primary inadequate contractions, delivered, with or without mention of antepartum condition*

Rationale: Patient is admitted on May 2 with a diagnosis of prolonged latent phase. She has been contracting since 17:00 hours on Apr 30 and is still only 3 cm dilated (i.e., the cervix is failing to dilate appropriately). The alphabetical index lookup:

Failure

– cervical dilation in labor O62.0

Important note

Using the time of onset that is documented on the delivery record, this case does not meet the criteria for a prolonged first stage of labor. Based on clinical input, when calculating the duration of labor for assignment of O63.0– *Prolonged first stage (of labour)* and O62.3– *Precipitate labour* the clock should really start ticking with the onset of the active phase, not the latent phase, of the first stage of labor. This is because clinicians do not want to intervene too early in the latent phase of labor. The latent phase is the longest part of labor and most women will spontaneously enter the active phase of labor. It is when the latent phase becomes prolonged that physicians will intervene.

O63.101 (1) *Prolonged second stage (of labour), delivered, with or without mention of antepartum condition*

Rationale: The second stage of labor was 3 hours and 3 minutes, which meets the criteria for prolonged second stage of labor in a primipara.

Z37.000 (3) *Single live birth, pregnancy resulting from both spontaneous ovulation and conception*

Operative episode 1

5.MD.54.KK *Vacuum traction delivery, low vacuum traction without episiotomy*

Rationale: Station +2 to +3 is by definition a low vacuum traction.

Operative episode 2

5.LD.31.HA-I2 *Augmentation of labour using infusion of uterotonic agent*

Rationale: It is mandatory to capture augmentation of labor. The documented time of the onset of labor represents the time she went into active labor. Since IV oxytocin was started on May 2 at 06:45 and the start of active labor was on May 2 at 02:00, this intervention is augmentation. This is further verified by the physician documentation in the delivery note and the information recorded on the delivery record.

4.9.2 Case study 2

O48.001 (M) *Prolonged pregnancy, delivered, with or without mention of antepartum condition*

Rationale: Failure of the induction does not become the indication for the Cesarean section. The Cesarean section is being performed to address the underlying maternal condition. The fact that the first delivery method failed does not change the original indication for expediting the delivery. Failed medical induction will be captured as an additional type (1) diagnosis.

O61.001 (1) *Failed medical induction of labour, delivered, with or without mention of antepartum condition*

Rationale: The induction did not initiate labor and the patient proceeded on to Cesarean section; therefore, this is a failed induction.

O36.631 (1) *Maternal care for excessive fetal growth, third trimester, delivered, with or without mention of antepartum condition*

Z37.000 (3) *Single live birth, pregnancy resulting from both spontaneous ovulation and conception*

Operative episode 1

5.MD.60.AA *Cesarean section delivery, lower segment transverse incision without instrumentation*

Status: PB Primary, Indicated, Emergent

Rationale: The Cesarean section in this case is definitely indicated. The prolonged pregnancy necessitates a need to expedite delivery; however, a failed induction does not allow for a vaginal delivery to proceed. Since the Cesarean section was not planned or prebooked, this is considered an emergent Cesarean section.

Operative episode 2

5.AC.30.CK-I2 *Induction of labour using per orifice (intra cervical/vaginal) administration of uterotonic agent*

5.AC.30.HA-I2 *Induction of labour using percutaneous infusion of uterotonic agent*

Rationale: The induction meets the definition of a failed intervention; therefore, this intervention is coded in the same manner as an induction that was successful. The intervention was performed; it just did not have the desired outcome.

Chapter 5: Dystocia

5.8.1 Exercise

In order to assign an obstructed labor code in ICD-10-CA, the mom must be in labor; “obstructed labor” must be stated by the physician, or the alphabetical index lookup leads to an “obstructed labor” code. See the *Canadian Coding Standards for Version 2022 ICD-10-CA and CCI*, Chapter XV — Pregnancy, childbirth and the puerperium, *Obstructed Labor* and Maternal Care Related to the Fetus, Amniotic Cavity and Possible Delivery Problems.

5.8.2 Exercise

O62.001 *Primary inadequate contractions, delivered, with or without mention of antepartum condition*

Rationale: The indication for the Cesarean section in this case is failure of cervical dilation (i.e., the dilation failed to progress beyond 4 cm). Primary inadequate contractions (O62.0–) includes failure of cervical dilatation.

5.10.1 Case study 1

O64.001 (M) *Obstructed labour due to incomplete rotation of fetal head, delivered, with or without mention of antepartum condition*

Rationale: The fetal head failed to rotate from an OP position to an OA position, necessitating vacuum delivery. This is obstructed labor; the influencing factor is malposition.

O70.101 (1) *Second degree perineal laceration during delivery, delivered, with or without mention of antepartum condition*

Z37.000 (3) *Single live birth, pregnancy resulting from both spontaneous ovulation and conception*

5.MD.54.KK *Vacuum traction delivery, low vacuum traction without episiotomy*

Rationale: Vacuum was applied at station +2; this is a low vacuum.

5.PC.80.JP *Surgical repair, postpartum of current obstetric laceration of pelvic floor, perineum, lower vagina or vulva*

5.10.2 Case study 2

O66.201 (M) *Obstructed labour due to unusually large fetus, delivered, with or without mention of antepartum condition*

Rationale: In pathological Bandl ring, the obstruction to the passage of the fetus comes first and it is the cause of the ring. This is in contrast to constriction rings, where the ring is the cause of the obstruction. The only influencing factor documented in this case is the large fetus. Failure to progress (O62.2–) and dystocia (O66.9–) do not have to be coded separately. She is having difficult labor due to the large fetus and the abnormalities of the forces in this case are actually hypertonic contractions as the uterus tries to overcome the obstruction.

O62.401 (1) *Hypertonic, incoordinate, and prolonged uterine contractions, delivered, with or without mention of antepartum condition*

Rationale: This includes Bandl ring and is actually a consequence of obstructed labor.

Z37.000 (3) *Single live birth, pregnancy resulting from both spontaneous ovulation and conception*

Operative episode 1

5.MD.60.AA *Cesarean section delivery, lower segment transverse incision without instrumentation*

Status: PB Primary, Indicated, Emergent

Operative episode 2

5.LD.31.HA-I2 *Augmentation of labour using infusion of uterotonic agent*

5.LD.31.AP *Augmentation of labour using artificial rupture of membranes*

Rationale: Labor was spontaneous; therefore, these interventions would be augmentation.

Chapter 6: Operative vaginal delivery

6.7.1 Exercise

This would be classified to low forceps. Low forceps are defined as those cases where the leading point of the fetal skull is at station lesser than or equal to plus 2 centimetres.

6.7.2 Exercise

No, only one code is necessary to show the application of the vacuum and the Cesarean section. In CCI, use of forceps or vacuum prior to proceeding to Cesarean section or application through the Cesarean section incision is captured using one code from rubric 5.MD.60.^^ *Cesarean section delivery*.

6.9.1 Case study 1

O64.001 (M) *Obstructed labour due to incomplete rotation of fetal head, delivered, with or without mention of antepartum condition*

Rationale: Failure of vacuum or forceps does not become the indication for the Cesarean section. The attempted instrumentation and subsequent Cesarean section are both being performed to address the malposition. Failed vacuum or forceps will be captured as an additional type (1) diagnosis.

O66.501 (1) *Failed application of vacuum extractor and forceps, unspecified, delivered, with or without mention of antepartum condition*

O63.101 (1) *Prolonged second stage (of labour), delivered, with or without mention of antepartum condition*

Z37.000 (3) *Single live birth, pregnancy resulting from both spontaneous ovulation and conception*

5.MD.60.JW *Cesarean section delivery using lower segment transverse incision with use of forceps*

Status: PB Primary, Indicated, Emergent

Extent: 01 Single application (of instruments) (optional)

Note

If this patient had not had a Cesarean section, this would have been classified to 5.MD.53.KP *Forceps traction and rotation delivery using double application of forceps*. This is not to be confused with double application in the extent attribute at 5.MD.60.^^. Double application in the extent attribute box means application of vacuum/forceps both prior to Cesarean section and through Cesarean section incision. Double application at 5.MD.53 means that forceps were applied for rotation, removed and then reapplied for traction (delivery).

6.9.2 Case study 2

O62.201 (M) *Other uterine inertia, delivered, with or without mention of antepartum condition*

Rationale: There are no influencing factors documented in this case, therefore; failure to progress NOS is appropriate.

O75.701 (1) *Vaginal delivery following previous caesarean section, delivered, with or without mention of antepartum condition*

Rationale: This is not a failed trial of labor as the patient did not proceed to Cesarean section. She did have a successful instrumental vaginal delivery.

O63.101 (1) *Prolonged second stage (of labour), delivered, with or without mention of antepartum condition*

Rationale: Multipara patient received epidural and pushed for greater than two hours. This meets the criteria for prolonged second stage in a multipara.

Z37.000 (3) *Single live birth, pregnancy resulting from both spontaneous ovulation and conception*

5.MD.53.KK *Forceps traction and rotation delivery, low forceps without episiotomy*

Rationale: There is a documentation discrepancy in this case. The physician titles the procedure as mid-cavity forceps; however, later states that the forceps were applied at station +2. The SOGC defines low forceps as those cases where the leading point of the skull is at station lesser than or equal to plus 2 cm. By definition, this is a low forceps delivery. When there is conflicting chart documentation, consult with the physician for clarification. The clinical record is the source for the coding of morbidity data and it is the health care provider's responsibility to ensure that diagnoses and procedures are recorded accurately. If the record does not contain sufficient information to assign a code, the coder must consult with the responsible health care provider. The coding standards cannot provide direction in the absence of complete documentation.

Chapter 7: Breech presentation and extraction

7.4.1 Exercise

O64.101 *Obstructed labour due to breech presentation, delivered, with or without mention of antepartum condition*

Rationale: The ICD-10-CA alphabetical index lookup is as follows:

Breech

– presentation (mother) O32.1

– – causing obstructed labor O64.1

Since the patient presents in labor, it is correct to assign an obstructed labor code in this scenario. Use of these obstructed labor codes does not necessarily mean there was an obstruction per se but that measures were taken to prevent obstruction, for example, Cesarean section.

7.4.2 Exercise

5.MD.56.NL *Breech delivery, partial breech extraction [assisted breech delivery], with spontaneous delivery of head* is the correct CCI code since this includes the Loveset maneuver when performed alone.

7.6.1 Case study

O64.801 (M) *Obstructed labour due to other malposition and malpresentation, delivered, with or without mention of antepartum condition*

Rationale: Labor has begun and a total breech extraction was performed so this is obstructed labor.

Presentation

– transverse (mother) O32.2

– – causing obstructed labor O64.8

O30.001 (1) *Multiple gestation, twin pregnancy, delivered, with or without mention of antepartum condition*

Z37.200 (3) *Twins, both liveborn, pregnancy resulting from both spontaneous ovulation and conception*

5.MD.56.NQ *Breech delivery, total breech extraction with assisted delivery of aftercoming head without episiotomy*

Rationale: The entire body of the infant is extracted by the physician; therefore, this is a total breech extraction. A Mauriceau-Smellie-Veit maneuver is also performed. This is for assisted delivery of the aftercoming head.

5.MD.40.JB *Version and/or rotation at time of delivery by internal podalic version*

Includes: turning the fetus in utero, with the hand or fingers inside the uterus, to a breech presentation

Rationale: Before being able to deliver as a breech extraction, the physician has to perform an internal version to bring the baby from a transverse lie into a breech presentation.

5.MD.50.AA *Manually assisted vaginal delivery (vertex) without episiotomy*

Rationale: In delivery of multiple gestations, each different delivery method is coded separately.

Chapter 8: Cesarean section

8.5.1 Exercise

False; contractions are stronger in the upper segment of the uterus. It is because of this that repeat Cesarean sections are required for those who have had a previous Cesarean section through a classical incision but a trial of labor is possible for those who have had a previous lower-segment Cesarean section. The scar from a classical incision in the upper segment presents a danger of rupture during labor in subsequent pregnancies.

8.5.2 Exercise

RB: Repeat, Indicated, Emergent

Rationale: This patient had two previous Cesarean sections making it a necessity that she have any subsequent deliveries via Cesarean section due to the weakened uterus (uterine scar from more than one incision). Although this Cesarean section was initially a repeat, planned intervention; the mother went into labor necessitating a change to the planned date. This changed the status from “planned” to “emergent” (from RA to RB).

8.7.1 Case study

O62.001 (M) *Primary inadequate contractions, delivered, with or without mention of antepartum condition*

O66.401 (1) *Failed trial of labour following previous caesarean, delivered, with or without mention of antepartum condition*

Rationale: The reason that the trial of labor failed is that there was failure of the cervix to dilate beyond 3 cm.

O48.001 (1) *Prolonged pregnancy, delivered, with or without mention of antepartum condition*

O24.801 (1) *Diabetes mellitus arising in pregnancy (gestational), delivered, with or without mention of antepartum condition*

Note

Gestational diabetes is defined as glucose intolerance with onset or first recognition during pregnancy. The majority of cases of gestational diabetes will return to normal after delivery. It is possible for unrecognized glucose intolerance to antedate the pregnancy or begin concomitantly with pregnancy. Classify diabetes mellitus that is diagnosed for the first time during pregnancy to O24.8– *Diabetes mellitus arising in pregnancy (gestational)*. When diabetes mellitus is present **prior to pregnancy**, assign the appropriate code from O24.5– to O24.7– *Diabetes mellitus in pregnancy*. When the patient has complications of pre-existing diabetes mellitus, assign as many additional codes for E10 to E14 as required to capture the complications that are assessed or managed during admission. When pre-existing diabetes mellitus is described as poorly controlled, assign additionally E1–.64 *Type ~ diabetes mellitus with poor control, so described.* Sequence the diabetes mellitus codes from Chapter XV before any diabetes mellitus code from Chapter IV.

O72.102 (2) *Other immediate postpartum haemorrhage, delivered, with mention of postpartum complication*

Rationale: The patient underwent Cesarean section and even though the blood loss was only 800 cc, there is documentation of postpartum hemorrhage due to uterine atony.

Z37.000 (3) *Single live birth, pregnancy resulting from both spontaneous ovulation and conception*

Operative episode 1

5.MD.60.AA *Cesarean section delivery, lower segment transverse incision without instrumentation*

Status: RB Repeat, Indicated, Emergent

5.PC.91.HU *Interventions to uterus (following delivery or abortion) bimanual compression and massage*

5.PC.20.AL-I2 *Postpartum pharmacotherapy, combined routes of administration using oxytocic agent (optional)*

Rationale: IV oxytocin and rectal Cytotec.

Operative episode 2

5.AC.30.AP *Induction of labour using artificial rupture of membranes*

5.AC.30.HA-I2 *Induction of labour using percutaneous infusion of uterotonic agent*

Chapter 9: Postpartum hemorrhage

9.6.1 Exercise

Yes, you would assign an ICD-10-CA code for postpartum hemorrhage in this case. Assign a code for postpartum hemorrhage if a physician documents postpartum hemorrhage, even if the greater than or equal to 500 cc/1,000 cc criterion is not met.

9.6.2 Exercise

No, the diagnosis code O72.102 *Other immediate postpartum haemorrhage, delivered, with mention of postpartum complication* should be the MRDx only and not repeated as a diagnosis type (2). When the postpartum hemorrhage is the most responsible diagnosis it is not necessary to repeat it as a diagnosis type (2). The sixth digit 2 of an obstetrical code identifies the diagnosis as a post-admit comorbidity.

9.8.1 Case study

O72.104 (M) *Other immediate postpartum haemorrhage, postpartum condition or complication*

Rationale: Hemorrhage occurred within four hours of delivery and is stated to be due to uterine atony.

O70.104 (1) *Second degree perineal laceration during delivery, postpartum condition or complication*

Rationale: A second-degree vaginal wall laceration with perineal involvement is captured at category O70. Vaginal lacerations with an intact perineum are captured at O71.4.

O90.204 (1) *Haematoma of obstetric wound, postpartum condition or complication*

Rationale: The obstetrical laceration is noted to be "actively bleeding" and required repair for control of hemorrhage. Bleeding from trauma that manifests after delivery (i.e., was not actively bleeding during delivery) is classified to O90.2–, which includes "Haemorrhage of obstetrical wound."

5.PC.91.HR *Interventions to uterus (following delivery or abortion) manual exploration of uterine cavity*

5.PC.80.JP *Surgical repair, postpartum of current obstetric laceration of pelvic floor, perineum, lower vagina or vulva*

5.PC.20.HA-I2 *Postpartum pharmacotherapy, percutaneous approach using oxytocic agent (optional)*

Chapter 10: Fetal distress

10.6.1 Exercise

No, you would not assign a code for evidence of fetal asphyxia in this case. O68.3– *Labour and delivery complicated by evidence of fetal asphyxia* cannot be assigned without lab evidence of acidemia. The Society of Obstetricians and Gynaecologists of Canada values for fetal acidemia are an arterial pH ≤7.0 and/or base deficit ≥12 mmol/L. O68.3– is not assigned based on Apgar scores.

10.6.2 Exercise

O68.201 *Labour and delivery complicated by fetal heart rate anomaly with meconium in amniotic fluid, delivered, with or without mention of antepartum condition*

Rationale: The patient is in labor. The documentation states there are fetal heart rate anomalies (late decelerations) and meconium is present. The alphabetical index lookup is as follows:

Delivery

– complicated (by)

– – fetal

– – – heart rate anomaly O68.0–

– – – – with meconium in liquor **O68.2–**

Note

For these case studies the entire case has not been coded. We are only focusing on the codes related to fetal distress or acidemia for both mother and newborn.

10.8.1 Case study 1

Newborn

P20.2 *Fetal acidaemia first noted at birth*

Rationale: Umbilical cord blood values of ≤7.0 are evidence that acidemia was present.

Mother

O68.301 *Labour and delivery complicated by evidence of fetal asphyxia, delivered, with or without mention of antepartum condition*

Rationale: There is documented evidence (cord blood values) of acidemia and this is an indicator of an asphyxial episode.

10.8.2 Case study 2

Newborn

P20.2 *Fetal acidaemia first noted at birth*

Rationale: Umbilical cord blood values of ≤7.0 are evidence that acidemia was present.

P91.6 *Hypoxic ischaemic encephalopathy of newborn*

Rationale: If the hypoxic episode is of long enough duration then the infant may suffer neonatal harm. Assign additional code(s) to identify any mention of neonatal findings indicative of neonatal harm such as hypoxic ischemic encephalopathy.

Mother

O36.331 *Maternal care for signs of fetal asphyxia, third trimester, delivered, with or without mention of antepartum condition*

Rationale: Signs of fetal distress first noted prior to the onset of labor are captured at O36.3 rather than O68.

Appendix B: References

1. Oxorn H. Oxorn–Foote Human Labor & Birth, Fifth Edition. 1986.

2. DeCherney H, Nathan L. *Current Obstetric & Gynecologic Diagnosis & Treatment*, *9th Edition*. 2003.

3. International Association for Maternal and Neonatal Health. Perinatal Education Programme — The First Stage of Labour: The Condition of the Mother. 2005.

4. World Health Organization. *Managing Complications of Pregnancy and Childbirth: A Guide for Midwives and Doctors*. 2017.

5. Canadian Institute for Health Information. *Giving Birth in Canada: A Regional Profile*. 2004.

6. Davies GA, Hahn PM, McGrath MM. Vaginal birth after Cesarean: Physicians' perceptions and practice. Journal of Reproductive Medicine. 1996.

7. Society of Obstetricians and Gynaecologists of Canada. *Clinical Practice Guidelines — Prevention and Management of Postpartum Haemorrhage*. 2000.

8. Cunningham FG, et al. Chapter 35: Obstetrical hemorrhage. In: *Williams Obstetrics 23rd Edition*. Cunningham FG, et al., eds. 2010.

9. Society of Obstetricians and Gynaecologists of Canada. *International Joint Policy Statement — Management of the Third Stage of Labour to Prevent Postpartum Hemorrhage*. 2003.

10. B-Lynch C, et al. The B-Lynch surgical technique for the control of massive postpartum haemorrhage: An alternative to hysterectomy?**.** *British Journal of Obstetrics and Gynecology*. 1997.

11. Ghezzi F, et al. The Hayman technique: A simple method to treat postpartum hemorrhage**.** *Obstetrical & Gynecological Survey*. 2007.

12. Society of Obstetricians and Gynaecologists of Canada. *Clinical Practice Guidelines — Fetal Surveillance in Labour*. 2002.

help@cihi.ca

CIHI Ottawa
495 Richmond Road
Suite 600
Ottawa, Ont.
K2A 4H6
613-241-7860

CIHI Toronto
4110 Yonge Street
Suite 300
Toronto, Ont.
M2P 2B7
416-481-2002

CIHI Victoria
880 Douglas Street
Suite 600
Victoria, B.C.
V8W 2B7
250-220-4100

CIHI Montréal
1010 Sherbrooke Street West
Suite 602
Montréal, Que.
H3A 2R7
514-842-2226

cihi.ca

22079-1022