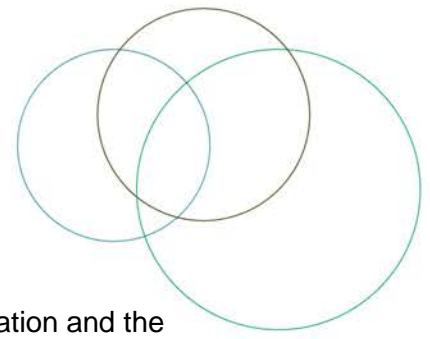


HOSPITAL HARM IMPROVEMENT RESOURCE

# Obstetric Trauma



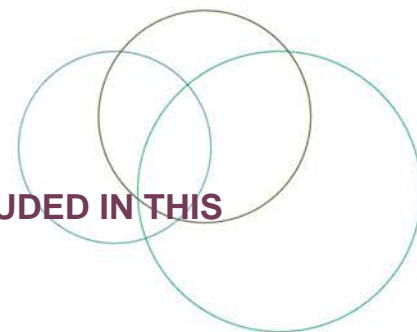
## ACKNOWLEDGEMENTS



The Canadian Institute for Health Information and the Canadian Patient Safety Institute have collaborated on a body of work to address gaps in measuring harm and to support patient safety improvement efforts in Canadian hospitals.

The Hospital Harm Improvement Resource was developed by the Canadian Patient Safety Institute to complement the Hospital Harm measure prepared by the Canadian Institute for Health Information. It links measurement and improvement by providing resources that will support patient safety improvement efforts.





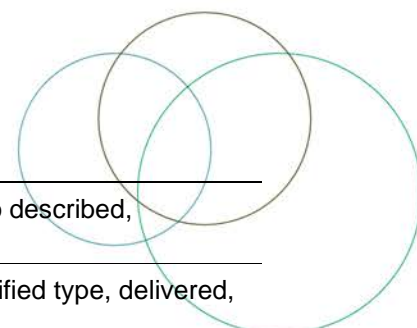
## DISCHARGE ABSTRACT DATABASE (DAD) CODES INCLUDED IN THIS CLINICAL CATEGORY:

### A03: Obstetric Trauma

<b>Concept</b>	Third- or fourth-degree perineal lacerations or other obstetric injuries to pelvic organs during a non-instrumented vaginal delivery identified during the delivery episode of care.
<b>Notes</b>	Refer to D03: Obstetric Trauma for obstetric trauma during an instrument-assisted vaginal delivery.
<b>Selection criteria</b>	
O70.201* O70.211† O70.221† O70.231† O70.281† O70.291† O70.301 O71.181 O71.301 O71.401 O71.501 O71.601	Identified as diagnosis type (M), (1), (2), (W), (X) or (Y) <b>AND</b> O10–O16, O21–O26, O28–O37, O40–O46, O48.–, O60–O75, O85–O92, O95.– or O98–O99 with a sixth digit of 1 or 2 or Z37.– <b>on the same abstract</b>
5.PC.80.JH 5.PC.80.JJ 5.PC.80.JR 5.PC.80.JQ 5.PC.80.JU 5.PC.80.JL	Identified as an intervention <b>AND</b> O10–O16, O21–O26, O28–O37, O40–O46, O48.–, O60.–, O75, O85–O92, O95.– or O98–O99 with a sixth digit of 1 or 2 or Z37.– <b>on the same abstract</b>
	* Before 2018–2019 data † Starting with 2018–2019 data
<b>Exclusions</b>	<ol style="list-style-type: none"> <li>Abstracts with intervention codes for instrument-assisted or Caesarean section delivery (5.MD.53.^, 5.MD.54.^, 5.MD.55.^, 5.MD.56.NN, 5.MD.56.PC, 5.MD.56.NR, 5.MD.56.PF, 5.MD.56.NW, 5MD.56.PJ or 5.MD.60.^)</li> <li>Abstracts indicating a pregnancy with abortive outcome (O04. – <b>OR</b> 5.CA.20.^, 5.CA.24.^, 5.CA.88.^, 5.CA.89.^ or 5.CA.93.^, not abandoned)</li> </ol>
<b>Codes</b>	<b>Code descriptions</b>
O70.201	Third degree perineal laceration during delivery; delivered with or without mention of antepartum condition
O70.211	Third degree perineal laceration during delivery, type 3a, so described, delivered, with or without mention of antepartum condition
O70.221	Third degree perineal laceration during delivery, type 3b, so described, delivered, with or without mention of antepartum condition



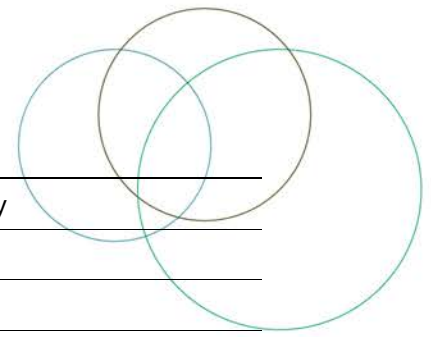
**HOSPITAL HARM IMPROVEMENT RESOURCE**  
**Obstetric Trauma**



O70.231	Third degree perineal laceration during delivery, type 3c, so described, delivered, with or without mention of antepartum condition
O70.281	Third degree perineal laceration during delivery, other specified type, delivered, with or without mention of antepartum condition
O70.291	Third degree perineal laceration during delivery, unspecified type, delivered, with or without mention of antepartum condition
O70.301	Fourth degree perineal laceration during delivery; delivered with or without mention of antepartum condition
O71.181	Other rupture of uterus during labour; delivered with or without mention of antepartum condition
O71.301	Obstetric laceration of cervix; delivered with or without mention of antepartum condition
O71.401	Obstetric high vaginal laceration; delivered with or without mention of antepartum condition
O71.501	Other obstetric injury to pelvic organs; delivered with or without mention of antepartum condition
O71.601	Obstetric damage to pelvic joints and ligaments; delivered with or without mention of antepartum condition
5.PC.80.JH	Surgical repair, postpartum of obstetric laceration of corpus uteri [body of uterus]
5.PC.80.JJ	Surgical repair, postpartum of current obstetric laceration of cervix occurring at vaginal delivery
5.PC.80.JR	Surgical repair, postpartum of current obstetric laceration of bladder and urethra
5.PC.80.JQ	Surgical repair, postpartum of current obstetric laceration of rectum and sphincter ani
5.PC.80.JU	Surgical repair, postpartum of current obstetric high vaginal laceration
5.PC.80.JL	Surgical repair, postpartum of current obstetric laceration of broad ligament(s) of uterus
<b>Additional Codes:</b>	<b>Inclusions</b>
O10–O16 O21–O26 O28–O37 O40–O46 O48.– O60–O75 O85–O92 O95.– O98–O99 Z37.–	Outcome of delivery (refer to <a href="#">Appendix A</a> of the <a href="#">Hospital Harm Indicator General Methodology Notes</a> )
<b>Additional Codes:</b>	<b>Exclusions</b>
O04.–	Medical abortion
5.CA.20.^	Pharmacotherapy (in preparation for), termination of pregnancy



**HOSPITAL HARM IMPROVEMENT RESOURCE**  
**Obstetric Trauma**

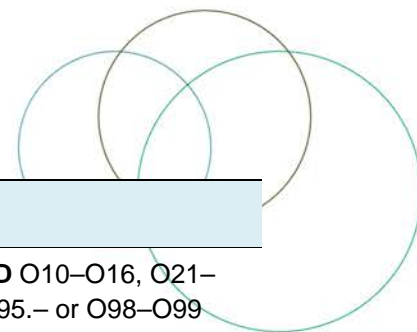


5.CA.24.^	Preparation by dilating cervix (for), termination of pregnancy
5.CA.88.^	Pharmacological termination of pregnancy
5.CA.89.^	Surgical termination of pregnancy
5.CA.93.^	Surgical removal of extrauterine pregnancy
5.MD.53.^	Forceps traction and rotation delivery
5.MD.54.^	Vacuum traction delivery
5.MD.55.^	Combination of vacuum and forceps delivery
5.MD.56.NN	Breech delivery without episiotomy, partial breech extraction [assisted breech delivery] with forceps to aftercoming head
5.MD.56.PC	Breech delivery with episiotomy, partial breech extraction [assisted breech delivery] with forceps to aftercoming head
5.MD.56.NR	Breech delivery without episiotomy, total breech extraction with forceps to aftercoming head
5.MD.56.PF	Breech delivery with episiotomy, total breech extraction with forceps to aftercoming head
5.MD.56.NW	Breech delivery without episiotomy, unspecified breech extraction with forceps to aftercoming head
5.MD.56.PJ	Breech delivery with episiotomy, unspecified breech extraction with forceps to aftercoming head
5.MD.60.^	Caesarean section delivery

**D03: Obstetric Trauma**

<b>Concept</b>	Lacerations of third degree or greater severity, or other obstetric injury to pelvic organs during an instrument-assisted vaginal delivery.
<b>Notes</b>	<ol style="list-style-type: none"> <li>1. Refer to A03: Obstetric Trauma for obstetric trauma during a non-instrumented vaginal delivery.</li> <li>2. This clinical group does not include obstetric trauma during Caesarean section delivery.</li> </ol>

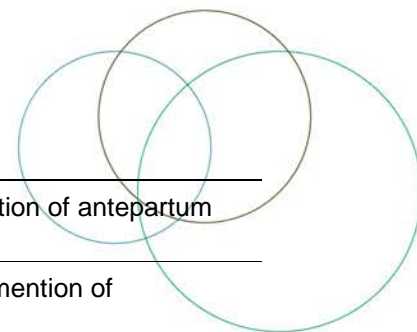




Selection criteria	
O70.201* O70.211 † O70.221 † O70.231 † O70.281 † O80.291 † O70.301 O71.181 O71.301 O71.401 O71.501 O71.601	Identified as diagnosis type (M), (1), (2), (W), (X) or (Y) <b>AND</b> O10–O16, O21–O26, O28–O37, O40–O46, O48.–, O60–O75, O85–O92, O95.– or O98–O99 with a sixth digit of 1 or 2 or Z37.– <b>AND</b> intervention codes 5.MD.53.^^, 5.MD.54.^^, 5.MD.55.^^, 5.MD.56.NN, 5.MD.56.PC, 5.MD.56.NR, 5.MD.56.PF, 5.MD.56.NW or 5.MD.56.PJ <b>on the same abstract</b>
5.PC.80.JH 5.PC.80.JJ 5.PC.80.JR 5.PC.80.JQ 5.PC.80.JU 5.PC.80.JL	Identified as an intervention <b>AND</b> O10–O16, O21–O26, O28–O37, O40–O46, O48.–, O60–, O75, O85–O92, O95.– or O98–O99 with a sixth digit of 1 or 2 or Z37.– <b>AND</b> intervention codes 5.MD.53.^^, 5.MD.54.^^, 5.MD.55.^^, 5.MD.56.NN, 5.MD.56.PC, 5.MD.56.NR, 5.MD.56.PF, 5.MD.56.NW or 5.MD.56.PJ <b>on the same abstract</b>
	* Before 2018-2019 data † Starting with 2018-2019 data
<b>Exclusions</b>	1. Abstracts with intervention codes for Caesarean section delivery (5.MD.60.^^) 2. Abstracts indicating a pregnancy with abortive outcome (O04.– <b>OR</b> 5.CA.20.^^, 5.CA.24.^^, 5.CA.88.^^, 5.CA.89.^^ or 5.CA.93.^^, not abandoned)
<b>Codes</b>	<b>Code descriptions</b>
O70.201	Third degree perineal laceration during delivery; delivered with or without mention of antepartum condition
O70.211	Third degree perineal laceration during delivery, type 3a, so described, delivered, with or without mention of antepartum condition
O70.221	Third degree perineal laceration during delivery, type 3b, so described, delivered, with or without mention of antepartum condition
O70.231	Third degree perineal laceration during delivery, type 3c, so described, delivered, with or without mention of antepartum condition
O70.281	Third degree perineal laceration during delivery, other specified type, delivered, with or without mention of antepartum condition
O70.291	Third degree perineal laceration during delivery, unspecified type, delivered, with or without mention of antepartum condition
O70.301	Fourth degree perineal laceration during delivery; delivered with or without mention of antepartum condition
O71.181	Other rupture of uterus during labour; delivered with or without mention of antepartum condition

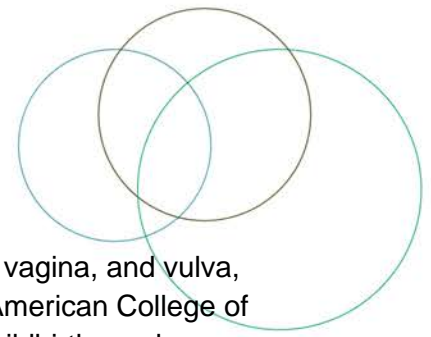


**HOSPITAL HARM IMPROVEMENT RESOURCE**  
**Obstetric Trauma**



O71.301	Obstetric laceration of cervix; delivered with or without mention of antepartum condition
O71.401	Obstetric high vaginal laceration; delivered with or without mention of antepartum condition
O71.501	Other obstetric injury to pelvic organs; delivered with or without mention of antepartum condition
O71.601	Obstetric damage to pelvic joints and ligaments; delivered with or without mention of antepartum condition
5.PC.80.JH	Surgical repair, postpartum of obstetric laceration of corpus uteri [body of uterus]
5.PC.80.JJ	Surgical repair, postpartum of current obstetric laceration of cervix occurring at vaginal delivery
5.PC.80.JR	Surgical repair, postpartum of current obstetric laceration of bladder and urethra
5.PC.80.JQ	Surgical repair, postpartum of current obstetric laceration of rectum and sphincter ani
5.PC.80.JU	Surgical repair, postpartum of current obstetric high vaginal laceration
5.PC.80.JL	Surgical repair, postpartum of current obstetric laceration of broad ligament(s) of uterus
<b>Additional Codes</b>	<b>Inclusions</b>
5.MD.53.^	Forceps traction and rotation delivery
5.MD.54.^	Vacuum traction delivery
5.MD.55.^	Combination of vacuum and forceps delivery
5.MD.56.NN	Breech delivery without episiotomy, partial breech extraction [assisted breech delivery] with forceps to aftercoming head
<b>Additional Codes</b>	<b>Exclusions</b>
5.MD.60.^	Caesarean section delivery
O10–O16 O21–O26 O28–O37 O40–O46 O48.– O60–O75 O85–O92 O95.– O98–O99 Z37.–	Outcome of delivery (refer to <a href="#">Appendix A</a> of the <a href="#">Hospital Harm Indicator General Methodology Notes</a> )





## OVERVIEW AND IMPLICATIONS

Lacerations are common after vaginal birth. Trauma can occur on the cervix, vagina, and vulva, including the labial, periclitoral, and periurethral regions, and the perineum (American College of Obstetricians and Gynecologists (ACOG), 2018). A woman's safety during childbirth can be assessed by looking at potentially avoidable tearing of the perineum (Organization for Economic Co-operation and Development (OECD), 2019) and other obstetrical injuries to the pelvic organs during vaginal deliveries. While it is not possible to prevent these types of tears in all cases, they can be reduced by appropriate labour management and high-quality obstetric care (OECD, 2019).

### Obstetric anal sphincter injuries (OASIS) (also known as Obstetric Anal Sphincter Injury - OASI)

Perineal trauma occurs either spontaneously with vaginal delivery or secondarily as an extension to an episiotomy. Severe perineal trauma can involve damage to the anal sphincters and anal mucosa. Obstetric anal sphincter injuries (OASIS) refers to third- and fourth-degree perineal tears. Third degree tears involve a partial or complete disruption of the anal sphincter complex which includes the external anal sphincter and the internal anal sphincter. Fourth degree tears involve disruption of the anal mucosa in addition to division of the anal sphincter complex (Aasheim et al., 2017; Harvey & Pierce, 2015). The table below lists the classification of OASIS from first to fourth degree.

<b>First degree</b>	Injury to perineal skin only
<b>Second degree</b>	Injury to perineum involving perineal muscles but not involving the anal sphincter
<b>Third degree</b>	Injury to perineum involving the anal sphincter complex:
<b>3a</b>	Less than 50% of external anal sphincter (EAS) thickness torn
<b>3b</b>	More than 50% of EAS thickness torn
<b>3c</b>	Both EAS and internal anal sphincter (IAS) torn
<b>Fourth degree</b>	Injury to perineum involving the anal sphincter complex (EAS and IAS) and anal epithelium

(Royal College of Obstetricians and Gynaecologists (RCOG), 2015; Harvey & Pierce, 2015)

Obstetric anal sphincter injuries can have a significant impact on women by impairing their quality of life in both the short and long term. One of the most distressing immediate complications of perineal injury is perineal pain. Short-term perineal pain is associated with edema and bruising, which can be the result of tight sutures, infection, or wound breakdown. Perineal pain can lead to urinary retention and defecation problems in the immediate postpartum period. In the long term, women with perineal pain may have dyspareunia and altered sexual function. Additionally, complications of severe perineal tears include abscess formation, wound breakdown, anal incontinence and rectovaginal fistulae (Harvey & Pierce, 2015).

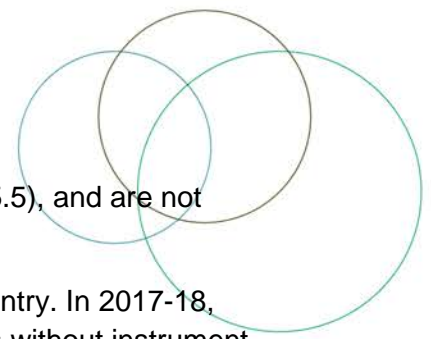
Canada lags behind other Organisation for Economic Co-operation and Development (OECD) countries on measures of patient safety. Specifically, obstetrical trauma rates in Canada are





## HOSPITAL HARM IMPROVEMENT RESOURCE

### Obstetric Trauma



twice as high as the OECD average (without instrument = 1.4, instrument = 5.5), and are not improving (Canadian Institute for Health Information (CIHI), 2019a).

The incidence of obstetric and sphincter injuries varies widely across our country. In 2017-18, Canada's average rate of obstetric and sphincter injuries in vaginal deliveries without instrument assistance was 3.1 per 100 deliveries with provincial rates ranging between 1.3 and 4.2 (CIHI, 2019b).

Assisted vaginal deliveries increase the risk of significant perineal trauma (OECD, 2019; Hobson et al., 2019; Harvey & Pierce, 2015) and obstetrical anal sphincter injuries are more commonly associated with forceps deliveries than with vacuum-assisted vaginal deliveries (Hobson et al., 2019, Harvey & Pierce, 2015). In vaginal deliveries with instrument assistance, the average Canadian rate was 16.4 per 100 deliveries, with provincial rates ranging between 6.0 and 24.1 (CIHI, n.d.).

Other risk factors for perineal trauma include: Asian ethnicity, primiparity, birth weight greater than four kg, shoulder dystocia, occipito-posterior position, and prolonged second stage labour (RCOG, 2015; Harvey & Pierce, 2015).

### Cervical laceration

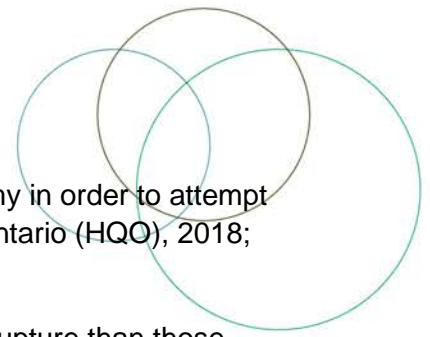
Intrapartum cervical lacerations are traditionally thought of as occurring due to the delivery of the fetus through the cervix at the time of vaginal birth. However, cervical lacerations may also be noted at the time of Caesarean delivery (CD), particularly when the Caesarean is performed during the second stage of labor (either due to second-stage arrest or for fetal indications) (Wong et al., 2016).

Although many studies have been published on vaginal and perineal lacerations, data on the incidence, clinical characteristics, and risk factors of intrapartum cervical lacerations is sparse (Melamed et al., 2009). Based on the limited literature, it has been reported that intrapartum cervical lacerations are common, with an overall incidence that ranges from 25 to 90 per cent in different reports. However, most cases are asymptomatic and are noted only on routine examination of the cervix (Melamed et al., 2009). Clinically significant cervical lacerations have been reported to complicate 0.2 to 4.8 per cent of all vaginal deliveries. Clinically significant cervical lacerations have been defined as lacerations that were associated with abnormal vaginal bleeding, those requiring cervical suturing or those lacerations that extend to involve the lower uterine segment or the vaginal wall (Melamed et al., 2009).

### Uterine rupture

Uterine rupture during labour, a rare but severe obstetric complication (Andersen et al., 2016), is defined as spontaneous tearing of the uterus that may result in the fetus being expelled into the peritoneal cavity. Uterine rupture can occur during late pregnancy or active labor. It occurs most often along healed scar lines in women who have had prior Caesarean deliveries. Other predisposing factors include congenital uterine abnormalities, trauma, and other uterine surgical procedures such as myomectomies or open maternal-fetal surgery (Moldenhauer, 2020). Uterine





rupture is an urgent situation that requires immediate attention and laparotomy in order to attempt to decrease maternal and perinatal morbidity and mortality (Health Quality Ontario (HQQ), 2018; Dy et al., 2019).

People who labour after a previous Caesarean have a higher risk of uterine rupture than those who choose an elective repeat Caesarean section (HQQ, 2018). Despite this risk it is important to note that a vaginal birth after Caesarean (VBAC) is associated with decreased maternal morbidity and a decreased risk of complications in future pregnancies as well as a decrease in the overall Caesarean delivery rate at the population level (ACOG, 2019).

In Canada, the primary Caesarean section rate has remained stable at 17.8 per cent, however the proportion of women with previous CS who underwent a repeat CS, has steadily increased. This steady rise in repeat CS is accompanied by a decline in women having a Trial of Labour after a previous Caesarean section (TOLAC) and vaginal birth after Caesarean (VBAC) (Dy et al., 2019).

The SOGC offers evidenced-based guidelines for the provision of a trial of labour after Caesarean section (Dy et al., 2019). Key messages from their Clinical Practice Guideline, Trial of Labour after Caesarean are:

1. TOLAC is recommended in women without contraindications to labour and vaginal birth, with a previous vaginal birth, and/or those who present in spontaneous labour.
2. The relative risk of maternal death is higher for elective repeat Caesarean section (ERCS) and the relative risk of uterine rupture is higher for TOLAC, but the absolute risks of either of these outcomes is low.
3. The baseline risk of uterine rupture with a TOLAC is 0.47 per cent.
4. Women planning a TOLAC should be advised that the relative risk of perinatal mortality is higher with TOLAC compared to ERCS, but the absolute risk is low.
5. Continuous fetal monitoring and access to immediate laparotomy are essential when planning a TOLAC.

A woman and her health care provider must decide together whether an appropriate situation exists for considering TOLAC (Dy et al., 2019). Informed, documented, and shared decision making of the risks of TOLAC versus ERCS is essential. All centres should have a plan for managing uterine rupture. Drills or other simulations may be useful in preparing for these rare emergencies.

## **GOAL**

Reduce the incidence of obstetric trauma captured in this clinical group.

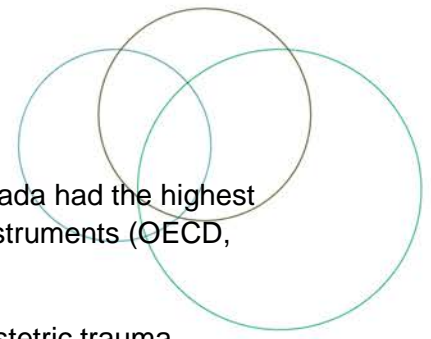
## **IMPORTANCE FOR PATIENTS AND FAMILIES**

In Canada, there are approximately to 380,000 births each year (Statistics Canada, n.d.). Although many births may appear to be 'normal' and uneventful, data portray a different scenario.



## HOSPITAL HARM IMPROVEMENT RESOURCE

### Obstetric Trauma



According to data from the OECD, of the 23 reporting countries in 2017, Canada had the highest reported rate of obstetric trauma for both vaginal deliveries with and without instruments (OECD, 2019).

Obstetric trauma is among the most common adverse events in Canada. Obstetric trauma, including third degree and greater lacerations which may result in longer lengths of stay for mothers, as well as chronic complications such as fecal incontinence, dyspareunia, perineal pain and other pelvic floor disorders (CIHI, n.d.). The immediate and long term psychological and physical impact of these complications on the mother and family are difficult to calculate. Many of the adverse events that occur are the result of system failures, rather than individual failures. It is now known that by creating a more reliable system of care we will be able to prevent, mitigate, and identify opportunities to prevent harm (Institute for Healthcare Improvement (IHI), 2012).

### Patient Story

#### OASI videos-Why reducing OASI matters

Here are videos of three women who have anonymously spoken out about their experience of suffering from the effects of an OASIS (RCOG, n.d.).

[OASI – Tia's story](#)

[OASI – Sarah's story](#)

[OASI – Lisa's Story](#)

## CLINICAL AND SYSTEM REVIEWS, INCIDENT ANALYSES

Given the broad range of potential causes of complications from obstetric trauma, clinical and system reviews should be conducted to identify latent causes and determine appropriate recommendations.

Occurrences of harm are often complex with many contributing factors. Organizations need to:

1. Measure and monitor the types and frequency of these occurrences.
2. Use appropriate analytical methods to understand the contributing factors.
3. Identify and implement solutions or interventions that are designed to prevent recurrence and reduce risk of harm.
4. Have mechanisms in place to mitigate consequences of harm when it occurs.

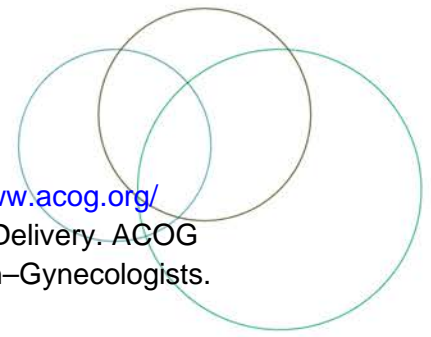
To develop a more in-depth understanding of the care delivered to patients, chart audits, incident analyses and prospective analyses can be helpful in identifying quality improvement opportunities. Links to key resources for [conducting chart audits](#) and [analysis methods](#) are included in the [Hospital Harm Improvement Resources Introduction](#).

If your review reveals that your cases of OB Trauma are related linked to specific processes or procedures, you may find these resources helpful:



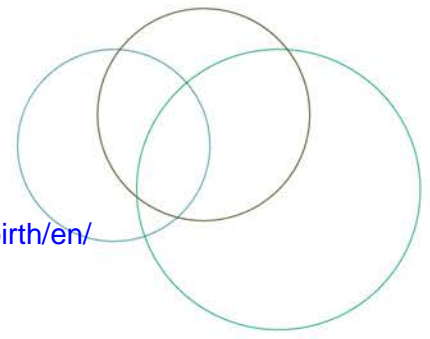
## HOSPITAL HARM IMPROVEMENT RESOURCE

### Obstetric Trauma



- American College of Obstetricians and Gynecologists (ACOG). <https://www.acog.org/>
  - Prevention and Management of Obstetric Lacerations at Vaginal Delivery. ACOG Practice Bulletin, Clinical Management Guidelines for Obstetrician–Gynecologists. Number 198, September 2018.
  - Operative Vaginal Delivery. ACOG Practice Bulletin, Clinical Management Guidelines for Obstetrician–Gynecologists. Number 154, November 2015.
  - Vaginal Birth After Cesarean Delivery. ACOG Practice Bulletin, Clinical Management Guidelines for Obstetrician–Gynecologists. Number 2015, February 2019.
- Association of Women’s Health, Obstetric and Neonatal Nurses. [www.awhonn.org](http://www.awhonn.org)
- Association of Ontario Midwives. <https://www.ontariomidwives.ca/>
  - Vaginal birth after Previous Low-Segment Caesarean Section, Clinical Practice Guideline, 14. September 2011.  
<https://www.ontariomidwives.ca/sites/default/files/CPG%20full%20guidelines/CPG-Vaginal-birth-after-caesarean-section-PUB.pdf>
- Ontario Health. <https://www.hqontario.ca/>
  - Vaginal Birth After Cesarean: (VBAC)-Quality Standard-  
<https://www.hqontario.ca/Evidence-to-Improve-Care/Quality-Standards/View-all-Quality-Standards/Vaginal-Birth-After-Caesarean-VBAC>
- National Institute for Health and Care Excellence (NICE). <https://www.nice.org.uk/>
  - Intrapartum care for healthy women and babies. Clinical guideline 190. Published date: December 2014, Last updated: February 2017.  
<https://www.nice.org.uk/guidance/cg190>
  - Caesarean section. Clinical guideline 132. Published date: November 2011 Last updated: September 2019. <https://www.nice.org.uk/guidance/cg132>
- Royal College of Obstetricians and Gynaecologists (RCOG). <https://www.rcog.org.uk/>
  - The OASI Care Bundle Project- <https://www.rcog.org.uk/en/guidelines-research-services/audit-quality-improvement/oasi-care-bundle/>
  - The Management of Third- and Fourth-Degree Perineal Tears- Green-top Guideline No. 29, June 2015
  - Birth After Previous Caesarean Birth-Green-top Guideline No. 45, October 2015
- Society of Obstetricians and Gynaecologists of Canada (SOGC). <https://sogc.org/>
  - Obstetrical Anal Sphincter Injuries (OASIS): Prevention, Recognition, and Repair. SOGC Clinical Practice Guideline. No. 330, December 2015.
  - Assisted Vaginal Birth. SOGC Clinical Practice Guideline. No. 381, June 2019.
  - Trial of Labour After Cesarean. SOGC Clinical Practice Guideline. No. 382, July 2019.
- World Health Organization (WHO). <https://www.who.int/>





- WHO Safe Childbirth Checklist.  
<https://www.who.int/patientsafety/implementation/checklists/childbirth/en/>

## **MEASURES**

Vital to quality improvement is measurement, and this applies specifically to implementation of interventions. The chosen measures will help to determine whether an impact is being made (primary outcome), whether the intervention is actually being carried out (process measures), and whether any unintended consequences ensue (balancing measures). In selecting your measures, consider the following:

- Whenever possible, use measures you are already collecting for other programs.
- Evaluate your choice of measures in terms of the usefulness of the final results and the resources required to obtain them; try to maximize the former while minimizing the latter.
- Try to include both process and outcome measures in your measurement scheme.
- You may use different measures or modify the measures described below to make them more appropriate and/or useful to your particular setting. However, be aware that modifying measures may limit the comparability of your results to others.
- Posting your measure results within your hospital is a great way to keep your teams motivated and aware of progress. Try to include measures that your team will find meaningful and exciting (IHI, 2012).

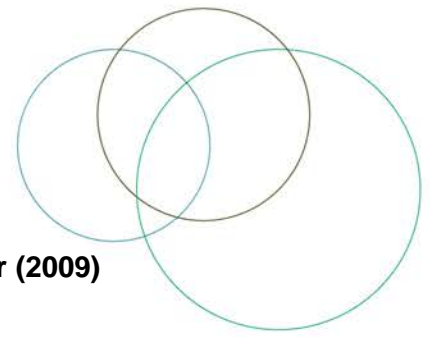
## **GLOBAL PATIENT SAFETY ALERTS**

[Global Patient Safety Alerts](#) (GPSA) provides access and the opportunity to learn from other organizations about specific patient safety incidents including alerts, advisories, recommendations and solutions for improving care and preventing incidents. Learning from the experience of other organizations can accelerate improvement.

### **Recommended search terms:**

- Obstetric trauma
- Vaginal birth after Caesarean section (VBAC)
- Uterine Rupture
- Third degree perineal tear
- Fourth degree perineal tear
- Obstetric anal sphincter injuries





## OBSTETRIC TRAUMA SUCCESS STORIES

### British Columbia Patient Safety & Quality Council-Quality Award Winner (2009) Managing Obstetrical Risk Efficiently (MORE<sup>OB</sup>) in Northern Health

The MORE<sup>OB</sup> program launched in 2006, is a comprehensive patient safety, professional development and performance improvement program for hospital caregivers and administrators providing obstetrical care in Northern Health.

Over the past four years, health care providers and administrators working in obstetrics have come together as a cohesive team with a shared passion and goal for putting patient safety first. Ninety-three per cent of Northern Health obstetrical healthcare providers (including physicians, midwives, nurses and administrators) are participating in the program. Evaluation of the program has found a growth in leadership capacity with safe patient care at the core. Activities within the program include environmental scans, patient satisfaction surveys, staying current with new evidence and best practices, participating in workshops, and competency drills. The program structure is based on proven principles of High Reliability Organizations, including:

1. Patient safety is the priority and everyone's responsibility.
2. Communication is highly valued.
3. Operations are a team effort.
4. Hierarchy disappears in an emergency.
5. Emergencies are rehearsed.

Reviews with all types of health care providers are routinely held. The MORE<sup>OB</sup> program's Annual Cultural Assessment for 2009 revealed that the participants had an improved sense of work culture, including: open communication with respect to patients and general knowledge; valuing each other's knowledge-base and skills sets; and an improved sense of teamwork. An improvement in staff retention and recruitment has been seen in all sectors.

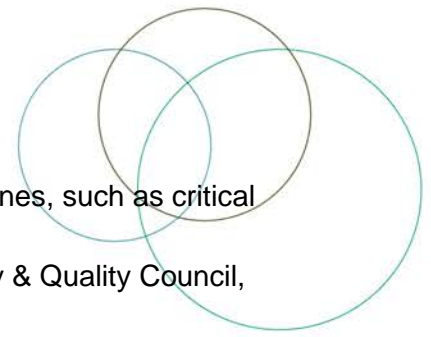
Statistical information from the B.C. Perinatal Health Program database shows improved statistics on the number of: labour inductions, mothers who received an epidural, intermittently listening to the unborn baby's heart during labour (auscultation), number of Caesarean-section deliveries, and newborns with cord blood gases after delivery.

Changes and efforts that were made to achieve these outcomes and spread the initiative included the following:

- promoting the annual program components of the MORE<sup>OB</sup> program for all participants;
- monthly regional obstetrical rounds via videoconference;
- development of a Regional Perinatal Council, including quality;
- practice working groups;
- growing communities of practice;

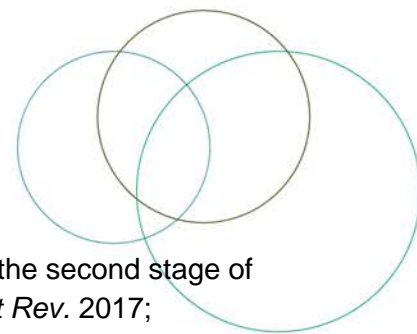


**HOSPITAL HARM IMPROVEMENT RESOURCE**  
**Obstetric Trauma**



- design of a template to support Council development for other disciplines, such as critical care, emergency care and long-term care; and
- annual planning conference for core team leaders. (BC Patient Safety & Quality Council, 2009)





## REFERENCES

- Aasheim V, Nilsen AB, , Reinar LM, Lukasse M. Perineal techniques during the second stage of labour for reducing perineal trauma (Review). *Cochrane Database Syst Rev.* 2017; 6:CD006672. doi: 10.1002/14651858.CD006672.pub3. doi: [10.1002/14651858.CD006672.pub3](https://doi.org/10.1002/14651858.CD006672.pub3)
- American College of Obstetricians and Gynecologists (ACOG), committee on Practice Bulletins-Obstetrics. ACOG Practice Bulletin No. 198: Prevention and Management of Obstetric Lacerations at Vaginal Delivery. *Obstet Gynecol.* 2018;132(3):e87-e102. doi:[10.1097/AOG.0000000000002841](https://doi.org/10.1097/AOG.0000000000002841)
- American College of Obstetricians and Gynecologists (ACOG), committee on Practice Bulletins-Obstetrics. ACOG Practice Bulletin No. 205: Vaginal Birth After Cesarean Delivery. *Obstet Gynecol.* 2019;133(2):e110-e127. doi:[10.1097/AOG.0000000000003078](https://doi.org/10.1097/AOG.0000000000003078)
- Andersen MM, Thisted DLA, Amer-Wahlin I, Krebs L. Can Intrapartum Cardiotocography Predict Uterine Rupture among Women with Prior Caesarean Delivery?: A Population Based Case-Control Study. *PLoS One.* 2016;11(2):e0146347. doi:[10.1371/journal.pone.0146347](https://doi.org/10.1371/journal.pone.0146347)
- BC Patient Safety & Quality Council. Quality Awards 2009. Managing Obstetrical Risk Efficiently (MOREOB): Northern Health. BC Patient Safety & Quality Council; 2009. <https://bcpsqc.ca/quality-awards/winners/managing-obstetrical-risk-efficiently-moreob-northern-health/> Accessed April 21, 2020.
- Canadian Institute for Health Information (CIHI). *Canada continues to lag behind other OECD countries on measures of patient safety.* Ottawa, ON: CIHI; 2019a. <http://www.cihi.ca/en/canada-continues-to-lag-behind-other-oecd-countries-on-measures-of-patient-safety>
- Canadian Institute for Health Information (CIHI). *Indicator library: Obstetric trauma (with instrument).* CIHI; n.d. <http://indicatorlibrary.cihi.ca/pages/viewpage.action?pageId=5111843>
- Canadian Institute for Health Information (CIHI). *OECD Interactive Tool: International Comparisons — Patient Safety: OB Trauma: No Instrument: Provincial comparison with all OECD countries, 2017 or most recent year.* CIHI. Published December 13, 2019b. <http://www.cihi.ca/en/oecd-interactive-tool-international-comparisons-patient-safety>. Accessed April 20, 2020.
- Dy J, DeMeester S, Lipworth H, Barrett J. No. 382-Trial of Labour After Caesarean. *J Obstet Gynaecol Can.* 2019;41(7):992-1011. doi:[10.1016/j.jogc.2018.11.008](https://doi.org/10.1016/j.jogc.2018.11.008)
- Harvey MA, Pierce M. No. 330 Obstetrical anal sphincter injuries (OASIS): Prevention, recognition, and repair. *J Obstet Gynaecol Can.* 2015;37(12):1131–1148. Erratum. doi: [10.1016/j.jogc.2016.02.004](https://doi.org/10.1016/j.jogc.2016.02.004)





## HOSPITAL HARM IMPROVEMENT RESOURCE

### Obstetric Trauma



Health Quality Ontario (HQO). *Vaginal birth after Caesarean (VBAC): care for people who have had a Caesarean birth and are planning their next birth*. HQO. Published 2018.

<https://www.hqontario.ca/Evidence-to-Improve-Care/Quality-Standards/View-all-Quality-Standards/Vaginal-Birth-After-Caesarean-VBAC>. Accessed April 21, 2020.

Hobson S, Cassell K, Windrim R, Cargill Y. No. 381-Assisted Vaginal Birth. *J Obstet Gynaecol Can*. 2019;41(6):870-882. doi:[10.1016/j.jogc.2018.10.020](https://doi.org/10.1016/j.jogc.2018.10.020)

Institute for Healthcare Improvement (IHI). *How-to Guide: Prevent Obstetrical Adverse Events*. Cambridge, MA: IHI; 2012.

<http://www.ihl.org/resources/Pages/Tools/HowtoGuidePreventObstetricalAdverseEvents.aspx>.

Melamed N, Ben-Haroush A, Chen R, Kaplan B, Yogev Y. Intrapartum cervical lacerations: Characteristics, risk factors, and effects on subsequent pregnancies. *American Journal of Obstetrics and Gynecology*. 2009;200(4):388.e1-388.e4. doi:[10.1016/j.ajog.2008.10.034](https://doi.org/10.1016/j.ajog.2008.10.034)

Moldenhauer JS. Uterine Rupture. *Merck Manual*. January 2020.

<https://www.merckmanuals.com/professional/gynecology-and-obstetrics/abnormalities-and-complications-of-labor-and-delivery/uterine-rupture>. Accessed April 21, 2020.

Organization for Economic Co-operation and Development (OECD). *Health at a Glance 2019: OECD Indicators*. Paris, FR: OECD Publishing; 2019. doi:[10.1787/4dd50c09-en](https://doi.org/10.1787/4dd50c09-en)

Royal College of Obstetricians and Gynaecologists (RCOG). *The Management of Third- and Fourth-Degree Perineal Tears*. Royal College of Obstetricians and Gynaecologists; 2015. <https://www.rcog.org.uk/globalassets/documents/guidelines/gtg-29.pdf>

Royal College of Obstetricians and Gynaecologists (RCOG). OASI videos: *Why reducing OASI Matters*. Royal College of Obstetricians and Gynaecologists.

<https://www.rcog.org.uk/en/guidelines-research-services/audit-quality-improvement/oasi-care-bundle/oasi-videos/> Accessed April 21, 2020.

Statistics Canada. *Table 17-10-0016-01. Estimates of births, by sex, annual*. Ottawa, ON: Statistics Canada; n.d. doi:[10.25318/1710001601-eng](https://doi.org/10.25318/1710001601-eng). Accessed April 20, 2020.

Wong LF, Wilkes J, Korgenski K, Varner MW, Manuck TA. Intrapartum cervical laceration and subsequent pregnancy outcomes. *AJP Rep*. 2016;6(3):e318-323. doi:[10.1055/s-0036-1592198](https://doi.org/10.1055/s-0036-1592198)

