IMPLEMENTATION GUIDE

This guide is designed to support health care providers when talking to patients about the use of oxytocin to start or advance labour.

Oxytocin to Start or Advance Labour: 5 Questions to Ask

ismp CANADA

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ISMP Canada was established in the year 2000 for the mission and mandate to promote medication safety through receiving and analyzing medication incident reports. The findings and system improvements developed from these reports are shared to the healthcare community and to consumers through ISMP Canada Safety Bulletins, newsletter, social media, special alerts, tools and guidance, seminars, workshops, meetings, contributions to the safety initiatives of other organizations, and advice to regulators and oversight agencies.

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The goal of this implementation guide is to support the use of the patient handout: Oxytocin to Start or Advance Labour - 5 Questions to Ask. The handout provides patients and their support person(s) with questions and answers about intravenous (IV) oxytocin and aims to advance the role of patients as partners in their care.

Background

Oxytocin is a high-alert medication[1,2] and when used to start or advance labour has been consistently identified as a high-risk area of practice.[3]

Improper administration can cause hyperstimulation of the uterus, which in turn can result in fetal distress, the need for an emergency caesarean section, or uterine rupture.[1]

In Canada, maternal, fetal, or neonatal harm was reported in 12% of the reports to ISMP Canada and 29% of the reports to National System for Incident Reporting NSIR in a multi-incident analysis of oxytocin medication errors.[1] An opportunity was identified to work with organizations across Canada and partner with patients to improve oxytocin safety.

This project was funded through the Canadian Medication Safety Coalition which is co-led by Healthcare Excellence Canada (previously Canadian Patient Safety Institute) and the Institute for Safe Medication Practices (ISMP) Canada.

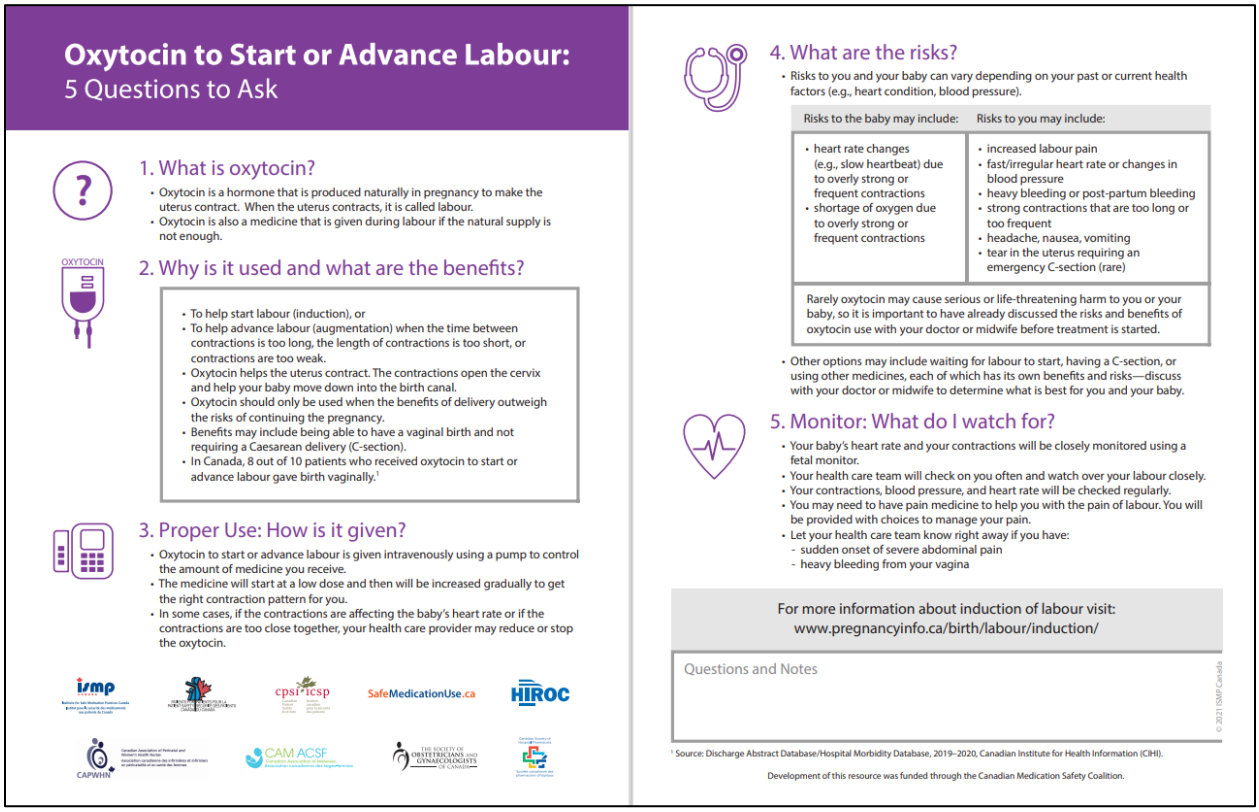
Why is a patient resource needed?

> *"This patient handout could open the lines of communication between patients and doctors and empower parents and carers to feel in control of their birth story."*
>
> *– Christie, Patient Advocate*

- The value of having written information readily available can help confirm the patient's understanding of the conversation they had with their health care provider.
- When the handout is provided during antenatal visits, the patient and their support person can refer to the information at any time and can think about what other questions they may have for their health care provider(s).
- When provided at the hospital in the birthing unit the handout can be another prompt to the patient to review the list of questions and an opportunity to ask more questions before or during IV oxytocin administration.
- Oxytocin errors are usually dose-related involving fetal heart rate (FHR) changes following a lack of timely recognition and inappropriate treatment of uterine tachysystole.[4]
- Read Christie's story: *bcparent.ca/health/what-is-informed-consent-in-the-birth-process/*
- Hear Christie's story: www.ismp-canada.org/audio/Oxytocin-Story.m4a

What is recommended by the experts?

- **Engage patients EARLY in the pregnancy.** Encourage questions about oxytocin when discussing the birth planning process with patients/families.[5] This may mean sharing information about oxytocin during antenatal visits recognizing that oxytocin may not be required. It is helpful to provide patients with as much information as early as possible to engage them in the development of the birthing plan that includes the possible use of oxytocin to start or advance labour.
- **Use a Pre-use Oxytocin Safety Checklist.** Ontario's Provincial Council for Maternal and Child Health's *Safe Administration of Oxytocin* report has a pre-use safety checklist for low-risk pregnant patients.[6] The report recommends that the patient demonstrates understanding of benefits and risks associated with oxytocin administration and that verbal consent is received and documented by the most responsible provider (MRP) in the patient's chart.
- **Educate patients on what concerning signs and symptoms to report.** The Agency for Healthcare Research and Quality (AHRQ) recommends to "educate the patient and family concerning signs and symptoms (e.g., uterine hypertonus, tachysystole, water intoxication) to report to nursing staff, and to provide instructions for reporting signs and symptoms to nursing staff ."[7]
- **Adopt a standardized IV oxytocin decision aid, fact sheet and/or pamphlet** to supplement the informed consent discussion(s) between the ordering or most responsible provider and the pregnant person.[8]
    - As part of the informed consent and informed choice discussions, use clear, explicit, and unbiased language when communicating with the pregnant person (and documenting) IV oxytocin-related risks, benefits, alternatives, and evidence including the risks to the fetus/future infant as well as the pregnant person.
    - This handout can support discussions.



Oxytocin to Start or Advance Labour:
5 Questions to Ask

1. What is oxytocin?

- Oxytocin is a hormone that is produced naturally in pregnancy to make the uterus contract. When the uterus contracts, it is called labour.
- Oxytocin is also a medicine that is given during labour if the natural supply is not enough.

2. Why is it used and what are the benefits?

- To help start labour (induction), or
- To help advance labour (augmentation) when the time between contractions is too long, the length of contractions is too short, or contractions are too weak.
- Oxytocin helps the uterus contract. The contractions open the cervix and help your baby move down into the birth canal.
- Oxytocin should only be used when the benefits of delivery outweigh the risks of continuing the pregnancy.
- Benefits may include being able to have a vaginal birth and not requiring a Caesarean delivery (C-section).
- In Canada, 8 out of 10 patients who received oxytocin to start or advance labour gave birth vaginally.[1]

3. Proper Use: How is it given?

- Oxytocin to start or advance labour is given intravenously using a pump to control the amount of medicine you receive.
- The medicine will start at a low dose and then will be increased gradually to get the right contraction pattern for you.
- In some cases, if the contractions are affecting the baby's heart rate or if the contractions are too close together, your health care provider may reduce or stop the oxytocin.

4. What are the risks?

- Risks to you and your baby can vary depending on your past or current health factors (e.g., heart condition, blood pressure).

Risks to the baby may include:	Risks to you may include:
• heart rate changes (e.g., slow heartbeat) due to overly strong or frequent contractions • shortage of oxygen due to overly strong or frequent contractions	• increased labour pain • fast/irregular heart rate or changes in blood pressure • heavy bleeding or post-partum bleeding • strong contractions that are too long or too frequent • headache, nausea, vomiting • tear in the uterus requiring an emergency C-section (rare)

Rarely oxytocin may cause serious or life-threatening harm to you or your baby, so it is important to have already discussed the risks and benefits of oxytocin use with your doctor or midwife before treatment is started.

- Other options may include waiting for labour to start, having a C-section, or using other medicines, each of which has its own benefits and risks—discuss with your doctor or midwife to determine what is best for you and your baby.

5. Monitor: What do I watch for?

- Your baby's heart rate and your contractions will be closely monitored using a fetal monitor.
- Your health care team will check on you often and watch over your labour closely.
- Your contractions, blood pressure, and heart rate will be checked regularly.
- You may need to have pain medicine to help you with the pain of labour. You will be provided with choices to manage your pain.
- Let your health care team know right away if you have:
  - sudden onset of severe abdominal pain
  - heavy bleeding from your vagina

For more information about induction of labour visit:
www.pregnancyinfo.ca/birth/labour/induction/

Questions and Notes

[1] Source: Discharge Abstract Database/Hospital Morbidity Database, 2019–2020, Canadian Institute for Health Information (CIHI).

Development of this resource was funded through the Canadian Medication Safety Coalition.

Figure 1: Oxytocin to Start or Advance Labour: 5 Questions to Ask Handout (Download: www.ismp-canada.org/download/Oxytocin-Questions-EN.pdf)

How can this handout help?

- The handout was developed in partnership with patients and health care providers. The handout includes information about the risks and benefits of oxytocin when used to start or advance labour.
- The information has been designed to **supplement the conversation** between health care providers and patients/care partners about oxytocin. **It is not a substitute for informed consent.**

Key findings from a recent Canadian survey

- In a recent pan-Canadian survey of patients and health care providers (n=61), 100% of patients and over 70% of health care providers surveyed found this patient handout to be useful.
- The survey revealed that some health care providers may be concerned with the information in the handout.

> *"We had concerns about the balance of negative and positive information."*

- The survey showed that patients want to receive information, be included in the decision about oxytocin, in control of their birth story, and partners in their own care.

> *"Very clear and informative. Easy to understand. Valuable unbiased info."*

Why is it important to talk about the benefits and the risks of oxytocin with the patient?

- Shared decision-making involves discussing both the benefits and the risks of a therapy with the patient.
- A common theme in medico-legal claims involving oxytocin for induction/augmentation was that the patient was not informed of all the risks prior to the initiation of oxytocin.[8]

How could the risks of oxytocin to the baby be described to the patient?

- During a contraction, the oxygen that goes to your baby is reduced and thus your baby is holding its breath during a contraction – this is normal, and babies generally cope well.
- If the contractions are too strong or too frequent, your baby may have to hold its breath longer – which may change your baby's heart rate pattern, this will show up on the monitor - your health care provider may reduce or stop the oxytocin.

What are some additional risks of oxytocin to the patient?

- In rare instances, oxytocin can cause QT prolongation and should be given with caution to patients who have congenital QT prolongation and patients who are on medications that can prolong the QT interval.[9]
- It is therefore important to ask to the patient to share information about all the medical conditions they have, no matter how small.
- It is also important to gather information about all the medications the patient takes at home, including over-the-counter medications and natural health products. If you have questions about risks associated with medications that can prolong QT, please consult with a hospital pharmacist.

Steps to implement this resource

- **Establish a process** for conveying the risks and benefits of oxytocin to patients and their support person that includes the provision of the handout to the patient.
- **Identify midwife/doctor stakeholders** to assist in advancing the use of the handout.
- **Provide the handout at the midwife/doctor's office and/or at the patient's bedside.**
- Refer to 'A Guide to Patient Safety Improvement' which is designed to support teams across all healthcare sectors in using a Knowledge Translation and Quality Improvement integrated approach to change that will impact patient safety outcomes.[10]

Centura Health - Case Study

- A collaborative initiative of Perinatal Clinical Nurse Specialists and Obstetric Nurse Educators for a 9-hospital healthcare system throughout Colorado undertook a system-wide process-improvement project to increase safety for pregnant persons receiving oxytocin.
- The goal was to decrease risk exposure by successfully implementing a standardized evidence-based protocol and processes for oxytocin use across the healthcare system.
- In response to concerns about the prerequisite of "education by the provider about oxytocin prior to its initiation," the group created an educational handout about oxytocin. The handout was shared with providers to obtain input and approval for dissemination. Physicians and midwives were supportive of standardized oxytocin education.
- The educational handout regarding oxytocin was made available at each hospital for patients who needed additional information prior to initiation of oxytocin.
- Each Perinatal Council representative identified key physician stakeholders at their individual facility. This provided the council member with a physician counterpart to assist in championing the practice change.[11]

Measuring the impact

- We encourage organizations to endeavor to include both qualitative and quantitative measures in their quality assurance program. This may include review of medication incidents relating to oxytocin administration and management where recommendations can be shared broadly with the clinical provider teams.
- The Ontario Provincial Council for Maternal and Child Health in Ontario has some suggested measures in the *Safe Administration of Oxytocin*[6] report on page 42.
- Medication incidents related to oxytocin can be reported to ISMP Canada. (www.ismp-canada.org/err_ipr.htm) or for hospitals, to the National System for Incident Reporting (NSIR) via the usual hospital reporting process.
- Adverse reactions can be reported to Health Canada (www.canada.ca/en/health-canada/services/drugs-health-products/medeffect-canada/adverse-reaction-reporting.html)
- Patients and their care partners can also report adverse reactions or medication errors to mederror.ca.

Resources

- ISMP Canada Oxytocin Safety: www.ismp-canada.org/oxytocinsafety/
- Safe Medication Use Newsletter: bit.ly/2TYJ0zJ
- Mismanagement of Oxytocin: Risk Reference Sheet. Sep 2020. HIROC. www.hiroc.com/resources/risk-reference-sheets/mismanagement-iv-oxytocin
- Administration of Oxytocin. The Provincial Council for Maternal and Child Health. www.pcmch.on.ca/pcmch-safe-administration-of-oxytocin/
- What is Induction? The Society of Obstetricians and Gynaecologists of Canada. www.pregnancyinfo.ca/birth/labour/induction/
- Tools for Advocacy and Assertion. HealthCare Excellence Canada (CPSI) www.patientsafetyinstitute.ca/en/education/TeamSTEPPS/Pages/CUS-tool.aspx

For more information contact us at info@ismpcanada.ca.

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- BC Women’s Hospital and Health Centre
- CAE Healthcare
- Canadian Association of Midwives (CAM)
- Canadian Association of Perinatal and Women's Health Nurses
- Canadian Medication Safety Coalition
- Canadian Medical Protective Association (CMPA)
- Canadian Patient Safety Institute (CPSI)/Healthcare Excellence Canada
- Canadian Society of Hospital Pharmacists
- Fraser Health Authority
- Hamilton Health Sciences Centre (HHSC)
- Healthcare Insurance Reciprocal of Canada
- Horizon Health Network
- Institute for Safe Medication Practices Canada
- The Ontario Association of Midwives
- Patients for Patient Safety Canada
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- Society of Obstetricians and Gynaecologists of Canada (SOGC)
- Sinai Health System
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