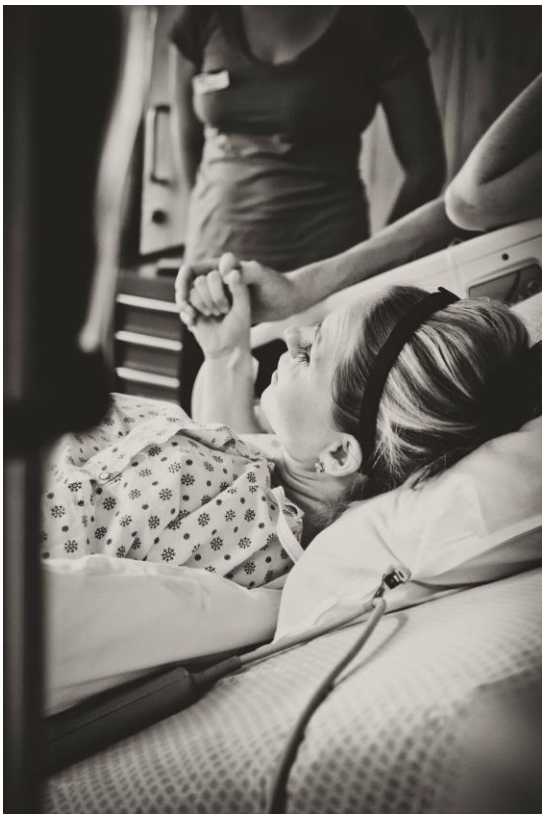
CHAMPLAIN MATERNAL NEWBORN REGIONAL PROGRAM
PROGRAMME RÉGIONAL DES SOINS À LA MÈRE ET AU NOUVEAU-NÉ DE CHAMPLAIN

# Induction of Labour Toolkit

## - Full Report -

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on behalf of the

CMNRP Induction of Labour Workgroup



August 2021

# Contents

# Disclaimer

Please note that the terms “mothers” and “women” used in this report are meant to refer to all expectant and birth parents regardless of gender or gender identity. It is important that we practice relationally and respectfully with all people, from all backgrounds, genders, and identities so they are not discriminated against, and/or inadvertently harmed by language used by healthcare providers.

The content of this document was based on extensive literature reviews and stakeholder/expert opinion. It does not define a standard of care, nor is it intended to dictate exclusive courses of practice. Rather, it presents general, recognized evidence-based recommendations that are intended to provide a foundation and direction for practice. Variations and innovations that demonstrably improve the quality of patient care are encouraged rather than restricted. Information in this document is subject to change without notice.

Although significant effort has been made to ensure the accuracy of the information presented in this report, neither the authors, CMNRP, nor any other parties make any representation or warranties as to the accuracy, reliability or completeness of the information contained herein.

# Acknowledgements

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- **Dr. Laura Gaudet**
- **Dr. Lawrence Oppenheimer**
- **Dr. Graeme Smith**

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- Queensway Carleton Hospital & The University of Ottawa's Department of Obstetrics and Gynaecology

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# Executive Summary

In December 2018, the CMNRP Advisory Committee identified Induction of Labour (IOL) as a regional clinical priority area. In February 2019 a workgroup was struck to address the inconsistencies in management of the IOL across the region. Simultaneously to the call for expression of interest (January 2019) the Provincial Council for Maternal Child Health (PCMCH) circulated the Safe Administration of Oxytocin Report. The Safe Administration of Oxytocin Report was reviewed and revised by the PCMCH Maternal Newborn and Maternal Newborn Clinically Advisory Committee's (which included CMNRP representation) before being published on the Provincial Council for Maternal and Child Health (PCMCH) website in August 2019.

The foreknowledge of the contents of the Safe Administration of Oxytocin report by PCMCH allowed for CMNRP to develop a clinical project based on identified gaps in clinical care relating to IOL. CMNRP convened interprofessional clinical experts in IOL and family advisors to guide the project charter development. The workgroup identified several areas at the front end of IOL that consistently demonstrated variation in practice across the region. Areas identified included inconsistent patient education, variation in the indications for and triaging of IOL, inconsistent use of the Bishop score, variation in practices around the use of cervical ripening and inconsistent access to outpatient IOL.

The goal of the workgroup was to design and implement an IOL toolkit with the intention to decrease variation in practices related to IOL across the region. The workgroup conducted an environmental scan and literature review. They identified and designed 8 final tools for inclusion in the toolkit. The contents of the toolkit are designed for health care providers, patients and family members and organizations. The resultant toolkit is designed to enhance the quality of care provided to patients throughout the entire IOL process.

In addition to the specific tools contained with the toolkit, knowledge translation tools and implementation strategies were also designed to assist in regional implementation. These tools were developed as part of a Master's student quality improvement project and they complement the work of the workgroup. Additional knowledge translation and implementation support will be provided to each of the CMNRP partner organizations by CMNRP's perinatal consultants.

Evaluation of the implementation of the toolkit will be conducted at 9 and 18 months following dissemination. Due to limitations in available data through the Better Outcomes Registry Network (BORN), evaluation of clinical changes may not be possible. As a result, the workgroup made suggestions to BORN for enhancements. Lack of usable data prevents us from being able to evaluate whether any clinical practice changes associated with cervical ripening have occurred as a result of the implementation of the toolkit.

# Part 1 - Methods

## Environmental Scan

An environmental scan was completed prior to commencing the Induction of Labour (IOL) workgroup. Policies and procedures were sought from all CMNRP partner organizations, along with requests to other level 3 centres across the province. Professional guidelines from the Society of Obstetricians and Gynecologists of Canada (SOGC), the Royal College of Obstetricians and Gynaecologists (RCOG) and the American College of Obstetricians and Gynecologists (ACOG) were included in the environmental scan. Content from Salus Global's Advances in Labour and Risk Management (ALARM 27th edition) program as well as the SOGC's Induction of Labour: Putting Safety First Online Course were also included. The findings of the environmental scan were collated and circulated to workgroup members for review prior to our first workgroup meeting and were then referred back to regularly throughout the remainder of the toolkit development.

## Stakeholder Engagement

In January of 2019, CMNRP extended the call for an expression of interest for a IOL workgroup. Multiple applications were received from across the region. Workgroup members were selected based on the content of their expression of interest, their professional designation or role within an organization, the level of care provided by the centre in which they work/are employed and with general intention for the group to provide regional representation. Final workgroup membership is listed in the acknowledgment section. Membership consisted of representation from nursing, midwifery, obstetrics, family medicine and hospital leadership. Despite multiple attempts to engage and include a family representative for this workgroup, no applications were received. As such, the toolkit contents were developed in collaboration with the CMNRP Family Advisory Committee (FAC) who provided input and feedback into all the tools included in the final toolkit.

## How to use the IOL Toolkit

The IOL toolkit contains several documents intended for patients and health care providers. These documents can be found on the CMNRP website (www.cmnrp.ca) or by using the links provided in this report. The intention of the regional IOL toolkit is to standardize the care provided to pregnant patient across the region as it pertains to cervical ripening and induction of labour. We recognize that processes and care may be slightly different in centres across the region, but would urge your organization to consider the rigorous processes used to develop these tools. The workgroup members all agreed that the intention of this toolkit was to help standardize evidence based care, as such many common but non-evidence based indications for IOL have intentionally been excluded.

These tools are designed to complement the work of the Provincial Council for Maternal and Child Health's (PCMCH) Safe Administration of Oxytocin initiative. The PCMCH toolkit can be found at https://www.pcmch.on.ca/health-care-providers/maternity-care/pcmch-strategies-and-initiatives/safe-administration-of-oxytocin/ and should be reviewed (and implemented) as your organization moves forward in implementing changes in the care being recommended through this toolkit. Additional support for implementation of the PCMCH Safe Administration of Oxytocin is a priority for CMNRP. If you have any questions or concerns, please contact cmnrpinfo@cmnrp.ca.

Some contents of the toolkit require organizations to explicitly name their unit and list a contact number that their patients can call for questions or ongoing telephone assessments. These tools will be sent electronically to each CMNRP partner organization. Organizations requiring word file format documents to support formatting based on internal forms committees can send their request to cmnrpinfo@cmnrp.ca.

## Toolkit Content Development

The members of the workgroup identified the toolkit contents based on their center's needs. The suggested contents were brought back to the CMNRP Advisory Committee and Leadership team for approval.

Recognizing subtle differences in clinical practice across the region, the workgroup aimed to create tools based of the best evidence available at the time. Where there was a lack of high quality evidence, the workgroup deferred to the SOGC Clinical Practice Guideline's on the subject. When no SOGC guideline existed, or in instances where these guidelines were felt to be outdated, the workgroup referred to the ALARM program's 27th edition manual (whose content is reviewed and approved by the Obstetrical Content Review (OCR) committee of the SOGC), the Cochrane database of systematic reviews and ultimately to our regional Maternal Fetal Medicine experts who supported the final content within our regional tools.

## Final Toolkit Contents

The final CMNRP Induction of Labour toolkit contains an array of patient education tools, clinical education and clinical practice tools as well as policies and procedures. All tools are based off the most up to date clinical best practice guidelines. The content of the toolkit includes the following:

### 1. Induction of Labour Request Form

This form is designed for all primary obstetrical health care providers (HCP) responsible for booking an IOL. Revised from the previous regional IOL Request form, this form has been enhanced to prompt the HCP to consider the clinical indication for IOL as well as the priority status given the indication. This form is meant to be filled out in clinic at the time a decision and discussion including consent for IOL occurs. Updates to this tool include information on previous Cesarean section and uterine scar; recommended methods for cervical ripening based on the discussion the primary OB HCP has had with the patient and their Bishops score in clinic. Indications around the clinical education and/or tools which have been provided; suggested time frames for IOL based on the priority rating of the indication for induction and criteria for outpatient IOL candidacy. Furthermore, Bishop's score calculations have been added to this sheet to allow for the clinician starting the cervical ripening or induction to assess any cervical changes and consider whether further cervical ripening may benefit the patient prior to initiating the IOL.

### 2. Cervical Ripening Options Flowchart for Health Care Providers

This tool was designed to assist the primary obstetrical HCP decide which method of cervical ripening is optimal for the patient. It outlines the current methods of cervical ripening used across the region, highlights the options for cervical ripening with rupture of membranes, and highlights when inpatient IOL should be done rather than outpatient. This tool is formatted to be enlarged, printed and laminated and posted in a clinical decision making area.

### 3. Induction of Labour Audit Tool

The IOL audit tool was created to assist with auditing IOL practices including documented indications for IOL and outcomes and/or standards of care within each centre. Standards of care refer to those set out in the Low Risk Birth Initiative set forth by the PCMCH and can be used separately or in combination. Organizations can use this audit template by printing and completing a form for each patient, or by using the parameters to set up their own audit tool. This tool has been adapted from Safer Care Victoria to fit the context of obstetrical care in Ontario. The key audit measures include:

Antenatal Care and Decision Making, Indications for IOL, IOL Methods and Outcomes. Each section of the audit tool is color coded to facilitate specific audit measurements.

### 4. Patient Education Tool - Induction of Labour (multimodality tool)

This patient education tool was created to help patients understand the concept of cervical ripening and IOL. This tool highlights indications for IOL, methods of IOL, and answers many of the frequently asked questions patients have about IOL. It also includes information on the process of IOL, the length of time cervical ripening may take, and information about the acuity of labour and birth units, to help patients to better prepare for the busyness of some of the units across the region.
This tool is available in both French and English and can be used in different formats:

- Electronic patient education tool (which includes a poster with a QR code to post in waiting rooms or clinic areas)
- Printable patient education tool,
- PowerPoint presentation.

This is tool is meant to be given to patients in the antenatal period. Clinics and organizations may laminate the abbreviated poster with the QR code and display it in their assessment and waiting rooms. Patients can scan the QR code with their mobile and be directed to the electronic version of the 2 page patient education tool. For patients who do not have access to mobile devices, the HCP can print off a copy of the handout available at www.cmnrp.ca.

This patient education tool will be available on the CMNRP website. To ensure accuracy, CMNRP will be responsible for maintaining this tool.

The PowerPoint presentation can be looped on an electronic screen/television in your clinic/organizations waiting area. The presentation includes basic information on IOL, similar to the content in the electronic patient education tool; it also includes the QR code for more information.

### 5. Patient Information Sheet – Outpatient Cervical Ripening

This tool was designed to be given out to patients once the decision to have an outpatient cervical ripening (prior to commencing induction with oxytocin) has been made with their Most Responsible Provider (MRP). It provides information on what to expect and explains in detail the process of outpatient cervical ripening. The HCP and patient should discuss the contents of this sheet in clinic. The patient should then be instructed to review this information further and write out additional questions they have. This tool is designed to allow each organization to include their unit name and telephone number.

Specific information includes:

- Various methods of cervical ripening
- The possibility of needing repeat doses or a combination of different methods to ripen the cerrvix
- Specific times the patient is expected to call the unit throughout the cervical ripening process
- Indications for the patient to return to the unit and
- Caution instructions

### 6. Telephone Assessment for Outpatient Cervical Ripening for Health Care Providers

The telephone assessment for outpatient cervical ripening is a documentation tool that is to be used to conduct a telephone assessment of uterine activity, fetal movement and general maternal well-being. This tool has been designed to prompt the HCP conducting the telephone assessment to determine if the patient can remain at home, or whether they should return to the hospital for further assessment. Designed to be used approximately every 6 hours following the initial method of cervical ripening, this tool will guide the clinician in identifying potential tachysystole or a decrease in fetal movement among other things, then prompting them to instruct the patient to return to the facility for additional surveillance and/or admission for subsequent cervical ripening or IOL.

To optimize the patient experience, this tool coincides with the Outpatient Cervical Ripening Patient Information Sheet; it allows for the opportunity for the patient to call at the scheduled time or in advance of going to sleep.

### 7. Misoprostol for Cervical Ripening and Induction of Labour – Policy & Procedure

This policy and procedure for the use of Misoprostol for IOL in live gestations greater than or equal to 35 weeks, will support clinicians and organizations in implementing the use of oral misoprostol for IOL. Misoprostol for IOL has been implemented in several regional hospitals, and in light of oxytocin shortages across the country, supporting the use of misoprostol provides opportunity for IOL for those patients who present with rupture of membranes, minimal or no uterine activity and an unfavorable cervix. This policy supports the use of misoprostol for *INPATIENT* cervical ripening and IOL only.

### 8. Outpatient Cervical Ripening – Policy & Procedure

The outpatient cervical ripening policy is an updated version of policies from across the region in support of implementation or continuation of the practice of outpatient IOL for those patients who can safely undergo cervical ripening in their own home/preferred environment. While many organizations within the region have been routinely offering outpatient IOL (some for 10 + years), some have not. The evidence shows increased patient satisfaction and no differences in measures of neonatal safety or mode of delivery with use of outpatient induction. There is however limited evidence on the use of prostaglandins for outpatient cervical ripening. As such, particular attention to documentation around the inclusion (or exclusion) criteria for those potential outpatient IOL candidates, as well as meticulous methods for ensuring patient contact throughout the process are of the utmost importance.

## Knowledge Translation

The toolkit will be launched in the summer of 2021. Communication around the launch will be shared via the Weekly News, social media and dissemination through targeted emails to partner organizations. Following dissemination, CMNRP will reach out to each partner organization to provide support for implementation and knowledge translation.

Our knowledge translation strategy includes work completed by Masters of Nursing student Sarah Richardson (University of Ottawa). Due to the limitation of the COVID-19 pandemic, Sarah focused her time on one centre

in the Champlain Region: the Queensway Carleton Hospital. Knowledge translation strategies for implementation of the toolkit developed by Sarah will continue to be used throughout the region as we implement the toolkit.

### Implementation and Evaluation

Implementation will occur on a regional level based on individual organization and program priorities. Ideally, regional implementation of a toolkit such as this could be completed in a brief period of time given that it is based on evidence based best practices. However due to corporate organizational demands, staffing logistics, COVID-19 pandemic, organizations processes for approving new policies and procedures as well as practice changes and formatting of tools (including policies, procedures, documentation tools, patient education tools, the potential need to translate documents beyond those available in translated format within the toolkit etc.); realistically, implementation may take upwards of 18 months.

Due to limitations in the data available through BORN, evaluation of changes in practice as a result of the toolkit will be impossible on a regional level without creating significantly more work for clinical managers or educators. Limitations identified by the workgroup were brought forward to BORN's Enhancements Working Group to highlight potential system upgrades that would provide better opportunity to truly understand the landscape of cervical ripening and IOL across our region and the province.

As a result, the evaluation will focus on the implementation of the toolkit. Evaluation will be conducted at 9 and 18 months following dissemination to our regional partners.

## Part 2 – Induction of Labour Toolkit Contents

Click on the titles to download tools

### 1. Induction of Labour Request Form

- **What is it?**
  This form was revised from the previous regional IOL Request Form. It has been enhanced to prompt the HCP to consider the clinical indication for IOL as well as the priority status given the indication.

- **Who can use this?**
  Obstetricians, family physicians, registered midwives, nurse practitioners and residents.

- **How to use?**
  This form is meant to be filled out in clinic at the time a decision and discussion including consent for IOL occurs. Depending on how your centre utilizes your IOL request form, this tool may be used in a paper format or added in your electronic medical record (EMR) system.

### 2. Cervical Ripening Options Flowchart

- **What is it?**
  This tool was designed to assist the primary obstetrical HCP decide which method of cervical ripening is optimal for the patient. It outlines the current methods of cervical ripening used across the region, highlights the options for cervical ripening with rupture of membranes, and highlights when inpatient IOL should be done rather than outpatient.

- **Who can use this?**
  Obstetricians, family physicians, registered midwifes, registered nurses, nurse practitioners, residents, medical students and nursing students.

- **How to use it?**
  This tool is formatted to be enlarged, printed and laminated and posted in a clinical decision making area.

### 3. Induction of Labour Audit Tool

- **What is it?**
  The IOL audit tool was created to assist with auditing IOL practices including documented indications for IOL and outcomes and/or standards of care within each centre. This tool has been adapted from Safer Care Victoria to fit the context of obstetrical care in Ontario. The key audit measures include: Antenatal Care and Decision Making, Indications for IOL, IOL Methods and Outcomes.

- **Who can use this?**
  Nurse educators, managers or any HCP wanting to audit IOL practices.

- **How to use it?**
  Organizations can print and complete a form for each patient, or use the parameters to set up their own audit tool. Standards of care refer to those set out in the Low Risk Birth Initiative set forth by the PCMCH and can be used separately or in combination. Each section of the audit tool is color coded to facilitate specific audit measurements.

### 4. Patient Education Tool - Induction of Labour (multimodality tool)

- **What is it?**
  This patient education tool was created to help patients understand the concept of cervical ripening and IOL. This tool highlights indications for IOL, methods of IOL, and answers many of the frequently asked questions patients have about IOL. It also includes information on the process of IOL, the length of time cervical ripening may take, and information about the acuity of labour and birth units, to help patients to better prepare for the busyness of some of the units across the region.
  This tool is available in both French and English and can be used in different formats:
  - Electronic patient education tool (which includes a poster with a QR code to post in waiting rooms or clinic areas),
  - Printable patient education tool,
  - PowerPoint presentation.

- **Who can use this?**
  Obstetricians, family physicians, registered midwifes, registered nurses, registered practical nurses, nurse practitioners, residents, medical students and nursing students.

- **How to use?**
  This is tool is meant to be given to patients in the antenatal period. Clinics and organizations may laminate the abbreviated poster with the QR code and display it in their assessment and waiting rooms. Patients can scan the QR code with their mobile and be directed to the electronic version of the 2 page patient education tool. For patients who do not have access to mobile devices, the HCP can print a copy of the handout available at www.cmnrp.ca.

  This patient education tool is available only on the CMNRP website, as this allows for CMNRP to maintain the tools contents and accuracy. The patient education tool is date stamped and will be updated as needed.

  The PowerPoint presentation can be looped on an electronic screen/television in your clinic/organizations waiting area. The presentation includes high level, basic information on IOL, similar to the content in the electronic patient education tool; it also includes the QR code for more information.

## 5. Patient Information Sheet – Outpatient Cervical Ripening

- **What is it?**
  This tool was design to give out to patients once the decision to have an outpatient cervical ripening (prior to commencing induction with oxytocin) has been made with their HCP. It gives information on what to expect and explains in detail the process of outpatient cervical ripening. This tool is available in French and English.

  Specific information contained on the sheet includes:

  - Various methods of cervical ripening;
  - The possibility of needing a repeat dose or a combination of different methods to ripen the cervix;
  - Specific times the patient is expected to call the unit throughout the cervical ripening process;
  - Indications for the patient to return to the unit; and
  - Cautions for instructions at home.

- **Who can use this?**
  Obstetricians, family physicians, registered midwifes, registered nurses, nurse practitioners, residents, medical students and nursing students.

- **How to use it?**
  The HCP should give this tool to patients if an outpatient cervical ripening has been scheduled. The HCP and patient should discuss the contents of this sheet and the patient should then be instructed to review this information further, and write out any additional questions they have which the labour and birth staff can answer. This tool is designed for each organization to include their unit name and telephone number. Copies of this tools should be found in the HCP offices, clinics, and the triage of labour & delivery hospitals units. In some cases, this tool may be given in triage if the IOL was not planned in advance.

## 6. Telephone Assessment for Outpatient Cervical Ripening for Health Care Providers

- **What is it?**
  This tool is used to conduct a telephone assessment of uterine activity, fetal movement and general maternal well-being for patients at home undergoing cervical ripening. To optimize the patient experience, this tool coincides with the Outpatient Cervical Ripening Patient Information Sheet; it allows for the opportunity for the patient to call at the scheduled time or in advance if going to sleep.

- **Who can use this?**
  Obstetricians, family physicians, registered midwifes, registered nurses, nurse practitioners and residents.

- **How to use this?**
  Designed to be used approximately every 6 hours following the initial method of cervical ripening, this tool will guide the clinician in identifying potential tachysystole or a decrease in fetal movement among other things, prompting them to instruct the patient to return to the facility for additional surveillance and/or admission for subsequent cervical ripening or IOL. This is meant as a documentation tool, and can be a paper version or integrated into your facilities EMR system.

## 7. Misoprostol for Cervical Ripening and Induction of Labour Policy & Procedure

- **What is it?**
  This policy and procedure is for the use of *INPATIENT* cervical ripening and IOL with Misoprostol in live gestations greater than or equal to 35 weeks. The policy includes definitions, indications, exclusion criteria, side effects, equipment needed, procedure for administration, management and documentation. Misoprostol for IOL has been implemented in several regional hospitals for those patients who present with rupture of membranes, no or minimal uterine activity and an unfavorable cervix.

- **Who can use this?**
  Obstetricians, family physicians, registered midwives, registered nurses, nurse practitioners, residents, medical students and nursing students.

- **How to use this?**
  Organizations can use this policy and procedure to guide care for INPATIENT cervical ripening and IOL with misoprostol.

## 8. Outpatient Cervical Ripening Policy & Procedure

- **What is it?**
  The outpatient cervical ripening policy is largely an update/revision to policies from across the region. The policy supports the implementation or continuation of the practice of outpatient IOL for those patients who can safely undergo cervical ripening in their own home/preferred

environment. It includes goals, prerequisites, different options for cervical ripening, considerations, equipment needed, procedure for administration and management and documentation.

- **Who can use this?**
  Obstetricians, family physicians, registered midwifes, registered nurses, nurse practitioners, residents, medical students and nursing students.

- **How to use this?**
  Organizations can use this policy and procedure to guide care for outpatient cervical ripening.

## Part 3 - Conclusion

Wide variations exist regionally, provincially and nationally in the management of Induction of Labour (IOL). The Healthcare Insurance Reciprocal of Canada (HIROC) and the Canadian Medical Protective Association (CMPA) have identified IOL as an obstetrical intervention that commonly leads to adverse outcomes. The Provincial Council for Maternal and Child Health (PCMCH) developed and disseminated a toolkit on the Safe Administration of Oxytocin in 2019. The PCMCH toolkit however, only addressed one component of IOL, while most people who experience IOL require some form of cervical ripening prior to the administration of oxytocin. The CMNRP Advisory Committee in December of 2018 identified the need for another complementary toolkit on IOL. The CMNRP`s IOL workgroup was struck to identify gaps in the current process and revise and develop tools to enhance the implementation of evidence based care around IOL.

The workgroup identified several processes requiring revision as well as tools for development which fit within the context of the workgroup. The resultant toolkit is designed to enhance the quality of care provided to patients throughout the entire IOL process. The toolkit includes tools for health care providers and patients which are designed to guide them through the process of IOL and help decrease variation in practice across the region. Members of the workgroup were interprofessional in nature and represented all levels of care across our region. The toolkit was co-design with the CMNRP Family Advisory Committee to ensure patients would understand the process of cervical ripening and IOL.

Evaluation of the toolkit will be challenging. Lack of usable data prevents us from being able to evaluate whether any clinical practice changes associated with cervical ripening will result. As previously mentioned, the workgroup made suggestions to BORN for enhancements to their data collection specific to IOL and cervical ripening. We will evaluate the implementation of the toolkit regionally through a Red Cap Survey administered at 9 and 18 months following dissemination and knowledge translation. The results and will be shared with the CMNRP Advisory Committee and leadership team. The potential additional evaluation of clinical changes will continued to be explored by CMNRP and BORN.

For further information please contact CMNRP at cmnrpinfo@cmnrp.ca.

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INSERT ORGANIZATIONAL LOGO HERE

PATIENT IDENTIFICATION INFORMATION

# Induction of Labour (IOL) Request Form

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Preferred Name: | Tel.:<br>Alt Tel.: | | | | | | |
| Health Care Provider: | **PREVIOUS C/S: Yes ☐ No ☐ KNOWN INCISION /CLOSURE: Yes ☐ No ☐** | | | | | | |
| **REQUESTED DATE OF INDUCTION:** _____<br>**RECOMMENDED METHOD OF CERVICAL RIPENING**: ☐ Foley ☐ Cervidil ☐ Gel ☐ Misoprostol **(Inpatient only)**<br>**RECOMMENDED IOL METHOD**: ☐ ARM ☐ Oxytocin | ALLERGIES: | | | | | | |
| GBS Status: ☐ NEGATIVE ☐ POSITIVE ☐ UNKNOWN | | | | | | | |
| GA at induction: _____ | EDC: _____ | G | T | P | A | L | |
| ☐ Cervical ripening and IOL process explained to patient and documented | ☐ IOL information given to patient | ☐ Consent documented | | | | | |

| PRIORITY | MATERNAL AND FETAL INDICATIONS FOR IOL | |
|---|---|---|
| ☐ **Priority 1** Immediately or within 24 hours of requested induction date | ☐Severe Preeclampsia, HELLP Syndrome or Eclampsia at any gestational age<br>☐Preeclampsia, greater than or equal to 34 weeks<br>☐Abnormal fetal surveillance (circle all that apply); Abnormal BPP; Abnormal NST; Abnormal Doppler Flow Studies (indicate findings): decreased / absent / reversed EDF<br>☐EFW less than the 10th percentile WITH other abnormal FHS parameters, please indicate _____<br>☐EFW less than the 5th percentile, otherwise uncomplicated greater than or equal to 37 weeks<br>☐Monochorionic/Diamniotic twins 36-37 weeks<br>☐ Significant Maternal medical disease _____OR ☐Fetal complication_____<br>☐TERM Pre-labour SROM GBS +/- Date/time of SROM_____☐ Patient declined | ☐ Inpatient |
| ☐ **Priority 2** Between 24-48hrs from requested induction date | ☐Dichorionic/Diamniotic twins, otherwise uncomplicated, 37-38 weeks<br>☐EFW 5th to 10th percentile, otherwise uncomplicated greater than or equal to 39 weeks **(*Suggest inpatient*)**<br>☐Type 1, Type 2 or GDM on insulin, uncomplicated, 38-39 weeks **(*Suggest inpatient*)**<br>☐Gestational hypertension or pre-existing hypertension, with or without medication(s) greater than or equal to 39 weeks, with well controlled BP and NO adverse conditions<br>☐Cholestasis: greater than or equal to 39 weeks with clinical diagnosis OR Bile salts less than 40mmol/L;<br>☐Cholestasis: less than 39 weeks if Bile salts are greater than 40mmol/L **(*Suggest inpatient*)**<br>☐Fetal demise, genetic or anatomic indications<br>☐Other: ☐ Maternal_____ ☐Fetal:_____ | ☐ Inpatient<br>OR<br>☐ Outpatient |
| ☐ **Priority 3** Within 2-4 days of requested induction date | ☐Gestational diabetes (diet managed) greater than or equal to 39 weeks, otherwise uncomplicated<br>☐AMA (greater than or equal to 40 years), otherwise uncomplicated, greater than or equal to 40 weeks<br>☐Postdates, greater than or equal to 41 weeks<br>☐Pre-pregnancy BMI greater than or equal to 40 kg/m², otherwise uncomplicated, greater than or equal to 39-40 weeks BMI=_____ kg/m²<br>☐VTE or additional thrombotic disorders receiving anticoagulation therapy, greater than or equal to 38 weeks<br>☐Other: ☐ Maternal_____ ☐Fetal:_____ | ☐ Inpatient<br>OR<br>☐ Outpatient |

**OUTPATIENT CRITERIA** ☐ Lives less than 1 hour away ☐Adequate transportation ☐ BPP 8/8 (within 7 days) **OR** ☐ NST + AF Assessment (within 48hrs) ☐ IOL explained ☐ Demonstrates understanding of information provided

**BISHOP SCORE**

| SCORE | DILATATION (cm) | EFFACEMENT (cm) | STATION | POSITION | CONSISTENCY | FAVORABLE CERVIX |
|---|---|---|---|---|---|---|
| 0 | Closed | Greater than 3 cm | -3 | Posterior | Firm | **Greater than or equal to 6**<br>**A Bishop score greater than 8, increases the likelihood of vaginal birth similar to that of spontaneous labour.** Consider additional cervical ripening to improve Bishop's score prior to additional intervention. |
| 1 | 1-2 | 2-3cm | -2 | Midline | Medium | |
| 2 | 3-4 | 1-2cm | -1, 0 | Anterior | Soft | |
| 3 | Greater than 5 | 0 cm | +1, +2 | ---- | ---- | **TOTAL SCORE** |
| **SCORE** | | | | | | |

**FOLLOW-UP:** ☐NST Date: _____ ☐BPP Date: _____☐Additional follow-up items: _____

ADDITIONAL COMMENTS: _____

_____

_____

| Health Care Provider Name (print) | Health Care Provider Signature | Date (yyyy/mm/dd) |
|---|---|---|
| | | |

INSERT ORGANIZATIONAL LOGO HERE

PATIENT IDENTIFICATION INFORMATION

LEGEND:

| | | |
|---|---|---|
| **IOL** = Induction of Labour | **Tel**. = Telephone | **Alt. Tel.** = Alternate Telephone |
| **C/S** = Cesarean Section | **ARM** = Artificial Rupture of Membrane | **GBS** = Group B Streptococcus |
| **GA** = Gestational Age | **EDC** = Estimated Date of Containment | **BPP** = Biophysical Profile |
| **EDF** = End Diastolic Flow | **IUGR** = Intrauterine Growth Restriction | **USS** = Ultrasound Scan |
| **GDM** = Gestational Diabetes Mellitus | **BP** = Blood Pressure | **AMA** = Advanced Maternal Age |
| **BMI** = Body Mass Index | **VTE** = Venous Thromboembolism | **NST** = Non Stress Test |
| **AFI** = Amniotic Fluid Index | **G** = Gravida | **T** = Term Birth |
| **P** = Preterm Births | **A** = Abortions | **L** = Living Children |
| **HELLP** = Hemolysis Elevated Liver Enzymes Low Platelet Count | **FHS** = Fetal Health Surveillance | **SROM** = Spontaneous Rupture of Membrane |

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# Cervical Ripening Process

*Maternal assessment and FHS **before** and **after** procedure/medication administration according to institutional policy*

***If, at any time during cervical ripening, tachysystole or abnormal FHR features occur, consider removing medication or device and determine whether tocolytic therapy is necessary***

Patient arrives to unit for **induction of labour**: **Assess Bishop Score**

Favourable cervix (Bishop score greater than or equal to 6)

**Consider ARM**

Unfavourable cervix (Bishop Score less than 6)

Patient arrives to unit with **term SROM** (not labouring): **Assess Bishop Score**

Favourable cervix (Bishop score greater than or equal to 6) **Start oxytocin**

Unfavourable cervix (Bishop Score less than 6)

**Inpatient/Outpatient Options**

**Inpatient Only**

MECHANICAL

PHARMACOLOGICAL

**Foley/Balloon Catheter**

**Vaginal or Cervical Prostaglandin ($PGE_2$)**

Dinoprostone Insert

Vaginal Gel every 6h

**Misoprostol ($PGE_1$)**

Oral every 4h

Maternal and fetal re-assessment at **12-24hrs** hours post-insertion

Maternal and fetal re-assessment **every 6hrs** pre/post- insertion

Maternal and fetal re-assessment **every 4hrs** pre/post-administration

Reconsider method of cervical ripening after 12-24hrs

Reconsider method of cervical ripening after 2 doses (48 hours)

Reconsider method of cervical ripening after 2 doses

Reconsider method of cervical ripening after 4 doses

**Reassess Bishop Score**

Unfavourable cervix (Bishop Score less than 6)

Favourable cervix (Bishop Score greater than or equal 6)

Consider additional ripening techniques. ***A combination of cervical ripening methods may need to be used***

*30 minutes after removal of last dose +/- ARM*

*6 hours after last dose +/- ARM*

*4 hours after last dose +/- ARM*

**Start Oxytocin Infusion**

*** CAUTION for all pharmacological methods***
Confirm medication preparation, dose and route prior to administration

*Adapted from Safer Care Victoria*

# Induction of Labour Audit Tool

This template is to assist with auditing induction of labour (IOL) indications, outcomes and/or standards of care within your centre. Standards of care refer to those established through regional work on IOL and the Low Risk Birth Initiative set forth by the Provincial Council for Maternal and Child Health (PCMCH). The audit measures can be used in their entirety or can be used separately to target one area of practice. Organizations can use this audit template by printing and completing a form for each chart audited, or by using the parameters to set up their own audit tool. This tool has been adapted from Safer Care Victoria to fit the context of obstetrical care in Ontario.

**Key for Audit Measures**

| Antenatal Care and Decision Making | Indications for IOL | IOL Methods | Outcomes |
|---|---|---|---|

**Audit Tool**

| Antenatal Care and Informed Decision Making | | | |
|---|---|---|---|
| **Where did the patient receive their antenatal care?** | | **Did the patient receive information about the risks and benefits of an induction of labour?** | |
| Hospital | | Yes | |
| Community | | No | |
| **If the EDC is documented, how was it calculated?** | | **If information was provided on the risks, benefits and available methods, when did the patient receive information to assist in making an informed decision?** | |
| T1 Ultrasound | | | |
| Last menstrual period | | | |
| Ultrasound in T2 or later | | Less than or equal to 38 weeks gestation | |
| Not specified | | Greater than 38 weeks gestation | |
| **Is the agreed upon Estimated Date of Containment (EDC) documented?** | | **If the patient had a previous C/S, was specific information about the risks of IOL after a previous C/S given?** | |
| Yes | | Yes | |
| No | | No | |

Additional Notes:

| Indications for IOL | | | |
|---|---|---|---|
| **Was the Indication for induction documented?** | | **Were there any contraindications?** | |
| Yes | | Yes | |
| No | | No | |
| **Indication(s) documented (tick all that apply)** | | | |
| Severe Preeclampsia, HELLP Syndrome or Eclampsia at any gestational age | | Dichorionic/Diamniotic twins, otherwise uncomplicated, 37-38 weeks | |
| Preeclampsia, greater than or equal to 34 weeks | | EFW 5th to 10th percentile, otherwise uncomplicated greater than or equal to 39 weeks | |
| Abnormal fetal surveillance | | Type 1, Type 2 or GDM on insulin, uncomplicated, 38-39 weeks | |
| EFW less than the 10th percentile WITH other abnormal FHS parameters | | Gestational hypertension or pre-existing hypertension, with or without medication(s) greater than or equal to 39 weeks, with well controlled BP and NO adverse conditions | |
| EFW less then the 5th percentile, otherwise uncomplicated greater than or equal to 37 weeks | | Cholestasis: greater than or equal to 39 weeks with clinical diagnosis OR Bile salts less than 40mmol/L; | |
| Monochorionic/Diamniotic twins 36-37 weeks | | Cholestasis: less than 39 weeks if Bile salts are greater than 40mmol/L (Suggest inpatient) | |
| Significant maternal medical disease OR fetal complication | | Fetal demise, genetic or anatomic indications | |
| TERM Pre-labour SROM GBS +/- | | Postdates, greater than or equal to 41 weeks | |
| Gestational diabetes (diet managed) greater than or equal to 39 weeks, otherwise uncomplicated | | Pre-pregnancy BMI greater than or equal to 40 kg/m2, otherwise uncomplicated, greater than or equal to 39-40 weeks | |
| AMA (greater than or equal to 40 years), otherwise uncomplicated, greater than or equal to 40 weeks | | VTE or additional thrombotic disorders receiving anticoagulation therapy, greater than or equal to 38 weeks | |

Additional Notes:

| Induction of Labour Methods | | | |
|---|---|---|---|
| **Was a maternal assessment completed and documented?** | | **Was fetal well-being monitored appropriately and documented prior to commencing the IOL (cervical ripening, ARM or oxytocin administration)?** | |
| Yes | | Yes | |
| No | | No | |
| **Which IOL methods were used? (indicate multiple methods used in the order they occurred e.g. 1, 2, 3 etc.)** | | | |
| Balloon Catheter | | ARM | |
| Gel | | Oxytocin | |
| Cervidil | | Other: | |
| Misoprostol | | | |
| **If cervical ripening was performed, was the patient a candidate for Outpatient IOL?** | | **If the patient was a candidate for outpatient IOL, but remained in hospital, was the rational documented?** | |
| Yes | | Yes | |
| No | | No | |

Additional Notes:

| Pharmacologic Methods of Cervical Ripening (Cervidil, Gels, Misoprostol) | | | |
|---|---|---|---|
| **Was more than 1 dose of prostaglandin given?** | | **If the patient received more than 1 dose was the dosing interval appropriate? (Cervidil greater than 12hrs; Gels greater than 6hrs, Misoprostol greater than 4hrs)** | |
| Yes | | Yes | |
| No | | No | |
| **After administration of medications for cervical ripening, was an EFM tracing or NST done until normal classification was obtained?** | | **If the patient was a candidate for outpatient IOL, did the patient go home?** | |
| Yes | | Yes | |
| No | | No | |
| **Was there at least 6 hours between the last dose of gel; 30 minutes from the removal of Cervidil or 4 hours from the last dose of misoprostol prior to starting oxytocin?** | | **Was continuous EFM initiated if regular painful uterine contractions were documented as being established?** | |
| Yes | | Yes | |
| No | | No | |

| Balloon Catheters | | | |
|---|---|---|---|
| **What type of balloon catheter was used?** | | | |
| Single (e.g. Foley) | | | |
| Double (e.g. Cook) | | | |
| **When was the balloon removed?** | | | |
| Less than 12hrs | | Greater than 25hrs | |
| 12-24hrs | | Balloon fell out | |
| **Were volumes instilled into the balloons documented?** | | | |
| Yes | | No | |
| **Was the balloon taped to the patient's leg with tension on it?** | | | |
| Yes | | No | |

Additional Notes:

| Oxytocin | | | |
|---|---|---|---|
| **Was there continuous EFM 30 minutes prior to staring the oxytocin?** | | | |
| Yes | | | |
| No | | | |
| **Was there continuous EFM while oxytocin was infusing?** | | | |
| Yes | | | |
| No | | | |
| **If 'No' was there an order indicating that the EFM could be stopped for up to 30 minutes provided the maternal fetal condition was stable and the oxytocin rate was stable?** | | | |
| Yes | | | |
| No | | | |
| **When was the oxytocin started?** | | | |
| Immediately after presenting with SROM | | 6 hours after last prostin dose administered | |
| Immediately after AROM | | 30 minutes after Cervidil removal | |
| *After expectant management of S/AROM* | | 4 hours after last dose of Misoprostol | |
| Less than 12hrs following ROM | | Immediately after removing balloon | |
| 12-24hrs following ROM | | While balloon catheter still in-situ | |
| Greater than24hrs following ROM | | At a set time or other | |
| **Was the oxytocin started ☐ with or ☐ without regular contractions.** | | | |

Additional Notes:

| Outcomes | | | |
|---|---|---|---|
| **Were there any complications documented?** | | **Type of Birth** | |
| Yes | | Spontaneous Vaginal | |
| No | | Vacuum Assisted Vaginal | |
| **Complications documented include:** | | Forcep Assisted Vaginal | |
| Tachysystole without FHR changes | | Cesarean Section (C/S) | |
| Tachysystole with FHR changes | | **If a C/S birth: what was the documented primary and secondary indication for C/S?** | |
| Antepartum bleeding | | Abnormal FHR | |
| Atypical or abnormal FHR monitoring leading to C/S | | Failed IOL. Indicate cm of dilation at time of diagnosis: | |
| **Was a scalp pH or lactate done prior to C/S?** | | Failure to Progress. Indicate cm of dilation at time of diagnosis: | |
| Yes | | | |
| No | | | |
| **Was meconium present?** | | Failed operative vaginal birth | |
| Yes | | | |
| No | | Other indications: | |
| **Was there a postpartum hemorrhage?** | | **Was the estimated blood loss documented?** | |
| Yes | | Yes | |
| No | | No | |
| **Were other intrapartum or postpartum complications sufficiently documented? :** ☐ **YES** ☐ **NO** | | | |

Additional Notes:

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# STARTING YOUR INDUCTION
## Cervical Ripening

### What is an induction of labour?

An induction of labour is when your labour is started before it begins on its own. It involves different steps. The goal is to increase your chance of having a vaginal birth. In most cases, cervical ripening will be the first step.

### Why do I need an induction of labour?

The most common reason is that your pregnancy is 1-2 weeks past your due date. This is a post-dates induction. Other reasons may include:

- Your baby is not growing as expected or baby movements have slowed down
- Your water has broken before labour has started
- You have an infection
- You have a medical condition like high blood pressure, diabetes, kidney disease or heart problems.
- There is a problem with your placenta

*(Best Start & PCMCH, 2019)*

### What is cervical ripening and why may I need it?

Cervical ripening helps your cervix (lowest part of your uterus) get ready for labour, which increases your chance of having a vaginal birth.

### Helping you make an informed decision about cervical ripening.

Your health care provider will discuss the options you have. They may be different depending on your health, the health of your baby, the location of your placenta or the place you are planning to give birth.

### What are my options and how does cervical ripening work?

### Mechanical

Foley or balloon catheters are a common way to ripen a cervix. Your health care provider will insert a catheter through your cervix and fill the balloon with water. This works well when your cervix is open enough to fit the catheter through. The weight of the balloon helps your cervix open (just like your baby's head will later in labour). It can be uncomfortable to have the catheter inserted. You may have some cramping or contractions. Following insertion, you will experience very little discomfort. The catheter can be left in place for 24 hours. When your cervix is ripe, the balloon will fall out.

### Medications

Prostaglandins help your cervix get ready for labour. They can be given by mouth, put in your vagina or in your cervix. They work by causing contractions. Before they are given to you, your health care team will monitor you and your baby and will explain the procedure.

**Oral Misoprostol** is a pill that you take every 4 hours. **You will need to stay at the hospital if this method is chosen**. You may be given this medication up to 4 times

**Cervidil** is a prostaglandin medication that comes on a string like a tampon. The string is tucked up into your vagina. If you are having too many contractions your health care provider may instruct you to pull it out. The Cervidil can stay in for up to 24 hours. You may need more than one dose.

***If you have had a previous caesarean section, prostaglandins are not a safe choice for you***

Some people need more than one method of cervical ripening. A combination of these methods can be used. In some cases it can take 3-4 days.

The option to stay in the hospital or go home will depend on many factors. Some of them include: how you and your baby are coping with the cervical ripening, how many babies you have had before, how far away you live from the hospital and what type of method is being used.

***You don't always stay in the hospital until you give birth***

Going home may be the most comfortable option. In case you need to stay at the hospital, make sure to bring all the things you need for you and your support person such as: comfortable clothes, books, movies, tablet, etc.

## My cervical ripening may not occur at the time it is booked because:

- Other patients have more urgent medical needs
- The labour and birth unit is very busy
- All beds are occupied
- Many people may be booked for induction of labour on the same day; priority will be decided by the health care team

## What if the cervical ripening does not work?

If you and your baby are both healthy, you may be able to go home and come back in a day or two and try again. Not all inductions of labour will result in a vaginal birth; a caesarean birth may be needed. Your health care provider will discuss your options with you.

## Websites for more information:

- **The MotHERS Program themothersprogram.ca**
- **Best Start en.beststart.org**
- **Omama omama.com**
- **SOGC Pregnancy Info pregnancyinfo.ca**
- **Association of Ontario Midwives (AOM) ontariomdiwives.ca**

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# DÉCLENCHEMENT DU TRAVAIL
## Maturation cervicale

### Qu'est-ce que le déclenchement du travail?

On parle de déclenchement du travail (induction) lorsqu'il est nécessaire de provoquer le travail avant qu'il débute naturellement. Ceci implique différentes étapes visant à augmenter les chances d'un accouchement vaginal. Dans la plupart des cas, la maturation cervicale est la première étape.

### Pourquoi ai-je besoin d'un déclenchement?

La raison la plus commune est que vous avez dépassé votre date prévue d'accouchement par 1-2 semaine (grossesse prolongée). Autres raisons peuvent inclurent :

- Votre bébé ne se développe pas bien, ou ses mouvements ont ralenti
- Vous avez perdu vos eaux avant que le travail commence
- Vous avez développé une infection
- Vous souffrez d'un problème médical, comme l'hypertension, le diabète, une maladie rénale ou un problème cardiaque
- Il y a un problème avec votre placenta

*(Meilleur départ et PCMCH, 2019)*

### Qu'est-ce que la maturation cervicale et pourquoi puis-je en avoir besoin ?

La maturation cervicale aide le col (la partie inférieure de l'utérus) à se préparer au travail, ce qui augmente vos chances d'avoir un accouchement vaginal.

### Pour vous aider à prendre une décision éclairée à propos de la maturation cervicale

Votre fournisseur de soins discutera des options qui vous sont offertes. Elles peuvent être différentes selon votre état de santé, celui de votre bébé, l'emplacement de votre placenta ou l'endroit où vous prévoyez accoucher.

### Quelles sont mes options et comment fonctionne la maturation cervicale?

#### Mécanique

La sonde de Foley est un moyen courant de faire murir le col de l'utérus. Votre fournisseur de soins insère la sonde dans le col de l'utérus et remplit le ballonnet d'eau. Ceci fonctionne bien lorsque le col est suffisamment ouvert pour permettre le passage de la sonde. Le poids du ballonnet aide le col à s'ouvrir (tout comme la tête de votre bébé le fera plus tard pendant le travail). La pose de la sonde Foley peut être inconfortable. Vous pouvez avoir des crampes ou contractions. Après l'insertion, vous ne ressentirez que très peu d'inconfort. La sonde de Foley peut demeurer en place pendant 24 heures. Une fois le col dilaté, la sonde tombera d'elle-même.

#### Médicaments

Les prostaglandines aident le col de l'utérus à se préparer au travail. Ils peuvent être donnés par la bouche, insérer dans le vagin ou le col de l'utérus. Ils agissent en provoquant des contractions. Avant de les recevoir, votre équipe soignante surveillera votre état et celui de votre bébé et vous expliquera la procédure.

**Misoprostol par voie orale :** Il s'agit d'une pilule que vous devez prendre toutes les quatre heures. **Vous devrez rester à l'hôpital si cette méthode est choisie.** On pourrait vous donner ce médicament jusqu'à quatre fois.

**Cervidil** : Médicament à base de prostaglandine qui ressemble à un tampon avec une corde. La corde est insérée dans le vagin. S'il y a trop de contractions, votre fournisseur de soins pourrait vous demander de le retirer. Le Cervidil peut demeurer en place jusqu'à 24 heures. Une deuxième dose peut être nécessaire.

***Si vous avez déjà eu une césarienne, les prostaglandines ne sont pas recommandées dans votre cas.***

Certaines personnes ont besoin plus qu'une méthode de maturation cervicale. Une combinaison de ces méthodes peut être utilisée. Dans certains cas, ceci peut prendre de trois à quatre jours.

La décision de rester à l'hôpital ou de retourner à la maison dépend de plusieurs facteurs : comment vous et votre bébé avez réagi à la maturation cervicale, le nombre d'accouchements que vous avez eu, la distance entre votre maison et l'hôpital, et la méthode utilisée.

***Vous ne restez pas toujours à l'hôpital jusqu'à l'accouchement.***

Retourner à la maison peut être l'option la plus confortable. Si vous devez rester à l'hôpital, assurez-vous d'apporter tout ce dont vous aurez besoin pour vous et votre personne de soutien : vêtements confortables, livres, films, tablette électronique, etc.

## Il est possible que votre rendez-vous pour commencer la maturation cervicale soit retardé, car:

- Nous devons prioriser des patientes avec un besoin médical plus urgent
- L'unité de naissance est très occupée
- Tous les lits sont occupés
- Plusieurs patientes peuvent être prévues pour un déclenchement du travail la même journée, la priorité sera décidée par l'équipe de soins.

## Que se passe-t-il si la maturation cervicale ne fonctionne pas ?

Si vous et votre bébé êtes en bonne santé, vous pourriez retourner à la maison et revenir à l'hôpital dans 1 à 2 jours pour réessayer. Ce n'est pas tous les déclenchements qui mènent à un accouchement vaginal ; une césarienne pourrait être nécessaire. Votre fournisseur de soins discutera de vos options.

## Sites web pour plus d'informations:

- **Omama [omama.com/fr/index.asp](omama.com/fr/index.asp)**
- **Info grossesse SOGC [pregnancyinfo.ca/fr/](pregnancyinfo.ca/fr/)**
- **Association of Ontario Midwives (AOM) : dépliants disponibles en français mais site web en anglais seulement [ontariomidwives.ca](ontariomidwives.ca)**
- **The MotHERS Program (en anglais seulement) [themothersprogram.ca](themothersprogram.ca)**

# Outpatient Cervical Ripening

## Patient Information Sheet

**INSERT UNIT NAME AND TELEPHONE NUMBER HERE**

Your health care provider has booked you for an outpatient cervical ripening before your induction. They will have talked with you about the risks and benefits for you and your baby.

**DATE/TIME to expect call: _____ at _____**
**(YYYY/MM/DD) (HHMM)**

**If you have not received a call 4-6 hours from the expected time, you need to call the hospital.**

You will get a phone call from the hospital telling you when to come in for your cervical ripening.

When you get to the hospital go straight to the nursing station [INSERT UNIT NAME]. There is a chance that when you arrive you will be asked to wait. If this happens, it is because the unit is very busy. In rare cases, you may be asked to return later in the day, evening or possibly the next day. Upon your arrival, a nurse will greet you and bring you to a room where the first assessment of you and your baby will begin.

The nurse will ask you questions while checking your vital signs. They will apply the fetal monitor to your belly to make sure that your baby is doing well before they start the cervical ripening process.

**What to Expect:**
If you are receiving a **Foley/balloon catheter** for mechanical cervical ripening, it is normal to have some discomfort throughout the procedure followed by menstrual-like cramps.

If you are receiving medication **vaginally**, it is normal to have some back pain and menstrual like cramping. In rare cases, contractions may start quickly and may happen too often. If this happens, some types of medications can be taken out. If the medication cannot be taken out, other medications may be given to help slow or stop the contractions you are having.

Whether you have a Foley or medications, you may have some spotting or pink discharge. If you and baby are coping well, you may be able to go home with a plan to return later.

After 12-24 hours, your health care provider will recheck your cervix to decide whether it is ready for labour.

If your cervix is ready for labour, a plan for induction will be made with you. This may include immediate admission or you may be asked to return home for a short period depending on the situation.

If your cervix is not ready for labour, your health care provider may insert a Foley/balloon or give you extra medications. This may be frustrating at the time, but is completely normal. Additional ripening of your cervix will increase your chance of having a successful vaginal birth. In some cases, cervical ripening can take 3-4 days.

During this time, you may have a shower or bath, eat normally, sleep and resume your usual activities.

# Outpatient Cervical Ripening Patient Information

You will need to call the triage nurse (PHONE NUMBER) 6 hours (  ) and 12 hours (  ) after you have gone home. This telephone call is very important. The nursing staff will ask you questions and answer any questions you may have. If you are tired and want to go to sleep before the time you are supposed to call for assessment, please call the triage nurse to let them know.

**If your Foley/balloon falls out:**
Throw it in the garbage and call the hospital to let them know. If it does not fall out, return to the hospital at the planned time for reassessment.

**Call the nurse if:**

- Your contractions are every 5 minutes or closer
- You have severe abdominal pain
- Your water breaks
- You are having bright red bleeding that is more than "pink mucousy discharge"
- You think your Cervidil or Foley/balloon has fallen out
- You have any concerns or are unsure of what to do
- You are planning to sleep or will be out of the house when the follow-up phone calls are due.

If you have a Cervidil for cervical ripening and you have contractions that are too close together, the triage nurse may ask you to pull it out. It has a string like a tampon and can easily be pulled out by putting your fingers into your vagina to grab the string and then pulling it out like a tampon.

**Cautions:**

- **Do not use any form of aspirin, ibuprofen or pain relief cream.**
- **When toweling off or after going to the bathroom, carefully pat (not wipe) your vagina so you don't accidentally remove the Cervidil or Foley/balloon. Make sure you do not tug on the Foley/balloon; tugging may cause additional cramping. If it falls out, DO NOT attempt to put it back in, call the hospital. You may be asked to return to the hospital.**

| My questions for the labour and birth staff: |
|---|
| |
| |
| |

Your cervical ripening has been booked for _____ (date). If you have not heard from the hospital when expected, please call [INSERT NUMBER] to determine when would be the best time for you to arrive to the unit.

# Maturation cervicale pour patiente en externe

## Fiche d'information pour la patiente

**INSÉRER LE NOM ET LE NUMÉRO DE TÉLÉPHONE DE L'UNITÉ**

Votre fournisseur de soins vous a donné rendez-vous pour une maturation cervicale avant le déclenchement du travail. Celui-ci vous aura déjà expliqué les risques et les avantages pour vous et votre bébé.

**DATE et HEURE prévues pour l'appel :** _____ **à** _____
**(AAAA/MM/JJ)** **(HHMM)**

**Si vous n'avez pas reçu d'appel dans les 4 à 6 heures après l'heure prévue, vous devez appeler à l'hôpital.**

Vous recevrez un appel de l'hôpital pour vous dire quand vous devez vous présenter pour votre maturation cervicale.

Lorsque vous arrivez à l'hôpital, allez directement au poste infirmier [NOM DE L'UNITÉ]. Il est possible qu'on vous demande d'attendre. Si c'est le cas, c'est que l'unité est très occupée. Rarement, on pourrait même vous demander de revenir plus tard dans la journée, en soirée, ou le lendemain. À votre arrivée, une infirmière vous accueillera et vous conduira dans une salle où auront lieu votre première évaluation et celle de votre bébé.

L'infirmière vous posera des questions pendant qu'elle vérifie vos signes vitaux. Elle installera le moniteur fœtal sur votre abdomen pour s'assurer que le bébé va bien avant de commencer le processus de maturation cervicale.

**À quoi s'attendre :**
Si une **sonde de Foley** est utilisée pour la maturation cervicale, il est normal que vous ressentiez un inconfort durant la procédure, suivi de crampes menstruelles.

Si vous recevez un **médicament par voie vaginale**, vous pourriez ressentir de la douleur au dos et des crampes menstruelles. Rarement, les contractions commencent rapidement et sont trop fréquentes. Dans ce cas, certains types de médicaments peuvent être retirés. S`il est impossible de le retirer, d'autres médicaments peuvent vous être donnés pour ralentir ou arrêter les contractions.

Que vous ayez une sonde de Foley ou des médicaments, vous pouvez avoir des taches ou des pertes rosées. Si vous et votre bébé êtes en bonne santé, vous pourriez retourner à la maison avec un plan de revenir plus tard.

Après 12 à 24 heures, votre fournisseur de soins réexaminera votre col et décidera s'il est prêt pour le travail.

Si votre col est prêt pour le travail, un plan de déclenchement du travail sera établi avec vous. Ce plan pourrait inclure de rester à l'hôpital ou de retourner à la maison pour une courte période, tout dépendant de la situation.

Si votre col n'est pas prêt pour le travail, votre fournisseur de soins pourrait insérer une sonde de Foley, ou vous donner une autre dose de médicament. Cela peut être frustrant à ce moment-là, mais c'est tout

à fait normal. Une maturation cervicale supplémentaire augmente les chances d'avoir un accouchement vaginal. Dans certains cas, la maturation cervicale peut prendre de trois à quatre jours.

Durant ce temps, vous pouvez prendre une douche ou un bain, manger normalement, dormir et reprendre vos activités habituelles.

Vous devrez appeler l'infirmière du triage (Nº DE TÉLÉPHONE) 6 heures ( ) et 12 heures ( ) après votre retour à la maison. Cet appel est très important. L'infirmière vous posera des questions et répondra aux vôtres. Si vous êtes fatiguée et que vous voulez dormir durant la période que vous devez appeler l'infirmière, veuillez appeler à l'avance pour l'informer.

**Si votre sonde de Foley tombe:**
Jetez-la à la poubelle et appelez l'hôpital pour les informer. Si elle reste en place, retourner à l'hôpital à l'heure prévue pour votre évaluation.

**Appelez l'infirmière si :**

- Vos contractions sont toutes les 5 minutes ou plus rapprochées
- Vous avez une douleur intense à l'abdomen
- Vos perdez vos eaux
- Vous avez des saignements rouge vif (non seulement des pertes vaginales rosées)
- Vous pensez que votre Cervidil ou sonde de Foley est tombé(e)
- Vous avez des inquiétudes ou vous ne savez pas quoi faire
- Vous prévoyez dormir ou sortir de la maison à l'heure prévue pour l'appel de suivi

Si vous avez reçu un Cervidil pour la maturation cervicale et que vos contractions sont trop rapprochées, l'infirmière du triage pourrait vous demander de le retirer. Celui-ci est muni d'une corde semblable à celle d'un tampon qui permet de le retirer facilement. Insérez les doigts dans le vagin pour sentir la corde, puis tirez sur celle-ci comme vous le feriez avec un tampon.

**Mises en garde :**

- **Ne pas prendre aucune forme d'aspirine, d'ibuprofène ou de crème antidouleur.**
- **Après être allée à la toilette, tapoter délicatement (ne pas essuyer) votre vagin pour ne pas retirer accidentellement le Cervidil ou la sonde de Foley. Évitez de tirer sur la sonde, ce qui pourrait causer plus des crampes. Si elle tombe, n'essayez PAS de la remettre en place et appeler l'hôpital. On pourrait vous demander de vous y rendre.**

| Mes questions pour le personnel de l'unité de naissance : |
|---|
| |
| |
| |

Votre rendez-vous pour la maturation cervicale aura lieu le _____ (date). Si vous n'avez pas reçu l'appel de l'hôpital à la date et l'heure prévue, veuillez appeler au [INSÉRER LE NUMÉRO] pour déterminer le meilleur moment pour votre rendre à l'hôpital.

Outpatient Cervical Ripening: Telephone Call-back Form

PATIENT IDENTIFICATION INFORMATION

## Foley

| ASSESSMENT | (Y/N) | Comment |
|---|---|---|
| Have you had regular contractions for more than 1 hour? | | |
| Have you had more than 5 contractions within 10 minutes? | | |
| Have you had any contractions that have lasted 90 sec. or longer? | | |
| If you are contracting, how painful are your contractions on a scale of 0-10 (VAS: 0-10)? | | |
| Can you talk through your contractions? Do you need to breathe through them? | | |
| Have you had any vaginal bleeding? | | |
| Is your baby moving as much as usual? | | |
| Is the Foley still in place? | | |
| Do you have any other concerns or questions about what to do? | | |
| ACTION TAKEN | (Y/N) | |
| Told to return to hospital | | |
| Clarification, reassurance provided and reviewed comfort measures | | |
| Informed of time to call back for next telephone/triage assessment | | |
| **Follow-up plan of care / Comments:** | | |

| PRINTED NAME | DESIGNATION | SIGNATURE | DATE (YYYY/MM/DD) | TIME (HHMM) |
|---|---|---|---|---|
| | | | | |

| ASSESSMENT | (Y/N) | Comment |
|---|---|---|
| Have you had regular contractions for more than 1 hour? | | |
| Have you had more than 5 contractions within 10 minutes? | | |
| Have you had any contractions that have lasted 90 sec. or longer? | | |
| If you are contracting, how painful are your contractions on a scale of 0-10 (VAS: 0-10)? | | |
| Can you talk through your contractions? Do you need to breathe through them? | | |
| Have you had any vaginal bleeding? | | |
| Is your baby moving as much as usual? | | |
| Is the Foley still in place? | | |
| Do you have any other concerns or questions about what to do? | | |
| ACTION TAKEN | (Y/N) | |
| Told to return to hospital | | |
| Clarification, reassurance provided and reviewed comfort measures | | |
| Informed of time to call back for next telephone/triage assessment | | |
| **Follow-up plan of care / Comments:** | | |

| PRINTED NAME | DESIGNATION | SIGNATURE | DATE (YYYY/MM/DD) | TIME (HHMM) |
|---|---|---|---|---|
| | | | | |

Outpatient Cervical Ripening: Telephone Call-back Form

**PGE2 (Cervidil® and Prostin)**

| PATIENT IDENTIFICATION INFORMATION |
|---|
| |

| ASSESSMENT | (Y/N) | Comment |
|---|---|---|
| Have you had regular contractions for more than 1 hour? | | |
| Have you had more than 5 contractions within 10 minutes? | | |
| Have you had any contractions that have lasted 90 sec. or longer? | | |
| If you are contracting, how painful are your contractions on a scale of 0-10 (VAS: 0-10)? | | |
| Can you talk through your contractions? Do you need to breathe through them? | | |
| Have you had any vaginal bleeding? | | |
| Is your baby moving as much as usual? | | |
| ***If Cervidil® was used only:*** Is the Cervidil® insert still in place? | | |
| Do you have any other concerns or questions about what to do? | | |
| ACTION TAKEN | (Y/N) | |
| Told to return to hospital | | |
| Told to pull Cervidil® insert out and come to hospital | | |
| Clarification, reassurance provided and reviewed comfort measures | | |
| Informed of time to call back for next telephone/triage assessment | | |
| **Follow-up plan of care / Comments:** | | |

| PRINTED NAME | DESIGNATION | SIGNATURE | DATE (YYYY/MM/DD) | TIME (HHMM) |
|---|---|---|---|---|
| | | | | |

| ASSESSMENT | (Y/N) | Comment |
|---|---|---|
| Have you had regular contractions for more than 1 hour? | | |
| Have you had more than 5 contractions within 10 minutes? | | |
| Have you had any contractions that have lasted 90 sec. or longer? | | |
| If you are contracting, how painful are your contractions on a scale of 0-10 (VAS: 0-10)? | | |
| Can you talk through your contractions? Do you need to breathe through them? | | |
| Have you had any vaginal bleeding? | | |
| Is your baby moving as much as usual? | | |
| ***If Cervidil® was used only****:* Is the Cervidil® insert still in place? | | |
| Do you have any other concerns or questions about what to do? | | |
| ACTION TAKEN | (Y/N) | |
| Told to return to hospital | | |
| Told to pull Cervidil® insert out and come to hospital | | |
| Clarification, reassurance provided and reviewed comfort measures | | |
| Informed of time to call back for next telephone/triage assessment | | |
| **Follow-up plan of care / Comments:** | | |

| PRINTED NAME | DESIGNATION | SIGNATURE | DATE (YYYY/MM/DD) | TIME (HHMM) |
|---|---|---|---|---|
| | | | | |

# Inpatient Cervical Ripening and Induction of Labour with Misoprostol

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# Inpatient Cervical Ripening and Induction of Labour (IOL) with Misoprostol

## GOALS/OBJECTIVES

The goal of cervical ripening is to soften and dilate the cervix to increase the chances of successful labour and vaginal birth. Cervical ripening is often needed prior to commencing induction of labour with Oxytocin.

The goal of induction of labour (IOL) is to stimulate the uterine muscles to contract in order to effect labour and achieve a successful vaginal birth.

This policy refers to the use of Misoprostol for live gestation greater than or equal to 35 weeks only.

## CONSIDERATIONS

IOL should be undertaken when continuing the pregnancy is believed to be associated with greater maternal or fetal risk than IOL.

IOL should only be conducted when there are no contraindications to vaginal birth.

Misoprostol (a synthetic prostaglandin $E_1$ analogue) is a pharmacologic option for **inpatient** cervical ripening with intact **AND** ruptured amniotic membranes.

## DEFINITIONS

**Cervical ripening:** The use of pharmacologic or mechanical means to soften, efface, or dilate the cervix prior to IOL to increase the likelihood of a vaginal birth (ALARM, 2019).

**Induction of labour (IOL):** The initiation of contractions in a pregnant person who is not in labour to help achieve a vaginal birth within 24 to 48 hours (ALARM, 2019).

**Augmentation of labour:** The stimulation of ineffective uterine contractions in the active phase of labour to enhance uterine activity in an effort to effect vaginal birth.

**Prostaglandins:** Hormones that cause relaxation of cervical smooth muscle and increase intracellular calcium levels, causing contraction of myometrial muscle.

**Misoprostol:** a synthetic prostaglandin E1 analogue ($PGE_1$) that is supplied in 100 or 200 mcg oral tablets which are then prepared by pharmacy to be delivered as 50 mcg doses **for the purpose of IOL for near-term (greater than or equal to 35 weeks) and term gestations**. Misoprostol causes both cervical ripening and uterine contractions in a dose-dependent fashion (ALARM, 2019).

**POPULATION / INDICATIONS**

Misoprostol should only be used in an **INPATIENT** setting. The indication for IOL must be convincing, compelling, consented to and documented. The reason for and method of induction should be discussed between the health care provider (HCP) and the patient in order to ensure an informed decision has been made (ALARM, 2019).

**INDICATIONS TO USE MISOPROSTOL FOR IOL OF LIVE GESTATION GREATER THAN OR EQUAL TO 35 WEEKS**

- Unfavourable cervix with indications for IOL
- Term Prelabour Rupture of Membranes (PROM)
- Preterm Prelabour Rupture of Membranes (PPROM) greater than or equal to 35 weeks
- Consider as first-line method for cervical ripening and induction for pre-pregnancy BMI greater than 40kg/$m^2$
- Following unsuccessful cervical ripening with the use of other mechanical or pharmacological cervical ripening methods

**EXCLUSION CRITERIA**

- Any contraindications to labour or vaginal birth, including but not limited to:
    - Placenta previa, vasa previa or cord presentation
    - Abnormal fetal lie or presentation (e.g. transverse lie or footling breech)
    - Prior classical or inverted T uterine incision
    - Significant prior uterine surgery (e.g. full thickness myomectomy)
    - Active genital herpes
    - Pelvic structural deformities
    - Invasive cervical carcinoma
    - Previous uterine rupture
- Less than 35 weeks gestation
- Previous Cesarean section (C/S)
- Abnormal Fetal Health Surveillance (FHS)
- Twins
- Fever
- Chorioamnionitis
- Known hypersensitivity to any prostaglandin
- Grand multiparity (greater than or equal to 5 prior vaginal births)
- Signs of placental insufficiency (e.g. fetal growth restriction or oligohydramnios)
- Active labour/regular or painful uterine contractions

**SIDE EFFECTS**

- Abnormal FHS (including tachysystole with and without associated Fetal Heart Rate (FHR) changes)
- Nausea
- Vomiting
- Diarrhea
- Abdominal pain
- Shivering
- Chills
- Fever

**ALERT**

- HCP must wear nitrile gloves while handling Misoprostol
- IV access should be established prior to administration of medication
- Prior to administering Misoprostol, wait:
    - 6 hours after administering Prostin gel
    - 30 minutes after removal of Cervidil
    - 4 hours after discontinuing an Oxytocin infusion

**EQUIPMENT**

- Misoprostol medication 50 mcg – PRE PACKAGED to be administered PO
- Nitrile gloves
- Cup of water

**PRE-ADMINISTRATION PROCEDURE**

1) Perform positive patient identification and confirm candidacy for procedure.

2) Discuss use of Misoprostol for induction or augmentation with the patient. Answer questions as applicable.

3) Ensure informed consent was obtained and Bishops score is documented.

4) Ensure patient has voided prior to medication administration (if needed).

5) Assist patient to a comfortable position. Position the patient with a wedge if supine.

6) Assess and document baseline maternal vital signs.

7) Perform a Non-Stress Test (NST)/Electronic Fetal Monitoring (EFM) as per institutional policy.

   a) **If FHS findings are atypical or abnormal**, defer to intuitional policy on FHS and manage accordingly. **Do not proceed with administration of Misoprostol** without notifying the most responsible provider (MRP) to assess the patient.

**ADMINISTRATION PROCEDURE**

1) Perform independent double verification of medication.

2) Administer Misoprostol 50 mcg PO.

   a) Instruct to swallow quickly to avoid sublingual absorption which may increase the risk of tachysytole.

**POST-ADMINISTRATION PROCEDURE**

1) Monitor FHR and uterine activity for a minimum of 60 minutes.

   a) If the FHS is normal and there is no uterine activity:

      i) Conduct FHS via auscultation q1h while not in labour.

      ii) Instruct patient to return for assessment if there is a change in uterine activity, vaginal bleeding, rupture of membranes or meconium staining.

   b) If the FHS is atypical or abnormal continue to monitor via EFM, notify MRP and start intrauterine resuscitation as appropriate.

   c) If the FHS is normal and uterine activity is present:

      i) Determine the frequency, duration and strength of contractions via palpation.

      - If the patient is not in active labour, the patient may ambulate prior to next dose. Instruct patient to return for assessment if there is a change in uterine activity, vaginal bleeding, rupture of membranes or meconium staining.

      - If the patient is in active labour, transfer to labour and birth unit.

      - If **tachysystole** present, initiate or continue EFM (for a minimum of 60 minutes), notify MRP and initiate treatment protocol as per institutional policy **(see Appendix A)**.

NOTE: If a break in the induction process is warranted and contractions are absent or mild 4 hours after the preceding dose and the FHR is normal, the patient may return home to rest as needed and continue induction at a later time.

**ONGOING MANAGEMENT:**

1) Assess maternal vital signs at least q4h (or as per institutional policy) and prior to each administration of Misoprostol.

2) Monitor for side effects.

3) Assess the level of maternal comfort frequently throughout the induction process. Provide relaxation techniques, emotional support, comfort measures, teaching and pharmacologic pain relief as requested and ordered/indicated.

4) Consider vaginal exam:

   a) after 2 hours of regular, painful uterine contractions;

   b) when patient requesting analgesia or pain relief measures;

   c) with rupture of membranes.

5) If contractions are occurring regularly or palpate as moderate to strong at the time of next dose, inform MRP and consider holding or discontinuing dose.

6) Notify MRP to reassess patient if labour has not begun after 4 doses of Misoprostol. MRP may consider alternative induction agents as indicated.

**ADDITIONAL DRUG INFORMATION**

| Additional drug information: Misoprostol 50 mcg PO for IOL |
|---|
| Onset of action: 8 minutes |
| Peak: 30 minutes |
| Duration: 4 hours |
| Maximum doses: 4 |

**DOCUMENTATION**

Document according to your institutional policies and procedures.

## REFERENCES AND FURTHER READING

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Queensway Carleton Hospital, (2018). Misoprostol (Cytotec) use for induction of labour (BU Policy 10-122).

Society of Obstetricians and Gynecologists of Canada (2019). Advances in Labour and Risk Management (ALARM) Course Manual 26th Ed. Induction of labour. Ottawa, Ontario, Canada.

## APPENDIX A: Treatment of Tachysystole

**DEFINTION:** Tachysystole

- greater than 5 contractions in 10 minutes, averaged over 30 minutes, and/or
- Inadequate resting tone (less than 30 seconds) **OR** the uterus does not return to resting tone between contractions, and/or
- Prolonged contraction: lasting greater than 90 seconds.

**PROTOCOL FOR UTERINE TACHYSYSTOLE: INITIATE OR CONTINUE EFM**

Tachysytole with Normal FHR:

- Maintain close continuous EFM
- Inform MRP to assess

Tachysytole with Atypical/Abnormal FHR:

- Assessment by MRP as soon as possible
- Initiate intrauterine resuscitation (see below)
- Consider acute tocolysis (see below)
- Consider scalp electrode/bedside ultrasound if any question about external FHR pick-up or uninterpretable tracing
- Expedite delivery if FHR remains abnormal despite intrauterine resuscitation interventions

**INTRAUTERINE RESUSCITATION**

- Change maternal position (left or right lateral)
- Assess maternal vital signs
- Consider IV bolus (if patient is hypotensive)
- Consider oxygen (if patient is hypoxic)
- Consider tocolysis
- Consider vaginal exam to rule out prolapsed umbilical cord

**NITROGLYCERIN (NTG) ADMINISTRATION**

- Monitor maternal BP prior to and following administration of each dose and **HOLD** dose if hypotensive.
- Dose: 50 mcg IV q 90 seconds to 3 min, maximum of 200 mcg over 15 minutes.
    - *Sublingual nitro does not work and will give the patient a headache*
- Example of IV NTG mixing directions (ALARM 26th ed.) - Refer to individual hospital policy:
    - *Dilute: 1ml NTG (200mcg/mL) in 9 ml NS*
    - *Concentration : 20 mcg/mL*
    - *Dosage : 50 mcg = 2.5 ml*
- Nursing assessment
    - Maternal $SaO_2$ and vital signs
    - Continuous EFM
    - Reassess uterine activity following NTG administration and document evaluation
    - If unresolved and FHR remains abnormal, prepare for emergency C/S

# Outpatient Induction of Labour: Cervical Ripening

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# Outpatient Induction of Labour: Cervical Ripening

**GOALS/OBJECTIVES**

Induction of labour (IOL) is indicated when the risk of continuing the pregnancy exceed the risks associated with induction of labour. The indication must be convincing, compelling, consented to, and documented. The most common indication is post-dates (ALARM, 2019).

Induction of labour in an outpatient setting is restricted to low-risk circumstances when cervical ripening and labour induction is carried out without an ongoing requirement for continuous or frequent maternal or fetal monitoring.

The use of outpatient induction of labour attempts to balance potential improvements in maternal satisfaction, convenience, reduced length of hospitalization and lower cost, against those of safety (both maternal and fetal) (Kelly, Alfirevic & Ghosh, 2013).

Outpatient ripening is defined as any cervical ripening or induction of labour intervention (with the exception of membrane sweeping) that can be continued at home or within community healthcare settings. It also includes a package of care initially provided in hospital (fetal monitoring, drug administration) after which the patient is allowed home until a later review or until admission in labour (Kelly, Alfirevic & Ghosh, 2013).

The efficacy and safety of controlled-release dinoprostone (Cervidil) are comparable whether it is used in the outpatient or the inpatient setting. For low-risk women, outpatient use may be a highly attractive option, potentially reducing hospital costs, and improving patient convenience.

Induction of labor in the outpatient setting should only be carried out if safety and support procedures are in place. The practice of outpatient induction should be audited continuously (Royal College of Obstetricians and Gynecologists [RCOG], 2008).

**PREREQUISITES FOR OUTPATIENT INDUCTION**

- Careful assessment of the patient's medical and obstetrical history. Appropriate patients must be selected excluding high-risk pregnancies and/or patient with contraindications for induction.
- Normal Biophysical Profile (BPP) within 7 days **OR** Normal Non-Stress Test (NST) + Amniotic Fluid Assessment within 48hrs.
- Assessment of cervical status (Bishop's score) (**See Appendix A**).
- Detailed verbal and/or written instructions about the induction process must be provided to the patient (**See Appendix B**).
- The patient must reside less than 1 hour away from the hospital.

At the time of discharge, the patient and support person should be provided with the telephone number of the obstetrical triage nurse or the Birthing Unit and instructed to call if they have any questions or concerns **(See Appendix B)**.

## OPTIONS FOR CERVICAL RIPENING

Various methods can be used for cervical ripening. These methods can be divided in two groups:

1. Mechanical options: Foley - Balloon catheters
2. Pharmacologic options: Prostaglandins a) posterior fornix slow release $PGE_2$ (Cervidil®)
   b) vaginal $PGE_2$ gel (Prostin)
   c) intracervical $PGE_2$ gel (Prepidil)

**NOTE:** $PGE_2$ is available in different doses. Check the box carefully for type of gel and dosage before administering **(See Appendix C).**

| | |
|---|---|
| Cervidil: | 10 mg (controlled release) |
| Prostin: | 1 and 2mg |
| Prepidil: | 0.5 mg |

## CONSIDERATIONS

**Mechanical options:** Foley catheters or specifically designed obstetrical balloons. Balloon type catheters work via endogenous prostaglandin release; traction applied to the catheter wherein the balloon exerts pressure on the cervix is not necessary. Balloons are cost effective and carry a lower risk of uterine tachysystole (ALARM, 2019).

**Prostaglandins:** Cause relaxation of cervical smooth muscle and increase intracellular calcium levels, causing contraction of myometrial muscle.

Also known as dinoprostone, PGE2 is available as an intravaginal or an intracervical gel. Intravaginal gels or preparations are easier to employ, cause less patient discomfort, and are preferred because they result in more timely vaginal delivery than mechanical methods (ALARM, 2019).

$PGE_2$ is a bronchodilator and is not contraindicated in women who have asthma. Adverse cardiovascular events are rare, idiopathic, and usually occur almost immediately after the gel or preparation has been inserted (ALARM, 2019).

## ALERT

It is important to ensure that vaginal agents (Prostin, Cervidil) are not inserted into the cervical canal because they have a much higher dosage than intracervical preparations (Prepidil).

**EQUIPMENT**

- Sterile gloves and procedure gloves
- Foley/balloon catheter or prostaglandin ($PGE_2$) preparation
- Foley Catheter kit (additional items to include):
  - No. 14 to 18 foley with a 30 ml balloon (if patient allergic to latex, catheter must be latex free)
  - 30 to 60 ml of water for inflation
  - Sterile bowl
  - Sponge forceps
  - Cord clamp or catheter plug to block drainage port
- Sterile speculum
- Soluble lubricant
- Adequate light source

**PRE-ADMINISTRATION PROCEDURE**

1. Review/explain procedure to the patient and support person and inform them that each visit to the hospital for cervical ripening can take up 2-3 hours depending on the method used.

2. Have the patient empty their bladder (if needed).

3. Assess and document baseline maternal vital signs.

4. Perform NST/ Electronic Fetal Monitoring (EFM) 30 minute window as appropriate.

5. Assessment of Bishop's Score by most responsible provider (MRP) as needed.

6. Pre-test the Foley/balloon catheter balloon before insertion.

**ADMINISTRATION PROCEDURE**

1. Insert/administer the Foley/prostaglandin of choice.

2. Provide pericare at completion of procedure (if needed).

**POST-ADMINISTRATION PROCEDURE**

1. Position patient in semi-Fowler or side-lying position and apply EFM according to Table 1:

| **TABLE 1** : Recommended FHS requirement associated with methods of cervical ripening and induction of labour **(obstetrical indications for EFM would take precedence)** | | |
|---|---|---|
| **Method** | **EFM requirement PRIOR ripening** | **EFM requirement POST ripening** |
| **Balloon devices including Foley** | 30 minutes | 30 minutes |
| **Prostaglandin E2 intravaginal gel 1-2 mg** | 30 minutes | 60-120 minutes |
| **Prostaglandins E2 controlled released vaginal gel 10 mg (Cervidil)** | 30 minutes | 60-120 minutes |
| **Intracervical gel** | 30 minutes | 60-120 minutes |
| EFM: electronic fetal monitoring; FHR: fetal heart rate; FHS: fetal health surveillance; IA: intermittent auscultation. Adapted from Dore, Ehman et al. 2020. | | |

2. Discharge the patient home after insertion/administration if:
    - EFM is classified normal after 30-120 minutes of monitoring depending on the method of cervical ripening used. **Refer to TABLE 1**
    - Not in active labour
    - Membranes are intact
    - Maternal vital signs are within normal limits

3. Give the patient an appointment to return to hospital (usually no more than 6-12 hours, depending on the agent used). Advise the patient of reasons to return to the hospital prior to their appointment as per **Appendix B**.

4. A second dose of $PGE_2$ may be required.

**ALERT**

Uterine tachysystole**:** Management of tachysytole depends on whether FHR changes are present. A treatment protocol for tachysystole is recommended for every labour unit **(See Appendix D).**

**DOCUMENTATION**

Document according to your institutional policies and procedures.

## REFERENCES AND FURTHER READING

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## APPENDIX A: Bishop Score

| BISHOP SCORE | | | | | | |
|---|---|---|---|---|---|---|
| **SCORE** | **DILATATION (cm)** | **EFFACEMENT (cm)** | **STATION** | **POSITION** | **CONSISTENCY** | **FAVORABLE CERVIX Greater than or equal to 6** **A Bishop score greater than 8 increases the likelihood of vaginal birth similar to that of spontaneous labour.** Consider additional cervical ripening to improve Bishop's score prior to additional intervention. |
| 0 | Closed | Greater than 3cm | -3 | Posterior | Firm | |
| 1 | 1-2 | 2-3cm | -2 | Mild | Medium | |
| 2 | 3-4 | 1-2cm | -1, 0 | Anterior | Soft | |
| 3 | Greater than 5 | 0 cm | +1, +2 | ---- | ---- | **TOTAL SCORE** |
| **SCORE** | | | | | | |

## APPENDIX B Outpatient Cervical Ripening Information Sheet

**INSERT UNIT NAME AND TELEPHONE NUMBER HERE**

Your health care provider has booked you for an outpatient cervical ripening before your induction. They will have talked with you about the risks and benefits for you and your baby.

**DATE/TIME to expect call: _____ at _____**
**(YYYY/MM/DD) (HHMM)**

**If you have not received a call 4-6 hours from the expected time, you need to call the hospital.**

You will get a phone call from the hospital telling you when to come in for your cervical ripening.

When you get to the hospital go straight to the nursing station [INSERT UNIT NAME]. There is a chance that when you arrive you will be asked to wait. If this happens, it is because the unit is very busy. In rare cases, you may be asked to return later in the day, evening or possibly the next day. Upon your arrival, a nurse will greet you and bring you to a room where the first assessment of you and your baby will begin.

The nurse will ask you questions while checking your vital signs. They will apply the fetal monitor to your belly to make sure that your baby is doing well before they start the cervical ripening process.

**What to Expect:**
If you are receiving a **Foley/balloon catheter** for mechanical cervical ripening, it is normal to have some discomfort throughout the procedure followed by menstrual-like cramps.

If you are receiving medication **vaginally**, it is normal to have some back pain and menstrual like cramping. In rare cases, contractions may start quickly and may happen too often. If this happens, some types of medications can be taken out. If the medication cannot be taken out, other medications may be given to help slow or stop the contractions you are having.

Whether you have a Foley or medications, you may have some spotting or pink discharge. If you and baby are coping well, you may be able to go home with a plan to return later.

After 12-24 hours, your health care provider will recheck your cervix to decide whether it is ready for labour.

If your cervix is ready for labour, a plan for induction will be made with you. This may include immediate admission or you may be asked to return home for a short period depending on the situation.
If your cervix is not ready for labour, your health care provider may insert a Foley/balloon or give you extra medications. This may be frustrating at the time, but is completely normal. Additional ripening of your cervix will increase your chance of having a successful vaginal birth. In some cases, cervical ripening can take 3-4 days.
During this time, you may have a shower or bath, eat normally, sleep and resume your usual activities.

You will need to call the triage nurse (PHONE NUMBER) 6 hours ( ) and 12 hours ( ) after you have gone home. This telephone call is very important. The nursing staff will ask you questions and answer any questions you may have. If you are tired and want to go to sleep before the time you are supposed to call for assessment, please call the triage nurse to let them know.

**If your Foley/balloon falls out:**
Throw it in the garbage and call the hospital to let them know. If it does not fall out, return to the hospital at the planned time for reassessment.

**Call the nurse if:**

- Your contractions are every 5 minutes or closer
- You have severe abdominal pain
- Your water breaks
- You are having bright red bleeding that is more than "pink mucousy discharge"
- You think your Cervidil or Foley/balloon has fallen out
- You have any concerns or are unsure of what to do
- You are planning to sleep or will be out of the house when the follow-up phone calls are due.

If you have a Cervidil for cervical ripening and you have contractions that are too close together, the triage nurse may ask you to pull it out. It has a string like a tampon and can easily be pulled out by putting your fingers into your vagina to grab the string and then pulling it out like a tampon.

**Cautions:**

- **Do not use any form of aspirin, ibuprofen or pain relief cream.**
- **When toweling off or after going to the bathroom, carefully pat (not wipe) your vagina so you don't accidentally remove the Cervidil or Foley/balloon. Make sure you do not tug on the Foley/balloon; tugging may cause additional cramping. If it falls out, DO NOT attempt to put it back in, call the hospital. You may be asked to return to the hospital.**

| My questions for the labour and birth staff: |
|---|
| |
| |
| |

Your cervical ripening has been booked for _____ (date). If you have not heard from the hospital when expected, please call [INSERT NUMBER] to determine when would be the best time for you to arrive to the unit.

## APPENDIX C: Cervical Ripening Options for Outpatient IOL

| Cervical Ripening | | Route | Dose | Number of doses | Contra-indications | Removal | Time until oxytocin | Management |
|---|---|---|---|---|---|---|---|---|
| **Mechanical** | **Foley Catheter** | Insert past internal os | No. 14 to 18 Foley with 30ml balloon<br><br>Inflate 30-60ml of water | 1 | **RELATIVE:**<br>ROM<br>Genital tract infection<br>_____<br>**ABSOLUTE:**<br>Low-Lying Placenta | Remove within 24hrs if it has not fallen out | Immediately following removal or may use concurrently | Safe use with TOLAC<br><br>Traction is not necessary<br><br>Can be done as outpatient |
| **Pharmacological** | **PGE 2 Dinoprostone vaginal insert (Cervidil)** | Posterior fornix | 10mg (release of 0.3mg/h) over 12hrs | 2 (may be repeated once 12-24hrs later) | TOLAC | When in active labour or 12-24hrs post-insertion<br><br>Easy removal by pulling on the string | 30 minutes | Remain in supine position 1h after insertion<br><br>Can be done as outpatient |
| | **PGE 2 Dinoprostone vaginal gel (Prostin)** | Posterior fornix ***(Not to be placed in the cervical canal)*** | Initial dose: 1mg<br><br>Repeat dose: 1 -2mg | 2 (may be repeated once 6 hours later) | TOLAC | Not removable | 6 hours | Remain in supine position 30min after insertion to prevent leakage<br><br>May be considered with ROM at term<br><br>Can be done as outpatient |
| | **PGE 2 Dinoprostone intracervical gel (Prepidil)** | Intracervical | 0.5mg | 1 | TOLAC and PROM | Not removable | 6 hours | Remain in supine position 10-15min after insertion to prevent leakage<br><br>Can be done as outpatient |

*ROM= Rupture of membranes*
*TOLAC= Trial of labour after cesarean section*
*PROM= Prelabour rupture of membranes*

## APPENDIX D: Treatment of Tachysystole

**DEFINTION:** Tachysystole

- Greater than 5 contractions in 10 minutes, averaged over 30 minutes, and/or
- Inadequate resting tone (less than 30 seconds) **OR** the uterus does not return to resting tone between contractions, and/or
- Prolonged contraction: lasting greater than 90 seconds.

**PROTOCOL FOR UTERINE TACHYSYSTOLE: INITIATE OR CONTINUE EFM**

Tachysytole with Normal FHR:

- Maintain close continuous EFM
- Inform MRP to assess

Tachysytole with Atypical/Abnormal FHR:

- Assessment by MRP as soon as possible
- Initiate intrauterine resuscitation (see below)
- Consider acute tocolysis (see below)
- Consider scalp electrode/bedside ultrasound if any question about external FHR pick-up or uninterpretable tracing
- Expedite delivery if FHR remains abnormal despite intrauterine resuscitation interventions

**INTRAUTERINE RESUSCITATION**

- Change maternal position (left or right lateral)
- Assess maternal vital signs
- Consider IV bolus (if patient is hypotensive)
- Consider oxygen (if patient is hypoxic)
- Consider tocolysis
- Consider vaginal exam to rule out prolapsed umbilical cord

**NITROGLYCERIN (NTG) ADMINISTRATION**

- Monitor maternal BP prior to and following administration of each dose and **HOLD** dose if hypotensive.
- Dose: 50 mcg IV q 90 seconds to 3 min, maximum of 200 mcg over 15 minutes.
    - *Sublingual nitro does not work and will give the patient headache*
- Example of IV NTG mixing directions (ALARM 26th ed.) - Refer to individual hospital policy:
    - *Dilute: 1ml NTG (200mcg/mL) in 9 ml NS*
    - *Concentration : 20 mcg/mL*
    - *Dosage : 50 mcg = 2.5 ml*
- Nursing assessment
    - Maternal $SaO_2$ and vital signs
    - Continuous EFM
    - Reassess uterine activity following NTG administration and document evaluation
    - If unresolved and FHR remains abnormal, prepare for emergency cesarean section (C/S)