



## CLINICAL GUIDELINE

### Outpatient Cervical Ripening

**A. EFFECTIVE DATE :**

March 15, 2022

**B. PURPOSE :**

To provide guidance on the use of Foley catheter balloon for outpatient cervical ripening prior to induction of labor.

**C. GUIDELINE :**

Cervical ripening prior to induction of labor increases the likelihood of vaginal delivery in patients with an unfavorable cervix. An unfavorable cervix is present when the Bishop Score is  $\leq 6$  or when the cervix is dilated  $\leq 2$  cm. The goals of offering mechanical cervical ripening in the outpatient setting are both to decrease patient length of stay in the hospital prior to induction of labor and to increase patient satisfaction with the induction process.

**D. SCOPE :**

This guideline applies to Obstetrics, Maternal Fetal Medicine ambulatory locations and Labor & Delivery.

**E. DEFINITIONS :**

- Favorable cervix - a cervix ready ('ripe') for induction, with Bishop Score greater than 6
- Unfavorable cervix - a cervix that is not ready ('unripe') for induction, with Bishop Score less than or equal to 6
- Bishop Score - scoring system to evaluate cervix and assess readiness for induction
- Biophysical Profile (BPP) - assessment of fetal well-being performed by ultrasound
- Non-stress Test (NST) - assessment of fetal well-being performed with external fetal monitor and tocometer

**F. MATERIAL(S) NEEDED :**

1. Silicone Foley catheter with 30mL balloon
2. 35 mL sterile normal saline drawn up in syringe(s)
3. Speculum
4. Ring forceps x 2
5. Betadine (chlorhexidine if allergy to betadine, iodine, or shellfish)
6. Surgical marker pen
7. Ultrasound (optional)

## **G. PROCEDURE :**

### **Indications for Outpatient Cervical Ripening**

1. Patient candidate for induction of labor and vaginal delivery
2. Term pregnancy  $\geq 39w0d$  (*or medical indication  $\geq 37w0$  weeks*)
3. Bishop's score  $\leq 6$  or dilation  $\leq 2$  cm (Appendix A)
4. Medically stable mother and fetus with no indication for inpatient management or continuous fetal monitoring prior to labor
5. Patient desires outpatient cervical ripening at home and demonstrates understanding of the instructions provided

### **Contraindications to Outpatient Cervical Ripening**

1. Vaginal delivery contraindicated (e.g., placenta previa, prior classical cesarean delivery, placenta accreta, active genital herpes infection, previous complicated myomectomy, etal)
2. Prior cesarean delivery
3. Fetal malpresentation
4. Rupture of membranes
5. Low-Lying placenta (current)
6. Conditions that require acute evaluation and/or continuous fetal monitoring, including:
  - a. Unstable medical or obstetric diagnoses, such as preeclampsia with severe features, chorioamnionitis, placental abruption or active vaginal bleeding
  - b. New maternal concerns such as decreased fetal movement, vaginal bleeding, leakage of fluid, severe intractable headache or other new worrisome symptoms
  - c. Fetal growth restriction (FGR)
  - d. Non-reactive NST
  - e. BPP (Biophysical Profile)  $\leq 6$
7. Other factors as determined by Obstetric provider assessing patient and/or in consultation with division directors or maternal medical director may include:
  - a. Conditions where the possibility of precipitous labor could pose special risks
  - b. Fetal anomalies requiring immediate aggressive resuscitation
  - c. Unstable lie
  - d. Prematurity
  - e. Patient unable to verbalize understanding of care plan or instructions for self-care, or lacks necessary means to fulfill outpatient plan (e.g. lack of housing, telephone service, transportation, or support person).

### **Optimal Candidates for Outpatient Cervical Ripening**

- Medical indications:
  - Gestational diabetes (well controlled)
  - Chronic hypertension (well controlled & stable)
  - Gestational hypertension (well controlled & stable)
- Obstetric Indications:
  - Postdates induction  $\geq 41w0d$
  - Advanced maternal age
- Elective inductions
  - $\geq 39w0$

### **Potential Candidates that Require Individualized Decision-Making may include:**

- Concerns about patient reliability or safety, e.g. patient who has demonstrated difficulty attending appointments or following through with medical advice
- Twin pregnancy\*
- Intrahepatic cholestasis of pregnancy\*
- Preeclampsia without severe features\*
- Oligohydramnios (isolated)\*
- Polyhydramnios (isolated)\*

\*Note: if the patient has been managed as an outpatient thus far, has been clinically stable, and has a scheduled induction for these indications, then undergoing outpatient cervical ripening the evening prior to planned induction may be reasonable. Consult Maternal Fetal Medicine if unclear.

### **DESCRIPTION OF PROCESS**

- Assessment of maternal and fetal well-being
- Equipment in place and induction confirmed on L&D schedule
- Pre-procedure review of patient/support team readiness and understanding (Appendix C)
- Foley balloon placed in cervical canal
- Post-procedure review of instructions, precautions (Appendix D)

### **MATERNAL-FETAL WELL-BEING ASSESSMENT**

- Maternal vital signs collected and recorded
- Patient undergoes Modified BPP (NST and MVP/AFI) or BPP
- Reactive NST with MVP  $\geq 2cm$ /AFI  $\geq 5$  or BPP 8/8 or 8/10 or 10/10

### **EQUIPMENT**

- Silicone Foley catheter with 30mL balloon
- 35 mL sterile normal saline drawn up in syringe(s)
- Speculum
- Ring forceps x 2
- Betadine (chlorhexidine if allergy to betadine, iodine, or shellfish)
- Surgical marker pen
- Ultrasound (optional)

## **PATIENT EDUCATION**

- **Prior to procedure**
  - Provide pre-procedure patient education materials (Appendix C)
  - Assess patient and support team understanding of/expectations from procedure
  - Offer additional instruction/education as needed
- **Prior to discharge home**
  - Provide and review follow-up instructions (Appendix D)
  - Document fetal heart rate by doppler and monitor patient for 10 minutes
  - Verify that patient is appropriately scheduled for induction of labor
  - Review plan of care with patient and support team and confirm teach-back
- **Review Precautions (Appendix D) – patients to call the Labor & Delivery unit for:**
  - Rupture of membranes
  - Vaginal bleeding
  - Strong uterine contractions
  - Shaking chills, fever  $\geq 101$  F
  - Severe pain
  - Decreased fetal movement
  - Any other new or concerning symptoms

## **PATIENT PREPARATION**

*To be performed by MA:*

- Verify medical record number and patient name
- Verify counseling has been performed & documented in Epic and patient has reviewed pre-procedure education materials
- Verify patient has induction of labor scheduled in 12-24 hours
- Ask patient to complete pre-procedure questionnaire (Appendix B)
- Obtain maternal vital signs including temperature, BP, HR, O2 Saturation
- Instruct patient to void then return to room & undress from waist down for exam and procedure (dip urine as with routine prenatal visit)
- MA, RN to assist provider with procedure and offer emotional support to patient as needed

*To be performed by physician or other qualified provider:*

- Assess fetal well-being
  - NST and MVP/AFI or BPP without NST
- Assess fetal position with ultrasound
- Confirm no contraindications present to outpatient cervical ripening

## PROCEDURE

- Ensure proper equipment has been assembled and MA and RN are present
- Provider performs digital cervical exam:
  - If Bishop score > 6 or cervix  $\geq$  2cm then cervix is already ripe; patient can be sent home from clinic with plan to return to L&D for induction of labor at scheduled time
  - If Bishop Score  $\leq$  6 or cervix <2cm, proceed with outpatient cervical ripening
- If cervix is at all dilated and cervical canal relatively straight, Foley balloon is placed digitally
- If digital placement not feasible, speculum is used (Appendix F)
- Once balloon in place, **slowly inflate to 35mL NS**
- **Ultrasound may be used to confirm position**
- Remove speculum and allow patient to clean and re-dress; MA to provide peri-pad

## POST-PROCEDURE ASSESSMENT

- Auscultate and document fetal heart rate
- **Observe patient for 10 minutes post-procedure**, ensuring she is comfortable enough for safe discharge home
- Complete post-procedure safety checklist (Appendix E)
- If significant discomfort, heavy bleeding, suspected rupture of membranes, or symptoms of active labor, consider further monitoring on L&D

## H. ATTACHMENTS:

1. [Appendix A: Bishop score](#)
2. [Appendix B: Pre-procedure questionnaire](#)
3. [Appendix C: Pre-procedure patient handout](#)
4. [Appendix D: Post-procedure patient handout](#)
5. [Appendix E: Post-procedure checklist](#)
6. [Appendix F: Outpatient Foley Balloon Placement Technique](#)
7. [Appendix G: Self-care in early labor](#)
8. [Appendix H: Sample Epic dot phrase documentation](#)

## I. REFERENCES :

[See attached references document](#)

## J. SEARCH WORDS :

None

## K. ENFORCEMENT:

Violations of this policy or associated procedures may result in appropriate disciplinary measures in accordance with University By-Laws, General Rules of Conduct for All University Employees, applicable collective bargaining agreements, the University of Connecticut Student Code, other applicable University Policies, or as outlined in any procedures document related to this policy.

## L. STAKEHOLDER APPROVALS :

On File

**M. COMMITTEE APPROVALS :**

None

**N. FINAL APPROVAL :**

- |   |                                   |
|---|-----------------------------------|
| <p>1. <u>Bruce T. Liang, MD (Signed)</u><br/>Bruce T. Liang, MD<br/><b>Interim Chief Executive Officer &amp; EVP for Health Affairs<br/>Dean, School of Medicine</b></p>      | <p><u>03/25/2022</u><br/>Date</p> |
| <p>2. <u>Anne D. Horbatuck (Signed)</u><br/>Anne D. Horbatuck, RN, BSN, MBA<br/><b>Clinical Policy Committee Co-Chair</b></p>   | <p><u>03/25/2022</u><br/>Date</p> |
| <p>3. <u>Scott Allen, MD (Signed)</u><br/>Scott Allen, MD<br/><b>Clinical Policy Committee Co-Chair</b></p>   | <p><u>03/25/2022</u><br/>Date</p> |
| <p>4. <u>Caryl Ryan (Signed)</u><br/>Caryl Ryan, MS, BSN, RN<br/><b>Chief Operating Officer, JDH<br/><br/>VP Quality and Patient Services &amp; Chief Nursing Officer</b></p> | <p><u>03/25/2022</u><br/>Date</p> |

**O. REVISION HISTORY :**

Date Issued: 9/21/2021  
Date Revised: 3/15/2022  
Date Reviewed: