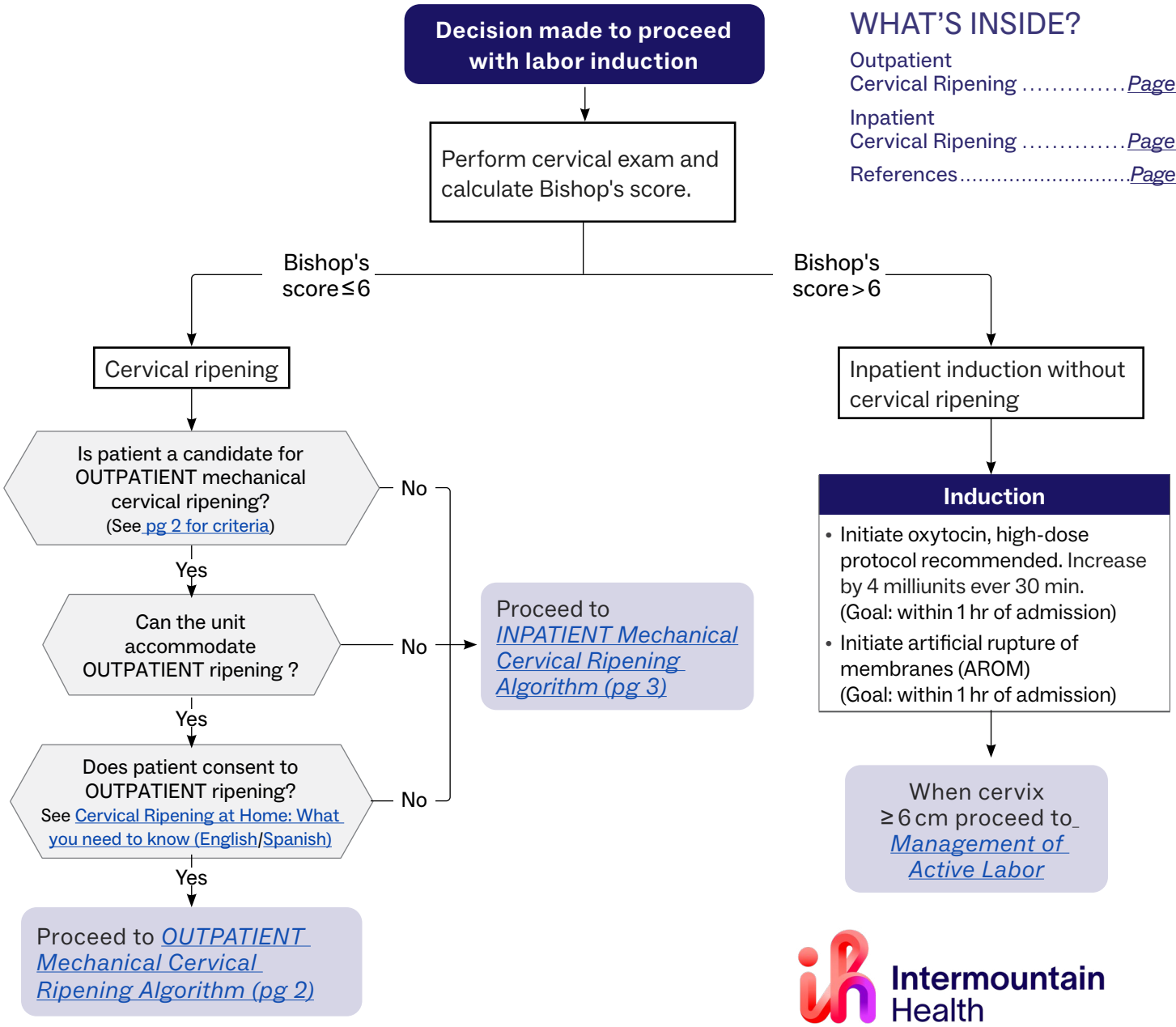
Labor Induction: Outpatient and Inpatient Cervical Ripening

Intermountain Canyons , Desert, and Peaks Regions

This guideline has been developed by the Women's Health Clinical Program as part of the Intermountain Clinical Best Practice Integration initiative (cBPI). It offers comprehensive, evidence-based recommendations to assist obstetric providers (Physician or Certified Nurse Midwife) in determining the most appropriate setting—either inpatient or outpatient—for cervical ripening during labor induction. Additionally, it outlines standardized procedures for implementing each approach to ensure safe, effective, and patient-centered care based on the evidence certification. See pg 5 for certification reports.

These guidelines apply to common clinical circumstances and may not be appropriate for certain patients and situations. The treating clinician must use judgment in applying guidelines to the care of individual patients, and shared decision-making should be used in all circumstances.

WHAT'S INSIDE?



Intermountain Health

Outpatient Mechanical Cervical Ripening

Patient presents for outpatient mechanical cervical ripening

Perform the following assessments

- Vital signs
- Document fetal heart tones
- Ultrasound for position and fluid
- Cervical examination

Does patient meet ALL inclusion criteria **(A)** ?

- No → Not a candidate for outpatient cervical ripening
- Yes ↓

Are ANY maternal or fetal contraindications present **(B)** ?

- No → Not a candidate for outpatient cervical ripening
- Yes ↓

Can induction be scheduled in L&D ~12 hrs after patient leaves placement visit?

- No → Expectant management or offer alternate date
- Yes ↓

Obtain and document patient informed consent

Physician or CNM places balloon catheter

- 30 mL Foley catheter (infusion volume 30–60 mL) **OR** Cook Cervical Ripening Balloon
- Can be placed in clinic or L&D. See pg 4 for instructions

Note: if patient unable to tolerate placement without analgesia, they are not a candidate for outpatient cervical ripening

Was placement of balloon successful?

- No → Consider inpatient ripening or expectant management
- Yes ↓

Perform the following post-procedural assessments

- Repeat vital signs
- Confirm and document reactive fetal heart rate tracing

Are any post-procedural contraindications present **(C)**?

- Yes → Admit for inpatient cervical ripening
- No ↓

Give patient instructions then discharge **(D)**

Patient returns ≤12 hours after balloon placement
(Remove balloon no later than 12 hrs after placement)

* For further details see pg 5

(A) Inclusion criteria for outpatient mechanical cervical ripening

- Normal vital signs
- Patient ≥39 and ≤41 wk 5d of gestation*
- Singleton, Living
- Non-anomalous fetus in cephalic present.
- Intact membranes
- Bishop score ≤6
- Maternal stability
- DVP ≥ 2 cm and <8 cm OR AFI ≥ 5 cm and ≤25 cm

(B) Maternal and fetal contraindications to outpatient cervical ripening

Maternal contraindications

- Previous cesarean section
- Low-lying placenta or placenta previa
- Human immunodeficiency virus (HIV)
- Contraindications to vaginal delivery present *
- Vaginal bleeding
- Placental abruption
- Any *IH Indications for Medical Induction*, exceptions (IVF, advanced maternal age, and obesity)
- Inability to verbalize understanding of care plan or instructions
- Unreliable phone access or transportation
- Demonstrated difficulty attending prenatal appointments
- GBS positive
- History of prior infant with GBS sepsis

Fetal contraindications

- Non-reassuring fetal status
- Fetal growth restriction
- Oligohydramnios or Polyhydramnios
- Unstable lie or unapplied presenting part
- Need for immediate neonatal resuscitation
- Increased risk for fetal distress or demise

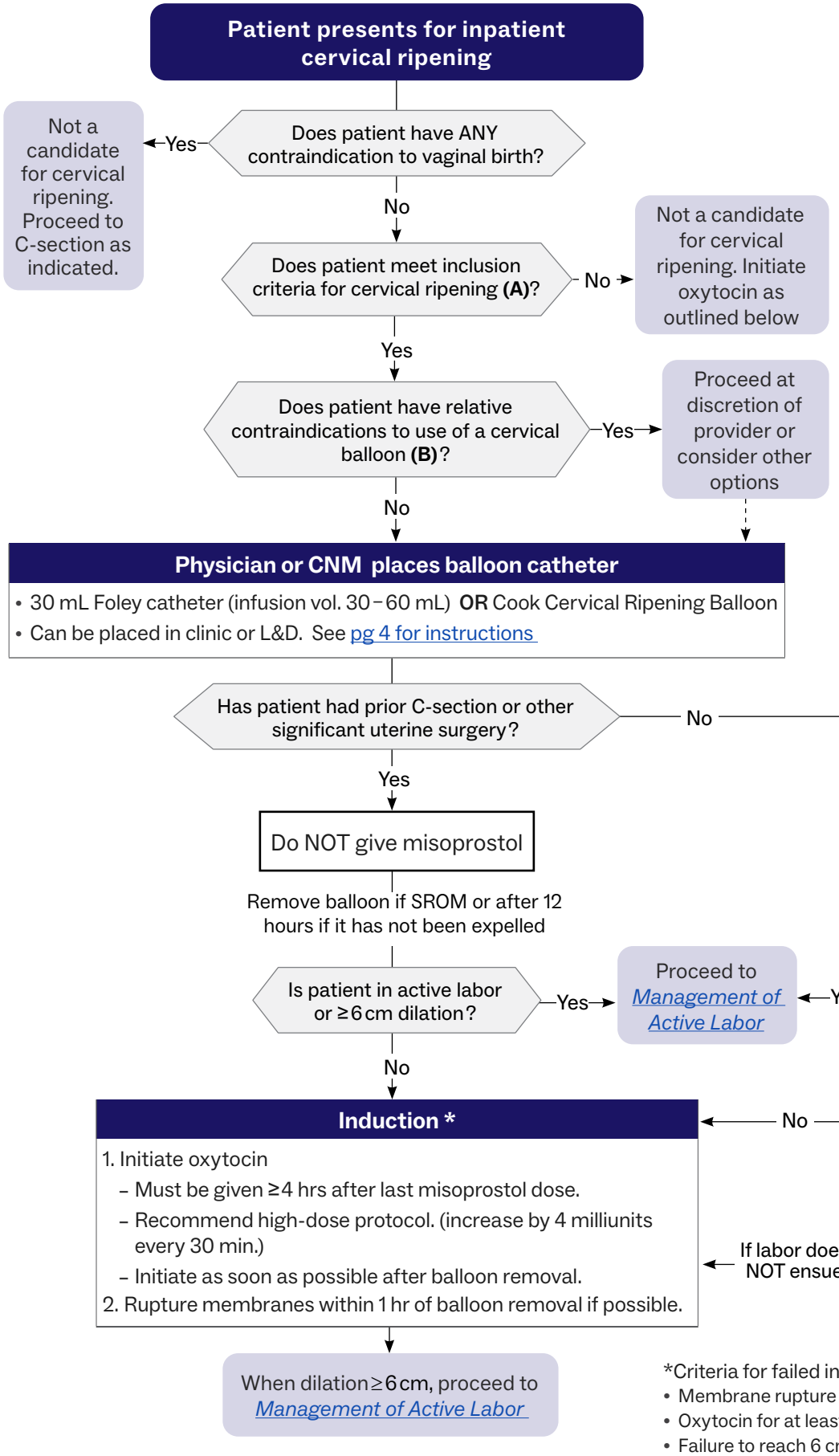
(C) Post-procedural contraindications

- Non-reactive NST
- Rupture of membrane
- Vaginal bleeding
- Significant patient discomfort
- Abnormal vital signs

(D) Patient Discharge

- Supply patient with peripad and/or disposable underwear
- Review patient education materials:
  - Cervical Ripening at Home: What you need to know (English/Spanish)

Inpatient Mechanical Cervical Ripening



(A) Inclusion criteria for inpatient cervical ripening

- Bishop score ≤6
- Not in active labor

(B) Relative contraindication to cervical balloon placement. Use is dependant on provider discretion.

- Ruptured membranes
- Abnormal fetal heart rate patterns
- Polyhydramnios\Presenting part above the pelvic inlet

(C) Administration of misoprostol

- First-line: Misoprostol per vagina, 25 mcg every 4 hours (Max 6 doses)
- Second-line: Misoprostol PO 25 mcg every 4 hours (Max of 5 doses)
- Interval of misoprostol administration can be extended to every 6 hrs at provider discretion.
- Oxytocin must be given ≥4 hrs after last misoprostol dose.
- Do not give misoprostol if previous significant uterine surgery or C-section

*Criteria for failed induction of labor. All 3 must be present:

- Membrane rupture
- Oxytocin for at least 12–18 hours after membrane rupture
- Failure to reach 6 cm of dilation or greater

Placement and Removal of Cervical Ripening Balloon Catheter

Foley Catheter		
Equipment Needed	• Silicone Foley catheter (16 Fr.) with 30 mL balloon • Syringe with sterile saline for inflating • Tape • Sterile gloves	• Sterile ring forceps X2 • Sterile speculum • Foley stylet if needed
Placement digitally or by sterile speculum	• If speculum assisted, use 1 ring forceps to stabilize cervix and second to advance Foley. • A 16 Foley catheter allows a stiffener to pass through with ease; a 30-mL balloon allows for maximum balloon circumference utilizing a minimal amount of fluid. • If using stylet then place it within the foley prior to attempting cervical placement of the balloon. • Hold the Foley catheter with the internal stylet between the first 2 fingers of your dominant hand, then insert the catheter/balloon into the patient's vagina up to the cervix. • Position a finger on either side of the cervical opening, slide the catheter into the os until it advances to the level of the internal cervical os. • See the QR code below for a video demonstration.	
Filling	• Inflate Foley catheter balloon with 30-60 mL of sterile Saline (60 mL preferred). • Bimanually inspect that balloon is above the internal OS. • No vaginal packing. • Tape catheter to inside of patients thigh without tension.	
Removal	• Remove all fluid with a syringe deflating the balloon. • Remove catheter. • Inspect balloon/catheter for any signs of damage or abnormalities. • Report any breaks in integrity.	
Instructional Video	https://www.youtube.com/watch?v=f5wvBkbc3zk (placement begins at 2:39)	

Cook Cervical Ripening Balloon Catheter	
Equipment Needed	• Cook Cervical Ripening Balloon Catheter • Syringe with sterile saline for inflating • Tape • Sterile gloves • Betadine® swabs • Sterile ring forceps X2 • Sterile speculum
Placement, Filling, and Removal	• See instructions for use : *Cook Cervical Ripening Balloon with Stylet*
Instructional videos	https://www.cookmedical.com/reproductive-health/resources-cook-cervical-ripening-balloon-with-stylet/

Supporting Information

Confirmation of Gestational Age	• Ultrasound measurement of less than 20 weeks of gestation supports the gestational age at 39 weeks or greater • Fetal heart tones have been documented as present for 30 weeks by Doppler ultrasonography • It has been 36 weeks since a positive serum or urine human chorionic gonadotropin pregnancy test result
Certification of Evidence	The following documents outline the evidence certification process used to develop these guidelines: • Evidence Certification Report: Outpatient Induction of Labor • Evidence Certification Report: Inpatient Induction of Labor

References

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This CPM presents a model of best care based on the best available scientific evidence at the time of publication. It is not a prescription for every physician or every patient, nor does it replace clinical judgment. All statements, protocols, and recommendations herein are viewed as transitory and iterative. Although physicians are encouraged to follow the CPM to help focus on and measure quality, deviations are a means for discovering improvements in patient care and expanding the knowledge base. For feedback contact: Women's Health Clinical Program (OB@imail.org)

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