



ALLIANCE FOR INNOVATION
ON MATERNAL HEALTH

Safe Reduction of Primary Cesarean Birth

AIM Clinical Refresher Series

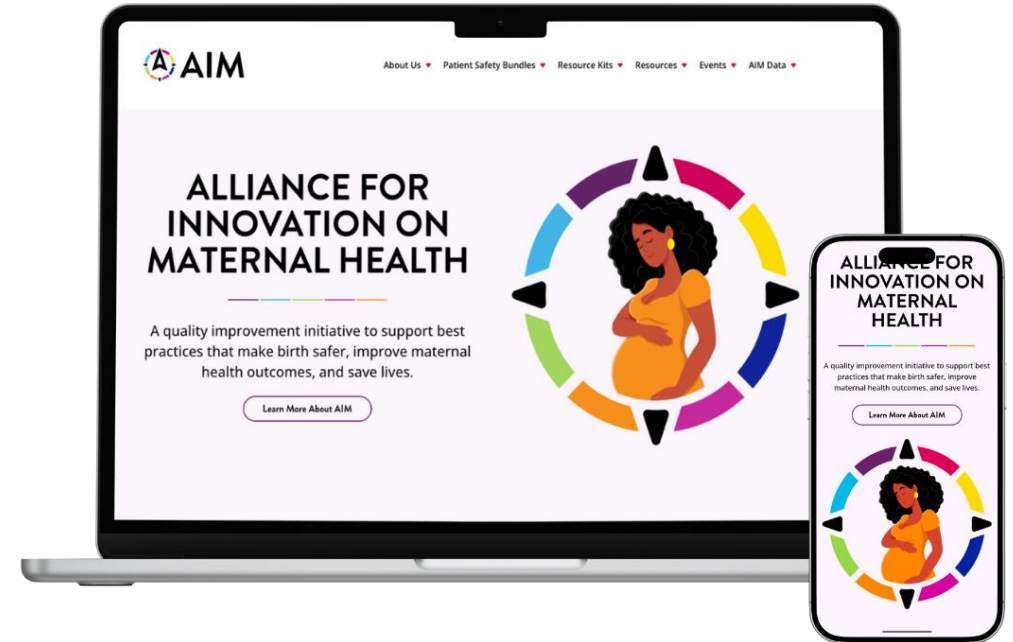
May 27, 2026

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ALLIANCE FOR INNOVATION
ON MATERNAL HEALTH
TECHNICAL ASSISTANCE CENTER

The Alliance for Innovation on Maternal Health (AIM) is a quality improvement initiative to support best practices that **make birth safer, improve maternal health outcomes, and save lives.**



AIM Safe Reduction of Primary Cesarean Birth Patient Safety Bundle

Patient Safety Bundle Documents

Patient Safety Bundle



Element Implementation Details



Implementation Resources



Data Collection Plan



Change Package



Learning Modules



Learning Objectives

By the end of this session participants will be able to:

1. **Describe** at least one evidence-based strategy for enhancing the likelihood of safe vaginal births and decreasing preventable cesareans.
2. **Implement** practical, team-based approaches to safely reduce primary cesarean sections while maintaining optimal maternal and neonatal outcomes.
3. **Integrate** concise, actionable, clinical guidance from expert updates into everyday practice to strengthen patient safety and improve maternal health outcomes.



Lisa Kane Low PhD, CNM, FACNM, FAAN



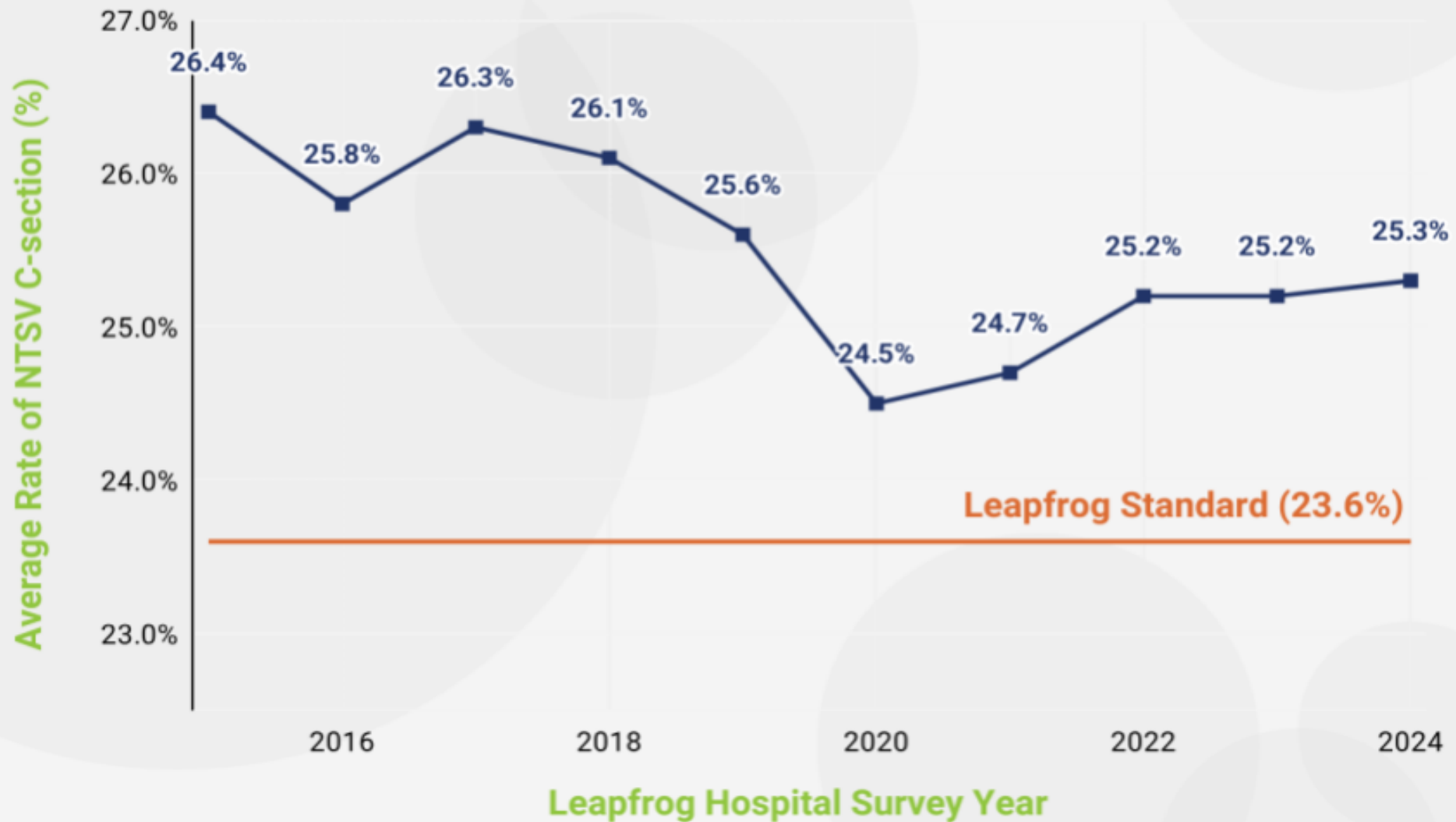
Senior Associate Dean of Professional Graduate
Studies and Professional Relations

Professor, *University of Michigan*



Safe Reduction of Primary Cesarean Births: *It takes a Village*

Hospitals' Average Rate of NTSV C-sections by Survey Year



Behind the Numbers: Your Cesarean Rate Matters

- Patient experience and expectations
- Clinical outcomes
- Population health outcomes
- Unit throughput, space and bed shortages, staffing, career expectations
- Hospital safety rankings and recognition: alignment with hospital, unit, and clinician expectations and goals

NTSV Cesarean Rate: A National Performance Metric

2026 Reporting Guidelines: CS rate exceeding 30% is considered concerning and will be publicly reported as a potential quality issue, specifically measured by the "PC-02" metric which focuses on NTSV births



Beyond the Numbers



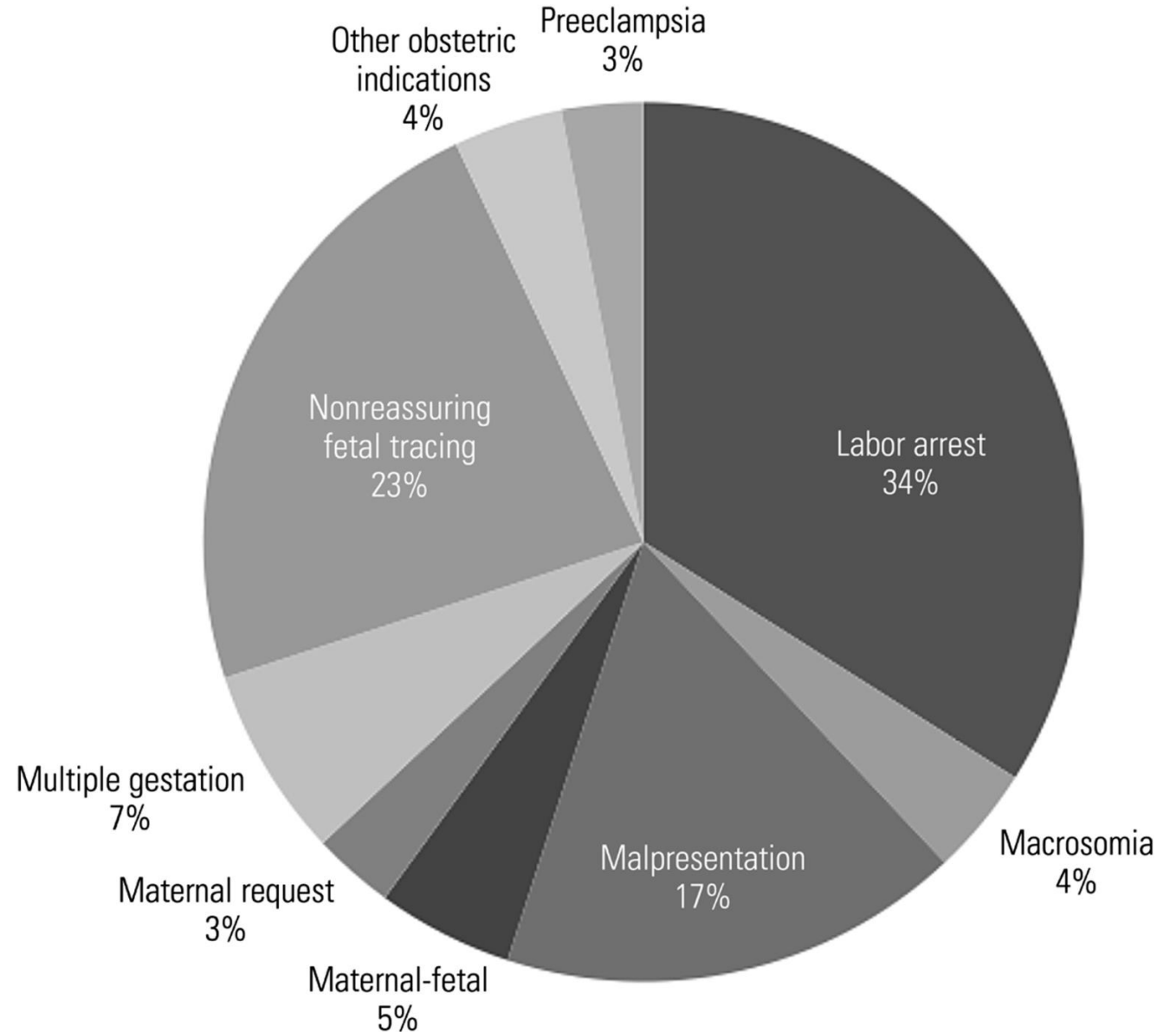
“I had something taken from me that wasn’t my doing” - Mykalynn Penny, referring to her hysterectomy related to placenta accreta

“The last eight years have been the worst experience of my life” - Julio Sanchez, referring to the loss of his wife, Maribel Sanchez

“I just felt like, they’re the doctor, they know best” - Rayven Coleman, referring to the advice to have subsequent cesareans after her first

Primary Indications for Cesarean

- Dystocia 34%
- Abnormal fetal heart rate tracing 23%
- Malpresentation 17%



Caughey A, Cahill A, Guise J ...

Safe prevention of the primary cesarean delivery

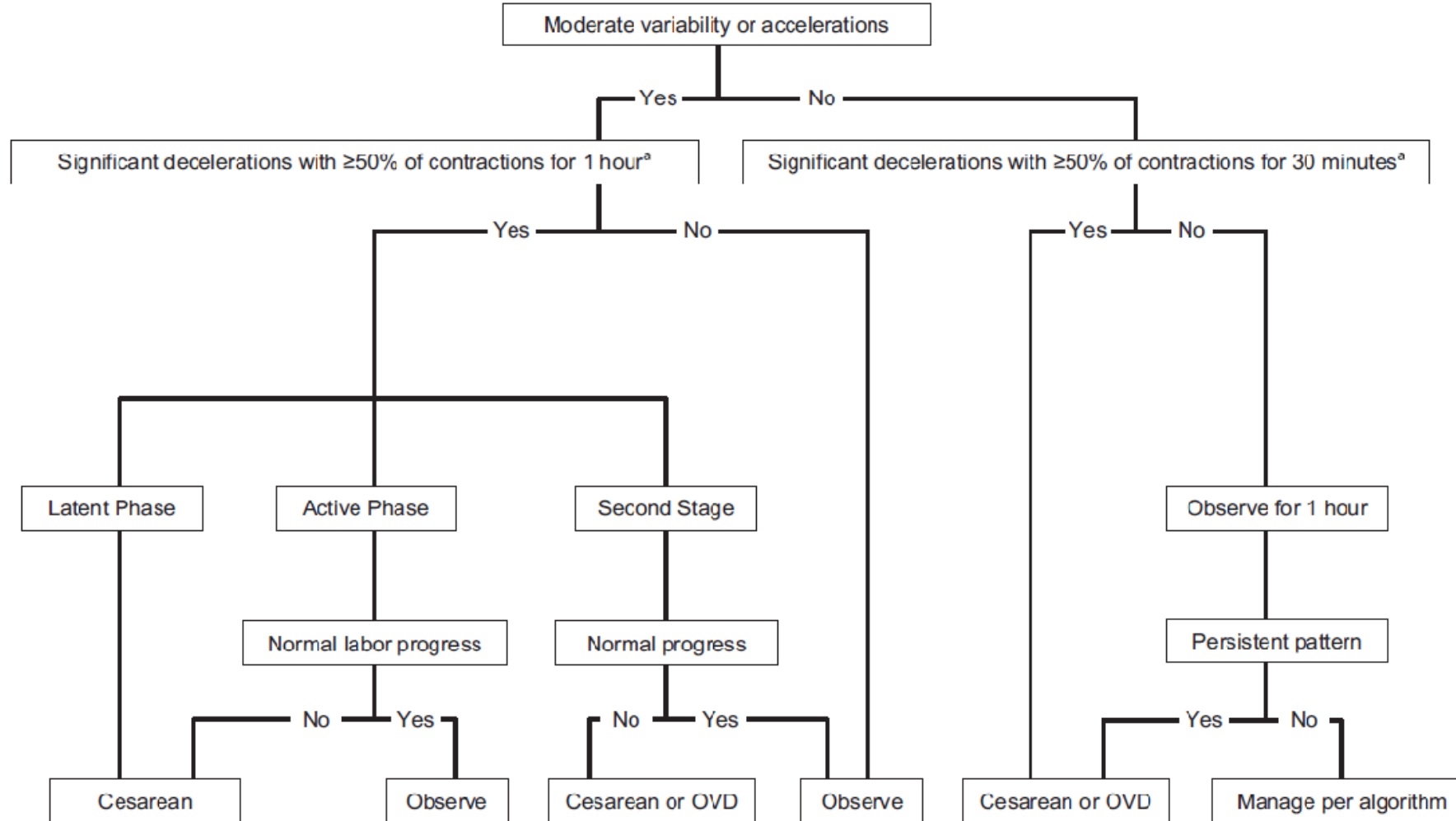
American Journal of Obstetrics & Gynecology, 210, 179-193

Category 2 Conundrum

- Use of a common nomenclature
 - NICHD endorsed Category 1, 2, 3
 - Category 2 includes a wide range of fetal heart rate tracings
- Key strategy to address conundrum is use of algorithms*
 - They guide common assessment steps
 - Engages the full clinical team in interpretation for Category 2
- Key principles with an algorithm for Category 2 management
 - Shared, structured multidisciplinary education and communication
 - Shared nomenclature used
 - Structured approach to review and escalation

FIGURE 1

Algorithm for management of category II fetal heart rate tracings

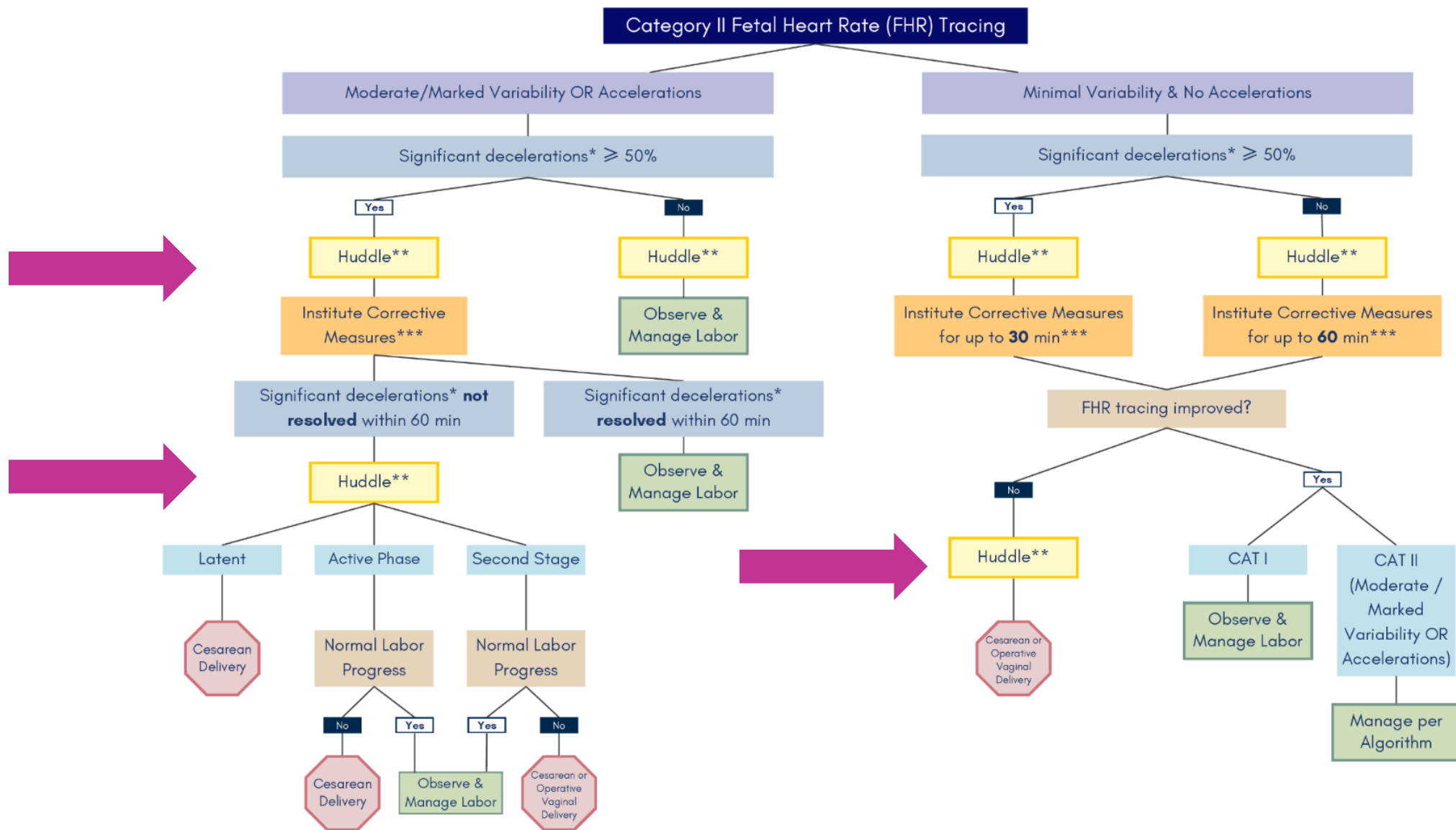


OVD, operative vaginal delivery.

^aThat have not resolved with appropriate conservative corrective measures, which may include supplemental oxygen, maternal position changes, intravenous fluid administration, correction of hypotension, reduction or discontinuation of uterine stimulation, administration of uterine relaxant, amnioinfusion, and/or changes in second stage breathing and pushing techniques.

Clark. Category II FHRT. Am J Obstet Gynecol 2013.

Category II Fetal Heart Rate Tracing Management Algorithm



Category II Fetal Heart Rate Tracing Management requires ongoing patient support and education.

Why Focus on Team Huddles as Part of Category 2 FHR Management?

Studies have demonstrated:

- Communication is a critical element in all safety management
- Transitions in care are high risk for breaches in communication
- Team huddles improve communication and help create highly reliable teams
- Regular interdisciplinary team huddles for review of FHR enhances multidisciplinary communication
- Reduces variation in FHR monitor analysis
- Improves health outcomes for term newborns
- Assists with labor management decision-making

Resources and Tools for Improved Fetal Assessment

- Use of intermittent auscultation for appropriate candidates, including unit policy, education and training for staff
- Training and Education: shared opportunity for all team member training, strip review sessions, 5-minute strip huddle reviews at safety rounds, strip checks at sign out
- Building awareness: have algorithm on Badge Buddies, posters
- Documentation: dot phrases with criteria
- Verification: algorithm and team member review in real time
- Reflection and Case Reviews: include positives and challenges




Keeping Labor Normal

- Be a constant presence
- Create a positive, respectful atmosphere
- Arrange the room for patient's comfort
- Give support, comfort, reassurance
- Use touch, massage, physical support as desired and consented to by the patient
- Promote being upright and moving
- Promote comfort consistent with the patient's desires and preferences
- Assess for progress over time and identify opportunities to encourage the labor process: proactive vs reactive when possible

Clinical Practice Guidelines: First and Second Stage Labor Management 2024

- General management of “normal labor”
- Reinforces the “newer 2014” paradigm of active labor beginning at 6cm, supporting “longer” time before identifying dystocia or abnormal labor progress
- Updates management of second stage and dystocia management



CLINICAL PRACTICE GUIDELINE

NUMBER 8
JANUARY 2024
(REPLACES OBSTETRIC CARE CONSENSUS 1, MARCH 2014)

First and Second Stage Labor Management

Committee on Clinical Practice Guidelines—Obstetrics. This Clinical Practice Guideline was developed by the ACOG Committee on Clinical Practice Guidelines—Obstetrics in collaboration with Alison G. Cahill, MD, MSCI; Nandini Raghuraman, MD, MSCI; and Manisha Gandhi, MD; with consultation from Anjali J. Kaimal, MD, MAS. The Society for Maternal-Fetal Medicine (SMFM) supports this document.

PURPOSE: The purpose of this document is to define labor and labor arrest and provide recommendations for the management of dystocia in the first and second stage of labor and labor arrest.

TARGET POPULATION: Pregnant individuals in the first or second stage of labor.

METHODS: This guideline was developed using an a priori protocol in conjunction with a writing team consisting of one maternal-fetal medicine subspecialist appointed by the ACOG Committee on Clinical Practice Guidelines—Obstetrics and two external subject matter experts. ACOG medical librarians completed a comprehensive literature search for primary literature within Cochrane Library, Cochrane Collaboration Registry of Controlled Trials, EMBASE, PubMed, and MEDLINE. Studies that moved forward to the full-text screening stage were assessed by the writing team based on standardized inclusion and exclusion criteria. Included studies underwent quality assessment, and a modified GRADE (Grading of Recommendations Assessment, Development, and Evaluation) evidence-to-decision framework was applied to interpret and translate the evidence into recommendation statements.

RECOMMENDATIONS: This Clinical Practice Guideline includes definitions of labor and labor arrest, along with recommendations for the management of dystocia in the first and second stages of labor and labor arrest. Recommendations are classified by strength and evidence quality. Ungraded Good Practice Points are included to provide guidance when a formal recommendation could not be made because of inadequate or nonexistent evidence.



ACOG Recommendations for Spontaneous Labor

- Continue to support admission in active labor (> 6 cm), considering discharge home if not in active labor upon presentation at hospital
- Once admitted promote labor progress through support techniques including mobility, position changes and comfort measures
- Select appropriate fetal assessment strategy
- Promote continuity of care and labor support
- Engage doula or family support

What about Latent Phase Labor?

- ACOG has never endorsed a specific evidence-based diagnosis for latent phase labor arrest or prolonged latent phase labor
- Use of CMQCC Definition
 - Cervical dilation <6cm and moderate or strong contractions on palpation were present for at least 12 hours without improvement in cervical dilation
- Requires management of latent phase labor
 - Decision to move to discharge home post comfort care management
 - Decision to move to augmentation of labor

Latent Phase Labor

- Patient education regarding labor progress, active labor definitions and strategies to support delayed admission until active labor
- For patient in latent labor, options include delayed admission, support at home, use of doula, “walking paths” and promotion of comfort measures
- If prolonged latent labor is experienced after admission (greater than 16 hours) consider induction/augmentation and follow induction of labor management, or discharge home

Second Stage Labor Pushing to Prevent Dystocia

Encourage pushing once complete, and consider a variety of positions as indicated, while continuing to assess fetal rotation and descent

NEW
ACOG Recommends:

Pushing commence when complete cervical dilation is achieved

Second Stage Management

Longer second stage = higher risk of maternal and neonatal morbidity?!

Outcomes	Immediate (n=1200)	Delayed (n=1204)	RR (95% CI)
SVD	1031 (85.9%)	1041 (86.5%)	0.99 (0.96-1.03)
PPH	27 (2.3%)	48 (4.0%)	0.60 (0.3-0.9)
Chorio	80 (6.7%)	110 (9.1%)	0.70 (0.66-0.9)

Cahill AG, Srinivas SK, Tita AT, Caughey AB, Richter HE, Gregory WT, et al. Effect of immediate vs delayed pushing on rates of spontaneous vaginal delivery among nulliparous women receiving neuraxial analgesia: a randomized clinical trial. JAMA 2018;320:1444-54. doi: 10.1001/jama.2018.13986

Delayed pushing in nulliparous patients with epidural

- No benefit, + Harm
- OMSS trial stopped early due to futility (for SVD) and harm signal
- pH <7.1 and suspected neonatal sepsis also increased with delayed pushing
- No impact on pelvic floor morbidity

Evidence-Based Management of Second Stage Labor

- Laboring down with an epidural no longer encouraged
- Open glottis, self-directed pushing
- Tailored coaching as necessary
- Upright positions, freedom of movement to change positions
- Evaluate progress in descent and ROTATION
- Assess for need to change process: fetal position, presentation
- Close fetal AND MATERNAL assessment

Specific Practices to Prevent Dystocia

- Childbirth preparation classes
- Continuous labor support by RN, midwife, doula or family
- Walking, movement
- Hydrotherapy (active labor)
- Position changes
- Intermittent FHR auscultation when eligible
- Use of wireless EFM when continuous monitoring indicated
- Spinning Babies©
- Use of peanut balls
- Comfort assessment and management



Adequate Nurse Staffing and Cesarean Birth Rates

- **Design:** Survey Research with 2,786 nurses from 193 hospitals across 23 states focused on unit staffing matched with hospital level administrative data and rates of cesareans & vaginal births
- **Results:** Better nurse staffing, (1:1 staffing in active labor, consistent with AWHONN standards) was an independent predictor of lower cesarean birth rates and higher vaginal birth after cesarean (VBAC) rates.
- **Conclusion:** Adequate nurse staffing is crucial for nurses to provide the care that promotes vaginal birth, such as bedside attendance, labor support, and advocacy. Inadequate staffing forces nurses to prioritize immediate medical tasks over these supportive measures.



First and Second Stage Labor Dystocia Diagnosis 2024

Reaffirms:

- No specific definition of latent phase labor*
- 6 cm as start of active phase
- Active phase arrest definition is unchanged
 - 4 hours with adequate contractions and ROM
 - 6 hours with ROM and augmentation
- Definition of prolonged second stage of labor is more than 3 hours of pushing in nulliparous and 2 hours of pushing in multiparous individuals.
- *Tailored counseling if moving beyond 2 or 3 hours second stage labor*



2024 Updates: Management of Dystocia in Active Labor Recommendations

- Recommends amniotomy for patients undergoing augmentation or induction of labor to reduce the duration of labor
- Recommends either low-dose or high-dose oxytocin strategies as reasonable approaches to the active management of labor to reduce operative deliveries
- Using intrauterine pressure catheters among patients with ruptured membranes to determine adequacy of uterine contractions in those with protracted active labor or when contractions cannot be accurately externally monitored

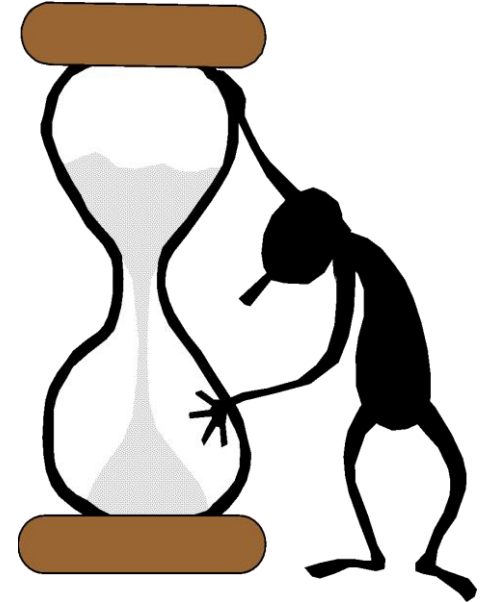
ACOG/SMFM Dystocia Criteria

Primary Indication for Cesarean Delivery Adherence to ACOG/SMFM Labor Dystocia Criteria

Active Phase Arrest	<ul style="list-style-type: none">• Rupture of membranes• No improvement in cervical dilation*• Cervical dilation of ≥ 6 cm with:<ul style="list-style-type: none">○ ≥ 4 hours of adequate uterine contractions○ OR ≥ 6 hours of oxytocin administration with inadequate uterine contractions
Arrest of Descent	<ul style="list-style-type: none">• Rupture of membranes• Second stage of labor with ≥ 3 hours of pushing in a nulliparous patient
Failed Induction	<ul style="list-style-type: none">• Rupture of membranes• Cervical dilation of < 6 cm and oxytocin administration for $\geq 12-18$ hours after rupture of membranes

Updated ACOG Statement: Second Stage

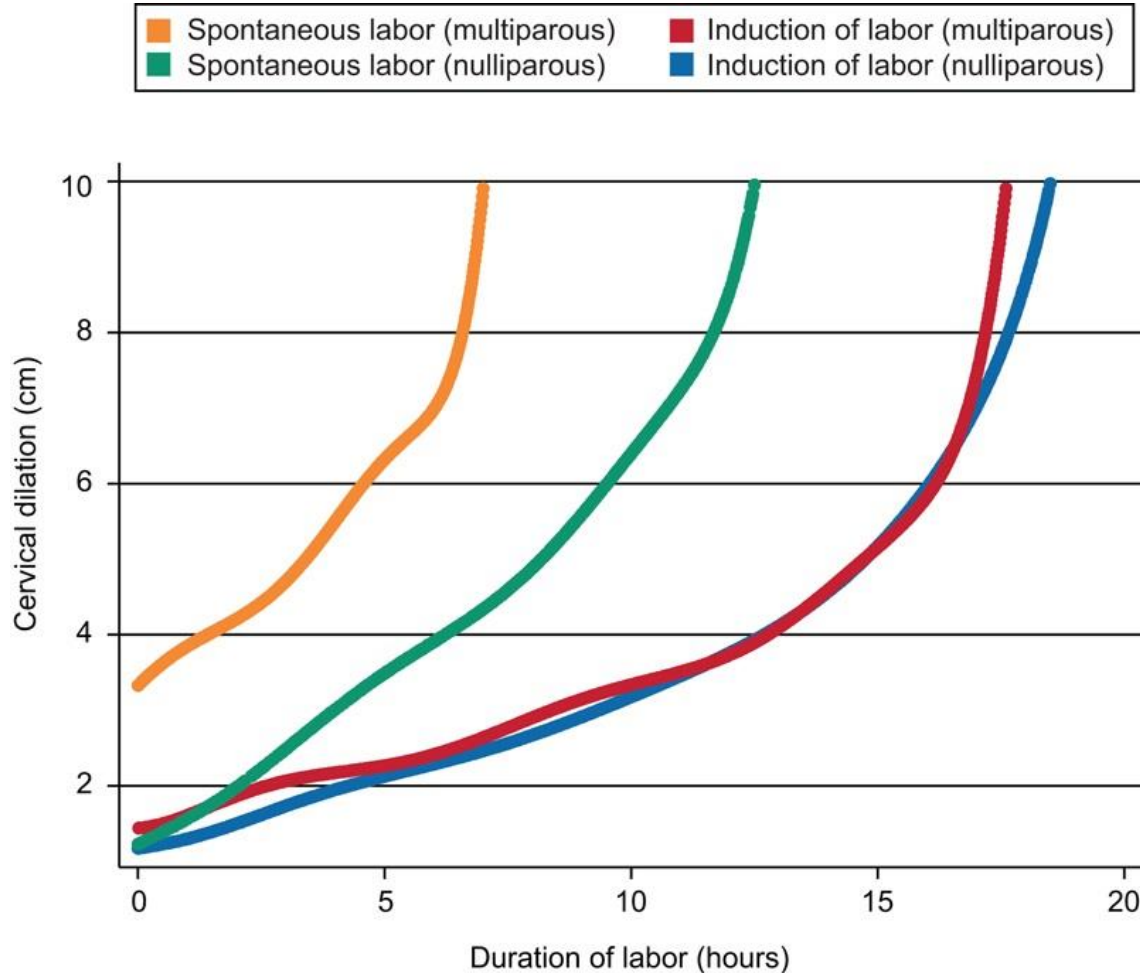
- New: Individualized decision making when making no progress prior to 2 hours in a multiparous individual and 3 hours in a nulliparous individual (strong evidence)
- “Arrest in the second stage can be identified earlier if there is lack of fetal rotation or descent despite adequate contractions, pushing efforts, and time. (GOOD PRACTICE POINT)”*



*Ungraded Good Practice Points are incorporated when clinical guidance is deemed necessary in the case of extremely limited or nonexistent evidence. They are based on expert opinion as well as review of the available evidence.

First and Second Stage Labor Management: ACOG Clinical Practice Guideline No. 8. Obstetrics & Gynecology 143(1):p 144-162, January 2024. | DOI: 10.1097/AOG.0000000000005447

What about Induction of Labor?



- Latent phase is slower with IOL
- Active phase at 6 cm
- Active phase slope is similar to spontaneous labor

Failed Induction of Labor Dx of Dystocia

- Interval from initiation of the induction process and < 6cm
 - Oxytocin administration at least 12-18 hours after membranes are ruptured
- If >6 cm dilated, follow the criteria for arrest of active phase
 - Arrest of Active Phase Labor: Membranes ruptures and:
 - *At least 4 hours of adequate contractions without change or*
 - At least 6 hours of oxytocin use with inadequate contractions and no change

Labor Unit Culture

Key Foundational Component to safely reduce NTSV cesareans:

- AIM Bundle Readiness: “Develop provider, patient community and unit culture that values, promotes, and supports spontaneous onset and progress of labor and vaginal birth and understands the risks for current and future pregnancies of cesarean birth without medical indication”
- Rarely addressed as hospital teams prepare for their QI work related to promoting vaginal birth.
- Labor Unit Culture as measured by Labor Unit Culture Survey is related to NTSV Cesarean Birth Rates

Callaghan-Koru JA, et al. Implementation of the Safe Reduction of Primary Cesarean Births Safety Bundle During the First Year of a Statewide Collaborative in Maryland. *Obstet Gynecol.* 2019 Jul;134(1):109-119. doi: 10.1097/AOG.0000000000003328. PMID: 31188309.

White VanGompel E, et al. Measuring labor and delivery unit culture and clinicians' attitudes toward birth: Revision and validation of the Labor Culture Survey. *Birth.* 2019 Jun;46(2):300-310. doi: 10.1111/birt.12406. Epub 2018 Nov 8. PMID: 30407646.

Opportunities to Promote a Positive Unit Culture

- Assessment of unit culture
- Team building events: celebrations
- Debriefs following events
- Case reviews with all team members represented
- Team Huddles: structured approach to assure consistency
- Shared learning/sharing opportunities outside of work environment (journal clubs, listening sessions)

Curious about
the Labor Culture
Survey?



We can do hard things!

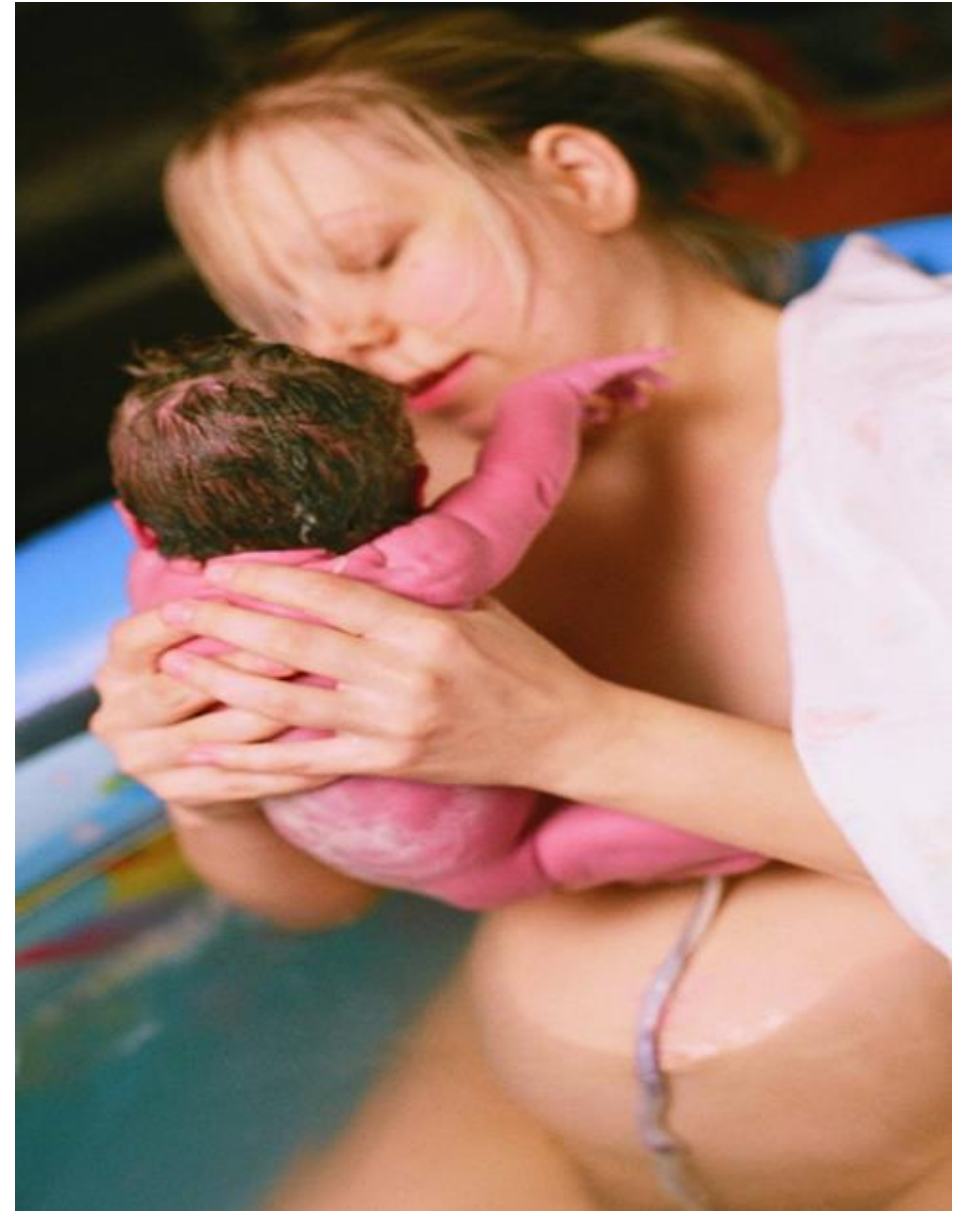


The Team, The Team, The Team

- When each of us brings our best to caring for our patients, even the smallest choices can add up to meaningful change. That's why our cesarean NTSV rate reflects the strength of our team—not just individual effort!
- All hands on deck and all hands matter....



KEEP
CALM
AND
BIRTH
ON



AIM Clinical Refresher Series

Sepsis in Obstetric Care ✓

May 6, 2026

Cardiac Conditions in Obstetric Care ✓

May 13, 2026

Severe Hypertension in Pregnancy ✓

May 20, 2026 at 12:30 - 1:00 PM ET

Safe Reduction of Primary Cesarean Birth ✓

May 27, 2026 at 12:30 - 1:00 PM ET

Join us at the 2026 AIM Annual Meeting



REGISTRATION OPEN
2026 AIM ANNUAL MEETING

June 15–17
Hyatt Regency Crystal City
Arlington, VA



qrco.de/bgns9H

Thank you!

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