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CENTER *for* HEALTHY LIVING

Healthy children in a healthy world.

We advance health and healthy living for children and families through cutting-edge research, innovative community-based programs, and dissemination of evidence-based practices.

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UTHealth Houston School of Public Health

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tchmb

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TEXAS COLLABORATIVE FOR HEALTHY MOTHERS AND BABIES (TCHMB)

Texas Collaborative for Healthy Mothers and Babies (TCHMB)

The Perinatal Quality Collaborative for Texas

Chair: Alice Gong, MD

Vice Chair: Kendra Folh, DNP, RNC-OB, C-ONQS, CPHQ, LSSBB

Executive Director: Deanna M. Hoelscher, PhD, RDN, LD, CNS, FISBNPA

TCHMB MISSION & GOALS

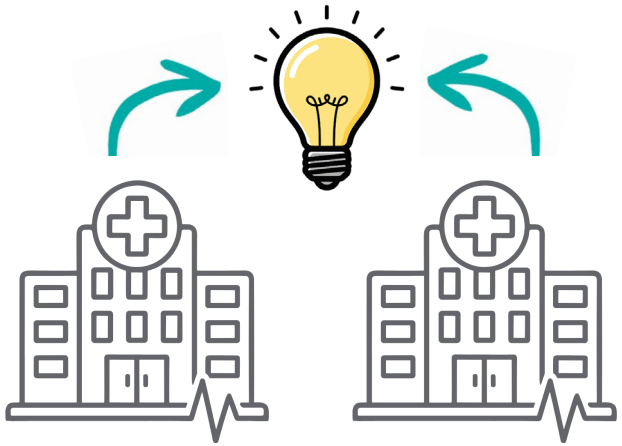
MISSION: To advance **health care quality and patient safety for all Texas mothers and babies** through the collaboration of health and community stakeholders as informed by the voices of the patients we serve

GOALS:

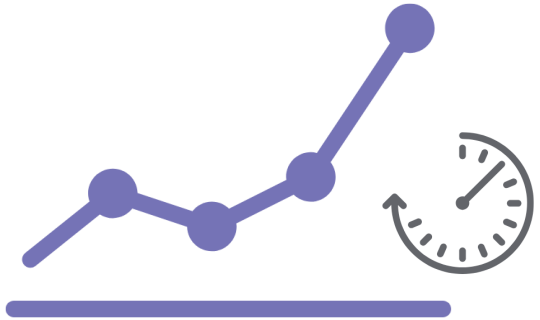
- Reduce preterm birth.
- Reduce maternal/infant morbidity and mortality.
- Eliminate health disparities.
- Improve health outcomes using the life course approach.
- Strengthen involvement of partners/families.
- Improve the health environment for mothers and babies.

PERINATAL QUALITY COLLABORATIVES (PQCS)

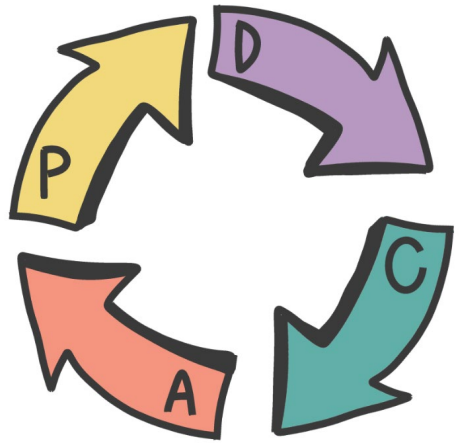
TCHMB is the Texas PQC



Collaborative Learning



Rapid Response Data



Quality Improvement Science Support

TEXAS IS UNIQUE

2nd LARGEST

State in the U.S.

10% of U.S. births occurred in TX (2021-2024)

Every **80 seconds** a child is born somewhere in Texas

Hispanics account for **the largest share** of Texas' total population

35% of population speaks languages other than English at home

Texas has a greater population than 18 states **combined**

5 million Texas residents live in rural areas, more than any other state

7 out of 10 Texans live within the Texas Triangle

DISCLOSURES & ACCREDITATION

This webinar awards **1.0 Entry-Level CHES/MCHES® credit.**

Requirements for Completion: Attend the session in its entirety

An evaluation form with instructions will be sent via email within one week following the webinar to registrants who signed up for credit.

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DISCLOSURES & ACCREDITATION

This webinar is pending **Commission on Dietetic Registration review and approval for 1.0 CPEU.**

Requirements for Completion: Attend the session in its entirety

Once approved, certificates will be sent via email to attendees who signed up for credit. Please note that takes 4-6 weeks for the CDR to review the applications.

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TCHMB Neonatal Webinar Series

Title: Optimizing Cesarean Recovery to Support Breastfeeding and Lactogenesis

Speakers: Charleta Guillory, MD, MPH, FAAP and Sonal Zambare, MD

Planning Committee Members: Deanna Hoelscher, PhD, Karla Abela, PhD, RN, CCRN, CPN, Susan Dimitrijevic, MSN, RN, RNC-NIC, Tiffni Menendez, MPH, and Rachel Linton, MPH

Accreditation Statement:
McGovern Medical School at the University of Texas Health Science Center at Houston is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Credit Designation:
McGovern Medical School at the University of Texas Health Science Center at Houston designates this live activity for a maximum of 1.00 *AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Commercial Support: This activity is not commercially supported.

Disclosure of Financial Relationships

***Planners*:**
Deanna Hoelscher, PhD, Karla Abela, PhD, RN, CCRN, CPN, Susan Dimitrijevic, MSN, RN, RNC-NIC, Tiffni Menendez, MPH, and Rachel Linton, MPH have no financial relationship(s) with ineligible companies whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients to disclose.

***Speakers*:**
Charleta Guillory, MD, MPH, FAAP and Sonal Zambare, MD have no financial relationship(s) with ineligible companies whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients to disclose.

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NURSING CONTACT HOUR DISCLOSURES

Requirements for Completion:

- Attest that you have attended 100% of the session
- Complete online evaluation form

This educational activity is provided by **Cizik School of Nursing at UTHealth Houston** in joint providership with Michael & Susan Dell Center for Healthy Living, UTHealth Houston School of Public Health in Austin.
Cizik School of Nursing at UTHealth Houston is accredited as a provider of nursing continuing professional development by the **American Nurses Credentialing Center's Commission on Accreditation (ANCC).**
This activity has been planned and implemented in accordance with the accreditation requirements and policies of the ANCC by **Cizik School of Nursing at UTHealth Houston** and Michael & Susan Dell Center for Healthy Living, UTHealth Houston School of Public Health in Austin.

Cizik School of Nursing at UTHealth Houston is awarding **1.0** nursing continuing professional development contact hours for this activity.

Learning Outcome

Upon completion, at least 80% of the learners will report enhanced knowledge and intent to implement evidence-based strategies that support breastfeeding outcomes after cesarean birth, including enhanced recovery practices, early skin-to-skin contact, and multidisciplinary care coordination, as measured by the post-activity evaluation.

Disclosures

Neither the Planning Committee members nor the presenters today have disclosed any relevant financial relationships related to the planning or implementation of this CNE activity. We have no COI to disclose to you.

OPTIMIZING CESAREAN RECOVERY TO SUPPORT BREASTFEEDING AND LACTOGENESIS

Sonal Zambare, MD, FASA – Baylor College of Medicine

TCHMB – August 6, 2026

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LEARNING OBJECTIVES

- **Impact of Anesthesia on Breastfeeding:** Describe anesthesia and medication considerations during cesarean birth that may impact maternal alertness, fatigue, breastfeeding initiation, and lactogenesis
- **Enhanced Recovery Strategies:** Identify strategies to support enhanced recovery after cesarean birth while promoting early maternal–infant bonding and skin-to-skin contact
- **Multidisciplinary Collaboration:** Discuss multidisciplinary approaches involving obstetric, anesthesia, nursing, and lactation teams to improve breastfeeding support following cesarean birth
- **System-Level Improvements:** Recognize opportunities to optimize postoperative care processes that support successful breastfeeding outcomes after cesarean delivery

WORLD BREASTFEEDING WEEK – AUGUST 1-7

https://www.usbreastfeeding.org/national-breastfeeding-month.html

https://waba.org.my/wbw/

MEDICATIONS AND BREASTFEEDING

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OVERVIEW

Medication Safety and Breastfeeding

Most cesarean medications are compatible with breastfeeding when used appropriately, promoting parent and infant well-being

Pharmacologic Properties of Anesthetics

Anesthetic agents have short half-lives and minimal infant absorption, limiting drug transfer into breast milk

Impact of Outdated Practices

Routine pump and dump disrupts milk removal, delays lactation, and increases parental anxiety unnecessarily

Optimizing Medication Use

Selecting favorable drugs and multimodal analgesia minimizes opioid use and supports breastfeeding recovery

MEDICATIONS USED FOR ANESTHESIA

Source: Unsplash: Eduardo Barrios

Anesthetic agents transfer into breast milk in very small amounts - well below the threshold considered clinically significant

Caveat being the breastfeeding parent is awake and alert to safely hold the baby or use the breast pump

Usually, ‘pump and dump’ is not necessary*

Encourage ‘Sleep and Keep’

Relative Infant Dose (RID) - < 10% safe

* Always confirm with your healthcare team regarding your specific clinical situation

Reference: https://www.asahq.org/standards-and-practice-parameters/statement-on-resuming-breastfeeding-after-anesthesia

BREASTFEEDING COMPATIBILITY OF COMMON ANESTHETIC MEDICATIONS

Medication Class	Examples	Breastfeeding Compatibility	Clinical points
Local anesthetics	Bupivacaine, Lidocaine, Chloroprocaine	Safe	Most commonly used for neuraxial,
IV Agents	Propofol, Etomidate, muscle relaxants	Safe	Minimal milk transfer; resume feeding once patient awake
Muscle Relaxants	Succinylcholine, Rocuronium	Safe	Used in General anesthesia
Inhalational Agents	Sevoflurane, Desflurane, nitrous oxide	Safe	Rapid elimination via lungs
Non-opioid analgesics	Acetaminophen, NSAIDs Ketorolac	Safe	Foundation of multimodal analgesia
Opioids	Fentanyl, Remifentanil	Safe	Short-acting; preferred opioids
Opioids (Caution)	**Morphine***	Use with monitoring	Observe infant for sedation
Contraindicated	Codeine, Tramadol	Avoid	Risk of infant overdose

Reference: https://www.asahq.org/standards-and-practice-parameters/statement-on-resuming-breastfeeding-after-anesthesia

Anesthesia and Breastfeeding: More Often Than Not, They are Compatible

*IV – Intravenous
*NMBAs – Neuromuscular Blocking Agents

Adapted from Wanderer, J. P., & Rathmell, J. P. (2017). Anesthesia & Breastfeeding: More Often Than Not, They Are Compatible. *Anesthesiology (Philadelphia)*, *127*(4), A15–A15. https://doi.org/10.1097/ALN.0000000000001867

Original illustration: Annemarie Johnson, Vivo Visuals. Infographic redesigned by Texas Collaborative for Healthy Mothers and Babies (TCHMB) (2026)

ANESTHESIA FOR CESAREAN

Source: Turner, J. (2018, April 23). *5 unique aspects of a family-centered C-section*. My Vanderbilt Health. https://my.vanderbilthealth.com/5-unique-aspects-family-centered-c-section/

- Neuraxial is the preferred method – spinal or an epidural
- Post-Cesarean analgesia – Gold Standard is Preservative Free Neuraxial Morphine
- Start skin-skin in the operating room to encourage latching for a stable mom and neonate
- If general anesthesia is necessary, skin to skin as soon as the mother is awake to hold the neonate in recovery

Source: Copyright, Boston Medical Center. Photographer, Nikki Hannon

CHALLENGES AFTER A CESAREAN

- Natural oxytocin surge is skipped – especially in scheduled delivery
- Surgical stress on the body
- Pain, fatigue
- Skin-to-skin is a bit delayed compared to vaginal delivery
- Mom and baby may be unstable and or sleepy – delayed initiation
- Physical discomfort due to pain at the incision site - holding the baby may be strained

ENHANCED RECOVERY STRATEGIES

ENHANCED RECOVERY AFTER CESAREAN (ERAC)

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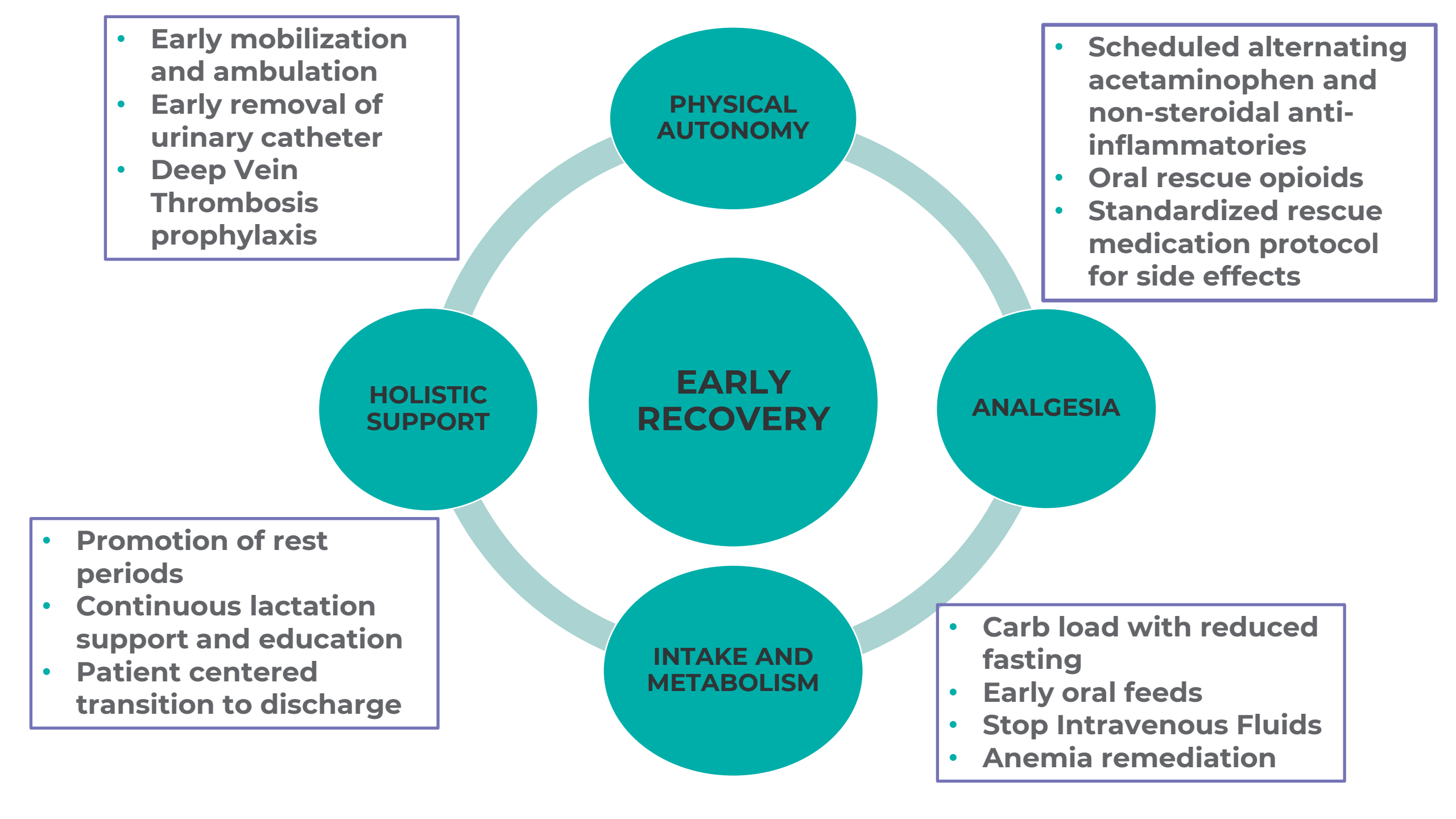
PRE-ERAC

- Opioid first for analgesia
- Fragmented care
- Delayed feeding and mobility
- Prolonged urinary catheter

With ERAC

- Multistep process geared for early holistic recovery
- Focus on multimodal opioid sparing analgesia
- Interdisciplinary Care-Team based approach
- Mindset shift


Early mobilization and ambulation
Early removal of urinary catheter
Deep Vein Thrombosis prophylaxis
PHYSICAL AUTONOMY
Scheduled alternating acetaminophen and non-steroidal anti-inflammatories
Oral rescue opioids
Standardized rescue medication protocol for side effects
HOLISTIC SUPPORT
EARLY RECOVERY
ANALGESIA
Promotion of rest periods
Continuous lactation support and education
Patient centered transition to discharge
INTAKE AND METABOLISM
Carb load with reduced fasting
Early oral feeds
Stop Intravenous Fluids
Anemia remediation

NON-OBSTETRIC SURGERY DURING BREASTFEEDING

Source: Dr. Lori Feldman Winter: The importance of skin to skin contact during and beyond the golden hour.

- Anesthetic medications are safe, short-acting and leave your system quickly
- Breastfeed or express milk immediately before the procedure
- After surgery, breastfeed as soon as you feel alert and orientated
- Discarding breastmilk is generally unnecessary
- Watch your baby for unusual drowsiness or changes in breathing or feeding, especially if your baby is premature or younger than 6 weeks

Reference: https://thepainlesspush.com/information-about-lactation-for-parents-needing-surgery-and-anesthesia/

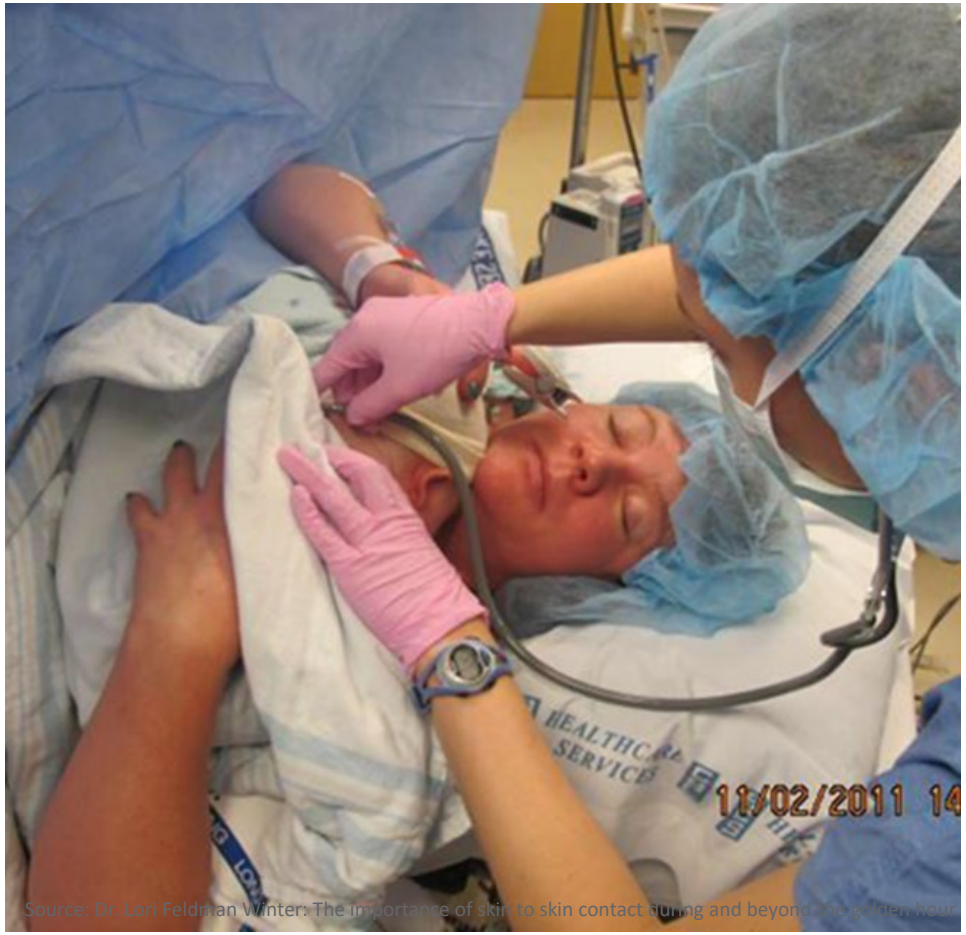
BEFORE CESAREAN

Source: Louisiana Department of Health

- Every patient's preference to breastfeed should already be known
- Encourage breastfeeding – understand reasons if choice is not to
- Labor and Delivery units to adopt ERAC* strategies - shortened fasting window, carb load, education to reduce anxiety, reassurance
- Education of teams to streamline adaptation of ERAC*

*Enhanced Recovery After Cesarean (ERAC)

IN THE OPERATING ROOM



Source: Dr. Lori Feldman Winter: The importance of skin to skin contact during and beyond the golden hour

- Place peripheral intravenous catheters in the back of the hands
- Neuraxial with awake patient
- Active warming as necessary and warm fluids pre and intra
- Don’t strap hands to arm boards
- Optimize fluid management
- Initiate skin-to-skin in the operating room
- Engage the partner to help position the baby

POST-CESAREAN RECOVERY

Source: Texas Ten Step Program

- Follow Enhanced Recovery After Cesarean (ERAC) steps
- Ensure adequate analgesia, nausea and side-effect management
- Encourage mobility after neuraxial wears off, early ambulation
- Overall nutrition
- Nurse or pump frequently (every 1.5 to 3 hours) in the first few days to stimulate the breasts → crucial for encouraging milk production and signaling the body to transition from colostrum to mature milk
- Experiment with nursing holds that keep the baby's weight off the abdominal incision, such as the laid-back position or the football hold

TEXAS BREASTFEEDING: STATISTICS AND BREASTFEEDING POLICY LANDSCAPE

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Breastfeeding Rates in Texas

About 83% of infants in Texas ever breastfeed, but only 26% are exclusively breastfed at six months, with rates lower for cesarean births[1]

Texas Ten Steps Hospital Initiative

The 10 Steps to Successful Breastfeeding encourages facilitating skin-to-skin contact after cesarean births[2]

Challenges and Disparities

Rural regions and populations face barriers like limited lactation consultation support and postpartum care fragmentation[3]

Policy to Remove Barriers

Texas policies encourage breastfeeding in the interests of maternal and child health[4]

1.CDC (2022) https://data.cdc.gov/Nutrition-Physical-Activity-and-Obesity/Nutrition-Physical-Activity-and-Obesity-National-I/8hxn-cvik/data_preview
2.Texas Ten Step Program. (n.d.). *About Texas Ten Step*. https://texastenstep.org/texas-ten-step-program/about-texas-ten-step
3. American College of Obstetricians and Gynecologists. (2021). *Barriers to breastfeeding: Supporting initiation and continuation of breastfeeding.* Committee Opinion No. 821
4. Texas Department of State Health Services. (n.d.). *Worksite lactation laws*. https://www.dshs.texas.gov/maternal-child-health/programs-activities-maternal-child-health/texas-mother-friendly-worksite/lactation-laws

WHAT CAN BREASTFEEDING PARENTS DO TO HELP THE PERIOPERATIVE TEAM?

Let your surgeons and anesthesiologists know ahead of time if you are breastfeeding or expressing milk for your baby, and what your breastfeeding goals are for after surgery.

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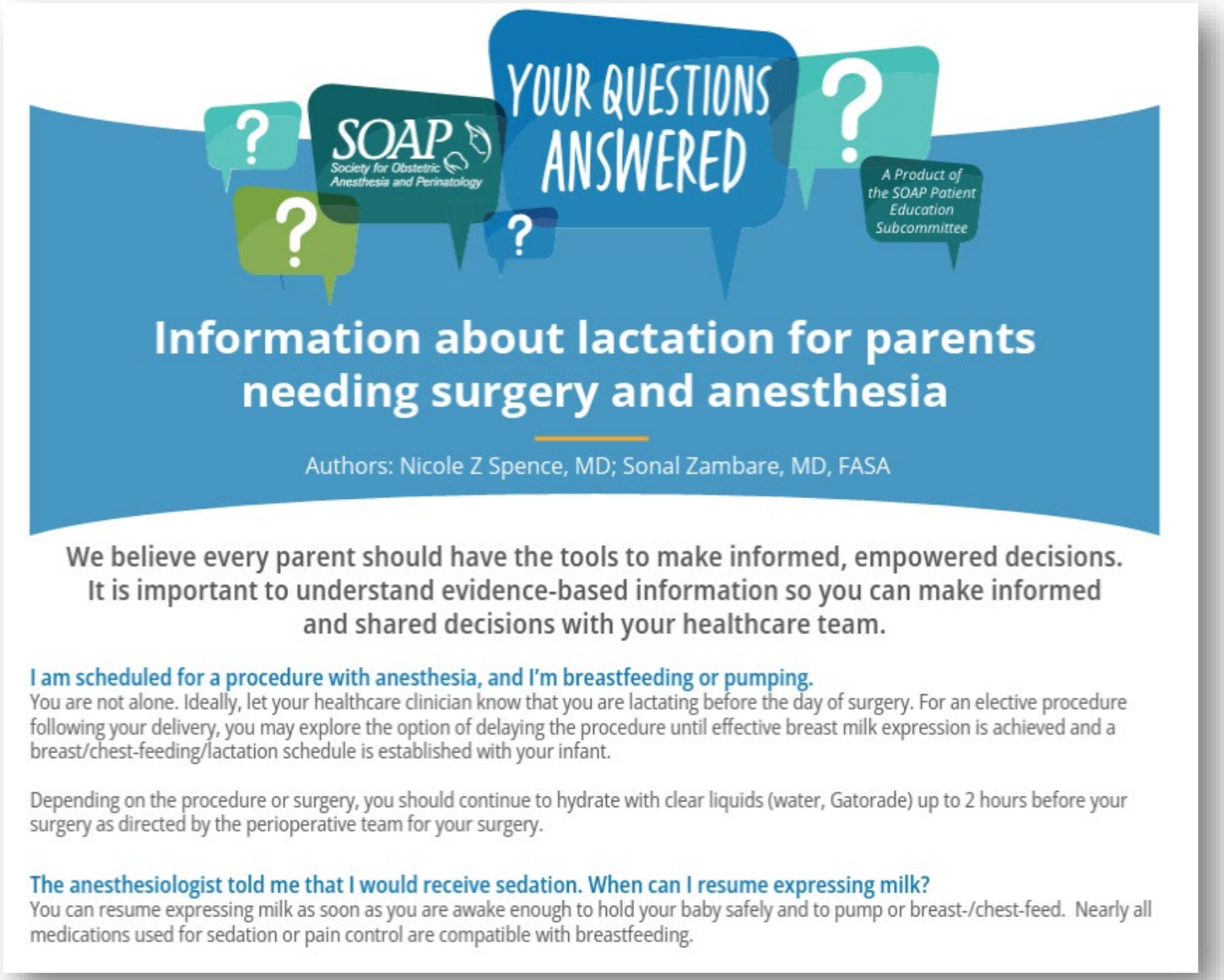
MULTIDISCIPLINARY COLLABORATION

TEAMS FOR THE WIN

- Obstetric Providers – antepartum, surgical optimization, pain, and follow-up medical issues
- Anesthesiologists – anesthesia, analgesia, nausea management, fluid management
- Nurses – assist with positioning, pain assessment, and medication safety; lactation consultants address latch and milk supply issues
- Midwives – prenatal and postpartum support
- Doulas – support and advocacy for the mother
- Family

MORE INFORMATION

- thepainlesspush.com
- SOAP.org
- ASAhq.org



BARRIERS TO SUCCESSFUL BREASTFEEDING AFTER SURGERY

- Excessive sedation and exhaustion
- Prolonged surgeries and complications
- Nausea
- Pain
- Limited mobility, delayed resumption of oral feeds requiring intravenous fluids, or need for urinary catheter
- Limited lactation support, education
- Limited access to a breast pump

TAKE HOME

Source: Texas Ten Step Program

- Overall, maternal recovery focus
- Adequate pain control
- Close observation of the infant, particularly in newborns, premature infants, or those with underlying medical conditions
- Importance of individualized risk-benefit assessments
- Integrating breastfeeding metrics into quality improvement and investing in education can improve cesarean care.

THANK YOU!

Please Post Your Questions in the Q&A

Sonal Zambare, MD, FASA – Baylor College of Medicine
sonal.zambare@bcm.edu

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RD/RDN

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Instructions for marking your attendance and claiming CME credit:

1. Text/scan code to mark attendance
2. Complete evaluation
3. Download CME certificate (MDs/DOs only) or Certificate of Attendance (non-physicians) *

**** Required if needed for your files to report for licensure/credentialing; certificate will not be emailed.***

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Scan this QR Code

The Activity Code will Expire on Friday, August 7, 2026 at 12:00 PM

August 6, 2026

Activity Code: 29ESPY

Text Code to 828-295-1144

or visit uthealth.eeds.com

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https://uthealth.questionpro.com/t/AXzzkZ9bsC

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FUTURE EVENTS

TexasAIM Safe Care for Every Mother

A program of the Texas Department of State Health Services

Biennial Summit

December 2026

TCHMB SUMMIT REMINDER

FALL 2027 BIENNIAL EVENT

THE TCHMB SUMMIT IS NOW HELD EVERY TWO YEARS
THERE WILL NOT BE A SUMMIT IN 2026.