Enhanced Recovery After Surgery (ERAS) in OB/GYN in the Era of the Opioid Epidemic

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23 January 2020

1425-1525 (ET)

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Disclosures

- CDR Wood and Maj. Anderson have no relevant financial or non-financial relationships to disclose relating to the content of this activity.
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Learning Objectives

At the conclusion of this activity, participants will be able to:

1. Identify basic principles of ERAS.
2. Summarize ERAS clinical pathway recommendations.
3. Distinguish specific considerations for ERAS in GYN and OB environments.

Poll Question

- Does your facility currently utilize a form of ERAS for GYN and/or OB procedures?
  - ❑ A-Yes
  - ❑ B-No
  - ❑ C-I'm unsure

ERAS Overview

- "Healing is a matter of time, but it is sometimes also a matter of opportunity" –Hippocrates
- Patient-centered, evidence-based, interdisciplinary team developed pathways to enhance recovery after surgery. Benefits include:
  - ❑ Shorter length of stay
  - ❑ Decreased post-operative pain/need for analgesia
  - ❑ Decreased complication/readmission rates
  - ❑ Increased patient satisfaction

(ACOG, 2018b)

ERAS Outcomes

ERAS AND THE OPIOID CRISIS

ERAS supports collaborative pain care between the patient, the CRNA and the entire care team. It also encourages patients to play an active role by expressing their own needs and concerns to help establish realistic goals for improved well-being and quality of life without dependence on opioids.

This thorough assessment and treatment of pain not only reduces the need for opioids during and after surgery, but also decreases the risk of acute pain transitioning to chronic pain and the development of opioid dependency and abuse.

ERAS: IMPROVED OUTCOMES AND REDUCED COSTS

- ERAS provides an **average savings of $880 to $5,560** per patient. [5,6]
- ERAS **reduces patient length** of stay **by 3-4 days** on average. [7-12]
- ERAS **reduces 30-day** patient readmission rates and costs. [13,14]
- ERAS **helps patients return** to normal activities more quickly. [6]

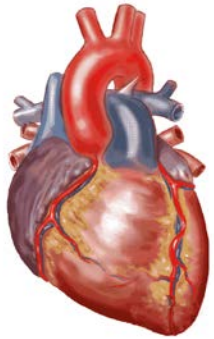
ERAS Overview

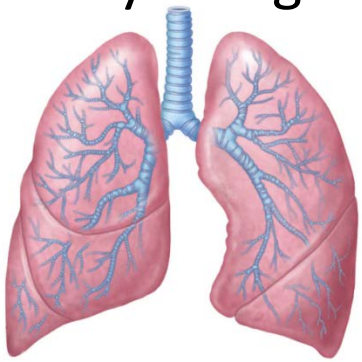
- Originally developed for colorectal surgery in Denmark in the late 1990s
- Patient engaged from their first visit to surgeon's office through 30-90 days post discharge
- Shift from individual clinician's practice decisions to facility specific pathways that limit variability
  - ❑ Can be modified to address each patient's specific needs

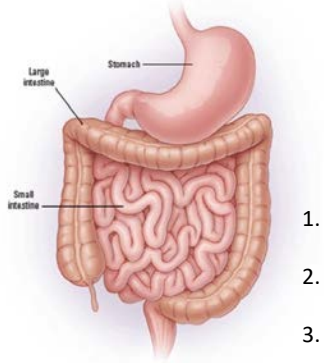
(AANA, 2017)

Background

- Surgical stress leads to a catabolic state
  - ❑ Increased cardiac demand
  - ❑ Relative tissue hypoxia
  - ❑ Increased insulin resistance
  - ❑ Impaired coagulation profiles
  - ❑ Altered pulmonary and gastrointestinal function







1. Image courtesy of http://humanheartdrawings
2. Image courtesy of http://humanlungimage
3. Image courtesy of http://systemsinthehumanbody

Background cont.

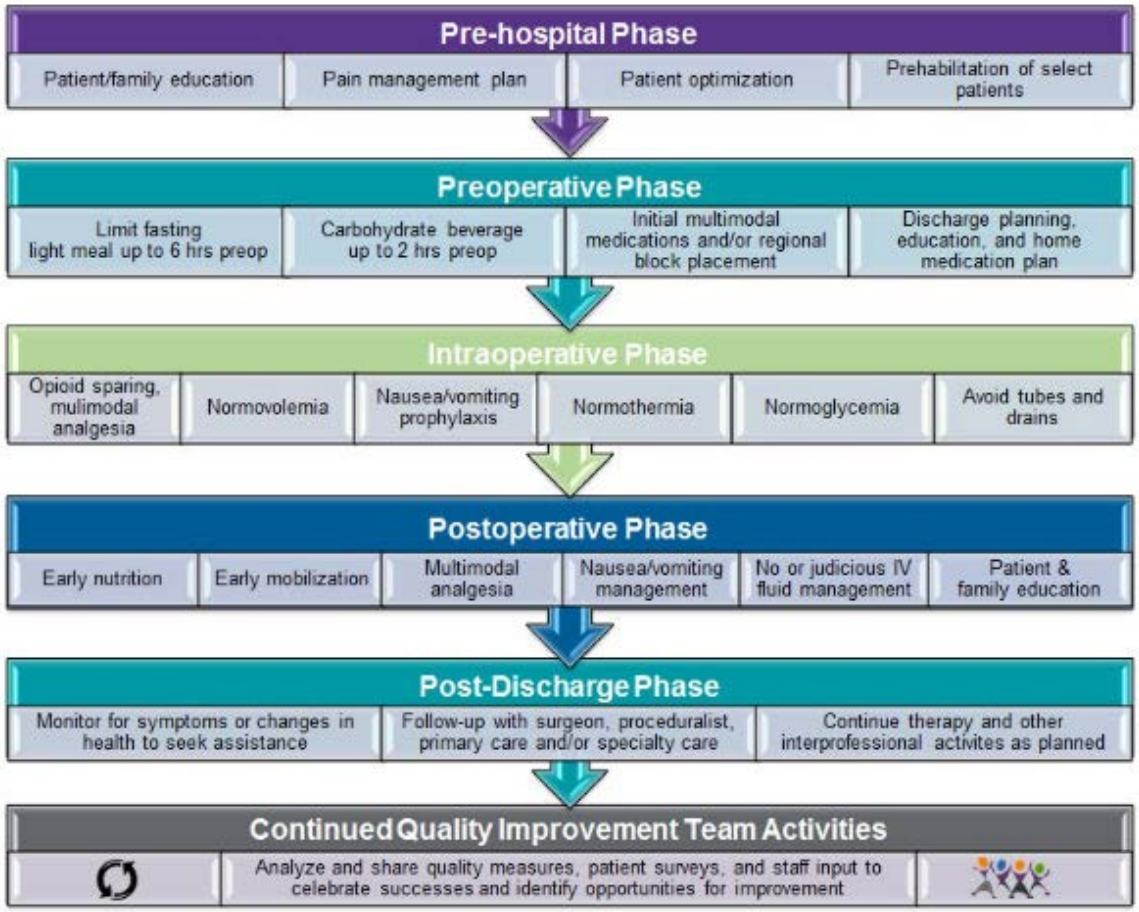
- Consequences of delayed post-operative recovery
  - Nosocomial infections
  - Development of Deep Vein Thrombosis/Pulmonary Embolism (DVT/PE)
  - Long term decreased Quality of Life (QOL)
  - Increased health care costs

https://wellsteps.com

Basic Principals of ERAS

- Pre-operative counseling and nutritional strategies
- Intra-operative considerations
- Promotion of post-operative recovery strategies

Elements of an ERAS Program



(AANA, 2019)

ERAS OB/GYN Support

- Both the American College of Obstetricians and Gynecologists (ACOG) and the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) advocate for ERAS use

The American College of Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

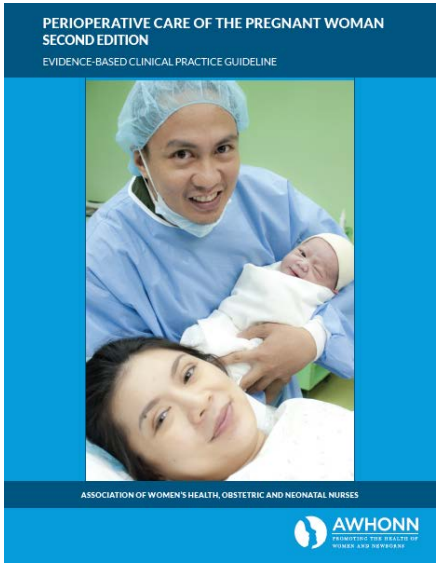
ACOG COMMITTEE OPINION

Number 750

Committee on Gynecologic Practice

This document is endorsed by the American Urogynecologic Society. This Committee Opinion was developed by the American College of Obstetricians and Gynecologists' Committee on Gynecologic Practice in collaboration with committee member Amanda N. Kallen, MD.

Perioperative Pathways: Enhanced Recovery After Surgery



GYN Specific Considerations

- Gynecologic surgery is very common
- ½ million hysterectomies performed annually
- Use of evidence based protocols for pre-operative and post-operative care has multiple benefits for patient
  - ❑ Reduce surgical stress
  - ❑ Optimize healing
  - ❑ Improve patient experience

GYN Specific Considerations

- Traditional peri-operative care
  - ❑ Bowel prep
  - ❑ Nothing by mouth (NPO) after midnight
  - ❑ Liberal narcotics/patient controlled analgesia (PCA) use
  - ❑ Prolonged bowel/bed rest
  - ❑ Slow reintroduction of feeding
  - ❑ Nasogastric (NG) tubes and drains
- Not evidence based
- Does NOT promote healing and recovery

http://images.medscape.com

GYN Specific Considerations

- Benefits of ERAS protocol
  - ❑ Shorter length of stay
  - ❑ Decreased post-operative pain and need for analgesia
  - ❑ More rapid return of bowel function
  - ❑ Decreased complication/readmission rate
  - ❑ Increased patient satisfaction

GYN Specific Considerations

- Active engagement of all parties
- Partner with patient
- Interdisciplinary team
  - Surgeon
  - Pre-operative nurse
  - Anesthesia
  - Office nurses
  - Hospital ward nurse/staff

Image courtesy of http://www.teamworkclipart

The Complex Surgical Environment

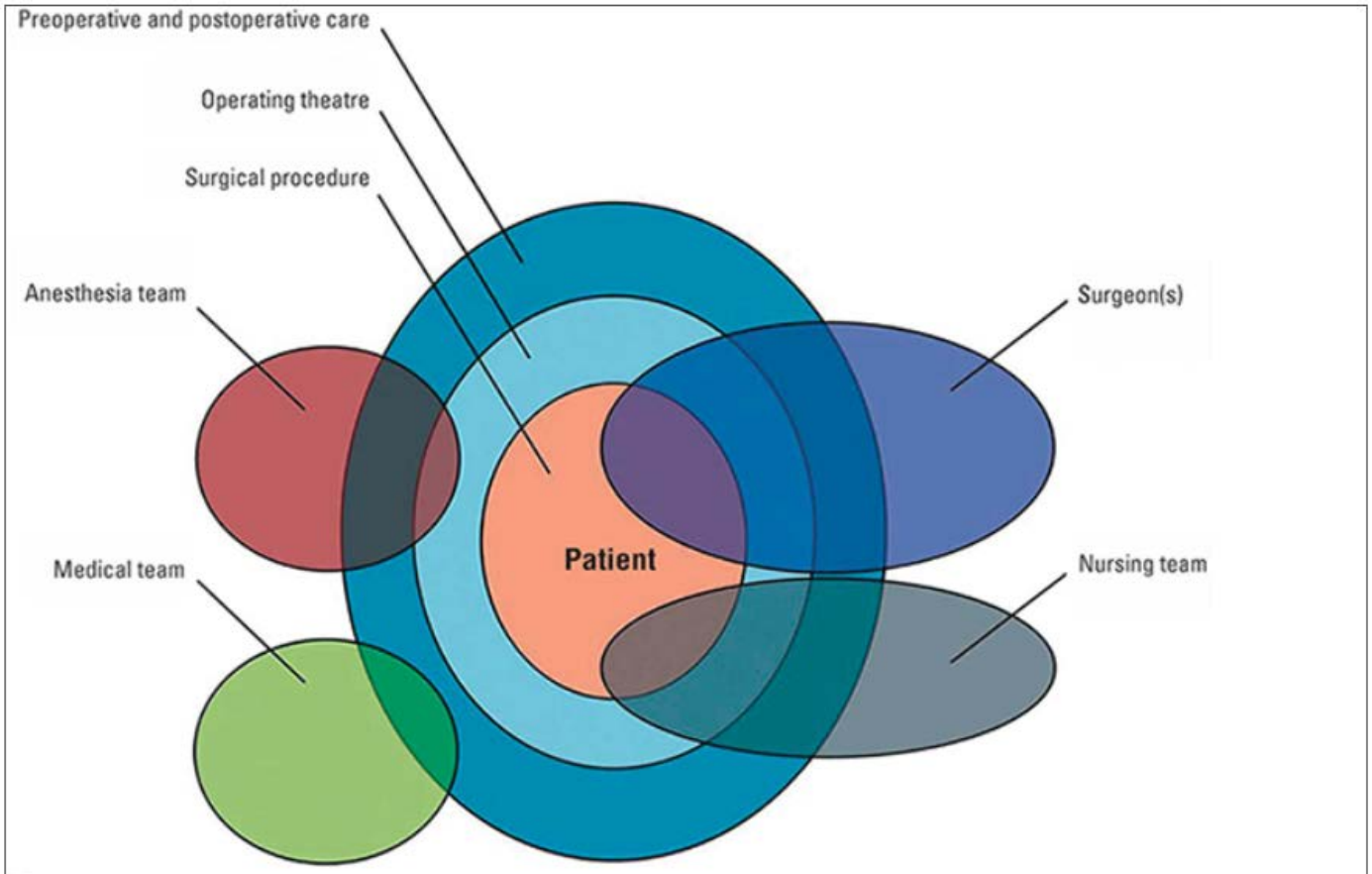


Figure 1. The complex surgical environment. (Modified from Ergina PL, Cook JA, Blazeby JM, Boutron I, Clavien PA, Reeves BC, et al. Challenges in evaluating surgical innovation. Lancet 2009;374:1097–104.)

GYN Specific Considerations

- ERAS can be divided into three phases with specific goals and interventions in each
  - ❑ Pre-operative
  - ❑ Intra-operative
  - ❑ Post-operative

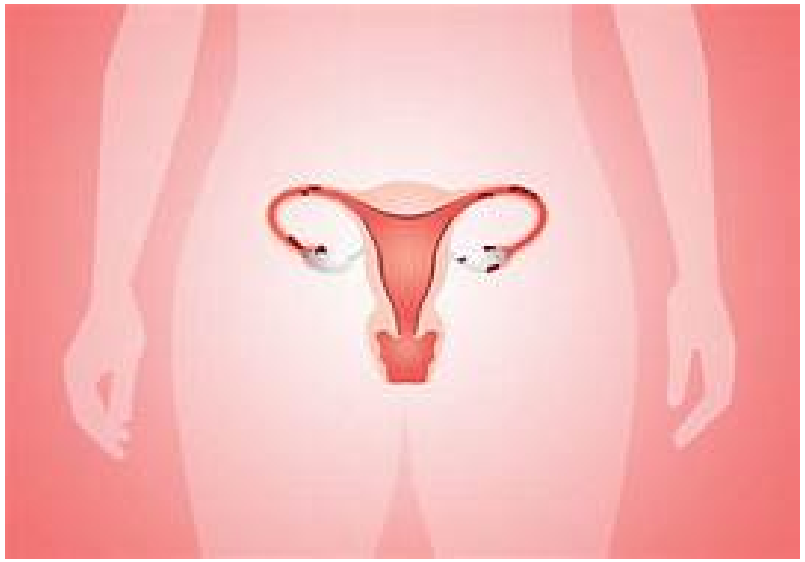


Image courtesy of http://www.reproductiveorgan

GYN Pre-operative Considerations

- Active engagement of patient is key!
- Education
- Optimization
- Fasting Guidelines

https://www.pngguru.com

Education and Optimization

- Dedicated pre-operative counseling
- Tobacco cessation
  - Ideally 4 week pre-operative
  - No data that short term cessation causes harm
- Alcohol cessation
  - Hazardous drinkers who consume 3-4 drinks/day
- Correction of anemia
- Risk stratification for DVT
  - NOT necessary to discontinue Oral Contraceptive Pills (OCPs)

Fasting Guidelines

- Goal: obtain energy necessary for body to accommodate high metabolic demands imposed by surgery
- Reduce pre-operative thirst and anxiety and post-operative insulin resistance
- Light meal up to 6 hours prior to surgery
- Clear liquids up to 2 hours preop
- Carbohydrate loading beverage
- No Bowel prep

GYN Intra-operative Components

- Analgesia
- Prophylaxis for nausea/vomiting
- Thromboprophylaxis
- Antimicrobial therapy
- Fluid optimization
- Drains/Packs
- Temperature

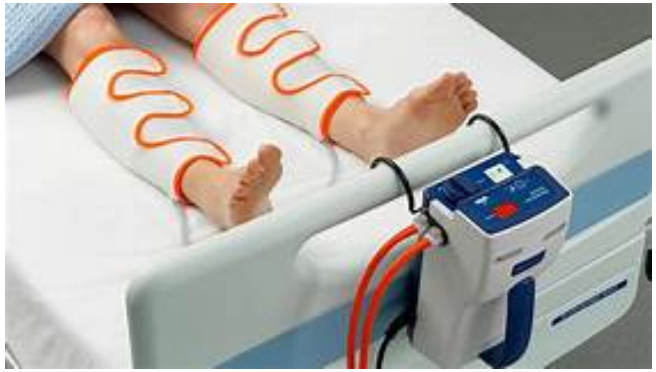
Analgesia

- Opioids
  - Delay recovery
  - Opioid epidemic
- Stepwise, multimodal, non-opioid
- Pre-emptive medication strategies
- Consideration of spinal/epidural
- Liposomal Bupivicaine

https://psicodom.com

Prophylaxis

- Nausea and vomiting
  - Scopalamine
  - Dexamethasone
  - Ondansetron
- Thromboprophylaxis
  - Superior Canal Dehiscence Syndrome (SCD's)
  - Heparin or Low-molecular-weight heparin (LMWH) for high risk patients



https://mfimedical.com

Antimicrobial Therapy and Infection Risk

- Keep incisions as small as possible
- Broad spectrum antibiotics initiated within 60 minutes of surgery
- Pre-operative surgical site prep with alcohol based agent (chlorhexidine)
- Vaginal cleansing with 4% chlorhexidine gluconate or povidone iodine solution
- Hair removal from surgical site

Fluid Balance, Hypothermia, Tubes and Drains

- Intra-operative euvolemia
- Normothermia
- Remove surgical drains ASAP!
- Routine use of NG, abdominal or vaginal drains should be avoided
- Remove foley within 24 hour or immediately post-operatively

GYN Post-operative Considerations

- Activity
- Diet
- Analgesia
- Fluid optimization
- Catheters
- Discharge

Early Mobilization and Thromboprophylaxis

- Out of bed night of surgery
- POD#1 out of bed more than 8 hours
- All meals in chair
- Thromboprophylaxis
  - ❑ Early ambulation
  - ❑ Sequential compression devices
  - ❑ Compression socks
  - ❑ Consideration of LMWH in hospital
  - ❑ Extended use LMWH

http://relt.xyz

Nutrition and Fluid Balance

- Early feeding
- Discontinue Intravenous Fluids (IVF) within 24 hours of surgery
- Glycemic control

Image courtesy of http://www.cambro.com

Hospital Discharge

- Criteria based
  - ❑ Ambulation
  - ❑ Adequate pain control on oral analgesics
  - ❑ Tolerance of diet
  - ❑ Flatus NOT required
- Post-op instructions
  - ❑ Emergency contact information
  - ❑ Recovery advice
  - ❑ Indications to contact surgical team

https://www.health.harvard.edu

OB Specific Considerations

- Pre-operative
  - ❑ Encourage women to drink clear fluids until 2 hrs prior to surgery and solid food up to 6 hrs prior to surgery
  - ❑ Consider the use of IV paracetamol (acetaminophen) prior to anesthesia whenever possible

(AWHONN, 2019)

https://publicdomainvectors.org/

OB Specific Considerations

- Pre-operative cont.
  - ❑ Establish normothermia prior to transferring the woman to the operative suite
    - Individualize active (conductive or convective) and passive (insulative) hypothermia prevention measures
    - If maternal temperature is:
      - ▻ below 36°C (96.8°) actively warm 60 min before anesthesia
      - ▻ 36°C (96.8°) or above actively warm 30 min before anesthesia

(AWHONN, 2019)

http://www.okclipart.com

OB Specific Considerations

- Pre-operative cont.
  - ❑ Cleansing
    - Pre-operative bathing at home
    - Consider vaginal cleansing immediately prior to cesarean
      - ▻ Especially for women with ruptured membranes and those who have labored prior to surgery
  - ❑ Skin preparation before incision
    - Alcohol-based skin preparation recommended by the Centers for Disease Control's (CDC's) *Guideline for the Prevention of Surgical Site Infections*

(AWHONN, 2019)

OB Specific Considerations

- Intra-operative
  - ❑ Urinary Catheter Considerations
  - ❑ Administer warmed IV fluids and boluses
  - ❑ Maintain operating room temp at 20-23^{o}C (68-73^{o} F)

(AWHONN, 2019)

Photo from Stone, S., Prater, L., & Spencer, R. (2014). Facilitating Skin-to-Skin Contact in the Operating Room After Cesarean Birth. Nursing for Women's Health, 18(6), 486–499. https://doi-org.proxy.lib.ohio-state.edu/10.1111/1751-486X.12161

OB Specific Considerations

- Intra-operative
  - Anesthesia Considerations
    - Normovolemia
    - Normoglycemia
    - Specific pre-op, intra-op and post-op medication pathway
    - Opioid sparing, multimodal analgesia
      - Consider neuraxial opioids (epidural and spinal analgesia)
      - Transversus abdominis plane block or other field blocks

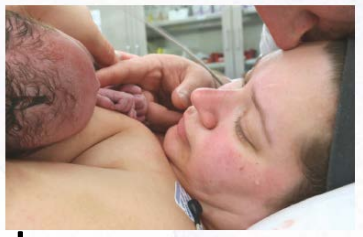
(AANA, 2017)

Poll Question

- Does your facility currently routinely offer skin to skin contact after cesarean birth?
  - ❑ A-Yes
  - ❑ B-No
  - ❑ C-I'm unsure

OB Specific Considerations

- Intra-operative cont.
  - Skin to Skin Contact with mother or other parent
- Post-operative
  - Early oral nutrition within 2 hours of birth
  - Gum chewing during the first 12 hours of the post-operative period
  - Remove indwelling catheter in timely manner



(AWHONN, 2019)

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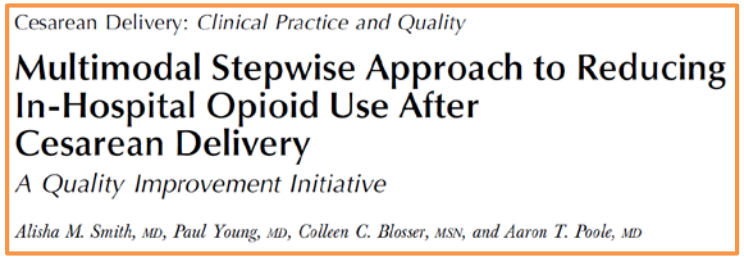
OB Specific Considerations

- Post-operative cont.
  - ❑ Pain Management
    - Schedule acetaminophen (APAP) and nonsteroidal anti-inflammatory drugs (NSAIDS)
    - Decouple opioids from APAP/NSAIDS
    - Evaluate in-hospital opioid use prior to ordering discharge medications

(AWHONN, 2019)


Cesarean Delivery: *Clinical Practice and Quality*

Multimodal Stepwise Approach to Reducing In-Hospital Opioid Use After Cesarean Delivery

A Quality Improvement Initiative

Alisha M. Smith, MD, Paul Young, MD, Colleen C. Blosser, MSN, and Aaron T. Poole, MD


Obstetrics: *Clinical Practice and Quality*

Evaluation of a Quality Improvement Intervention That Eliminated Routine Use of Opioids After Cesarean Delivery

Erica Holland, MD, Brian T. Bateman, MD, MSc, Naida Cole, MD, Ashley Taggart, MD, Laura A. Robinson, BS, Ronan Sugrue, MBBCH, BAO, Xinling Xu, PhD, and Julian N. Robinson, MD

OB Specific Considerations

- Post-operative cont.
  - ❑ Pain Management
    - Use nonpharmacological interventions: presence of family, music, aromatherapy, massage, abdominal binders, spiritual support/prayer, distraction, quiet environment, reiki, or physiotherapy

(AWHONN, 2019)

Photo by Christin Hume, christinhumephoto.com

Women and Infant Clinical Community (WICC)

- Several ongoing lines of effort
  - WICC ERAS task force being stood up
    - Draft Procedural Instruction (PI) under development
  - Dr. Andrew S. Thagard briefed "Obstetric Provider Prescribing Patterns in the Armed Forces: A Proposed Survey" at the 12 Dec 19 WICC Community Update
    - Survey of United States Navy (USN) Military Treatment Facilities (MTF's) noted not all have standardized or written policies for outpatient opioid prescriptions for postpartum patients
    - Armed Forces Provider Opioid Prescribing Patterns Survey
  - Opioid pain management tools being created

Key Takeaways

- Patient education and buy-in is essential
- Implementation of ERAS is proven successful for postoperative recovery and decreased opioid use
- Multidisciplinary ERAS clinical pathways limit variability and improve patient outcomes
- ERAS is an evidence-based clinical and cultural shift in surgical management

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Questions?

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To receive CE/CME credit, you must register by 0745 ET on 24 January 2020 to qualify for the receipt of CE/CME credit or certificate of attendance. You must complete the program posttest and evaluation before collecting your certificate. The posttest and evaluation will be available through 6 February 2020 at 2359 ET. Please complete the following steps to obtain CE/CME credit:

1. Go to URL https://www.dhaj7-cepo.com/content/clinical-communities-speaker-series-23-jan-2020
2. Click on the REGISTER/TAKE COURSE tab
   a. If you have previously used the CEPO CMS, click login.
   b. If you have not previously used the CEPO CMS, click register to create a new account.
3. Click "ENROLL."
4. Follow the onscreen prompts to complete the following for each session you wish to claim CE/CME Credit:
   a. Read the Accreditation Statement
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   c. Complete the Evaluation
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   e. Download your Certificate(s)
   f. Complete the Commitment to Change survey (optional)
5. After completing the posttest at 80% or above, your certificate will be available for print or download.
6. You can return to the site at any time in the future to print your certificate and transcripts at https://www.dhaj7-cepo.com/
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