Obstetric Anesthesia Subcommittee Meeting Minutes

February 7, 2024

Attendance:

Sharon Abramovitz, Weill Cornell	Katie O'Conor, Johns Hopkins
Dan Biggs, Oklahoma	Diana O'Dell, MPOG
Nicole Barrios, MPOG	Wendy Owens, MyMichigan
Kate Buehler, MPOG	Rebecca Pantis, MPOG
Brendan Carvalho, Stanford	Jonathan Paul, Columbia
Johanna Cobb, Dartmouth	Patrick Payne, Vermont
Carlos Delgado Upegui, Washington	Jack Peace, Temple
Kelly Fedoruk, Stanford	Sharon Reale, BWH
Ronald George, Sinai Health	Lawrence Ring, Columbia
Jackie Goatley, Michigan	Nirav Shah, MPOG
Josh Goldblatt, Henry Ford	Preet Singh, WUSTL
Jerri Heiter, Trinity Health	Frances Guida Smiatacz, MPOG
Wandana Joshi, Dartmouth	Melanie Stanislaus, Johns Hopkins
Tom Klumpner, Michigan	Alexandra Taylor, Trinity Health
Jeremy Juang, UCSF	Brandon Togioka, OHSU
Tiffany Malenfant, MPOG	Rachel Toonstra, Spectrum
Mohammad Faysal Malik, Henry Ford	Meridith Wade, MPOG
Graciela Mentz, MPOG	Robert White, Weill Cornell
Melinda Mitchell, Henry Ford	Jennifer Woodbury, UCSF

Announcements:

1. Welcome New Members
    - Hannah Burham- University of Texas Southwestern
    - Katie O'Conor - Johns Hopkins
    - Mellany Stanislaus - Johns Hopkins
    - Jack Peace - Temple University

- Jeremy Juang – University of California, San Francisco
- Arthur Calimaran – Cleveland Clinic
- Muhammad Athar – UAMS
- Alexandra Taylor –Trinity Health

2. Congratulations to Dr. Brandon Togioka for accepting the position as Chair of the Obstetric Subcommittee.
    - Thank you to Dr. Servin for her work and dedication not only to the OB Subcommittee, but for her time at Michigan Medicine.
3. OB Subcommittee Meeting Dates 2024:
    - May 22, 2024 @1pm EST
    - Oct 2, 2024 @1pm EST
4. MPOG Perioperative Clinical Research Committee (PCRC) meeting February 12th: Primary author, Jeremy Juang, MD- UCSF will be presenting PCRC 249 (Juang) - MPOG: Racial disparities in cesarean delivery anesthesia type by race and social determinants of health. If you are interested in attending this research proposal presentation, please email Nicole.

November Meeting Recap:

1. Thank you to Dr. Dan Biggs for leading the measure review of BP-04-OB: Hypotension during Cesarean Delivery. Subcommittee voted to continue this measure as is (no changes).
2. New Azithromycin measure proposed:
    - Percentage of unscheduled cesarean deliveries in which azithromycin was administered within 60 minutes before incision and anesthesia end.
    - Subcommittee interested in chorioamnionitis data before moving forward – will share MPOG data with subcommittee later in this meeting
3. Reviewed MPOG data to assess variation in administration of uterotonic agents and transfusions.
4. Presented data to examine patients undergoing cesarean delivery stratified by Body Mass Index (BMI).

In the News - Winter 2024:

1. ***Two easy fixes could reduce bleeding after cesarean delivery*** – Research presented at the Anesthesiology 2023 annual meeting
    - Calcium Chloride Solution:
        - Double-blind, randomized, controlled trial included 120 women who required a cesarean delivery after labor with an oxytocin infusion.
        - 60 women received 1 gram of calcium chloride infusion and the other 60 received a placebo.
        - In placebo group 57% had PPH, 15% required a blood transfusion while those who received calcium chloride, 40% had PPH and 8.3% required a blood transfusion.

The last Food and Drug Administration-approved drug to treat uterine atony was released in 1979.

- Early Warning System:
  - Alerts built into electronic health record at 2, 7 and 12 minutes after delivery: Assess uterine tone on a scale of 1-10.
  - Scores ≤ 6 indicate uterus is not contracting well and the woman is at higher risk for PPH.
  - Study assessed more than 1,000 consecutive cesarean deliveries by 70 different obstetricians over eight months.
  - At 12 minutes, 179 women (18%) had scores of 6 or lower, meaning they were at higher risk for severe bleeding.
    - Of those with scores of ≤6: 77% experienced hemorrhage, 46% experienced major hemorrhage and 25% needed a blood transfusion.

2. *Association between ionized calcium and severity of postpartum hemorrhage: a retrospective cohort study.*
   - Retrospective Cohort Study of women diagnosed with PPH during vaginal delivery between January 2009 and April 2020.
   - Primary outcome was severe PPH.
     - Hypocalcemia present in 52% severe PPH vs 11% less severe bleeding.
     - Hypocalcemia may identify those at risk for severe PPH.
   - Calcium and fibrinogen are independently associated with severe PPH.

Discussion:

- *Tom Klumpner (University of Michigan)* – we are highly considering this at our institution. Did this change your practice at Stanford outside of a study setting?
- *Carlos Delgado (University of Washington-via chat)* - Scoring of tone at UW by OB w qualitative words and yes- we have been more open to giving calcium in the setting of PPH
- *Brendan Carvalho (Stanford)* –Remember the study was prophylaxis in high-risk patients for atony so it was an enriched population that has a high probability of atony, intrapartum sections, or those with known risk factors for uterine atony. It was a prophylaxis in other words we gave it not using for treatment but gave it to those patients at risk in a 10-minute infusion. How we've changed our practice- we administer using it as treatment but need large cohorts to continue to study calcium chloride for treatment, but we have moved to using it after this study.
- *Sharon Abramovitz (Weill-Cornell):* Are there certain patient you are not giving calcium to such as those on Magnesium. Are you giving TXA for prophylaxis? Are there any patients you're not giving calcium chloride to?
- *Brendan Carvalho (Stanford Medicine):* We don't use prophylactic TXA we only use it in the treatment arm and the one relative contraindication maybe a patient on magnesium so we would clearly reserve it for later. You could also argue those patients have contraindications to methergine and you would probably administer it later on for hemorrhage if they're hypertensive and hypovolemic. I want to stress that the data for treatment to replace the secondary uterotonic or given as one of them is not there yet, this was added to the treatment protocol. It was for enriched patients not scheduled sections or low risk patients- we still need

more data. It's pretty harmless as a 10-minute infusion but in operational reality we're giving it as incremental pushes from microjet syringes. If it is administered too quickly you get pain on injection site and maternal side effects so should strictly give as an infusion over 10 minutes. Lastly, probably only need half a gram- don't have to give the full gram to see the effect.

SOAP Centers of Excellence for Anesthesia Care of Obstetric Patients

Presented by: Brendan Carvalho, MBBCh, FRCA, MDCH, FASA

1. 90 institutions worldwide have received SOAP COE designation
    a. Academic and private/community hospitals
    b. Hospitals with total number of deliveries ranging from <1000 to >15,000
2. SOAP COE Metrics
    a. GA for Cesarean Delivery: <5% overall
    b. Labor epidural block replacement rate: Ideally 3-6%
    c. Wet tap rate: <2%
    d. Have added in blood patches for the most recent publication of the metrics
3. ASA Statement on Quality Metrics relevant to obstetric anesthesia care:
    a. Mode of Anesthesia for Cesarean Delivery
    b. Neuraxial-Induced Hypotension during Cesarean Delivery
    c. Post Cesarean Opioid Consumption
    d. Responsiveness to the Request for Labor Analgesia
    e. Post Dural Puncture Headache Accountability
    f. Labor Epidural Replacements
4. SOAP COE for Anesthesia Care of Obstetric Patients Criteria
    a. Domains:
        i. Personnel and staffing
            1. Leadership: Physician, obstetric anesthesia fellowship or equivalent
            2. Core staffing with obstetric anesthesia training
            3. Ongoing staffing education
            4. Adequate supervision
            5. In-house (24/7), dedicated coverage
            6. Ability to mobilize backup
        ii. Equipment, Protocols, Policies
            1. Hemorrhage protocols, airway management, emergencies (LAST, MH)
            2. Emergency response, simulation program, cognitive aids
            3. Daily multidisciplinary rounds, triage
            4. Institutional resources
            5. Ultrasound/TTE/POC testing
            6. Community and interprofessional education
            7. Promote diversity, equity and inclusion
            8. ASA Guidelines, SOAP Consensus Statements, National Partnership Maternal Safety Bundles
        iii. Recommendations and Guidelines Implementation
        iv. Cesarean Delivery Management
            1. ERAC protocol
            2. Multimodal analgesia protocols, minimize opioid usage
            3. Pencil-point ≤25-gauge needle
            4. Temperature management, Antibiotic prophylaxis

5. Spinal hypotension
6. Nausea and vomiting prophylaxis and treatment
7. Intraoperative pain management
8. Postpartum monitoring

v. Labor Analgesia
1. Low concentration local anesthetic solutions with neuraxial opioids
2. Standardized, pharmacy prepared
3. Combined-spinal epidural (CSE)
4. PCEA and ideally PIEB
5. Flexible epidural catheters
6. Regular assessment of labor epidurals
7. Track epidural replacements
8. Non-neuraxial analgesic options

vi. Quality Assurance and Patient Follow-up
1. Anesthesiologist serves as multidisciplinary clinical policy and committees
2. Structured follow-up all patients who received analgesia/anesthesia
3. Evaluate complications
4. Evaluate and treat post-dural puncture headache
5. Collect patient feedback
6. Root cause analysis or equivalent
7. Educate nurses, obstetricians and allied professionals

b. Requirements:
i. All 'essential' criteria
ii. Majority of other criteria

c. Applications and Reviews
i. Annual Application Cycle: Open July to August
ii. Certificate: Valid for 4 years
iii. Cost (Application $500; Certification $2000; Recertification $1000)
iv. Information: SOAP website, talks/webinars, consultations
v. Rigorous review process
vi. Self-reporting with no hospital visits

5. <u>Discussion</u>

- *Nirav Shah (MPOG Quality Director):* Question for the group – is there some thought about how we can lower the energy required for an applicant for the SOAP COE? Maybe a bundle of MPOG measures for the quality measure platform in looking at performance for this application? Would that be helpful for SOAP?
    - *Brendan Carvalho (Stanford Medicine):* We don't care where the source comes from, If you could provide your metrics and where they come from that would be helpful. Having a robust way of collecting QI is great and leveraging MPOG would be great. The ASA quality metrics were very thoughtful but there aren't good ways of measuring them. We understand anesthesia has a full spectrum of care so the approach of 'more metrics, the better' would be good and nicely dovetail with ASA and SOAP.
- *Josh Goldblatt (Henry Ford Allegiance):* I'm curious about the quality metrics specifically as designed – MPOG currently has limited overlap with the SOAP COE metrics. You mentioned at Stanford you had to change your process to capture failed epidurals. How did you do

that? What did you change? Can we learn from your experience to enhance what we capture through MPOG?

- *Brendan Carvalho (Stanford Medicine):* Good question. We originally had to change GA related metrics since we didn't have great data for scheduled vs. unscheduled cases. Then worked to distinguish blood patches from wet taps. You may see centers with a higher incidence of certain rates, but they simply may be capturing more. We are always concerned with unintended consequences – you want patients to be converted to GA when appropriate, but you don't want to ding centers when they do so. There were a number of centers that were 15% GA conversion rates that got down.
- *Carlos M. Delgado Upegui (University of Washington):* We do take advantage of the EPIC options – it's a lot of re-education of residents and faculty to remind them to document using the epidural replacement event – same thing for conversion to general anesthesia. Just constant reminders to staff to use the appropriate events in EPIC to capture this data.
- *Brendan Carvalho (Stanford Medicine):* An automated process is better if you can get it right. For example, anytime SEVO is detected it pushes a nudge to say 'Hey you have a GA'. The more we can get our EPIC to be smarter, the better it is, but then you will increase your GA conversion rates and don't want to ding for that.

GA-01 & GA-02 Measure Review:

Presented by: Sharon Abramovitz, MD - Weill Cornell Medical College & Melinda Mitchell, MD - Henry Ford, Jackson

GA-01: General Anesthesia for Cesarean Delivery

1. Measure was first published 2/16/2021. First revised 6/19/2021.
2. Appropriateness of rationale: Tracking general anesthesia rates is an important benchmark.
3. Evaluation and definition of success: Success defined as cesarean delivery without the use of general anesthesia. Case will be flagged if GA used as anesthetic method.
4. Other Feedback to consider: Should an outcome threshold be considered?
5. Recommendation for GA-01: Continue as is- no change

Discussion

- *Carlos Delgado (University of Washington)* Can we use patient in room time so that any labor epidural placed after the patient enters the OR isn't included in the measure?
  - *Melinda Mitchell (Henry Ford Health System):* I agree
  - *Sharon Abramovitz (Weill-Cornell):* I agree
  - *Sharon Reale (BWH):* I agree
  - *Tom Klumpner (University of Michigan):* Assuming most folks are on EPIC, depending on how you attach your procedure to the case you might not pull in OP time case tracking events like patient OR. If you are dividing your professional fees for labor epidurals from intraoperative time most places are using the epidural to C-section or some variation of that event, I would recommend we use that instead of patient OR. It is part of the anesthetic record and it's not an OP time case tracking event.

- *Dan Biggs (University of Oklahoma): D*oes that track the reason for conversion? The common reason we have failed epidural is because OBGYNs call cesareans at the last second which does not give us enough time to let the epidural work. We know this because when we wake the patient up the epidural is working fine.
- *Brandon Togioka (OHSU): P*erhaps not having a threshold of zero would account for that – to indicate that some cases require GA. I think what we're trying to capture are true labor epidurals that should have been replaced, rather than converted to GA. Depends on how your documentation system is designed to capture reason for conversion – not all sites have this field available and therefore it can't be measured by MPOG at this time.

GA-02: General Anesthesia after Neuraxial for Cesarean Delivery

1. Measure was first published 8/10/2021. First revised 7/23/2023.
2. Appropriateness of rationale: Tracking rates of GA after neuraxial is an important benchmark.
3. Evaluation of success: Success defined as cesarean delivery with neuraxial anesthesia completed without use of general anesthesia. Case will be flagged if patient receives GA after neuraxial anesthesia administered.
4. Recommendation for GA-02: Continue as is- no change.

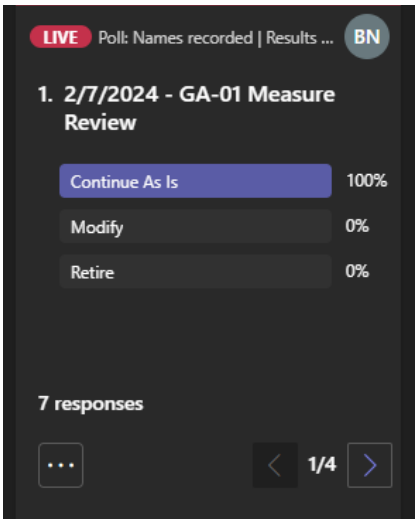
GA-03: General Anesthesia Administered after Epidural for Cesareans

1. May 2023: GA-03-OB published
2. July 2023: Revised to exclude placenta accreta cases
3. New Consideration:
    a. Currently examines the % patients with an epidural that also required general anesthesia
    b. Proposed change: Limit to % of labor epidurals that converted to GA (exclude epidurals placed immediately before cesarean delivery for pain control only)
        i. Will present data at future meeting

Discussion:

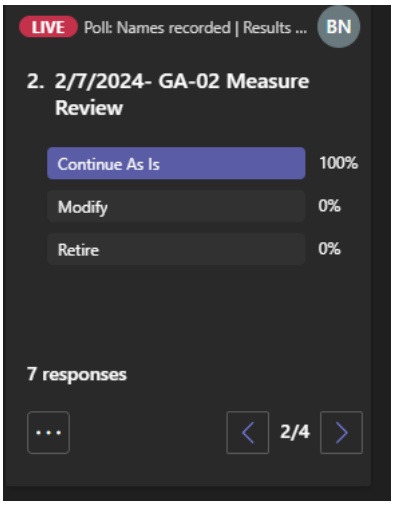
GA-01-OB: General Anesthesia for Cesarean Delivery

Vote



GA-02-OB: General Anesthesia after Neuraxial for Cesarean Delivery

Vote



Next Steps:

1. Will continue GA-01 and GA-02 as is (no changes needed).
2. Consider modifying GA-03 to only capture cesarean delivery cases converted to general anesthesia after labor epidural.
    - Compare data using OBAT enumerations 1 & 7 only vs. a time period limitation – only include cases with labor epidural placed before patient in room time.

Meeting adjourned at 1402.