Anesthesiology Performance Improvement and Reporting Exchange (ASPIRE)

Quality Committee Meeting Notes – Monday, January 23, 2023

Attendance:

Abess, Alex (Dartmouth)	Kaper, Jon (Corewell Trenton)
Agerson, Ashley (Corewell West)	Katta, Gaurav (Henry Ford)
Aouad, Marie (AUB)	Kenron, Dan (OHSU)
Armstrong-Browder, Lavonda (Henry Ford)	Lacca, Tory (MPOG)
Balfanz, Greg (U. North Carolina)	Lauer, Kathryn (MCW/Froedtert)
Barrios, Nicole (MPOG)	Lu-Boettcher, Eva (U. Wisconsin)
Bauza, Diego (Weill Cornell)	Lewandowski, Kristyn (Corewell Troy)
Berndt, Brad (Bronson Kalamazoo)	Lopacki, Kayla (Mercy Health - Muskegon)
Berris, Josh (Corewell - Farmington Hills)	Ma, Xiaolu (UMaryland)
Bollini, Mara (WUSTL)	Malenfant, Tiffany (MPOG)
Boutin, Jim (Henry Ford - Wyandotte)	McKinney, Mary (Corewell Dearborn / Taylor)
Biggs, Dan (Oklahoma)	Mentz, Graciela (MPOG)
Brennan, Alison (U. Maryland)	Milliken, Christopher (Sparrow)
Buehler, Kate (MPOG)	Nurani, Shafeena (Corewell Troy)
Charette, Kristin (Dartmouth)	O'Conor, Katie (Johns Hopkins)
Clark, David (MPOG)	O'Dell, Diana (MPOG)
Cohen, Bryan (Henry Ford - West Bloomfield)	Owens, Wendy (MyMichigan - Midland)
Coleman, Rob (MPOG)	Pardo, Nichole (Corewell Grosse Pointe)
Collins, Kathleen (Trinity- St. Mary Mercy Livonia)	Perkaj, Megan (Corewell - Beaumont)
Colquhoun, Douglas (MPOG)	Pimental, Marc Phillip (Brigham and Women's Hospital)
Corpus, Charity (Corewell Royal Oak)	Poindexter, Amy (Holland)
Crump, Joyce (AUB)	Quinn, Cheryl (St. Joseph Oakland)
Cuff, Germaine (NYU)	Reidy, Andrea (WUSTL)
Denchev, Krassimir (Trinity- St Joseph Oakland)	Riggar, Ronnie (MPOG)
Dewhirst, Bill (Dartmouth)	Rozek, Sandy (MPOG)
Domino, Karen (U. Washington)	Schwerin, Denise (Bronson)
Doney, Allison (MGH)	Scranton, Kathy (Trinity Health St. Mary Mercy Grand Rapids)
Drennan, Emily (U. Utah)	Shah, Nirav (MPOG)
Everett, Lucy (MGH)	Smith, Susan (Trinity Health St. Joseph)
Finch, Kim (Henry Ford Detroit)	Spanakis, Spiro (UMass)
Fisher, Clark (Yale)	Toonstra, Rachel (Corewell West Health)

Fisher, Garrett (MyMichigan)	Tyler, Pam (Corewell Farmington Hills)
Goatley, Jackie (Michigan Medicine)	Vallamkonda, Sushma (MPOG)
Goldblatt, Josh (Henry Ford Allegiance)	Vaughn, Shelley (MPOG)
Hall, Meredith (Bronson Battle Creek)	Veach, Kristine (Trinity Ann Arbor, Chelsea, Livingston)
Harwood, Tim (Wake Forest)	Vitale, Katherine (Trinity Health)
Heiter, Jerri (Trinity- Ann Arbor)	Widrich, Jason (UFlorida)
Henson, Patrick (Vanderbilt)	Wood, Aaron (Corewell Farmington Hills)
Hubbert, Kate (Holland Hospital)	Woody, Nathan (UNC)
Johnson, Rebecca (Corewell West & UM-West)	Andrew Zittleman (MPOG)
Joseph, Tom (UPenn)	

Agenda & Notes

1. **Roll Call**: Will contact QI Champions and ACQRs directly to inquire about participation status if missing. Other participants can review meeting minutes and contact the Coordinating Center if they are missing from the attendance record.
2. **Minutes from November 28, 2022 meeting approved**- minutes and recording posted on the website for review
3. **Announcements**
    - Congrats to Amit Bardia, MBBS from Massachusetts General Hospital for being the MPOG Featured member of the month for January and February!
    - Congratulations to Columbia University Irving Medical Center & University of Pennsylvania Medical Center for their recent conversions to Import Manager!
4. **Upcoming 2023 Meetings**
    - April 21: MSQC/ASPIRE Collaborative Meeting at the Michigan Union in Ann Arbor, MI
    - July 14: ASPIRE Collaborative Meeting, Henry Executive Center, Lansing, MI
    - September 15: ACQR Retreat, DoubleTree hotel in Ann Arbor, MI
    - October 13: MPOG Retreat in San Francisco, CA
5. **2023-2024 Outcomes Research Fellowship**
    - Opportunity to complete a one-year fellowship either onsite at the MPOG coordinating center (University of Michigan, Ann Arbor, MI) or as a hybrid experience at MPOG participating site
    - A minimum of 50% non-clinical time devoted to MPOG fellowship activities
    - Fellows will engage in a Practicum Capstone Project related to an MPOG-based clinical research project or quality metric
    - Application packet (cover letter, current CV, letters of support, 1-page research plan and 1-page training plan) due by February 10, 2023
    - More information and FAQs available at https://mpog.org/research-fellowship/
6. **QI Measure Page Updated!**
    - Sections for Cardiac, Peds, and Obstetric Measures
    - Toolkit Links
    - Measure reviewers and Version History now available
    - Next Release to include:

        - Flowcharts to outline measure logic
        - Improve mobile UI
        - Ability to attach supporting documents

7. **Measure Review: [OME Dr. Mike Burns (University of Michigan)]**
    - **DISCUSSION:**
        - See presentation slides for additional literature included as part of Dr. Burns's review.
        - *Aaron Wood (Corewell Farmington Hills) via chat:* I have not seen that number (1) listed as the conversion for IV Morphine and Dilaudid. I see most people use 7 and you have listed 1. We give a lot of medications in PreOp to take care of pain in the OR, like MSContin or Dilaudid. You won't catch those with this measure.
        - *Kathryn Lauer (Medical College of Wisconsin/Froedtert) via chat*: I think this is an excellent tracking measure. Our EPIC has developed a "poppy" that when you hover over it measures the OME for this as well. It is very useful for the Preadmission testing group for optimization Preop. I think having a number that is identified Preop is really helpful for periop management
        - *Aaron Wood (Corewell Farmington Hills) via chat*: You mentioned a flag for Remi. What does that mean? Is it included in the calculations? Make sure for PACU measure you include Epic case events (probably different at each location) that indicate the patient is now a PACU hold.
            - *Mike Burns (Michigan Medicine)*: Remifentanil conversion is 0 - would want to compare remi infusion to other patients who receive remi infusion so we 'flag' those cases in the case list to indicate remifentanil was administered (or not) but do not calculate a conversion
        - *Marc Pimentel (Brigham and Women's)*: We don't normally use the opioid measure as a group. Something we have tried to push is adjunct analgesia to reduce opioid consumption. Any plans to incorporate this into measurement?
            - *Nirav Shah (MPOG QI Director)*: This measure is intended for opioid use and PAIN 02 is used for measuring adjunct medication use. Have not compared PAIN 02 pass rates to Opioid Equivalency to see if it increases or decreases use but is something we can look into.
            - *Alexander Abess (Dartmouth)*: Looking to capture PACU data. Pre-op and intraop opioids are less helpful without implications for PACU. One question I did have, in the spec, opioid equivalency normalizes by weight and time, why? Is that normalized for all MPOG sites or just my site?
                - *Nirav Shah (MPOG QI Director)*: Hope is that calculating across all MPOG sites will make it easier to interpret at your site when compared to the average across MPPG sites.
            - *Patrick Henson (Vanderbilt)*: Would be helpful to include PACU and preop administration for our group too.
                - *Mike Burns (Michigan Medicine)*: We have an active MPOG study looking at intraop opioid administration variation across all sites. A second MPOG study is looking at PACU opioid administration compared to what was given intraop (opioid and non-opioids). Definitely could add a measure to add PACU opioid use and possibly

preop too

- *Dan Kenron (OHSU) via chat*: Agree about the PACU data being interesting
- *Gurav Katta (Henry Ford Allegiance) via chat*: That is a fascinating set of charts Michael. Extremely fascinating. Did not realize there was that much variation. I knew there was variation, but wow!
- *Patrick Henson (Vanderbilt) via chat*: I think this is or could be very helpful but strongly agree with expanding the timing to include pre/post OR opioids. Thanks!
- *Emily Drennan (University of Utah) via chat*: Can we also track suboxone use pre op and other such meds? Seeing more patients with suboxone use.
    - *Mike Burns (Michigan Medicine)*: Currently have limited phenotypes to study home meds and medication abuse history.
    - *Nirav Shah (MPOG QI Director)*: May be able to create a flag for patients who have suboxone listed as home med. Conceptually, would be very useful but not sure how accurate MPOG data is regarding home meds.
    - *Emily Drennan (University of Utah)*: Patients also use injectable form and believe reporting use is slipping through the cracks. important to get this on people's minds to ask about different forms of use.
- *Gurav Katta (HFHS)*: Questioning some of the medications on the opioid equivalency list: can we possibly remove some that are not used? Rectal belladonna?
    - *Mike Burns (Michigan Medicine)*: There are instances of the use of these meds. Transvaginal morphine currently results as 'no equivalent.'
    - *Joe Ruiz (MD Anderson) via chat*: B&O suppositories for bladder spasms post cysto and when a cystostomy tube is changed. But I want to say our institution is out of them
- *Clark Fisher (Yale)*: Remifentanil- patients are getting this medication. I know there isn't a conversion rate but think we should include this beyond the 'yes' or 'no' that the measure provides now. Possibly assess pharmacokinetic modeling effects.
    - *Alexander Abess (Dartmouth) via chat*: Regarding remi exclusion: lots of cases here with remi during neuromonitoring but then "regular" opioids at end of case.
- *Josh Goldblatt (Henry Ford Allegiance) via chat*: What about standardizing data to patients' opioid mu receptor genetic tests?

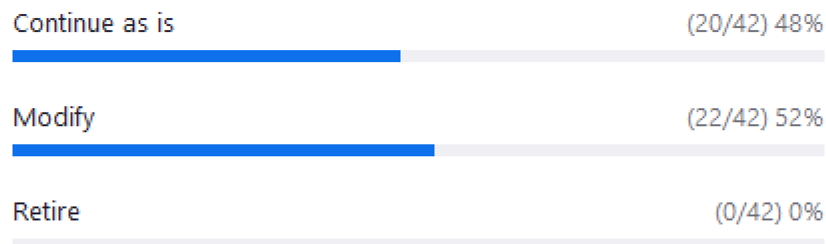
○ **OME VOTE:**

01/23/23 - Opioid Equivalency - Vote

Poll | 1 question | 42 of 84 (50%) participated

1. Please select one of the following options for Opioid Equivalency (Single Choice) *

42/42 (100%) answered



   - **Conclusion:**
     - **Add another measure for PACU opioid use but continue intraop OME measure as is**
8. **Measure Updates: TEMP 01**
   - Description: Percentage of cases in which an active warming device was applied intraoperatively, or the patient maintained a temperature above 36.0°C without active warming.
   - Active warming defined as:
     - Convective warming
     - Conductive warming
     - Endovascular warming
     - Radiant heaters
   - Exclusions:
     - Labor epidurals & cases less than 60 minutes case duration
     - Added exclusion for cesarean deliveries per Obstetric Subcommittee vote (12/2022)
   - *Minimal change to performance scores: Scores increased on average of 1.2%
9. **NMB Guideline Update**
   - American Society of Anesthesiologists recently released practice guidelines for monitoring and antagonism of NMB
     - Aligned with our measures though recommend quantitative over qualitative NMB monitoring (NMB-01)
     - Try to understand how often quantitative monitoring is used
     - Sugammadex recommended for deep, moderate, or shallow levels of NMB blockade from rocuronium or vecuronium
     - Analyze usage of sugammadex vs neostigmine
   - Implications for MPOG
     - Try to understand how often quantitative monitoring is used
   - **Discussion:**
     - *Joseph McComb (Temple)*: Our dept was surprised by the recommendations. From what I

understand, it was not a smooth discussion about the committee creating these guidelines. There are some downsides to using sugammadex in regards to contraceptive use and anaphylaxis but it definitely has its place. We look for documented recovery. would propose we look at documentation of recovery

- *Gurav Katta (HFHS) via chat*: Just adding some info for everyone: Sugammadex patent in the US expires on January 27th, 2026. After that, I strongly suspect we will see increasing use of Sugammadex if cost is only barrier.
- *Patrick Henson (Vanderbilt)*: The broader literature suggests that there is not a large difference across types of surgery, ASA class etc. It would be nice to have more granularity. When we brought on sugammadex the cost difference was not that significant compared to neostigmine. That has changed dramatically. We can look at those scenarios and are looking internally at what might be reliable and safe and more efficient as well.
  - *Nirav Shah (MPOG QI Director)*: I think on the research end there are a slew of studies that can be done to assess sugammadex use
  - *Marc Pimentel (Brigham and Women's)*: yep $90/200mg vial - easily the most expensive common med in the bo. need to use quantitative monitoring.
- *Emily Drennan (University of Utah)*: Besides cost, who is choosing to NOT use sugammadex and why?
- *Kathy Lauer (Medical College of Wisconsin/Froedtert)*: We are also most interested in TOF ratio with recovery.
- *Greg Balfanz (UNC)*: we have had the crazy issue of the power cable goes missing regularly from our quantitative monitors (sadly presumed theft as they are apparently of high quality from a charging standpoint)
- *Patrick Henson (Vanderbilt)*: We switched as well but also have struggled with damage and lost devices, and currently cannot easily replace
- *Joseph McComb (Temple) via chat*: We switched to 100% quant monitoring. It has taken us almost two years to acquire equipment and change behavior. Have seen a decrease in post-op intubation.
- *Karen Domino (University of Washington)*: The strength of evidence is quite good for these recommendations. A couple points to have with Quantitative Monitoring: can be finicky, difference between EMG and AMG technologies. Takes effort to figure out which you want and then you have to figure out how to implement that technology. With quantitative monitoring of 0.9 or greater, you do not need to reverse- that reduces the need for sugammadex. We also saw the data for neostigmine is limited and highly variable which is why it was defined at minimal block and is recommended only for specific monitoring ratios of: 0.4-0.9
- *Nirav Shah (MPOG QI Director)*: Still have work to do at Michigan to make transition to quantitative monitoring and enable optimal use of sugammadex.
- *Karen Domino (University of Washington) via chat*: Safety aspect of monitoring looking for 0.9 or greater TOF ratio prior to extubation. Hard to capture this ratio and there are issues with delays in viewing the information in EPIC.
- *Garrett Fisher (MyMichigan) via chat*: Anyone familiar with a study that looked at decreased time in OR with sugammadex? Would be another way to justify its use with pharmacy whom

often complains about cost.

- *Marc Pimentel (Brigham and Women's)*: We've accepted the cost of sugammadex, but we are still working on making sure that every opened vial actually makes it into the patient. At one point we had a 50% loss rate on the vials. we are 80-90% documentation (automatic, not manual) of TOF > 90% before extubation. almost there.
- *Douglas Colquhoun (MPOG Associate Research Director)*: Reintubation and an ICU stay is not cheap. It doesn't take many of those to offset the costs. Would love to learn more about making quantitative work in practice. Amazing! NMB monitoring is an amazing implementation science problem

10. Sustainability Toolkit

- Thank you to Armaan Patel for reviewing the literature to create this toolkit!
- Includes presentation slides: modify as needed to share with your departments
- Please let us know if you wish to see a early version to review and provide feedback

Meeting concluded at 1103