Anesthesiology Performance Improvement and Reporting Exchange (ASPIRE)

Quality Committee Meeting Notes – Monday, February 27, 2023

Attendance:

Abess, Alex (Dartmouth)	Katta, Gaurav (Henry Ford)
Anders, Megan (Maryland)	Kochan, Joseph (Sparrow)
Agerson, Ashley (Spectrum)	Lacca, Tory (MPOG)
Balfanz, Greg (North Carolina)	LaGorio, John (Trinity Muskegon)
Bailey, Meredith (MPOG)	Lauer, Kathryn (Froedtert)
Barrios, Nicole (MPOG)	Liwo, Alvin (UAB)
Bauza, Diego (Weill Cornell)	Loyd, Gary (Henry Ford)
Berndt, Brad (Bronson)	Lewandowski, Kristyn (Beaumont)
Boutin, Jim (Henry Ford - Wyandotte)	Lopacki, Kayla (Mercy Health - Muskegon)
Biggs, Dan (Oklahoma)	Ma, Xiaolu (Maryland)
Brennan, Alison (Maryland)	Mack, Patricia (Weill Cornell)
Bulkley, Andrea (WUSTL)	Malenfant, Tiffany (MPOG)
Buehler, Kate (MPOG)	Mathis, Mike (MPOG)
Charette, Kristin (Dartmouth)	McEwan, Dana (Trinity Ann Arbor)
Clark, David (MPOG)	McFarland, P (Tennessee)
Coleman, Rob (MPOG)	McKinney, Mary (Beaumont Dearborn / Taylor)
Collins, Kathleen (St. Mary Mercy)	Mentz, Graciela (MPOG)
Colquhoun, Douglas (MPOG)	Milliken, Christopher (Sparrow)
Corpus, Charity (Beaumont Royal Oak)	Nanamori, Masakatsu (Henry Ford Detroit)
Cuff, Germaine (NYU)	O'Conor, Katie (Johns Hopkins)
Cywinski, Jacek (Cleveland Clinic)	O'Dell, Diana (MPOG)
Denchev, Krassimir (St Joseph Oakland)	Owens, Wendy (MyMichigan - Midland)
Dewhirst, Bill (Dartmouth)	Pace, Nathan (Utah)
Domino, Karen (Washington)	Pardo, Nichole (Beaumont)
Doyal, Alex (UNC)	Parks, Dale (UAB)
Drennan, Emily (Utah)	Perkaj, Megan (Corewell - Beaumont)
Dutton, Richard (US Anes Partners)	Pimental, Marc Phillip (B&W)
Esmail, Tariq (Toronto)	Poindexter, Amy (Holland)
Everett, Lucy (MGH)	Quinn, Cheryl (St. Joseph Oakland)
Finch, Kim (Henry Ford Detroit)	Rozek, Sandy (MPOG)
Fisher, Garrett (MyMichigan)	Saffary, Roya (Stanford)
Gibbons, Miranda (Maryland)	Schroeck, Hedi (Dartmouth)

Goatley, Jackie (Michigan)	Schwerin, Denise (Bronson)
Goldblatt, Josh (Henry Ford Allegiance)	Scranton, Kathy (Trinity Health St. Mary's)
Hall, Meredith (Bronson Battle Creek)	Shah, Nirav (MPOG)
Harrison, Kelly (UAMS)	Smiatacz, Frances Guida (MPOG)
Harwood, Tim (Wake Forest)	Stam, Benjamin (UMHS West)
Heiter, Jerri (St. Joseph A2)	Stewart, Alvin (UAMS)
Henson, Patrick (Vanderbilt)	Toonstra, Rachel (Spectrum Health)
Joseph, Tom (U Penn)	Tyler, Pam (Beaumont Farmington Hills)
Kaper, Jon (Beaumont Trenton)	VanTreese, PattiAnn (Henry Ford)
Katta, Gaurav (Henry Ford)	Vaughn, Shelley (MPOG)
Kenron, Dan (OHSU)	Veach, Kristine (Trinity Ann Arbor, Chelsea, Livingston)
Johnson, Rebecca (Spectrum & UMHS West)	Vishneski, Susan (Wake Forest)
Joseph, Tom (Tennessee)	Wedeven, Chris (Holland)
Kaper, Jon (Beaumont Trenton)	Wissler, Richard (University of Rochester)
Karamchandani, Kunal (UT Southwestern)	

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 January 23, 2022 meeting approved** - minutes and recording posted on the website for review
3. **Announcements**
   - **Welcome University of Alabama Birmingham!**
     - Chair: Dr. Dan Berkowitz
     - Quality Champion & PI: Dr. Philip McArdle
     - IT Champion: Dr. Dale Parks
   - April 21: MSQC/ASPIRE Collaborative Meeting at the Michigan Union in Ann Arbor, MI
     - Registration is now Open!
   - **VBR measurement period updated**
     - Due to BCBSM reporting timelines for 2024 VBR, the measurement time period for this year has been updated to December 1, 2022 - September 30, 2023. Reimbursement begins in March 2024.
     - This time period update applies to both standard and smoking cessation VBR measures. Please contact Kate with questions: kjbucrek@med.umich.edu
   - **SUS-03 Measure Released!**
     - Informational dashboard - Carbon footprint during induction of anesthesia
     - Beta-version of the measure is available on the dashboard now. Please review and let the Coordinating Center know what modifications may be helpful.

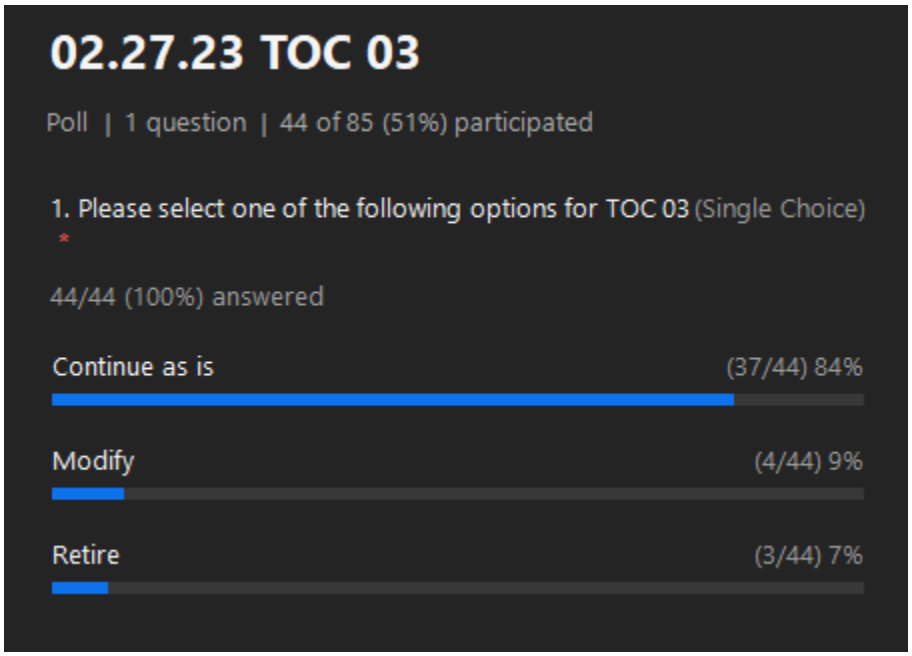
- Please view the measure specification for more information
- **OB Subcommittee Update**
  - Last meeting held on February 15th
    - QI Story: Dr. Robert Nicholson (Bronson-Kalamazoo) and Research Overview: Dr. Mike Mathis (MPOG)
  - Call for Measure Reviewers!
    - ABX-01 & TEMP-05
  - Next Meeting: May 24th @ 1pm EST
    - BMI Stratification
    - Second line uterine tone medications
  - Please contact Nicole Barrios (Nicbarri@med.umich.edu) if interested in attending future meetings.

4. **Upcoming 2023 Meetings**
   - 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. **Measure Review: TOC-03 Dr. Alvin Stewart (University of Arkansas)**
   - **DISCUSSION:**
     - See presentation slides for additional literature included as part of Dr. Stewart's review.
     - *Nirav Shah (MPOG Quality Director)*: Though this is a 'check the box' measure, ASPIRE recommends developing a standardized checklist to accompany this measure to ensure the key elements are included as part of this measure. In Michigan, as part of a Pay for Performance program, we did introduce a TOC audit process for our handoff to PACU measure (TOC-02) for a year which did lead to standardization of the handoff checklist across many participating sites within Michigan.
     - *Kunal Karamchandani (UTSouthwestern via chat)*: At MHC (Multicenter handoff collaborative) which is part of APSF, we are working on standardizing the OR-ICU handoff. Once we have something concrete, we can talk about integrating it with ASPIRE
       - We do not have a concrete proposal yet but once we do would be interested in working with ASPIRE to create a more granular measure or add those components to this measure.
     - *Greg Balfanz (University of North Carolina via chat)*: At UNC we just completed a major update to our institutional handoff process for both ICU -> OR and OR -> ICU. It was led by one of our ICU docs and involved a huge multi-disciplinary and interprofessional team to cover all adult ICUs
       - *Nirav Shah (MPOG Quality Director)*: How do you measure compliance with that update?
         - *Greg Belfanz (UNC)*: Great question- that would be phase 2 of this process. Don't have a great way to measure compliance currently. Do have something for them to document within Epic but doesn't necessarily account for what was discussed in the handoff. Cna share with MPOG as soon as we develop a process to measure this.
         - Kunal Karamchandani (UTSouthwestern): We did the same thing when I was at Penn State. Would MPOG pull things that are documented by the ICU nurse?

- *Guarav Katta (Henry Ford Allegiance)*: I think we can all agree that checklists are good. My one suggestion is that it is too easy to just hit this button. Maybe in the future have the nurse report if they received an adequate handoff from the anesthesia team.
- *Megan Anders (UMaryland)*: Asking ICU nurses to increase their documentation is a very hard sell here
- *Greg Balfanz via chat (UNC)*: We have been evaluating implications and ability to chart checklists into the epic chart. This was previously brought up for auditing our timeout processes in the OR. It's hard to get meaningful audits anytime but with current staffing here it is basically impossible
- *Richard Wissler (Columbia):* A dual sign out would be more likely to ensure compliance.
- *Germaine Cuff via chat (NYU):* we have developed an IPASS handoff tool that Anes, Surg and RN sign off.
- *Marc Pimentel via chat (Brigham and Women's):* Agree - much of the compliance for this measure at my site is from clicking the button. Only a few ICUs have a structured handoff

- **TOC 03 VOTE:**



- **Conclusion:**
  - **Continue measure as is**
  - **Consider handoff elements released by APSF and others once available in the future**

6. **Measure Proposal: Low dose Sugammadex dosing (Dr. Megan Anders, University of Maryland)**
   - Background
     - Strategies for cost-containment are an area of interest
       - Formulary restrictions
       - Lower-dosing strategies (0.5 or 1mg/kg)
       - Dosing at "adjusted" body weight instead of actual body weight
       - IWB + 0.4 (Actual – IBW)
       - Decision support and email feedback for dosage guideline
     - A timely measure – groups may be engaging in discussion of loosening formulary restrictions

given ASA guideline

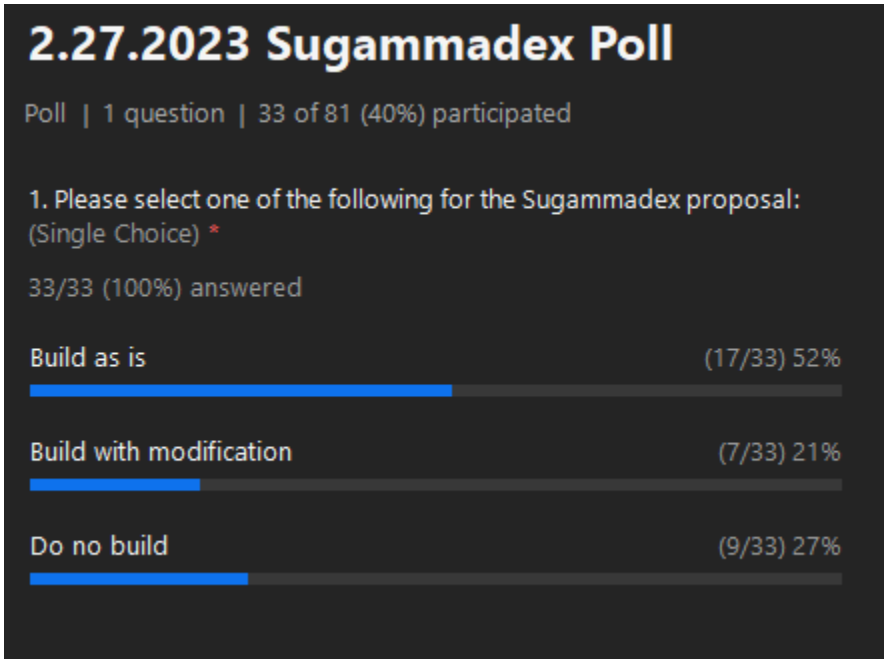
- Measure Specification/Rationale
  - Percentage of cases with sugammadex administration where cumulative sugammadex dose < 200mg OR ≤ 3mg/kg
    - Fixed cost of 200mg vial
    - Acknowledges dose rounding given small injection volumes
    - Encourages judicious use of NMBD to end with at least TOF = 2
    - Compliant with FDA approved dosing and ASA 2023 guideline
- Threshold – 90%
  - Acknowledges CICV, unexpected discontinuation of surgery, safety margin for individualized dosing
- Time Period: Anes start to Anes stop
- Inclusion: Is valid case, Sugammadex administered, Adult patients?
- Exclusion: No weight documented, ASA 6
- Attribution options
  - Provider(s) signed into case at time of last sugammadex administration
  - Provider signed into case at time of last NMBD administration
  - Only include case if a and b are the same
- **DISCUSSION:**
  - See presentation slides for additional literature included as part of Dr. Ander's proposal
  - *Rick Dutton via chat (USAP):* What will be the impact of quantitative monitoring? Will you measure % who need (and get) no reversal?
    - *Megan Anders (UMaryland)*: I think that would be under a separate measure. In terms of sugammadex there isn't a difference…because the denominator is cases where sugammadex was given
    - *Rick Dutton (USAP)*: A parallel measure looking at patients who get any reversal would be interesting - to see if patients who have quantitative monitoring and recover without reversal, would be interesting to monitor that change over time in conjunction with this measure
    - Nirav Shah (MPOG): I think maybe an informational measure examining quantitative measurement at a given institution would be helpful. It sounds like more sites are moving towards quant monitoring and some are having great success. I think this is definitely an area where MPOG could do some QI and research work.
  - *Kunal Karamchandani via chat (UTSouthwestern)* Any thoughts on the use of "Rescue" sugammadex, where sugammadex is dosed after Neo/Glyco. Something that was very common at my previous institution
    - *Megan Anders (UMaryland)*: Not available here - our neo/glyco cost is not significant so has not been examined at Maryland
  - *Richard Wissler via chat (Columbia):* Given the dose/vial, would you consider changing <200 mg to less than or equal to 200 mg?
    - *Megan Anders (UMaryland)*: Yes, less than or equal to 200mg;
  - *John LaGorio*: any impact on rate for additional doses in PACU or re-curarization in your work?

- *Kathy Laurer (Froedert)*: Which weight do you propose in this metric? Recorded body weight or the adjusted body weight?
  - *Megan Anders (UMaryland)*: Recorded body weight. Our intent is to stay consistent with the package insert.
- *Xan Abess (Dartmouth):* I have some hesitancy in creating a measure based on a medication cost, when prices can fluctuate so much depending on distribution contracts, pharmaceutical manufacturing decisions, patents, etc.
  - *Germaine Cuff via chat (NYU)*: Agreed
  - *Megan Anders (UMaryland)*: Great point! the cost when we started this; regardless of cost, will always be less expensive to give less drug than more. measure would withstand fluctuations in cost, is my personal opinion
- *Marc Pimentel (Brigham and Women's)*: We have a history of overusing sugammadex…we found we were only using 1 out of every 2 vials that were purchased accounting to over a million dollars/year. moved it to the omnicell and we're finding residents were using too much rocuronium. We tend to give more sugammadex as a result. Even without considering cost, this measure is worthwhile due to anaphylaxis is a real risk for sugammadex. Look forward to this measure!
- *Greg Balfanz via chat (UNC):* I think this measure can also be reframed as ensuring appropriate dosing with the benefit of evaluating cost benefits. Despite what Megan said, we had a very noticeable increase in NMBD use because of the 'easy out'
- *John Lagorio via chat (Trinity Health)*: Agree that problem is overuse of NMBD. Some concern that this measure may focus on smaller doses of Sugammadex and not first problem
- *Susan Vishneski (Wake Forest):* Is there confirmation that the patient is meeting TOF ratio of 90% after low dose of sugammadex?
  - *Megan Anders (UMaryland)*: there are papers encouraging under-dosing of sugammedex, this is not that. This is encouraging proper dosing to meet the criteria. no logic built into the measure to account for this. There is clinical freedom to match the proper dose to the scenario.
- *Alexander Abess (Dartmouth)*: I think it's a cool measure. I think it's cost and appropriately therapeutic conscious. I have come concerns about chasing reduction in drug costs. We are really only seeing 200 vs 400 mg dosing. Will this measure account for using the 500 mg vial? Will this measure examine the use of a 500 mg vial and only giving 200 mg of that?
  - *Megan Anders (UMaryland):* We do see dose rounding to the 50 and 200's. Our pharmacy splits and compound the 200mg syringes for us so we don't have much tension with the 500mg vials and i think this helps reduce our cost. The measure isn't going to address all specific scenarios. We did see a change in the NMB dosing patterns where the and am happy to share that separately
- *Patrick Hensen (Vanderbilt)*: I know we all hate addressing cost in the open but it is a large component of providing anesthesia care. Are we suggesting this measure would also address proper sugammadex dosing? I didn't think so but want to clarify that would not be part of this measure. Is it part of an existing ASPIRE measure?
  - *Nirav Shah (MPOG)*: not this measure or part of another existing measure. Based on ASA recommendations we are thinking of building a measure to assess use of quantitative

monitoring. Appropriate NMB dosing would be cool but a very difficult measure to build.

- *Mike Mathis via chat (MPOG)*: Regarding vial effect -- there is 100% a vial effect. However, hilariously, the 500 mg dose vial ($2391) is cheaper than the 400 mg dose (2 200 mg vials = $1310 x 2 = $2620) currently. Interested to know if any center re-compounds 500mg vials into 2 separate 250 mg doses (only cost-effective if can be used for 2 separate patients, and doesn't need to be discarded frequently)
    - *Marc Pimental via chat (Brigham and Women's)*: wow that is expensive for 500mg - our 200mg vials are $90 each. We stopped buying 500mg vials because of vial hoarding/loss/overdose despite the lower cost per mg. we looked into compounding for 100mg sugammadex syringes but too expensive
    - *Patrick Henson via chat (Vanderbilt)*: 200 mg 113/vial here
    - *Mike Mathis via chat (MPOG)*: Sorry, numbers are off (I think per gross), but the ratios I believe are correct (where 500 is cheaper than 200 x 2)

- **Sugammadex Dosing VOTE:**



- **Conclusion:**
    - Will move forward with building this measure spec and will represent it to the Quality Committee before completing the build.

7. **Measure Updates**
    - CARD 04/05 - replacing CARD 02/03
        - Reviewed by Dr. Andrea Reidy - Washington University, 2021
        - CARD 04 - outcome measure that identifies patients that had elevated troponin levels (>99th percentile upper reference limit) within 72 hours postoperatively.
        - CARD 05 Percentage of high cardiac risk cases with significantly elevated postoperative troponin levels.
        - Sites must submit upper and lower reference limits for each cardiac troponin assay used by their site in order to participate with this measure.
        - Reference limit data can be submitted to the MPOG Coordinating Center as part of the

standard lab extract. For sites that are unable to add to the extract, MPOG will distribute a survey to collect the upper and lower reference limits on an annual basis.
    - Unable to modify the extract to reliably incorporate reference limits.
    - Unable to develop process to reliably obtain reference limits manually
    - Pausing work on these until we can reliably get reference information using automated methods
- **Hyperglycemia Measure Updates Released**
- GLU 01:
    - Added 'pass' criteria to consider cases that were administered insulin SQ within 120 minutes before the high glucose value (this change was already applied to GLU 03/05)
    - Added exclusion for cases with measure duration ≤ 30 minutes
    - Score changes were significant at some sites: >15% improvement!
- GLU 03 & GLU 05:
    - Added exclusion for cases with measure duration ≤ 30 minutes
    - Score changes were minimal: +/-1%

Meeting concluded at 1101