Anesthesiology Performance Improvement and Reporting Exchange (ASPIRE)

Pediatric Subgroup Meeting Minutes – April 21, 2020

Attendees: P=Present; A=Absent; X=Expected Absence

A	Alina Bodas, Cleveland Clinic	A	Lisa Chan, Arkansas Children's
A	Allan Simpao, Children's Hospital of Philadelphia	P	Lisa Vitale, Michigan Medicine
P	Amber Franz, Seattle Children's	A	Lucy Everett, Mass General Hospital
A	Anna Clebone, University of Chicago	X	Lori Reigger, Michigan Medicine
A	Anna Swenson, University of Minnesota	A	Luis Tollinche, Memorial Sloan Kettering
A	Anastasia Grivoyannis, Weill-Cornell	A	Marco Silvestrini, US Anesthesia Partners
P	Anshuman Sharma, Washington University	P	Morgan Brown, Boston Children's
P	Bishr Haydar, Michigan Medicine	P	Olga Eydlin, NYU Langone
P	Bob Brustowicz, Boston Children's	P	Paul Reynolds, Michigan Medicine
P	Brad Taicher, Duke University	A	Phillip Collier, Beaumont Royal Oak
A	Carrie Menser, Vanderbilt	A	Phillip Yun, OHSU
P	Charles Schrock, Washington University	P	Priti Dalal, Penn State University
P	Cheryl Gooden, Yale University	X	Red Starks, US Anesthesia Partners
A	Christy Crockett, Vanderbilt	P	R.J. Ramamurthi, Stanford
P	Claudia Benkwitz, UCSF	A	Robert Christensen, Michigan Medicine
P	Dan Roke, St. Louis Children's	A	Ronak Patel, University of Virginia
A	David Buck, Cincinnati Children's	P	Ruchika Gupta, Michigan Medicine
A	Elizabeth Elliot, Children's Hospital of Philadelphia	P	Ryan Bradstreet, Bronson Healthcare Group
P	Germaine Cuff, NYU Langone	A	Shannon Grap, Penn State Children's
A	Gina Whitney, University of Colorado	P	Shobha Malviya, Michigan Medicine
A	Hamid Vahabzadeh-Monshie, University of Oklahoma	A	Stephanie Kahntroff, University of Maryland
P	Imelda Tjia, Texas Children's	P	Steve Zgleszewski, Boston Children's
A	Jacob Tiegs, NYU Langone	A	Tetsu Uejima, DuPont Children's
A	Jessica Cronin, John Hopkins Children's	P	Uma Parekh, Penn State Children's
P	Jina Sinskey, UCSF	P	Vikas O'Reilly-Shah, University of Washington
P	Joe Cravero, Boston Children's	A	Vivian Onyewuche, Henry Ford-Detroit
A	Jorge Galvez, Children's Hospital of Philadelphia	A	Wenyu Bai, Michigan Medicine
A	Julianna Mendoza, Stanford University	A	Wilson Chimbira, Michigan Medicine
A	Jacques Scharoun, Weill-Cornell	P	Nirav Shah, MPOG Associate Director
P	Jurgen de Graaff, Erasmus MC-Netherlands	P	Kate Buehler, MPOG Clinical Program Manager
P	Laura Downey, Emory University	P	Meridith Bailey, MPOG QI Coordinator
A	Lianne Stephenson, University of Wisconsin	P	Brooke Szymanski, MPOG QI Coordinator

Agenda & Notes

1) **Roll Call**
2) **Thank you to all those who have joined this committee and continue to assist in moving this work forward!** Special thanks to Brad Taicher (Duke), Vikas O'Reilly-Shah (University of Washington), Bishr Haydar (Michigan Medicine), Shobha Malviya (Michigan Medicine), Lisa Vitale (Michigan Medicine) for helping lead this initiative.
3) **Upcoming Events/Announcements**
    a) MPOG Pediatric Subcommittee Meetings
        i) July 2020: Webex meeting
        ii) October 2020: In-person meeting (hopefully) at ASA
        iii) December 2020: Webex meeting
    b) MPOG Quality Committee Meetings
        i) April 27th 10am EST Webex
        ii) June 22nd 10am EST Webex
        iii) August 24th 10am EST Webex
        iv) October 26th 10am EST Webex
    c) MPOG Annual Retreat: October 2nd, ASA Washington D.C.
4) **December 2019 Meeting Recap**
    a) Meeting minutes and slides have been posted to the website
    b) 23 pediatric anesthesiologists in attendance
    c) 2020 Plans: Build 2-3 pediatric specific measures
        i) Temperature Management
        ii) Postoperative respiratory complications
        iii) Add tonsillectomy and adenoidectomy + spine procedures to the morphine equivalency dashboard
        iv) Intraoperative hypotension (informational measure)- tabled to future discussion
5) **SPA Quality and Safety Measure Workgroup**
    a) Brad Taicher MD, PhD (Duke) presented an intro to MPOG at SPA Q&S meeting in February
    b) Proposed the formation of a metric workgroup within SPA Q&S to help inform the MPOG subcommittee of best practices in pediatric anesthesia.
    c) First in person workgroup meeting planned for October at ASA
    d) All members of the SPA Q&S committee are welcome to join, regardless of involvement with MPOG
        i) *Priti Dalal (Penn State)*- Question regarding who the leader from SPA Q&S leading this initiative/collaboration with MPOG; who should primary contact be?
            (1) Brad Taicher (Duke) and Vikas O'Reilly-Shah (University of Washington) to take this liaison role on for now but are open to others helping; will be an open collaboration, goal is to be inclusive
    e) Contact Meridith (Meridith@med.umich.edu) if interested in joining

6) **Improved MPOG QI Dashboard: Scheduled for May 2020 release**

7) **Pediatric Measure Specification Review (Bishr Haydar- Michigan Medicine)**
   a) **Temperature Management (TEMP-04-Peds)**
      i) Overview of temperature measure discussion to date
         (1) Examine hypothermia, hyperthermia, or both?
            (a) Focusing on hypothermia only → more frequent among pediatric cases & poses greatest risk to patients *(Committee reached consensus that this is the appropriate place to start: hypothermia should be the focus.)*
         (2) Low median temperature value (<36.0 degrees Celsius) will flag cases for review
            (a) Consecutive temperature: difficult from a technical perspective.
            (b) Average temperature not utilized since it can be impacted by over-warming a patient at the end of a case.
         (3) Nadir temp < 35C will also flag cases for review
            (a) Seamon et al (2012) determined that a single intraoperative temperature measurement less than 35C increased surgical site infection risk by 221% per degree below 35C (p=0.007)
         (4) **Time Period**: Intraoperative
            (a) Many patients are hypothermic for a significant duration of the procedure despite having a temperature > 36C postop.
            (b) Baseline temperature and the first temp value postop will be listed for each case as information only to assist in case review.
      ii) **Measure Specification**: Intraoperative Temperature Management (TEMP 04-Peds)
         (1) Description: *Percentage of patients < 18 years old who undergo any procedure greater than 30 minutes who have a **median** core/near core body temperature < 36°C (96.8°F) or **nadir temp** < 35°C (95°F)*
            (a) *Vikas O'Reilly-Shah (University of Washington):* Comment that grouping these two populations together (nadir and median groups) could lead to issues if this measure was used for research purposes.
               (i) *Nirav Shah (MPOG):* MPOG will be able to break these into separate groups on the measure build side
         (2) **Measure Time Period**: Patient in Room to Patient Out of Room
         (3) Algorithm for determining Measure Start/End Times
            (a) *Measure Start Time*
               (i) Patient In Room. If not then,
               (ii) Induction End. If not then,
               (iii) Procedure Start. if not then,
               (iv) Anesthesia Start
            (b) *Measure End Time*
               (i) Patient Out of Room. If not then,
               (ii) Procedure End. If not then,
               (iii) Anesthesia End
         (4) **Core or Near Core Temperature Monitoring Includes**:

(a) Pulmonary Artery, Distal Esophageal, Nasopharyngeal, Temporal, Tympanic, Bladder, Rectal Temperature, Axillary Temperature (arm must be at patient side) or Oral Temperature *(Skin temperatures would be excluded.)*

(b) *Claudia Benkwitz (UCSF):* Raised concern regarding capturing temperature routes with the actual temperature values since temperatures can be very different between routes.
   (i) *Bishr Haydar (Michigan Medicine):* Expressed that routes will be available upon case review and ultimately want to know if a patient was hypothermic from any of the core or near-core routes.

(c) *RJ Ramamurthi (Stanford):* Is mode more appropriate compared to median for this measurement?
   (i) *Vikas O'Reilly-Shah (University of Washington):* Should we try to capture the time below threshold rather than a single value?
      1. *Nirav Shah (MPOG):* Median is easiest to understand for providers and easy to calculate.
      2. *Bishr Haydar (Michigan Medicine):* If focusing on how to improve provider behavior, median may be more straightforward for providers to understand.
   (ii) *Anshuman Sharma (WashU):* Is there a way to filter out the noise/inaccurate values?
      1. *Nirav Shah (MPOG):* Artifact code in place to address the jumps in temperature that occur when the probe is initially trying to calibrate
   (iii) *Anshuman Sharma (WashU):* This measure would assist in improving organizational practices but also allow institutions to compare to national performance to bring back to our sites to drive improvement. In favor of this measure. Do we want to address the end of case temperature as a separate measure? Does this align with the MIPS measure for reporting?
      1. *Nirav Shah (MPOG):* This measure does not align with the MIPS measure exactly - MIPS measure is more closely aligned with ASPIRE measure: TEMP 03 although this new pediatric measure as well as the TEMP 03 measure use 36 degrees Celsius as the cutoff rather than 35.5. Will plan to include the end of case temperature as additional information for the cases flagged by the measure so providers can compare median values to end of case temperatures.
   (iv) *Claudia Benkwitz (UCSF):* How will cases be excluded, specifically cardiac cases? Do we not submit those cases to MPOG?
      1. Nirav Shah (MPOG): MPOG will apply the measure exclusions within the measure code, will use anesthesia CPT codes to exclude
   (v) *Bishr Haydar (Michigan Medicine):* What routes are most appropriate to include for core or near-core temperatures?
      1. *Brad Taicher (Duke):* Do most sites on the adult site document a temperature monitoring location?

a. *Nirav Shah (MPOG):* Most do now, since MPOG implemented the TEMP 02 core temperature monitoring measure

2. *Claudia Benkwitz (UCSF) & Priti Dalal (Penn State)*- Axillary probes can easily become dislodged and temperatures may not be accurate
   a. *Shobha Malviya (Michigan Medicine):* Many cases only use axillary cases, do we want to exclude all those cases?
   b. *Amber Franz (Seattle Children's):* Does arm at patient side need to be documented to use the axillary temp? Are sites documenting this? For small children, their arm easily falls away from the side.
      i. *Nirav Shah (MPOG):* We have focused on this for adults so many sites are documented 'at the patient side' but may not be feasible in the pediatric population.
   c. *Nirav Shah (MPOG): Would encourage including those cases as review can help identify process issues - If you exclude all axillary cases, less likely to review and as Shobha mentioned, this can be a high volume of cases*
3. *Ruchika Gupta (Michigan Medicine):* Should MAC cases be excluded?
   a. Committee agrees to exclude MAC cases- downstream impact or risk of SSI is low for MRI & other common MAC cases.

(5) **Case Exclusions:**
   (a) ASA 5 and 6
   (b) Cases < 30 minutes duration
   (c) Unlisted Anesthesia procedure (CPT: 01999)
   (d) Organ Harvest (CPT: 01990)
   (e) Obstetric Non-Operative Procedures (CPT: 01958, 01960, 01967)
   (f) Cardiac Surgery (CPT: 00561, 00562, 00563, 00566, 00567, 00580)
   (g) Add MAC cases as additional exclusion
   (h) Exclude cases without a temperature or core/near-core temperature route documented

(6) **Responsible Provider:** Provider present for the longest duration of the case per staff role.
   (a) Provider Attribution: Committee agrees to attribute the provider signed in for the longest duration of the case per staff role.

(7) **Success Criteria:** The median temperature intraoperatively is ≥ 36 C (96.8F) or is the nadir ≥ 35 C (95F).
   (a) *We will "clean" temperature values using the following artifact algorithm:*
   (b) Less than 32.0˚C (89.6F)
   (c) Greater than 40.0˚C (104.0F)
   (d) Any minute-to-minute jumps > 0.5˚C equivalent.
   (e) Will account for initial warm up of probe placement

(8) Feedback requested**:** In addition to baseline temp and first postop temp, what other data (if any) should be displayed as a "case detail"?

8) **Next Steps**
   a) Publish temperature management measures- will send notes to this committee to summarize discussion and consensus
   b) Finalize specification for opioid equivalency – send to group and publish measure
   c) Send out specifications for proposed measures

Meeting adjourned at: 1203