Anesthesiology Performance Improvement and Reporting Exchange (ASPIRE)

Pediatric Subgroup Meeting Minutes – December 17, 2019

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

A	Alina Bodas, Cleveland Clinic	A	Luis Tollinche, Memorial Sloan Kettering
A	Allan Simpao, Children's Hospital of Philadelphia	A	Marco Silvestrini, US Anesthesia Partners
P	Anna Clebone, University of Chicago	P	Michelle Lucier, Henry Ford- Detroit
P	Anshuman Sharma, Washington University	A	Paul Stricker, Children's Hospital of Philadelphia
P	Bishr Haydar, University of Michigan	E	Paul Reynolds, University of Michigan
P	Brad Taicher, Duke University	A	Phillip Collier, Beaumont Royal Oak
P	Charles Schrock, Washington University	P	Phillip Yun, OHSU
A	Cheryl Gooden, Yale University	P	Prita Dalal, Penn State University
P	Claudia Benkwitz, University of California San Francisco	P	Red Starks, US Anesthesia Partners
A	Elizabeth Elliot, Children's Hospital of Philadelphia	A	Robert Christensen, University of Michigan
P	Gary Loyd, Henry Ford- Detroit	P	Ronak Patel, University of Virginia
A	Germaine Cuff, NYU Langone	A	Ryan Bradstreet, Bronson Healthcare Group
A	Gina Whitney, University of Colorado	P	Shobha Malviya, University of Michigan
A	Hamid Vahabzadeh-Monshie, University of Oklahoma	P	Stephanie Kahntroff, University of Maryland
P	Jacques Scharoun, Weill Cornell	P	Tetsu Uejima, DuPont Children's
A	Jacob Tiegs, NYU Langone	P	Vikas O'Reilly-Shah, University of Washington
E	Jina Sinskey, University of California San Francisco	A	Vivian Onyewuche, Henry Ford-Detroit
A	Jorge Galvez, Children's Hospital of Philadelphia	P	Wenyu Bai, University of Michigan
P	Julianna Mendoza, Stanford University	A	Wilson Chimbira, University of Michigan
P	Jurgen de Graaff, Erasmus MC-Netherlands	P	Nirav Shah, MPOG Associate Director
P	Laura Gibbs, Michigan Medicine	P	Katie Buehler, MPOG Clinical Program Manager
P	Lianne Stephenson, University of Wisconsin	P	Meridith Bailey, MPOG QI Coordinator
A	Lisa Chan, Arkansas Children's	P	Brooke Szymanski, MPOG QI Coordinator
P	Lucy Everett, Mass General Hospital		

Agenda & Notes

1) **Roll Call, Introductions**
2) **Background of MPOG/ASPIRE**
    a) Formed in 2008
    b) Academic and community hospital consortium; includes over 40 hospitals across the country (2 in Netherlands)
    c) Dual mission of research and quality improvement
    d) Collect data from 49 institutions and 5 EHR Vendors
    e) Over 12 million cases extracted & de-identified
    f) Includes demographic, medication/fluid administration, physiologic, billing, and staff data
    g) ASPIRE is the quality improvement arm of MPOG
    h) ASPIRE dashboard and provided feedback emails available to participating sites
3) **Current Status of Pediatric Data/Measures**
    a) 8% of total cases in MPOG Central
    b) 1 Pediatric Specific Measure (PONV 02)
    c) 0 Sites contributing NSQIP-peds or CCAS-STS registry data
    d) SPA and Wake up Safe Discussions
    e) Top 10 sites contributing data: *see slide 10.*
    f) Current Age Exclusion for ASPIRE measures
        i) Set at <12yo- is this still appropriate?
            (1) **Neonate**: < 1 mo , **Infant**: 1 mo – 1y
            (2) **Toddler**: 1-3y , **Child**: 4-7y
            (3) **Adolescent**: 8-11y , **Pre-teen**: 12-17y
        ii) *Claudia Benkwitz, UCSF*- consider excluding pediatric cardiac cases or at least examine them separately as the parameters will be different.
        iii) *Vikas O'Reilly Shah, University of Washington*- Consider evaluating patients who revisit the health system frequently to assess their outcome measures differently or separately.
        iv) *Nirav Shah*, *MPOG Coordinating Center*- Can list patient comorbidities as part of the measure details in the analysis but would recommend still including patients with these additional comorbidities in the measure rather than excluding them so providers can still review performance and determine if any opportunity is present. Trying to adopt the philosophy of flagged vs. failed cases.
4) **2020 Plans**
    a) **Measure Goals: Build 2-3 pediatric specific measures in 2020**
        i) Extending Glucose measures to preop and PACU. Separating treatment vs. glucose lab recheck
            (1) Glucose < 60 mg/dL treated or re-checked within 90 minutes
            (2) Preoperative glucose check on diabetes patients or high-risk cases
                (a) *Claudia Benkwitz, UCSF*- preop glucose is not often checked in pediatric patients- this measure may not apply.
        ii) Move forward with measure suggestion from 2017

(1) Hypotension informational measure displaying the lowest, highest and average MAP values per age group
    (a) < 1 mo
    (b) 1 mo – 1 yo
    (c) 1-3 yo
    (d) 4-7 yo
    (e) 8-11 yo
    (f) 12-17 yo
    (g) Measure Time Period: Intraoperative
    (h) Inclusions: All patients requiring general anesthesia or monitored anesthesia care (MAC)
    (i) Exclusions:
        (i) Patients > 18 years old
        (ii) ASA 5 and 6 cases
        (iii) Organ Harvest, liver transplant, lung transplant and Cardiac surgeries

iii) **Prioritize 2 additional measures that exclude patients > 18yo**
    (1) % of cases with sustained postoperative hypothermia (4.08/5)
    (2) % of cases where the patient is re-intubated in PACU (4.04/5)
    (3) % of cases where non-opioid adjunct was used (3.79/5)
        (i) *Nirav Shah, MPOG Coordinating Center*- We capture all medication administration data and can report the results of adjunct pain administrations with high confidence
    (4) Other Medication Dosing (3.75/5)

b) **Call for Measure Survey Results**
    i) 24 Providers completed the survey – Thank You!
    ii) No overwhelming consensus on one measure focus
        (1) % of cases with sustained postoperative hypothermia (75%)
        (2) % of cases where the patient is re-intubated in PACU (75%)
        (3) % of cases with ≥ 2 intubation attempts (65%)
            (a) *Claudia Benkwitz, UCSF*- Look at provider roles to determine if there is any correlation in number of attempts; also examine comorbidities. Interested in cardiac specific measures for pediatrics.
        (4) % of cases where non-opioid adjunct was used (65%)
        (5) Other Medication Dosing (80%)
    iii) MPOG data capture - measure limitations
        (1) 4 Hours before Anesthesia Start → 6 hours after Anesthesia End
    iv) Temperature Management
        (1) **Proposal 1:** % of cases where patient's temperature was < 36 C during immediate postoperative period
            (a) Time bounds: patient out of OR, patient in recovery room, PACU discharge, 6 hours after Anesthesia End
            (b) Inclusion criteria: All patients regardless of postop disposition

(2) **Proposal 2:** Informational Measure: temperature < 36 C at specific times
   (a) Patient In Room, Induction End, Procedure Start, Procedure End, PACU Arrival
      (i) *Julianna Mendoza, Stanford*- Currently working on this at our institution- in favor or maintaining a specific temperature intraoperatively. Looking at temperatures between induction and procedure start.
      (ii) *Tetsu Uejima, DuPont Children's*- Our institution has focused on normothermia targeted at specific case types or age range (NICU patients)

v) Airway Management
   (1) Reintubation rates in PACU
      (a) **Proposal:** % of cases where the patient is intubated between patient out of room and PACU discharge.
         (i) Inclusions: All patients (general, MAC, Sedation)
         (ii) Exclusions: ICU direct transports
   (2) Very Interested (75%): % of cases where the patient is re-intubated in PACU
   (3) *Shoba Malviya, Michigan Medicine*: Respiratory complications in PACU may be a better metric as reintubations rarely occur in pediatric patients.

vi) Medication Dosing: medications of interest?

vii) Pain Management
   (1) **Proposal 1: % of cases with a postoperative pain score greater than ____**
      (a) Inverse Measure. Threshold?
      (b) Pain scales used; variation in documentation
      (c) *Vikas O'Reilly-Shah, University of Washington*- Consider examining correlation between nursing documentation of postop pain score and the total dose of pain medication administered in PACU (much like the study that was conducted for adults)
   (2) **Proposal 2:** % of cases where non-opioid adjunct was used
      (a) Include or exclude patients with regional blocks?
      (b) Case Types
   (3) *Anshuman Sharma, WashU* – Large variance in using regional anesthesia- would be helpful in guiding future practice.

viii) ASPIRE Opioid Dashboard
   (1) Add Tonsillectomy/Adenoidectomy and Spine categories for patients < 18yo
   (2) Morphine equivalents in the OR vs. PACU
   (3) *Anshuman Sharma, WashU*- One of the benefits of MPOG is identifying variance amongst organizations or providers in providing care- specifically for intraop opioid administration. This could be beneficial for displaying practice patterns for opioid use in the pediatric population.

ix) Other Suggestions
   (1) Fluid Management (3.75/5)
   (2) Antibiotic Stewardship (3.67/5)
   (3) % of cases with hypoxemia (3.63/5)
   (4) Transfusion Management in patients < 2yo (3.54/5)

(5) % of cases with emergence delirium
(6) % of cases with laryngospasm
(a) *Vikas O'Reilly-Shah, University of Washington*- Look for surrogates for laryngospasm or bronchospasm rather than provider documentation of the event such as succinylcholine administration or epinephrine administration
(7) % of cases where Succinylcholine was administered in PACU
(8) % of cases using FiO2 less than 30% with patients SpO2 > 92%
(9) % of cases where the patient was NPO liquids for < 2 hours without adverse outcomes

5) **Subcommittee Membership & Meeting Schedule**
   a) Open to all pediatric anesthesiologists
      i) Do not have to practice at an active MPOG institution
   b) Basecamp forum: best format for communication between members
   c) How often should this group meet?
      i) *Shobha Malviya, Michigan Medicine*- Meet at least quarterly to keep everyone on task
      ii) *Vikas O'Reilly-Shah, University of Washington:* Try to coordinate at least 2 of the meetings with SPA Quality and Safety meetings
   d) Need volunteers to assist with measure build questions
   e) MPOG Collaborative Meetings 2020 (In-person)
      i) March 27th, Schoolcraft College, Livonia, MI
      ii) July 17th, Henry Center East Lansing, MI
      iii) October 2nd, ASA-Washington DC
6) **Recommendation**
   a) Build 2-3 peds specific measure in 2020
      i) Temperature management: postoperative hypothermia or intraoperative hypothermia at defined intervals
      ii) Intraoperative Hypotension – informational measures
      iii) PACU re-intubation or utilization of respiratory therapy (if possible)
      iv) Add tonsillectomy and spine to opioid equivalency dashboard
      v) Non opioid adjuncts, including regional blocks
7) **General Comments:**

   Anna Clebone, University of Chicago, SPA- Beneficial to highlight the pediatric specific measures that are evidence based and, when possible, link back to outcome data to prove the process is effective in improving outcomes
   a) *Nirav Shah, MPOG Coordinating Center*- There seems to be limited pediatric anesthesia literature that provides concrete evidence to inform measures; some of the initial measures may be based on expert opinion and be focused on describing variance rather than hard thresholds for pass/fail. Can use dashboards and provider feedback emails to provide this information to Quality Champions and individual providers
   b) *Vikas O'Reilly Shah, University of Washington*- If we are choosing process measures that have been linked to improving outcomes in the literature, would be beneficial to provide feedback to providers to focus on certain processes of care.

- *Anna Clebone, University of Chicago, Vice Chair-SPA Quality and Patient Safety*: SPA meeting is usually on Saturday morning of the ASA. In addition, SPA is interested in building measures (ideally evidence-based) focused in the following areas and would be interested in collaborating with MPOG to obtain data for these metrics:
    - Care for patients with high BMI at surgery centers
    - Changing NPO guidelines to be < 1hour for fluids

Meeting adjourned at: 1104