

MPOG Pediatric Subcommittee Meeting

February 16, 2022



Agenda

5 minutes

Announcements

10 minutes

December Meeting Recap

40 minutes

MPOG Peds 2022 Plans

Survey Results

Finalize Measure Build

5 minutes

Upcoming Events/Wrap up

Unblinded Data Review

SPA-AAP PEDIATRIC ANESTHESIOLOGY

2022

A meeting co-sponsored by the Society for Pediatric Anesthesia and the American Academy of Pediatrics Section on Anesthesiology and Pain Medicine



American Academy of Pediatrics

April 1-3, 2022

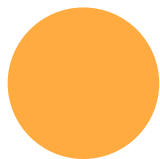
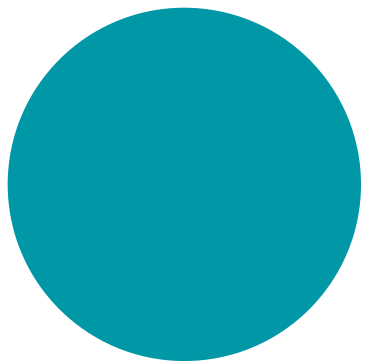
Marriott Tampa Waterside JW Marriott Tampa
Tampa, FL

March 5th - SPA Quality & Safety Meeting (Virtual)

- MPOG Peds Update will be presented

April 1-3rd - SPA-AAP Conference

- Meridith attending in person. If interested in meeting up to discuss MPOG peds program don't hesitate to reach out! (meridith@med.umich.edu)



Meeting Recap

December 2021



PONV Prophylaxis Measure Update (PONV-04-peds)

Now **excludes** 'MAC/Sedation' cases (ie natural airway cases)

Determined by the Anesthesia Technique: General phenotype

Pediatric PONV Management

Diagnosis

- Risk of PONV/PNVS
- History of PONV/PNVS
- Family history of PONV/PNVS
- Post-pubertal female

Interventions

- Preoperative surgery
- Adjuvant/antiemetic
- Propofol
- Surgery > 30 mins
- Nausea medications
- Anti-dopaminergics

1 RISK FACTORS

- Postoperative
- Long acting opioids

2 RISK STRATIFICATION *Consider multimodal analgesia to minimize opioid use

No Risk Factors → LOW RISK
 1-2 Risk Factors → MEDIUM RISK
 3 Risk Factors → HIGH RISK

3 PROPHYLAXIS

- LOW RISK:** None or 5HT3 antagonist or dexamethasone
- MEDIUM RISK:** 1, 2, or 3 5HT3 antagonist + dexamethasone
- HIGH RISK:** 5HT3 antagonist + dexamethasone + consider TIVA

4 RESCUE TREATMENT

Use anti-emetic from different class than prophylactic drug + ondansetron, prochlorperazine, dimenhydrinate, promethazine, metoclopramide. May also consider acupuncture/acupressure.

Value	Definition
No	No general, ETT, or LMA note and no sedative medications or inhaled anesthetics or paralytics associated with the case.
General - both ETT and LMA	There were ETT and LMA notes associated with this case.
General - ETT	There was at least one ETT note, with another general or ETT note associated with this case. There were no LMA notes.
General - LMA	There was at least one LMA note, There were no ETT notes.
<i>General - Inhaled Anesthetic Only</i>	<i>There were inhaled anesthetics associated with this case. There were no ETT or LMA notes.</i>
<i>General - Neuromuscular Blocker Only</i>	<i>There were neuromuscular blockers associated with this case. There were no ETT or LMA notes.</i>
General - Unknown	There were both neuromuscular blockers and inhaled anesthetics associated with this case along with ambiguous general airway notes

Multimodal Pain Measure Update (PAIN-01-peds)

- Exclusion → **TEE/Cardioversion** and **open cardiac** cases excluded using the new phenotype [Procedure Type: Cardiac Surgery](#)
- Local Anesthetic algorithm improved!
- Update will be pushed to the QI dashboard next week



**Pain
Management**

Postoperative Hypothermia (TEMP-03)

Measure Description: Percentage of general and/or neuraxial cases with at least one body temperature $\leq 36^{\circ}\text{C}$ within 30 minutes immediately before or 15 minutes after Anesthesia End.

Success: At least one body temperature measurement $\geq 36^{\circ}\text{C}$ (96.8°F) achieved 30 minutes before or the 15 minutes after Anesthesia End time.

Should the temperature threshold for neonates and infants be changed to **36.5°C**?

- WHO Definition for neonates (age < 1mo) is 36.5
- 2015 guideline of care for prevention of perioperative hypothermia targets 36.5
 - Evidence IIb: normal core temp age < 5yr is 36.5 to 38.0.
- STEPP-IN (Safe Transitions & Euthermia in the Perioperative Period in Infants & Neonates - wide multicenter QI effort) used 36.0

Option 1

Keep TEMP-03 with threshold of 36°C, Add age group filter to the MPOG QI Dashboard

Entity: Pediatric Anesthesia Dashboard

TEMP-03: Perioperative Hypothermia [More Info](#)

The percentage of cases with hypothermia (< 36°C (or 96.8°F)) at the end of case

Providers [Case List](#)

Overall Score

0.5%

Result Counts

Result	Case Count
Passed	7,403
Flagged	40
Excluded	7,856
Total	15,299

Performance Trend

% Flagged

Months

Overall score: 0.5%

Month	Your Institution	All Institutions
Feb 21	0.5%	5.5%
Mar 21	0.5%	5.5%
Apr 21	0.5%	5.5%
May 21	0.5%	5.5%
Jun 21	0.5%	5.5%
Jul 21	0.5%	5.5%
Aug 21	0.5%	5.5%
Sep 21	0.5%	5.5%
Oct 21	0.5%	5.5%
Nov 21	0.5%	5.5%
Dec 21	0.5%	5.5%
Jan 22	0.5%	5.5%

Additional Filters

- + Location
- + Patient Age
- + Patient Gender
- + Patient Race/Ethnicity
- + Surgical Service

Presets

- Adult (≥18 years)
- Pediatric (<18 years)

Custom

From to [Go](#)

Result	Reason	Case Count
Passed	Had temp >= 36.0 C	7,403
Flagged	Had temp >= 36.0 C	25
Flagged	No temperature values	15
Excluded	Excluded Procedure Type	40
Excluded	Anesthesia Duration	2,582
Excluded	General or Neuraxial?	1,892
Excluded	Emergency Cases	713
Excluded	Labor Epidural	12
Excluded	Invalid Measure Range	9
Excluded	Is Valid Case	1
Total		15,299

Preterm Neonate	The period at birth when a newborn is born before the full gestational period
Term-Neonate	0 - 27 days (0 - 3 weeks)
Infant	28 days to 12 months (4 - 48 weeks)
Toddler	13 months - 23 months
Child (early)	2 to 5 years
Child (middle)	6 to 11 years
Adolescent (early)	12 to 18 years
Adolescent (late)	19 to 21 years

Option 2

Build a New Measure: TEMP-08-peds

Description: Percentage of patients **< 1 month old** with at least one body temperature **≤ 36.5°C** within 30 minutes immediately before or 15 minutes after Anesthesia End.

Success: At least one body temperature measurement $\geq 36^{\circ}\text{C}$ (96.8°F) achieved 30 minutes before or the 15 minutes after Anesthesia End time.

Exclusions:

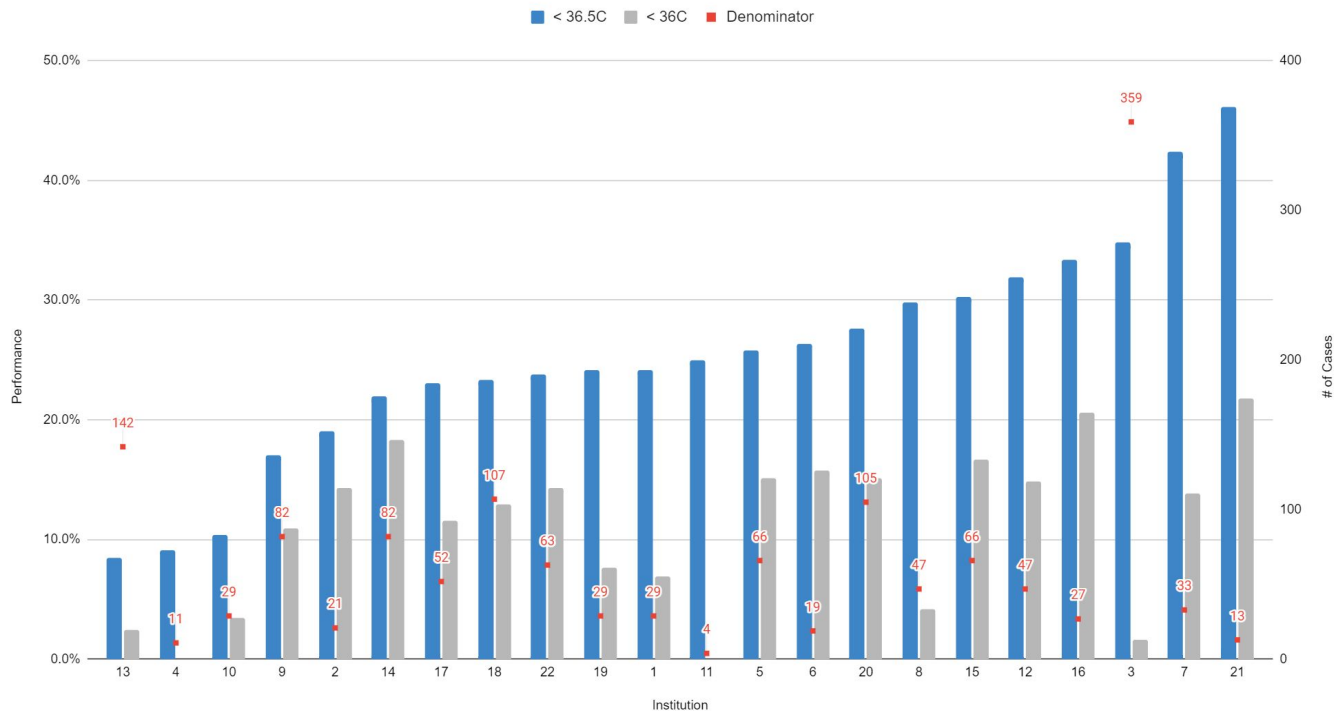
- Patients ≥ 1 month old
- ASA 5 & 6
- Cases with a Anesthesia Start-End duration < 60 min?
- MAC cases?
- Procedure Types
 - All Cardiac (EP/TEE, Cath Lab, open cardiac)
 - Emergent cases
- Cases with Intentional hypothermia

Responsible Provider: Provider present for longest duration of the case per staff role

Performance Threshold: $\leq 20\%$

Neonates (2021)

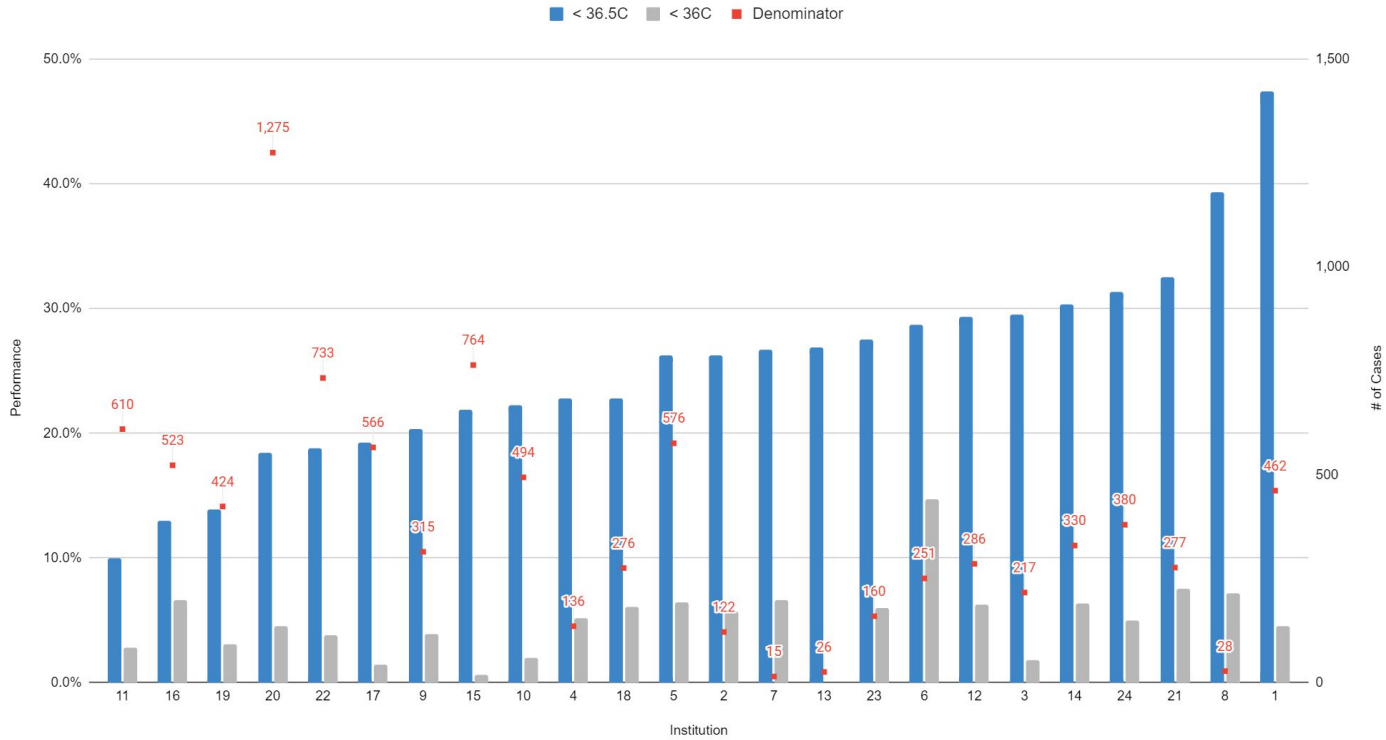
< 27 days old



Site	< 36.5C	< 36C	Diff	Denominator
14	22.0%	18.3%	3.7%	82
2	19.0%	14.3%	4.8%	21
13	8.5%	2.5%	6.0%	142
9	17.1%	11.0%	6.1%	82
10	10.3%	3.4%	6.9%	29
4	9.1%	0.0%	9.1%	11
22	23.8%	14.3%	9.5%	63
18	23.4%	12.9%	10.4%	107
6	26.3%	15.8%	10.5%	19
5	25.8%	15.2%	10.6%	66
17	23.1%	11.5%	11.5%	52
20	27.6%	15.1%	12.5%	105
16	33.3%	20.6%	12.7%	27
15	30.3%	16.7%	13.6%	66
19	24.1%	7.7%	16.4%	29
12	31.9%	14.9%	17.0%	47
1	24.1%	6.9%	17.2%	29
21	46.2%	21.7%	24.4%	13
11	25.0%	0.0%	25.0%	4
8	29.8%	4.2%	25.6%	47
7	42.4%	13.9%	28.5%	33
3	34.8%	1.7%	33.2%	359

Infants (2021)

28 days - 12 mo.



Site	< 36.5C	< 36C	Diff	Denominator
16	13.0%	6.7%	6.3%	523
11	10.0%	2.8%	7.2%	610
19	13.9%	3.1%	10.9%	424
20	18.4%	4.6%	13.9%	1,275
6	28.7%	14.7%	13.9%	251
22	18.8%	3.8%	15.0%	733
9	20.3%	3.9%	16.4%	315
18	22.8%	6.1%	16.7%	276
4	22.8%	5.1%	17.6%	136
17	19.3%	1.4%	17.8%	566
5	26.2%	6.4%	19.8%	576
7	26.7%	6.7%	20.0%	15
10	22.3%	2.0%	20.2%	494
2	26.2%	5.7%	20.5%	122
15	21.9%	0.6%	21.3%	764
23	27.5%	6.0%	21.5%	160
12	29.4%	6.3%	23.1%	286
14	30.3%	6.4%	23.9%	330
21	32.5%	7.6%	24.9%	277
24	31.3%	5.0%	26.3%	380
13	26.9%	0.0%	26.9%	26
3	29.5%	1.8%	27.6%	217
8	39.3%	7.1%	32.1%	28
1	47.4%	4.5%	42.9%	462

Formation of MPOG Peds Interest Groups

- Member driven component of the MPOG peds subcommittee
- Fostering collaboration among pediatric anesthesiologists and sparking ideas of how MPOG data can be useful in projects of interest
- Goal to feature 1-2 projects per meeting
- Introduced a Pediatric Mortality project during our last subcommittee meeting

*MPOG Mortality Workgroup

Members of this workgroup will

1. Receive a monthly report of mortality cases (cardiac and/or non-cardiac) from your institution to review
2. Perform standardized review of cases (< 5/month on average)
3. Meet quarterly to discuss findings with other MPOG pediatric reviewers and identify trends



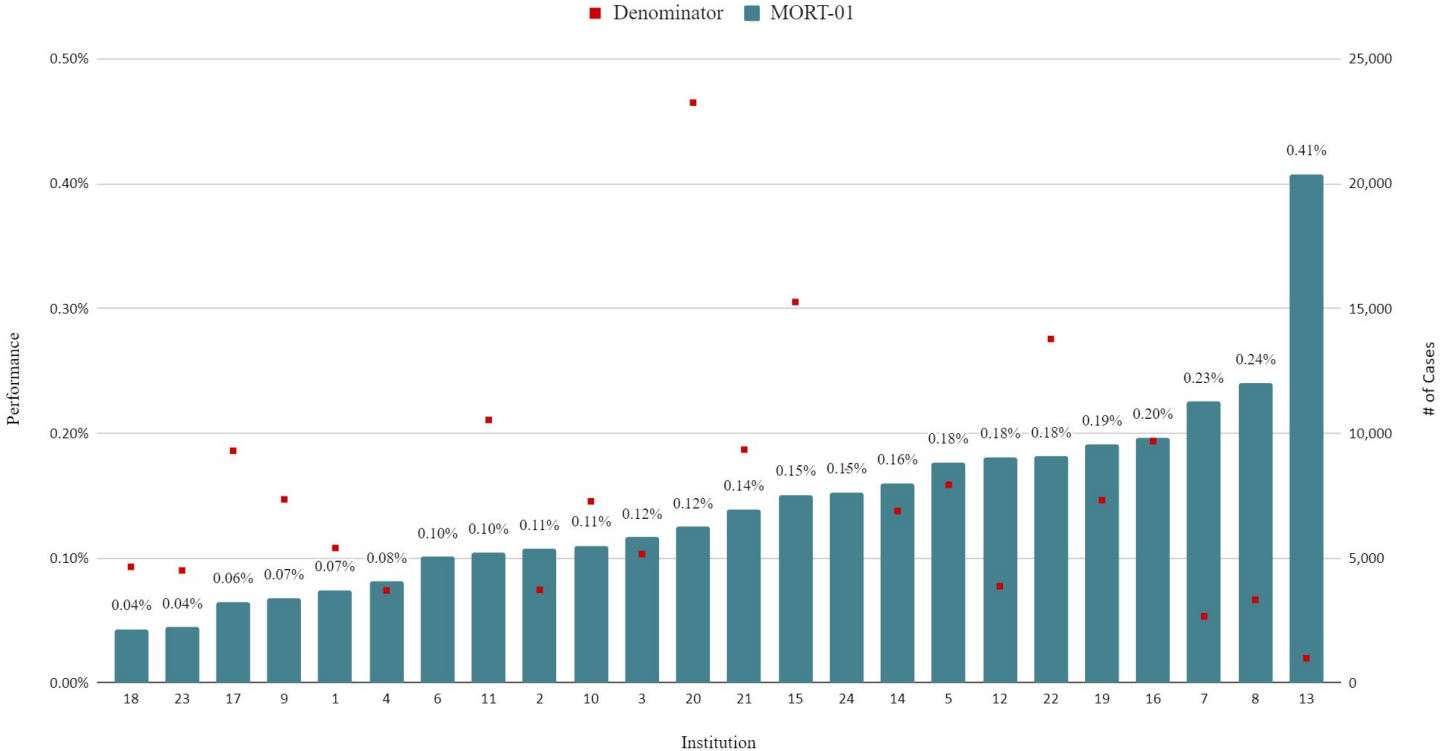
Mortality

MORT-01: 30 Day Post-Op
In-Hospital Mortality Rate

If interested in joining contact Meridith (meridith@med.umich.edu)

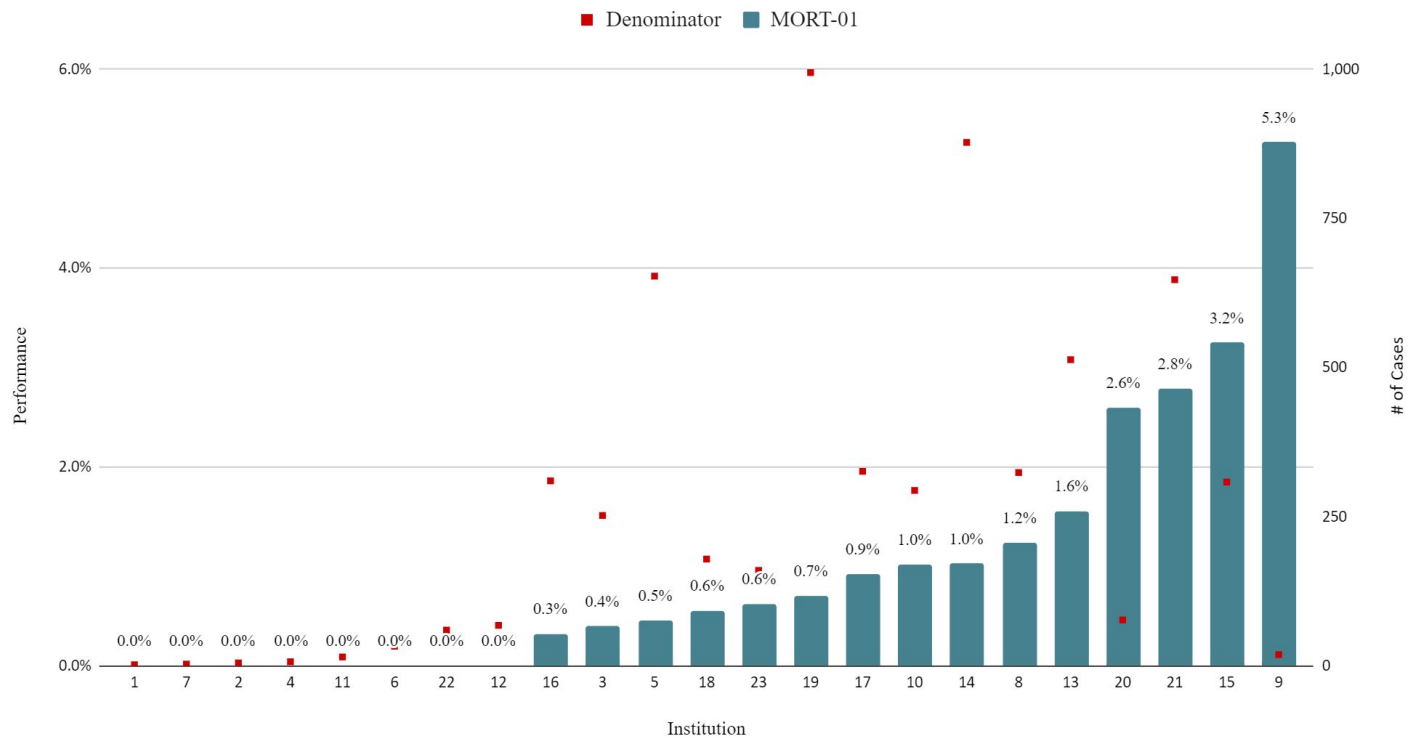
MPOG Pediatric Mortality 2021

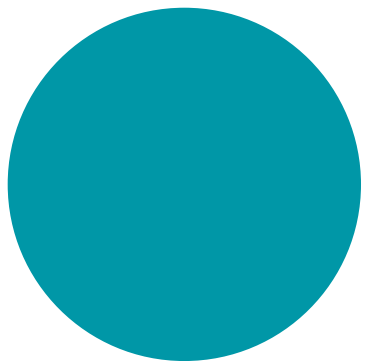
Non-Cardiac, Age < 18



MPOG Pediatric Mortality 2021

Cardiac, Age < 18





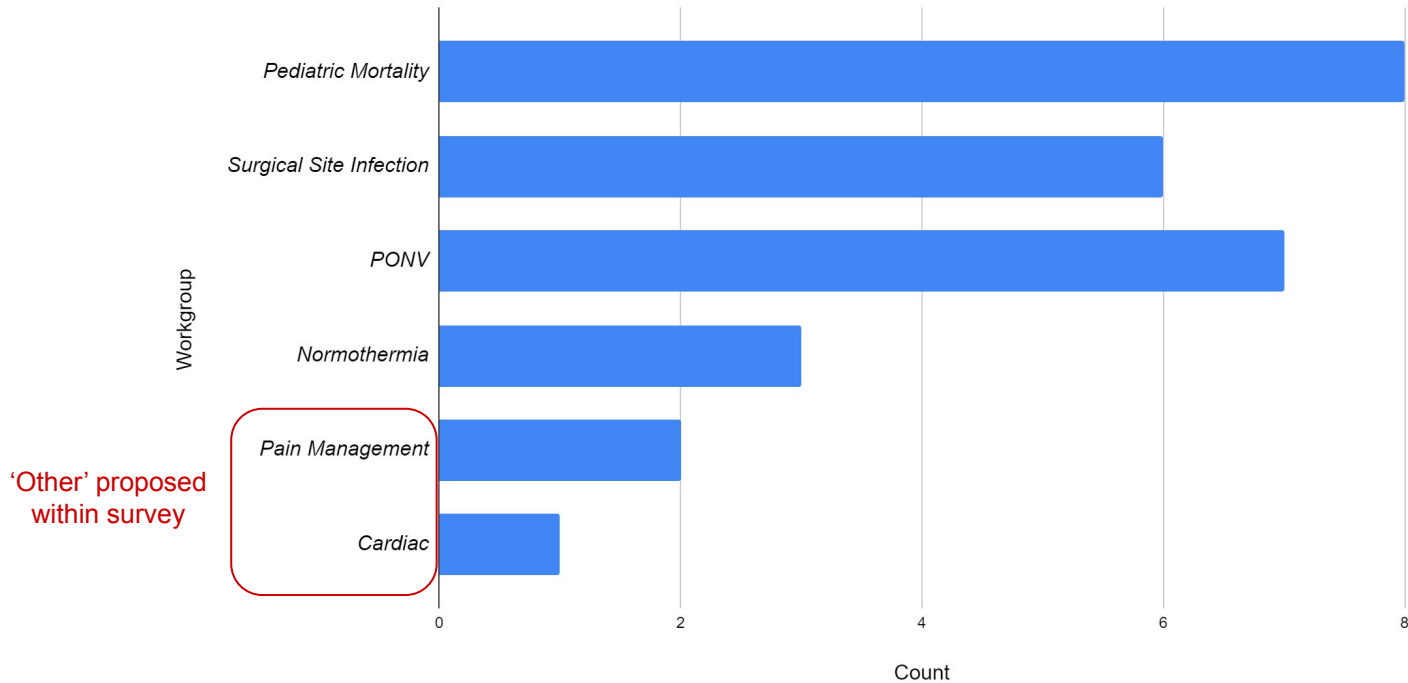
Survey Results

MPOG Peds 2022 Planning



20 Survey Responses. Thank you!!

MPOG Peds Workgroup Interest



Highest QI Interest/Focus Areas



(5) - Neuromuscular Blockade

Assessment / Reversal / Residual Blockade

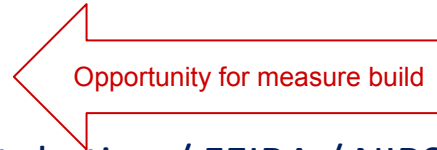


(5) - Normothermia



(4) - Cardiac Specific

ERAS / Early Extubation / FEIBA / NIRS Monitoring



(4) - Postoperative Nausea and Vomiting

Medium QI Interest/Focus Areas



(3) - **Glycemic Management**



(3) - **Infection Control**



(3) - **Medication Safety**



(2) - **Pain Management / Regional Anesthesia**



(2) - **Blood Management**

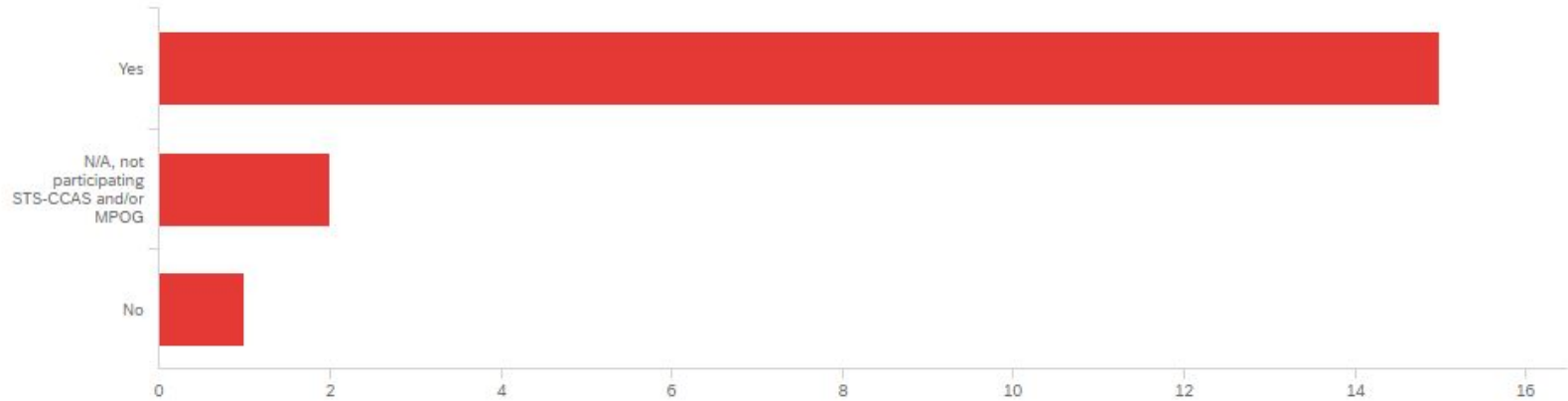
Other Reported QI Interests

- Cardiac Arrest
- Operational Efficiency
 - PACU Length of Stay
 - Decreased Case Cancellations
 - Throughput
- *Minimizing Colloid Use
- NPO Compliance
- *Sustainability
- Clinical Deterioration
- Liver Transplant
- *Low MAP
- EEG Monitoring



*MPOG measure exists

For Congenital Cardiac Anesthesiology patients, there is consideration of facilitating STS-CCAS data entry using MPOG data. Is this something of interest to you?



Discussion

Which Pediatric QI measures should MPOG work towards building this year?

Minimizing Colloid Use in Pediatrics (FLUID-02-peds)

Description: Percentage of non-cardiac cases in which colloids were not administered intraoperatively.

Measure Type: Process

Threshold: NA

Measure Time Period: Patient in Room → Patient out of Room

Inclusions:

- All patients < 18 year of age

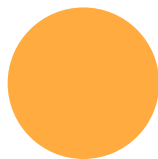
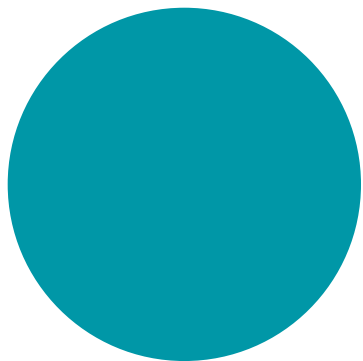
Exclusions:

- Patients ≥ 18 years of age
- ASA 5 & 6
- All cardiac cases as defined by the phenotype [Procedure Type: Cardiac Surgery](#)
- Massive Transfusion or blood loss: Defined as volume of 40mL/kg
- [Procedure Type: Non-operative](#)
- Patients that are in prone or trendelenburg position for ≥ 4 hours
- Patients with ascites

Success Criteria: Colloids are not administered during the case

Adult colloid measure
currently exists (FLUID-01)

Is there interest in building a
pediatric specific measure?



Next Meeting

Unblinded Pediatric Data Review



Unblinded Pediatric Data Review



- We will begin sharing unblinded data at our next pediatric subcommittee meeting on **May 18th, 2022**
- Site QI Champions will be notified that unblinded data will be shared
 - They will have the opportunity to opt out
- All participants will be required to sign a confidentiality agreement prior to the meeting
 - A separate registration for this meeting will be required
- **Only active MPOG sites will be able to participate and view the data**
- We encourage low/high performers on the pediatric measures to speak to the care they provide and current barriers they face
 - Facilitates further discussion and provides additional context to the comparison scores on the dashboard

Active MPOG Pediatric Sites



MPOG Institution	Children's Hospital
Beaumont Health	Beaumont Children's Hospital
Bronson Healthcare Group	Bronson Methodist Hospital
Cleveland Clinic	Cleveland Clinic Children's
Columbia University Medical Center	NewYork-Presbyterian Morgan Stanley Children's Hospital
Dartmouth-Hitchcock Medical Center	Children's Hospital at Dartmouth-Hitchcock
Duke University	Duke Children's Hospital & Health Center
Massachusetts General Hospital - Epic	MassGeneral Hospital for Children
MD Anderson	MD Anderson Children's Cancer Hospital
Memorial Sloan Kettering Cancer Center	Memorial Sloan Kettering Cancer Center
NYU Langone Medical Center	Hassenfeld Children's Hospital at NYU Langone
Oregon Health and Science University	Doernbecher Children's Hospital
Spectrum Health	Helen DeVos Children's Hospital
UChicago Medicine	Comer Children's Hospital at University of Chicago Medical Center
UCLA Medical Center	UCLA Mattel Childrens Hospital
University of California San Francisco	UCSF Benioff Children's Hospital San Francisco
University of Michigan Health System	C.S. Mott Children's Hospital
University of North Carolina - Medical Center	North Carolina Children's Hospital
University of Oklahoma Health Sciences Center	Oklahoma Childrens Hospital at OU Health
University of Virginia Health System	UVA Childrens
University of Wisconsinin	American Family Children's Hospital
Vanderbilt University Medical Center	Monroe Carell Jr. Children's Hospital at Vanderbilt
Wake Forest Baptist Medical Center	Brenner Children's Hospital
Washington University School of Medicine	St. Louis Children's Hospital
Weill Cornell Medical College	NewYork-Presbyterian Komansky Children's Hospital
Yale New Haven Hospital	Yale-New Haven Children's Hospital



Thank You!