MPOG
MULTICENTER PERIOPERATIVE OUTCOMES GROUP

ASPIRE Obstetric Anesthesia Subcommittee Meeting

December 4, 2024

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Agenda

- Announcements
- September Meeting Recap
- Tranexamic Acid Measure Proposal and Vote
- 2025 measures survey results
- Discussion & Voting: Future Measures

Welcome New Members!

- David Arnolds, MD – University of Michigan
- Jessica Stockinger, MD – Duke Medical Center
- Joshua Younger, MD – Northwell Health/Long Island Jewish Medical Center

MPOG Obstetric Anesthesia Subcommittee is open to all individuals interested in improving obstetric care. Please reach out to Nicole at (nicbarri@med.umich.edu) if interested in joining.

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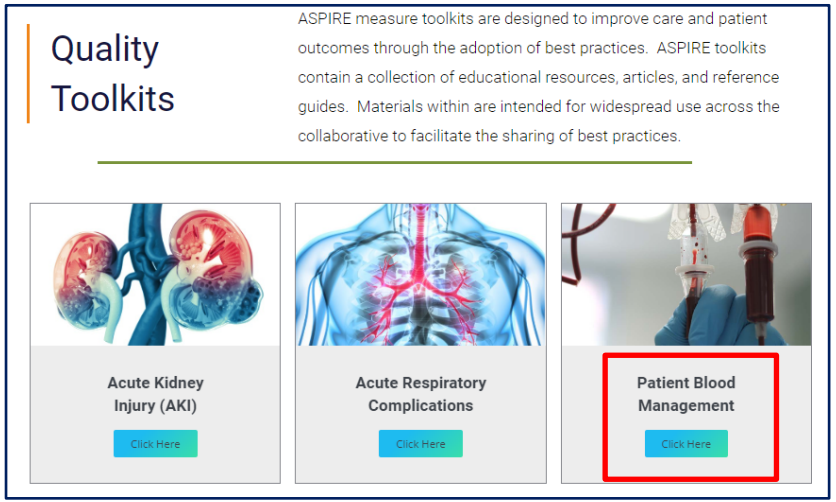
Announcements

Future Meeting Dates:

- MPOG OB Subcommittee
  - February 26, 2025, at 1pm EST
  - May 14th, 2025, at 1pm EST
  - September 3, 2025, at 1pm EST
  - December 3, 2025, at 1pm EST

OB Transfusion Toolkit now available!

- OB Transfusion Toolkit Presentation is now available on the Patient Blood Management Toolkit website.
- Please use as you see fit, the toolkits are available for your use and distribution.



Toolkit

- PTS Presentation: PowerPoint presentation for site
- OB Transfusion Toolkit Presentation: Presentation

Future OB Related PCRC Research Proposals

- The Perioperative Clinical Research Committee (PCRC) helps researchers to coordinate efforts throughout the entire research proposal process from determining feasibility through dissemination of results.

- For all future OB related PCRC meetings, you will receive an invitation to attend as an optional attendee. (OB Subcommittee members from an active sites).

- Depending on the presenter schedule, we will also announce all approved OB research proposals at the OB Subcommittee.

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September Meeting Recap

- **Azithromycin quality measure** for intraoperative cesarean deliveries approved. Will announce when the measure is built and ready to be reviewed on your dashboards.
- **Measure discussion** for the 2025 MPOG OB Subcommittee and SOAP Centers of Excellence alignment
- **Phenotype Discussion**: An update of pregnancy phenotype was discussed. Request for volunteers to review cases- if interested in helping, please email Nicole at nicbarri@med.umich.edu

Approved Measure: ABX-06-OB

Measure Description: ABX-06-OB *Percentage of unscheduled cesarean deliveries in which azithromycin was administered in the time period 60 minutes before surgical incision through anesthesia end.*

Measure Time Period: 120 minutes before surgical incision to Anes End. (Will Flag if given too early).

Inclusions:

Cesarean delivery patients as determined by: Obstetric Anesthesia Type Phenotype

- 1- Conversion (Labor epidural and cesarean delivery charted under one case ID)
- 7- Conversion (cesarean delivery portion, labor epidural documented on another case ID)

Exclusions:

Obstetric Anesthesia Type phenotype:

- 0 - No
- 2- Cesarean delivery without a preceding labor epidural
- 3- Labor Epidural
- 4- Cesarean Hysterectomy
- 5- Obstetric Case Unable to Determine
- 6- Conversion (labor epidural portion)
- 8- Conversion (cesarean hysterectomy portion)

Success Criteria: Non-elective cesarean patients who received azithromycin within the measure time period.

GA-01-OB: Measure Discussion

GA-01-OB: General Anesthesia During Cesarean Delivery
Percentage of cesarean delivery cases where general anesthesia was used.

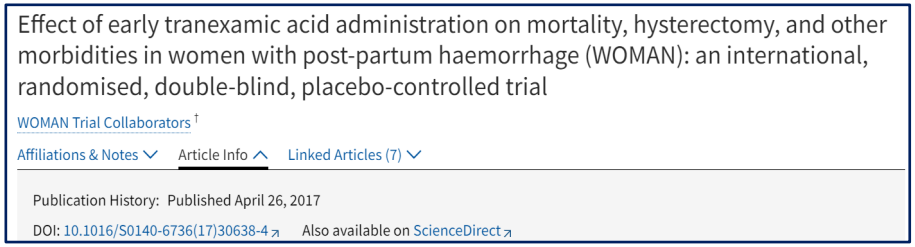
- Includes: Scheduled cesareans and conversion to cesarean from labor epidural
- Excludes: Cesarean hysterectomy & placenta accreta cases
- Should we create a new measure GA-01-OB (b) to assess general anesthesia for scheduled cesarean deliveries only?
- Should we set a threshold for success? If yes, what should the threshold be?
  - Currently no threshold for this measure

GA-01 Poll Questions

- Should we set a measure of success for GA-01?
- If yes, what threshold is recommended?
- What is your level of interest in creating a quality metric for GA rate for scheduled cesarean deliveries?

- 1 vote/site
- Coordinating center will review all votes after meeting to ensure no duplication

Background: Tranexamic Acid


Effect of early tranexamic acid administration on mortality, hysterectomy, and other morbidities in women with post-partum haemorrhage (WOMAN): an international, randomised, double-blind, placebo-controlled trial

WOMAN Trial Collaborators †

Affiliations & Notes ⌄ Article Info ⌃ Linked Articles (7) ⌄

Publication History: Published April 26, 2017

DOI: 10.1016/S0140-6736(17)30638-4 ↗ Also available on ScienceDirect ↗

WOMAN Trial- Published in 2017

- **Inclusion criteria**: 193 hospitals in 21 countries. Women 16 yrs or older with dx of PPH after vaginal or cesarean delivery
- **Design**: International, randomized, double blind, placebo-controlled trial.
- **Trial Treatment**: 1 GM TXA at a rate of 1 ml per minute vs placebo (2nd dose if bleeding cont'd or started again within 24 hrs).
- **Primary outcome:** composite of death from all causes or hysterectomy within 42 days of randomization.

Results: Death from all causes were reduced but were not statistically significant. Early treatment with TXA reduces postpartum hemorrhage and deaths and the need for surgical intervention to control bleeding.

World Health Organization recommendation early use of TXA within 3 hours of birth for women diagnosed with postpartum hemorrhage

ACOG recommendation 2017: TXA should be considered in obstetrical hemorrhage when initial medical therapies fail. There is insufficient data for the use of prophylactic TXA.

Expert Review 2023: TXA

- Saharan Africa and South Asia 1/1000 births a mother dies due to hemorrhage
- High income countries 1/100,000 births a mother dies due to hemorrhage
- In low-risk settings (high income countries) there are more thrombotic deaths than bleeding deaths
- Trials in low-risk settings must be large enough to assess nonfatal thrombosis, as fatal cases are rare. Despite having 11,000 patients, Pacheco et al. study lacked the power to effectively evaluate thrombosis risk.
- Women Trial -> mortality benefit was primarily seen in Africa where 12,000 pts/20,000 total patients were enrolled. In Europe, where only 1,000 patients were enrolled, there were no deaths.
- Conclusion: TXA reduced bleeding by 1/3.

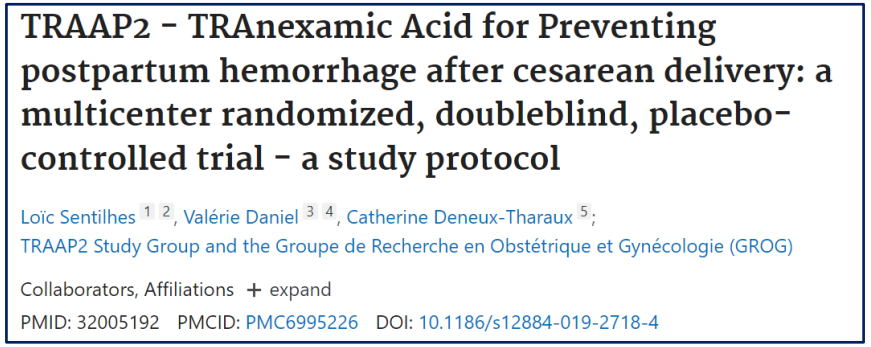
Background: Tranexamic Acid

ORIGINAL ARTICLE

Tranexamic Acid for the Prevention of Blood Loss after Vaginal Delivery

Authors: Loïc Sentilhes, M.D., Ph.D., Norbert Winer, M.D., Ph.D., Elie Azria, M.D., Ph.D., Marie-Victoire Sénat, M.D., Ph.D., Camille Le Ray, M.D., Ph.D., Delphine Vardon, M.D., Franck Perrotin, M.D., Ph.D., +13, for the Groupe de Recherche en Obstétrique et Gynécologie* Author Info & Affiliations

Published August 22, 2018 | N Engl J Med 2018;379:731-742 | DOI: 10.1056/NEJMoa1800942 | VOL. 379 NO. 8



TRAAP2 – TRAnexamic Acid for Preventing postpartum hemorrhage after cesarean delivery: a multicenter randomized, doubleblind, placebo-controlled trial – a study protocol

Loïc Sentilhes [1] [2], Valérie Daniel [3] [4], Catherine Deneux-Tharaux [5];
TRAAP2 Study Group and the Groupe de Recherche en Obstétrique et Gynécologie (GROG)

Collaborators, Affiliations + expand

PMID: 32005192 PMCID: PMC6995226 DOI: 10.1186/s12884-019-2718-4

TRAAP- Published 2018

Conducted to assess the effect of TXA on blood loss after vaginal delivery.

TRAAP2 –Published 2021

Conducted to assess the effect of TXA on blood loss after cesarean delivery.

- **Design**: Multicenter, double-blind, randomized controlled trial.
- **Inclusion Criteria**: Women undergoing CD before or during labor at 34 weeks or more gestational weeks.
- **Trial Treatment**: Each patient received IV administered prophylactic uterotonic agent and 1GM of TXA.
- **Primary outcome:** postpartum hemorrhage defined as a calculated estimated blood loss greater than 1000 ml receipt of RBC transfusion within 2 days after delivery.
- 4551 women were randomized. 4431 underwent CD of whom had primary outcome data available.
- The results demonstrated that prophylactic uterotonic agent, use of TXA at CD resulted in a calculated estimated blood loss that was significantly lower than those who received the placebo. The difference in blood loss after cesarean delivery was 100 ml which is not clinically significant.

Background: Tranexamic Acid

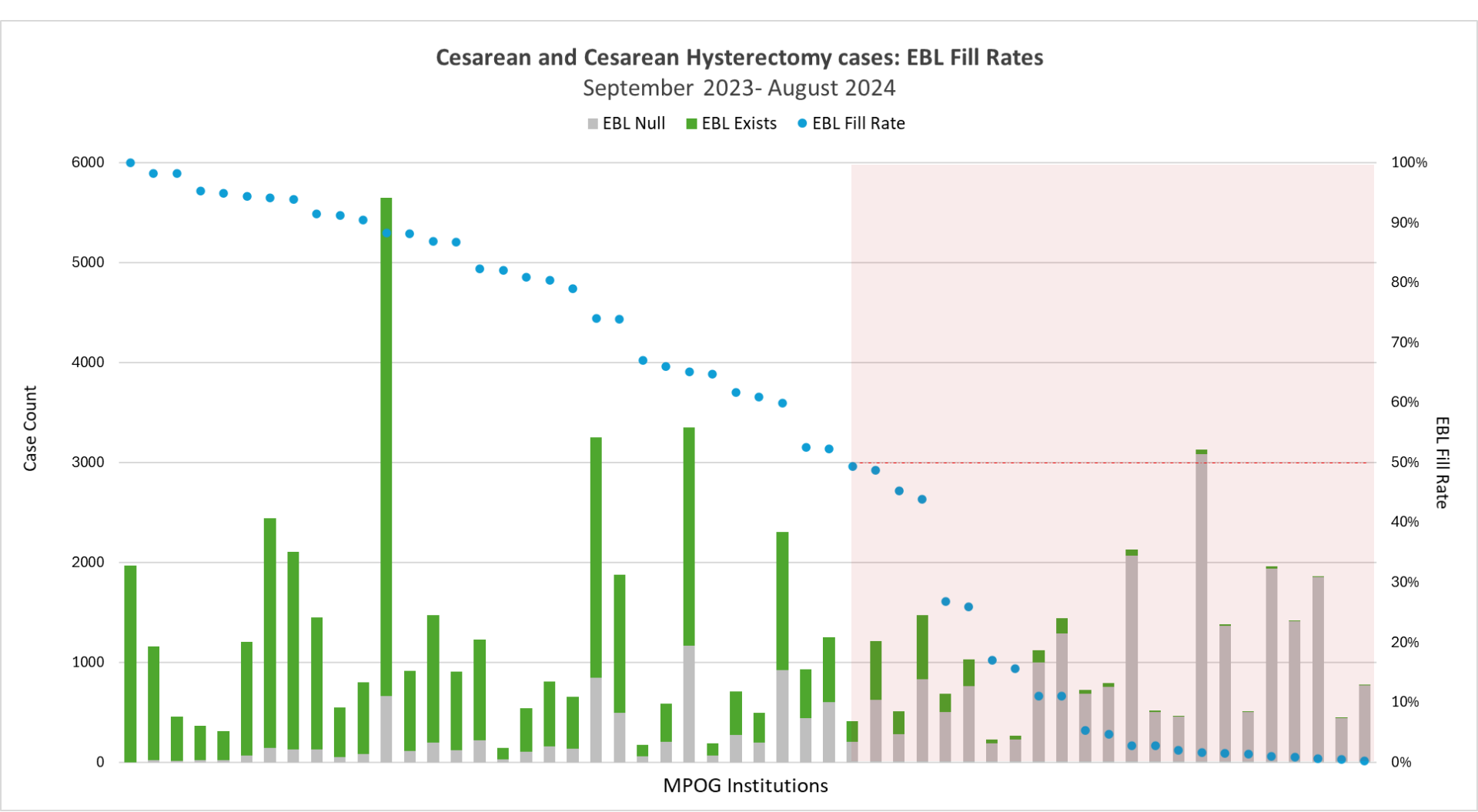
ORIGINAL ARTICLE

Tranexamic Acid to Prevent Obstetrical Hemorrhage after Cesarean Delivery

Authors: Luis D. Pacheco, M.D., Rebecca G. Clifton, Ph.D., George R. Saade, M.D., Steven J. Weiner, M.S., Samuel Parry, M.D., John M. Thorp, Jr., M.D., Monica Longo, M.D., Ph.D., +12, for the Eunice Kennedy Shriver National Institute of Child Health and Human Development Maternal–Fetal Medicine Units Network* Author Info & Affiliations

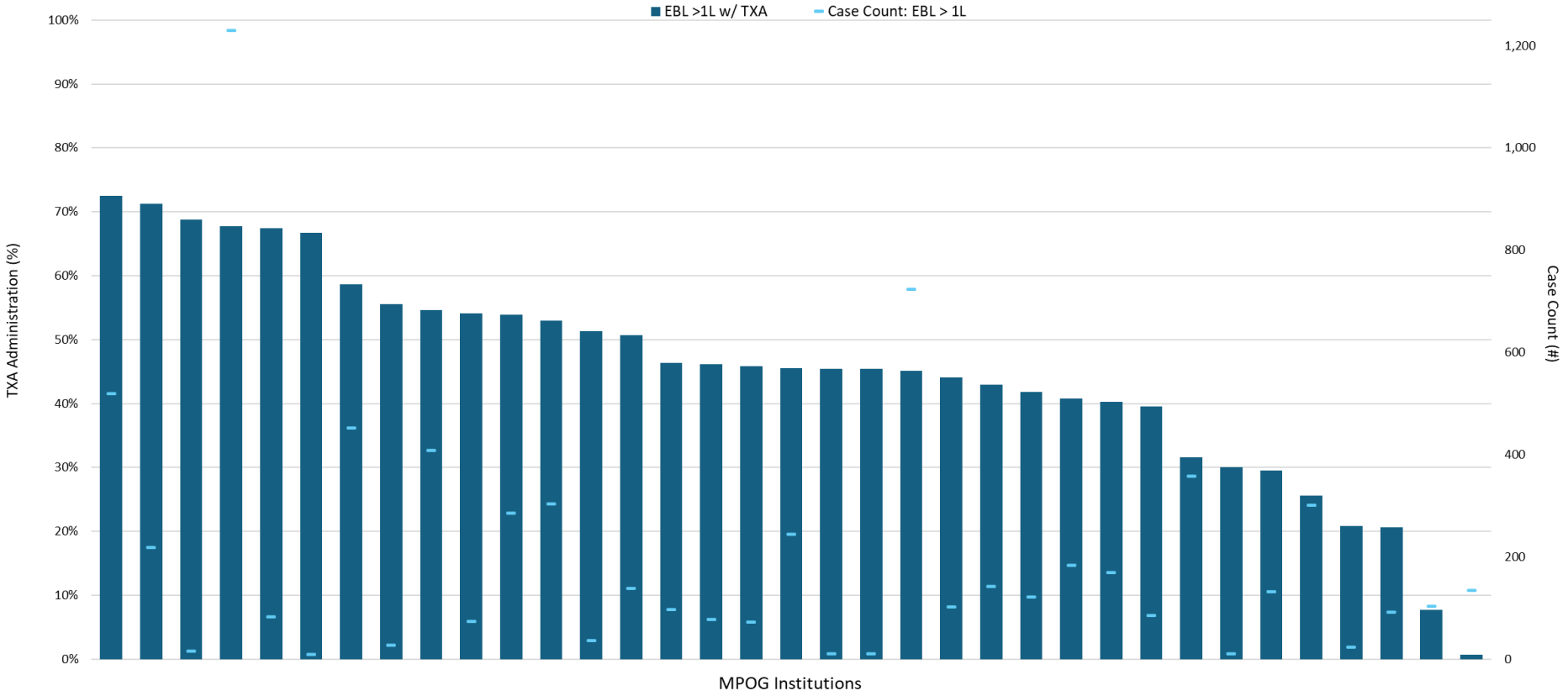
Published April 12, 2023 | N Engl J Med 2023;388:1365-1375 | DOI: 10.1056/NEJMoa2207419
VOL. 388 NO. 15

- **Design**: Double blinded, randomized, control trial at 31 US hospitals
- **Inclusion Criteria**: This trial included both scheduled and unscheduled cesarean deliveries.
  - 11,000 patients: 5529 TXA group and 5471 placebo group
- Trial excluded patients who were high risk for thromboembolism.
- **Trial Treatment**: TXA given IV within 3 minutes after cord clamping or placebo.
- **Primary outcome:** composite of maternal death or transfusion by hospital discharge or 7 days PP which ever came first.
- No sufficient evidence to recommend TXA. However, a trend was seen towards benefit for women given TXA versus the placebo. ACOG and the World Health Organization continue to recommend early use of TXA in postpartum hemorrhage.


Cesarean and Cesarean Hysterectomy cases: EBL Fill Rates
September 2023- August 2024
EBL Null
EBL Exists
EBL Fill Rate
Case Count
6000
5000
4000
3000
2000
1000
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
EBL Fill Rate
MPOG Institutions

Percentage of Cesarean Cases with ≥ 1L EBL and recieved TXA

September 2023- August 2024



Proposed New Measure -TRAN-05 OB

TRAN-05-OB- Percentage of cesarean deliveries with tranexamic acid administration for blood loss > 1000 mL

Measure Time Period: Anes Start to Anes End

Inclusions:

Cesarean delivery patients as determined by: Obstetric Anesthesia Type Phenotype

- 1- Conversion (Labor epidural and cesarean delivery)
- 2- Cesarean Delivery
- 4- Cesarean Hysterectomy
- 7- Conversion (cesarean delivery portion)
- 8- Conversion (cesarean hysterectomy portion)

Exclusions:

Obstetric Anesthesia Type phenotype:

- 0 - No
- 3- Labor Epidural
- 5- Obstetric Case Unable to Determine
- 6- Conversion (labor epidural portion)

Success Criteria: The administration of tranexamic acid in patients with blood loss >1000mL

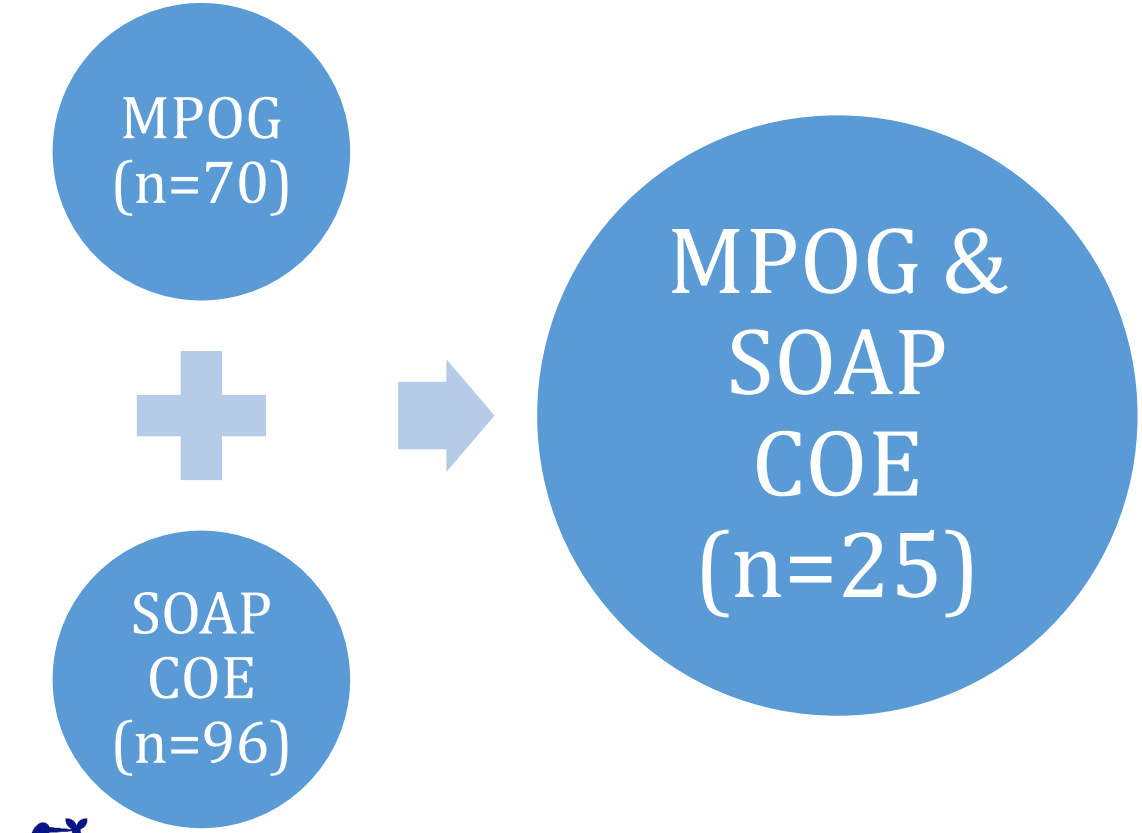
Tranexamic Acid Measure

Vote:

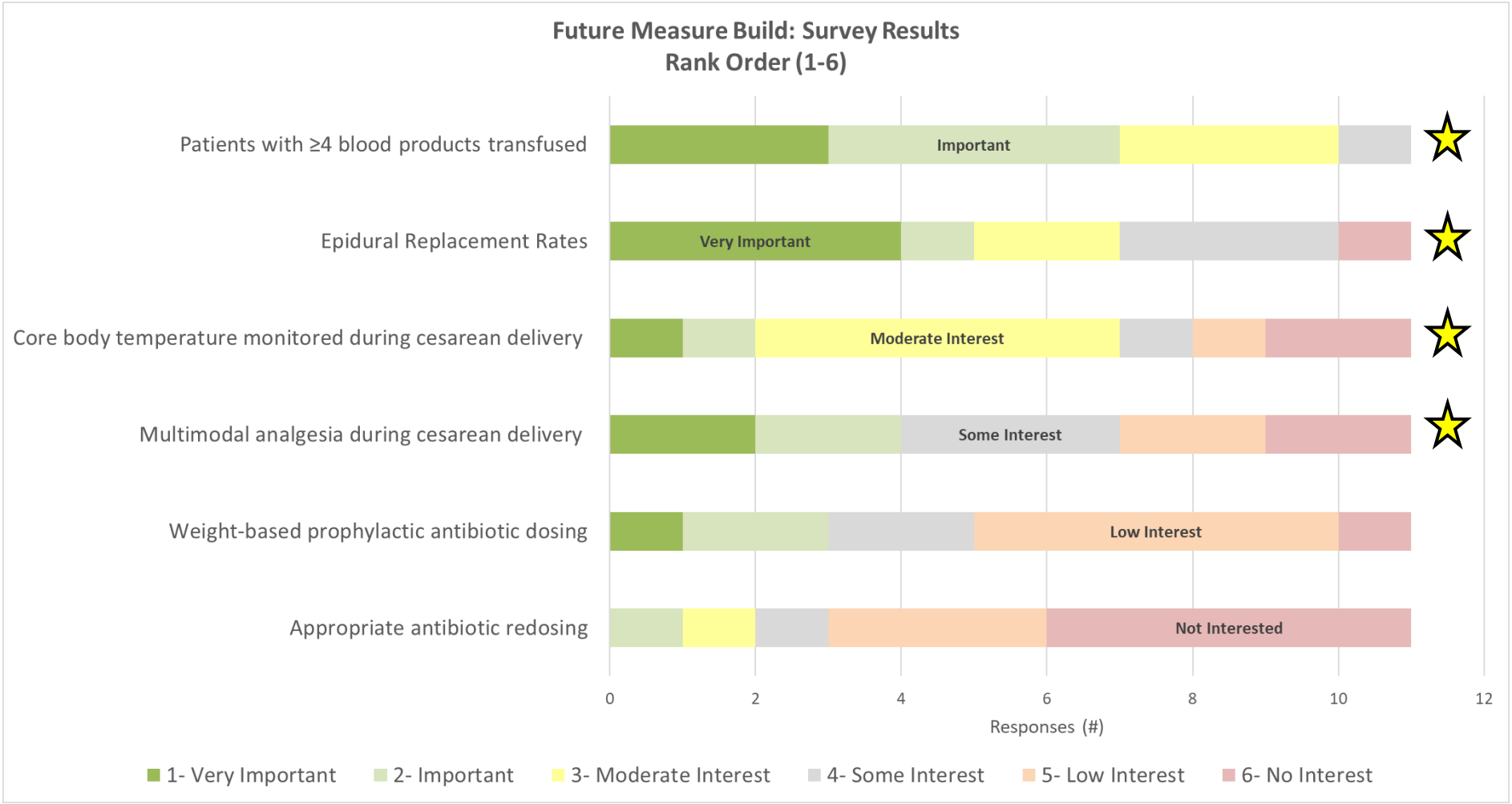
1. Build tranexamic acid measure examining use for cesarean delivery with EBL >1000 mL?
2. Should we require a minimum dosage of tranexamic acid?
    - 1 vote/site
    - Coordinating center will review all votes after meeting to ensure no duplication

MPOG OB Subcommittee 2025 Goals Survey Results

MPOG and COE Institutions



1	Brigham and Women's Hospital
2	Columbia University Medical Center
3	Duke University
4	Johns Hopkins Medicine
5	Massachusetts General Hospital
6	New York Presbyterian Weill Cornell
7	NYU Langone Medical Center
8	Oregon Health and Science University
9	Sparrow Hospital
10	Stanford Hospitals and Clinics
11	University of Alabama - Birmingham
12	University of Arkansas for Medical Sciences
13	University of California San Francisco
14	University of Colorado
15	University of Maryland
16	University of Michigan Health - Ann Arbor
17	University of North Carolina - Medical Center
18	University of Pennsylvania-Philadelphia, PA
19	University of Texas Southwestern Medical Center
20	University of Utah Health Care
21	University of Virginia Health System
22	University of Washington Medical Center
23	Vanderbilt University Medical Center
24	Wake Forest Baptist Medical Center
25	Washington University School of Medicine
26	Yale New Haven Hospital


Future Measure Build: Survey Results
Rank Order (1-6)
Patients with ≥4 blood products transfused
Epidural Replacement Rates
Core body temperature monitored during cesarean delivery
Multimodal analgesia during cesarean delivery
Weight-based prophylactic antibiotic dosing
Appropriate antibiotic redosing
Important
Very Important
Moderate Interest
Some Interest
Low Interest
Not Interested
0
2
4
6
8
10
12
Responses (#)
1- Very Important
2- Important
3- Moderate Interest
4- Some Interest
5- Low Interest
6- No Interest

Survey Results

Top 4 survey results (11 participants):

1. Proportion of patients (SVD + EPI) with ≥4 blood products transfused
2. Epidural replacement rate
3. Core body temperature monitored during cesarean delivery
4. Multimodal analgesia for cesarean delivery

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Higher volume blood transfusion

- Is blood transfusion [≥4 units] an indicator of poor anesthesia quality?
- Is there interest in this measure because of potential to support institutional quality improvement?
- Is this outcome a proxy for higher risk patients?
  - Overdistended uterus, retained placenta, prolonged labor, placental abruption, placenta previa, chorioamnionitis, higher BMI
- Are there unintended consequences?

Discussion: To what extent are you invested in the development of this measure?

- Proportion of patients with an anesthesia record that are transfused ≥4 units of blood

Discussion: To what extent are you invested in the development of this measure?

- Proportion of patients that require a second neuraxial procedure prior to delivery

THANK YOU!

Brandon Togioka, MD

MPOG Obstetric Anesthesia Subcommittee Chair

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Wandana Joshi, DO

MPOG Obstetric Anesthesia Subcommittee Vice-Chair

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