Cardiac Anesthesia Subcommittee Minutes

Dec 8, 2023

1:00pm – 2:00pm EST

Zoom - Unblinded Data Review Session – Registration Required

Addo, Henrietta (MPOG)		Kertai, Miklos (Vanderbilt)
Atwood, Tammy (Henry Ford)		Kinney, Daniel (Yale)
Barrios, Nicole (MPOG)		Malenfent, Tiffany (MPOG)
Benitez Lopez, Julio (MyMichigan)		Mathis, Mike (MPOG)
Billings, Josh (Vanderbilt)		Meuhlshlegel, J. Danny (Johns Hopkins)
Brown, Morgan (Boston Children's)		Notarrianni, Andrew (Yale)
Buehler, Kate (MPOG)		Schonberger, Robert (Yale)
Fisher, Clark (Yale)		Smiatacz, Frances Guida (MPOG)
Geube, Mariya (Cleveland)		Sturmer, David (Michigan)
Grewal, Ashan (Maryland)		Theurer, Patty (Michigan)
Heiter, Jerri (Trinity)		Wade, Meridith (MPOG)
Janda, Allison (MPOG)		Zittleman, Andrew (MPOG)

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Meeting Summary

1. **Discussion of Proposed Antibiotic Measures**
    a. **ABX-02: Antibiotic Timing for Open Cardiac Procedures**
        i. **Description:** Percentage of adult patients undergoing open cardiac surgery with antibiotic administration initiated within the appropriate time frame before surgical incision.
        ii. **Timing:** 120 minutes prior to Surgery Start Time through Surgery Start Time
        iii. **Attribution:** All anesthesia providers signed in at the time of Surgery Start Time

*For cases without a documented surgical incision time or procedure start time, the case will be flagged for review.

        iv. **Inclusions:** All patients, 18 years of age or older, who undergo open cardiac surgical procedures (as determined by Procedure Type: Cardiac phenotype: value = 1) under general anesthesia with duration of anesthesia lasting ≥ 120 minutes

v. **Exclusions:**

1. ASA 6 or Organ harvest (CPT: 01990)
2. Non-cardiac cases as defined as those cases not meeting criteria for the cardiac case type phenotype
3. Within the general cardiac case type phenotype, exclude: Transcatheter/Endovascular, EP/Cath groups and Other Cardiac
4. Patient age <18
5. Patients already on scheduled antibiotics or had a documented infection prior to surgery, as specified by "Patient on Scheduled Antibiotics/Documented Infection" (value: 2) of the ABX Notes Phenotype

vi. **Included Antibiotics:**

Antibiotic	Appropriate Start Time	Antibiotic	Appropriate Start Time
Azithromycin	Within 90 minutes before incision	Ceftriaxone	Within 60 minutes before incision
Cefamandole	Within 60 minutes before incision	Cefuroxime	Within 60 minutes before incision
Cefazolin	Within 60 minutes before incision	Ciprofloxacin	Within 90 minutes before incision
Cefepime	Within 60 minutes before incision	Daptomycin	Within 120 minutes before incision
Cefotaxime	Within 60 minutes before incision	Gentamicin	Within 90 minutes before incision
Cefotetan	Within 60 minutes before incision	Levofloxacin	Within 90 minutes before incision
Cefoxitin	Within 60 minutes before incision	Vancomycin	Within 120 minutes before incision
Ceftazidime	Within 60 minutes before incision	Ceftriaxone	Within 60 minutes before incision
Ceftizoxime	Within 60 minutes before incision	Cefuroxime	Within 60 minutes before incision

vii. See presentation for preliminary performance ABX-02 data.

viii. **DISCUSSION:**

1. Exclude Lung Transplants across all cardiac measures?
    a. *Josh Billings (Vanderbilt University):* Lung transplants should not be lumped with cardiac cohort.
    b. *Miklos Kertai (Vanderbilt University):* Totally agree – should be excluded from this measure, not included in cardiac cohort.
    c. *Ashan Grewal (University of Maryland) via chat:* Is there any specific reason to exclude except that at some institutions they are performed by non-cardiac surgeons and cared for by non CT Anesthesiologists?
    d. *Mike Mathis (MPOG Research Director, UMichigan):* I lean towards

not having the lung transplants included.

e. *Allison Janda ((MPOG Cardiac Subcommittee Chair):* Sounds great, we will move to exclude lung transplants from this measure.

2. If more than one antibiotics are given, do they all need to be on time or just one?
    a. *Allison Janda (MPOG Cardiac Subcommittee Chair):* Our measure includes all cephalosporins based on the 2018 European guidelines
        i. Links to the guidelines:
            1. **https://www.guidelinecentral.com/guideline/19852/**
            2. **https://pubmed.ncbi.nlm.nih.gov/37075942/**
            3. **STS Guideline: https://www.sts.org/sites/default/files/documents/Clinical%20Guidelines/AntibioticProphylaxisCardiacSurgeryPart_IIAntibiotic_Choice.pdf**
    b. *Josh Billings (Vanderbilt University)*: Do the guidelines say whether we should stick to one antibiotic before incision.
    c. *Allison Janda (MPOG Cardiac Subcommittee Chair)*: For cardiac cases based on the Bardia and Schonberger articles it was any antibiotics should be given within the appropriate window.
    d. *Rob Schonberger (Yale):* I think that's correct. And then whether the antibiotic was appropriately redosed.
    e. *Clark Fisher (Yale)*: Lack of variation is not a reason to not have it a part of the measure, at least for people reviewing their own cases. It's interesting that the one site with a 20% success rate and curious if this is a data quality issue. In my experience procedure start and stop may not be correct.
    f. *Allison Janda (MPOG Cardiac Subcommittee Chair):* We still have some additional validation to do but wanted to bring it to this group to get some initial feedback. We are excluding topical abx like irrigation so that outlier site could be documenting antibiotics as topical instead of intravenous.
3. Vote to move forward with measure development?
    a. Despite a lack of variation it sounds like cases are still worth reviewing for individual practice.
4. Next Steps:
    a. Exclude lung transplants for all ABX cardiac measures
    b. Move forward with releasing ABX-02

b. **ABX-03: Antibiotic Re-dosing for Open Cardiac Procedures**
    i. **Description:** Percentage of adult patients undergoing open cardiac surgery with an antibiotic re-dose initiated within four hours after initial antibiotic administration (cephalosporins only).
    ii. **Success:** Re-dosed within 180-240 minutes after each cephalosporin administration. (For longer cases, a second re-dose within 180-240 minutes after initial re-dose is required unless there is ≤ 240 minutes between a cephalosporin dose and anesthesia end.)
    iii. **Attribution:** Provider(s) signed in at the time of each re-dose (If not given: 240 minutes after initial cephalosporin dose, and/or if not given: 240 minutes after the first re-dose)
    iv. **Inclusions:**
        1. Adult patients undergoing open cardiac surgical procedures
        2. Patients receiving initial antibiotic prophylaxis with a cephalosporin

v. **Exclusions:**
    1. ASA 6 or Organ harvest (CPT: 01990)
    2. Patient age <18
    3. Cases where Anesthesia End time occurs before redose is due (4 hours after cephalosporin dose)
    4. Cases without a cephalosporin for initial dose of antibiotic prophylaxis
    5. Non-cardiac, Transcatheter/Endovascular, EP/Cath, and Other Cardiac cases (determined by the Procedure Type: Cardiac value codes: 0, 2, 3, and 4)
    6. Patients already on scheduled antibiotics or had a documented infection prior to surgery, as specified by "Patient on Scheduled Antibiotics/Documented Infection" (value: 2) of the ABX Notes Phenotype

vi. Cases will be assigned one of the following result reasons:
    1. Passed - Re-dose(s) administered on time
    2. Flagged - Non-standard antibiotic selection
    3. Flagged - Incision/procedure start time documented: No
    4. Flagged - Antibiotic re-dose too late
    5. Flagged - Antibiotic re-dose too early
    6. Excluded - Scheduled antibiotics/documented infection
    7. Excluded - No initial cephalosporin dose
    8. Excluded - Re-dose not required
    9. Excluded - ASA 6
    10. Excluded - Non-Cardiac
    11. Excluded - Age<18

vii. See presentation for preliminary performance ABX-03 data.

viii. **DISCUSSION:**
    1. *Allison Janda (MPOG Cardiac Subcommittee Chair):* This measure could allow for more than one flag per provider or attributing multiple providers depending on how many re-doses were indicated.
    2. *Danny Meuhlshlegel (Johns Hopkins)*: How do we define a re-dose? Bolus only or does an infusion count?
    3. *Allison Janda (MPOG Cardiac Subcommittee Chair)*: Both count for this measure, but we did have a question for the group regarding infusions.
        a. *Danny Meuhlshlegel (Johns Hopkins)*: What about infusing for duration of the case?
        b. *Allison Janda (MPOG Cardiac Subcommittee Chair)*: Some sites do have very long infusions documented. If you run them as continuous infusions, do we think the data is accurately captured or is this a documentation issue?
        c. *Danny Meuhlshlegel (Johns Hopkins)*: We bolus the 2 gm initially and then infuse 1g/hr dependent for however long the case is
        d. *Allison Janda (MPOG Cardiac Subcommittee Chair)*: We did see that in some of our prelim validation. What does the group think about treating this as a success for the measure?
        e. *Kate Buehler (MPOG Clinical Program Manager)*: There is another large academic center that does this also. They are not represented on the call but I will reach out to see if this is standard practice or

not.

f. *Rob Schonberger (Yale)*: I agree with Danny. If an infusion runs for the duration of the case, it should pass.

g. *Clark Fisher (Yale):* Agree. This measure is assessing underdosing so I think overdosing should still count as compliant.

h. *Danny Meuhlshlegel (Johns Hopkins)*: I don't know how this infusion practice was instituted but am looking into at why our site practices this way

4. *Clark Fisher (Yale)*: Anesthesia end is currently the measure end. I wonder if this should be updated to surgery end since it can be a while between surgery end and anesthesia end. If the case is over, no need to redose after surgery end.
    a. *Allison Janda (MPOG Cardiac Subcommittee Chair):* We could use procedure end and if not available use anesthesia end.
5. *Allison Janda (MPOG Cardiac Subcommittee Chair)***:** Preliminary performance shows a lot more variability since there are a lot more opportunities for flags.
6. *Morgan Brown (Boston Children's via chat):* We do not do an infusion, but we have a separate protocol for redosing which is not compliant with the STS guidelines.
    a. *Mike Mathis (MPOG Research Director, UMichigan via chat):* Morgan - do you have a succinct detailing of BCH protocol? (And I assume peds cases since BCH?)
        i. *Morgan Brown (Boston Children's via chat):* CPB cases who receive cefazolin receive additional cefazolin in the CPB circuit and then a dose when off CPB. It is independent of timing. Gets more complicated if its not cefazolin.
        ii. *Mike Mathis (MPOG Research Director, UMichigan):* Is that kefzol given in the circuit charted in the EMR or in perfusion documentation?
        iii. *Morgan Brown (Boston Children's)* - Documented by perfusion but feeds into the chart.
        iv. *Allison Janda (MPOG Cardiac Subcommittee Chair)* - What about non cardiac bypass cases? When do those get redosed?
        v. *Morgan Brown (Boston Children's)*: I don't think we're meeting the guidelines on that – our protocols say every four hours but I don't think we're currently meeting that.
        vi. *Kate Buehler (MPOG Clinical Program Manager)*: Peds case are currently excluded from these measures. Maybe this is a topic we should bring back to the peds cardiac workgroup – are there guidelines to support a measure for peds cardiac cases?
        vii. *Morgan Brown (Boston Children's)*: There is less literature to support a measure for peds-specifically but we do a lot of >18 cases as well so it would also pertain to them.
7. Do we need a separate measure for **other** antibiotic redosing? Gets tricky with renal dysfunction. What does the group think about sticking to cephalosporins?

a. *Allison Janda (MPOG Cardiac Subcommittee Chair)*: I'll take silence as confirmation that we should stick with cephalosporins for now.
b. *Rob Schonberger (Yale)*: Agree

8. **Next Steps:**
   a. Proceed with build
   b. Exclude lung transplant cases
   c. Infusions running for the duration of the case will pass
   d. Update measure end time to: Surgery end, if not available, use anesthesia end.

c. **ABX-04: Antibiotic Selection for Open Cardiac Procedures**

i. **Description:** Percentage of adult patients undergoing open cardiac surgery with an appropriate antibiotic administered for surgical site infection prophylaxis.
ii. **Timing:** 120 minutes prior to Anesthesia Start through Anesthesia End
iii. **Attribution:** All anesthesia providers signed in at the time of Anesthesia Start
iv. **Inclusions:** Adult patients undergoing open cardiac surgical procedures
v. **Exclusions:**
   1. ASA 6 or Organ harvest (CPT: 01990)
   2. Patient age <18
   3. Non-cardiac cases as defined as those cases not meeting criteria for the cardiac case type phenotype
   4. Within the general cardiac case type phenotype, exclude: Transcatheter/Endovascular, EP/Cath groups and Other Cardiac
   5. Patients already on scheduled antibiotics or had a documented infection prior to surgery, as specified by "Patient on Scheduled Antibiotics/Documented Infection" (value: 2) of the ABX Notes Phenotype

vi. Acceptable Antibiotics:
   1. Vancomycin (or Daptomycin) + Cephalosporin
   2. Vancomycin (or Daptomycin) + Aminoglycoside
   3. Cephalosporin Only

vii. Cases will be assigned one of the following result reasons:
   1. Passed - Appropriate Antibiotics Administered
   2. Flagged - Non-standard antibiotic selection
   3. Flagged - Prophylactic antibiotic administered (Not documented in MAR)
   4. Flagged - Antibiotic not ordered/indicated per surgeon
   5. Flagged - Incision/procedure start time documented: No
   6. Flagged - Not administered for medical reasons
   7. Excluded - Scheduled antibiotics/documented infection

viii. **DISCUSSION:**
   1. Is the list of antibiotics acceptable? Should we add macrolides and fluroquinolones? Do other sites have those in their guidelines?
      a. *Allison Janda (MPOG Cardiac Subcommittee Chair)*: Planning to have a pharmacist review this measure and provide input on this as well. Should we defer to the pharmacist experts on antibiotics to include?
      b. *Danny Meuhlshlegel (Johns Hopkins)*: Agree, get pharmacy input
      c. *Mike Mathis (MPOG Research Director, UMichigan):* Is there an additional consideration if patient has an allergy to vancomycin?

d. *Allison Janda (MPOG Cardiac Subcommittee Chair)*: We've included other antibiotics that could be used instead of vancomycin as well, but the case would still pass as long as a cephalosporin is given.
e. *Kate Buehler (MPOG Clinical Program Manager)*: Is the group supportive of a selection measure as an anesthesia group since surgeons are typically responsible for antibiotic selection? This has been a concern for other MPOG Subcommittees – would like to address before we move forward with building this measure.
    i. *Rob Schonberger (Yale)*: No hesitancy but am open to others having them.
    ii. *Mike Mathis (MPOG Research Director, UMichigan):* In the past, our MPOG QI philosophy has been that even if the individual anesthesiologist is not 'solely responsible' for the flagged case, they can still be the agent for change. They are part of a larger multidisciplinary team and important to review at an individual case level.
    iii. *Kate Buehler (MPOG Clinical Program Manager)*: Sounds good. We will proceed with build!

ix. **Next Steps:**
1. Proceed with measure build.
2. Consult pharmacist regarding antibiotics to include

d. **ABX-05: Composite Antibiotic Compliance for Open Cardiac Procedures**

i. **Description:** Percentage of adult patients undergoing open cardiac surgery appropriate antibiotic selection, timing, and re-dosing administered for surgical site infection prophylaxis.
ii. **Timing:** 120 minutes prior to Anesthesia Start through Anesthesia End
iii. **Attribution:** Departmental Only – Not available for Provider Feedback Emails
iv. **Success:** Case is passed for all open cardiac antibiotic measures (timing, re-dosing, selection)
v. **Inclusions:** Adult patients undergoing open cardiac surgical procedures
vi. **Exclusions:**
1. ASA 6 or Organ harvest (CPT: 01990)
2. Patient age <18
3. Non-cardiac cases as defined as those cases not meeting criteria for the cardiac case type phenotype
4. Within the general cardiac case type phenotype, exclude: Transcatheter/Endovascular, EP/Cath groups and Other Cardiac
5. Patients already on scheduled antibiotics or had a documented infection prior to surgery, as specified by "Patient on Scheduled Antibiotics/Documented Infection" (value: 2) of the ABX Notes Phenotype

vii. **DISCUSSION:**
1. Is the attribution at the departmental level acceptable?
    a. *Allison Janda (MPOG Cardiac Subcommittee Chair)*: Although we aren't directly in control of the antibiotic orders for each case, with this composite measure, we could bring back data at the systems level to say we aren't in compliance with the guidelines. Again, we wouldn't be giving individual clinicians feedback for this measure.
2. *Danny Meuhlshlegel (Johns Hopkins)*: Sounds reasonable.

3. *Allison Janda (MPOG Cardiac Subcommittee Chair)*: Sounds good. We will proceed with measure build.

viii. **Next Steps:**

1. Proceed with measure build
2. No provider attribution – departmental only measure

2. Unblinded Data Review Session – Glycemic Management Measures

a. Closed review session – open only to those who registered and signed the confidentiality attestation

b. Site Participation:

i. All sites that perform >75 open cardiac procedures annually are presented on the slides

ii. Only those sites who have a participant on the cardiac subcommittee are unblinded

iii. Cardiac Anesthesia Champions were notified that unblinded data would be shared and were given the opportunity to opt out

iv. No sites emailed us to express a desire to be excluded from this review

c. **GLU-06: Hyperglycemia avoidance measure - available on cardiac dashboards!**

i. **Description**: Percentage of patients, ≥18 years age, who undergo open cardiac surgical procedures under general anesthesia of 120 minutes case duration or longer for whom any blood glucose measure did not exceed 180 mg/dL (and not rechecked within 30-minutes and found to be </=180 mg/dL) was documented.

ii. **Note:** open cardiac cases without ANY glucose values documented are flagged

iii. **Unblinded site data shared** – removed from slides posted to the website for confidentiality reasons.

iv. **Flagged Case Analysis (see slides for data presented):**

1. Majority of cases in MPOG flagged due to high glucose value documented; Only 2% of cases flagged due to no glucose checked
2. Majority of high glucose values found in non-diabetic patients (70%)
3. High glucose value documented while patient was on bypass for the majority of flagged cases
4. Majority of flagged cases did not have an insulin gtt running at the time of high glucose value (80%)

v. **DISCUSSION:**

1. *Allison Janda (MPOG Cardiac Subcommittee Chair)*: Our site has had a big push to improve our glucose management in cardiac surgery. We instituted a new protocol and after one month we have had some improvement. We aren't quite at our goal performance but definitely a step in the right direction.
2. *Josh Billings (Vanderbilt University)*: How many glucose labs are submitted per case per site?
    a. *Allison Janda (MPOG Cardiac Subcommittee Chair)*:This is something we could look into but it looks like a handful. Kate, do you have any insight?
    b. *Josh Billings (Vanderbilt University)*: Based on how they run their labs, central vs. POC), are there some sites that do a dozen ABGs for a case. Just curious if there's any bias in the lab modality.
    c. *Allison Janda (MPOG Cardiac Subcommittee Chair)*: Great question.
    d. *Kate Buehler (MPOG Clinical Program Manager)*: It is so widely variable across sites. Some sites don't submit any glucose during cardiac cases.

e. *Josh Billings (Vanderbilt University)*: I'm just wondering if there are reporting issues. The 2% of cases that don't have glucose, I would be very surprised that any CPB case wouldn't have a glucose. Adding the number of glucose labs to the histogram would be informative.

f. *Jerri Heiter (Trinity Health via chat):* seeing min. invasive epicard ablation, left appendage lig. cases without being checked, others check more compliant

g. *Kate Buehler (MPOG Clinical Program Manager)*: I think there is at least one site that is not reporting glucose labs or have an issue sending it over in the MPOG data extract. It is a fair amount of work for sites to implement data sync between their POC and formal lab systems. However, most MPOG sites have figured that out and are sending these labs consistently.

h. *Allison Janda (MPOG Cardiac Subcommittee Chair)*: Josh, I hear what you are saying that sites with 12 labs have 12 opportunities to flag vs a site that has less. Good news is these are not VBR measures and only purpose is to improve care, but overall, we should be checking glucoses on these patients frequently.

3. *Patty Theurer (MSTCVS via chat):* Thank you for having us! The statewide (MI) cardiac surgery collaborative is working on this measure also - and we recognize we can't possibly make progress without you!
4. *Mike Mathis (MPOG Research Director, UMichigan)*: Cases without a glucose lab should be flagged.
    a. *Allison Janda (MPOG Cardiac Subcommittee Chair)*: Yes, they are currently flagged.
5. *Mariya Geube (Cleveland Clinic):* Are these all pump cases or include TAVR, EP cases and others....? Thank you.
    a. *Allison Janda (MPOG Cardiac Subcommittee Chair)*: These are just open cardiac cases and do not include TAVR, EP cases.
6. *Mike Mathis (MPOG Research Director, UMichigan)*: In regards to timing of high glucose (on bypass)…this definitely tells the story that the way we tend to fail our glucose measure is we need to have better coordination with our perfusion team. I'm optimistic that with our recent efforts at our institution that we will continue to improve that coordination. It may be helpful for other sites to focus on this as well.
7. *Ashan Grewal (University of Maryland)*: In regards to high glucose while on insulin gtt, is this the first glucose being over 180 vs. rechecked high values?
    a. *Kate Buehler (MPOG Clinical Program Manager)*: This is the first high glucose that flagged the case. If you had multiple, we use the first lab to determine if the insulin drip is running. The next analysis we should do is to see if you continued to run the infusion after the initial high glucose that flagged the case.
8. *Clark Fisher (Yale)*: Because we have the opportunity to look at the unblinded data, I'm curious what all intuitions glucose protocols are, not just limited to cardiac procedures.
9. *Allison Janda (MPOG Cardiac Subcommittee Chair)*: Good food for thought as we process the other unblinded measure data to follow…

d. **GLU-07: Hypoglycemia avoidance measure – available on cardiac dashboards!**

i. **Description:** Percentage of adult patients, undergoing open cardiac surgery with any intraoperative blood glucose value < 70 mg/dL.
ii. **Note:** open cardiac cases without ANY glucose values documented are flagged
iii. **Timing:** Anesthesia Start to 15 minutes after Anesthesia End
iv. **Inverse Measure: Lower performance is better.**
v. **Unblinded site data shared** – removed from slides posted to the website for confidentiality reasons.
vi. **Flagged Case Analysis (see slides for data presented):**
    1. More than half of cases (55%) in MPOG flagged due to no glucose value documented on the case. Much lower denominator of cases that are flagged in comparison to the GLU-06 (hyperglycemia) measure
    2. Majority of flagged cases in diabetics due to actual hypoglycemia (~55%); majority of flagged cases in non-diabetic patients due to no glucose checked (60%)
    3. Low glucose values documented during pre-bypass time period or while patient was on bypass for the majority of flagged cases
    4. Majority of flagged cases did not have an insulin gtt running at the time of high glucose value (77%)

e. **GLU-08: Hyperglycemia Treatment Measure – available on cardiac dashboards!**
i. **Description: Percentage of patients, ≥18 years age, who undergo open cardiac** surgical procedures under general anesthesia of 120 minutes case duration or longer for whom any blood glucose measure >/=180mg/dL was either treated with insulin or rechecked and found to be <180mg/dL within 30 minutes.
ii. **Note:** open cardiac cases without ANY glucose values documented are flagged
iii. **Timing:** Anesthesia Start to 30 minutes after Anesthesia End
iv. **Unblinded site data shared** – removed from slides posted to the website for confidentiality reasons.
v. **Flagged Case Analysis (see slides for data presented):**
    1. Majority of flagged cases (~85%) in MPOG due to high glucose not treated
    2. Majority of flagged cases in diabetics due to actual hyperglycemia in both diabetic and non-diabetic patients. Far more cases with hyperglycemia reported in non-diabetic patients (5,021) compared to diabetic patients (1,931)
    3. High glucose values primarily documented during bypass for flagged cases
    4. Majority of flagged cases did not have an insulin gtt running at the time of high glucose value (99%)

f. **DISCUSSION:**
i. See slides for analysis breakdown (blinded)
ii. Follow up: Share glucose protocols across sites for both cardiac and non-cardiac patients
iii. *Mike Mathis (MPOG Research Director, UMichigan)*: Is there a coordination between perfusion and anesthesia at other institutions? Is it protocol or just a communication?
    1. *Clark Fisher (Yale)*: We have good communication between cases but there is no institutional guidance or protocol on how to work together to achieve this.
    2. *Ashan Grewal (University of Maryland): W*e have a glucose protocol but no

protocol with perfusion involvement. We see all the blood gases they run and react to those but nothing else.

3. *Allison Janda (MPOG Cardiac Subcommittee Chair)*: We used to do that as well at Michigan until we implemented this new protocol involving perfusionists.
4. *Josh Billings (Vanderbilt University)*: Perfusion doesn't give the insulin at our institution; anesthesia gives all insulin.
5. *Mariya Geube (Cleveland Clinic*): We do check ABG for glucose every hour if not more often. For every case, we check 8-10 ABGs. So I wonder if that has something to do with our performance. We also start the insulin right around 180, we don't really start it at 150 but this is another reason why we could have a high percentage of cases that are above 180. We check ABGs every 30-60 minutes. The more often you check, the more chances you have to flag the measure.
6. *Allison Janda (MPOG Cardiac Subcommittee Chair)*: We often have an insulin infusion running so that would count as 'treatment' for GLU-08.
7. *Clark Fisher (Yale via chat):* From an operations standpoint, I'm very curious about how many infusions of any type people generally start with. We need to work pretty hard to get more than 4 infusion pumps to begin.
    a. *Allison Janda (MPOG Cardiac Subcommittee Chair):* That's an interesting point. We could ask sites to submit via the forum how many infusion pumps they typically start the case with.
    b. *Julio Benitez Lopez (MyMichigan):* 8 pumps available to start at our site

3. **Cardiac Anesthesia Subcommittee Membership**
    a. Next meetings:
        i. April 2024
        ii. August 2024
        iii. Nov/Dec 2024
    b. Open to all anesthesiologists or those interested in improving cardiothoracic measures
        i. Do not have to practice at an active MPOG institution to participate
    c. Thank you for continued use of the Basecamp forum for discussion between meetings!

Meeting adjourned at 1408 EST