MPOG Cardiac Anesthesia Subcommittee Meeting
December 09, 2025

Agenda

Announcements

Measure Proposal: GLU-14-C
Ashan Grewal, University of Maryland

Unblinded Performance Review
GLU-06, GLU-07, GLU-08
TEMP-06, TEMP-07
BP-07

Introductions

- **ASPIRE Quality Team**
  - **Allison Janda, MD** – MPOG Cardiac Anesthesia Subcommittee Chair
  - **Michael Mathis, MD** – MPOG Director of Research
  - **Meridith Wade, MSN, RN** – MPOG Cardiac Subcommittee Facilitator
  - **Mei Calabio, MSHI, RN** – MPOG Cardiac Subcommittee Facilitator

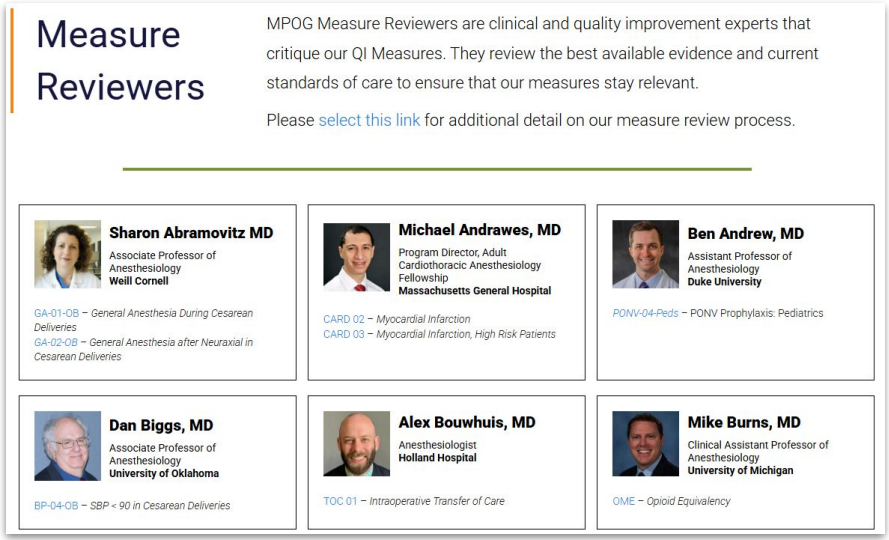
- Cardiac Anesthesiology Representatives joining us from around the US!

Seeking Cardiac Subcommittee Vice-Chair

- Minimum 2-year term
- Help shape direction of Cardiac Subcommittee
- Measure performance review, new measure development, measure revision
- Identify and participate in research opportunities
- Work with Allison, Meridith, Mei and the MPOG team
- Be able to devote 2 - 4 hours per month to this role
- Cardiac Subcommittee Vice-Chair Description: here
- **Interested faculty should submit their interest** to MPOG QI Director (Nirav Shah) at nirshah@med.umich.edu and MPOG Cardiac Subcommittee Chair (Allison Janda) at ajanda@med.umich.edu by January 5th, 2026

Measure Review Process

- Review literature for given measure topic and provide review using MPOG Measure Review Template
- Present review of literature and recommendations at Cardiac Subcommittee meetings
- Reviewers names will be added to measure specifications as well as MPOG Measure Reviewer website



Upcoming Cardiac-Focused Measure Reviews

Measure	Review Date	Reviewers
GLU-06-C: Hyperglycemia Management	June 2026	Josh Billings, Vanderbilt
GLU-07-C: Hypoglycemia Management	June 2026	Rob Schonberger, Yale
GLU-08-C: Hyperglycemia Treatment	June 2026	Josh Billings, Vanderbilt

Thank you in advance for ensuring MPOG Cardiac-specific measures remain relevant & consistent with published recommendations!

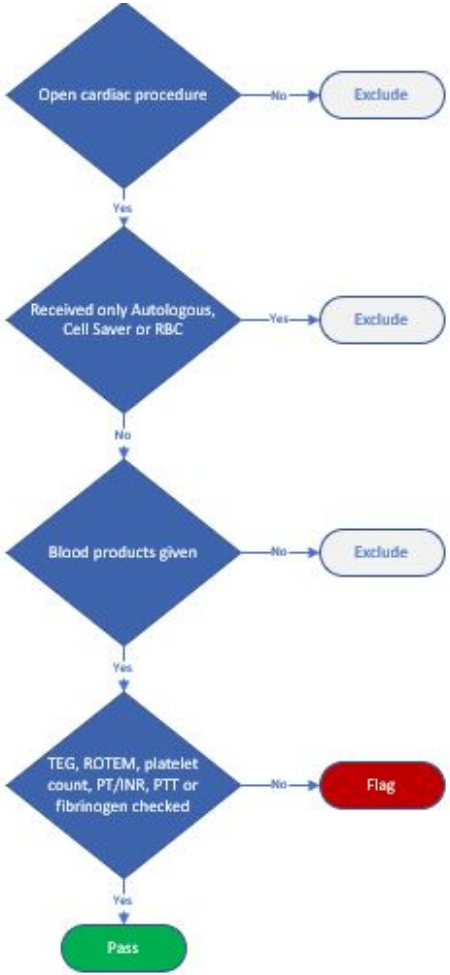
Contact Allison with any questions: ajanda@med.umich.edu

MPOG

Measure Updates

TRAN-05-C Coagulation Monitoring, Open Cardiac

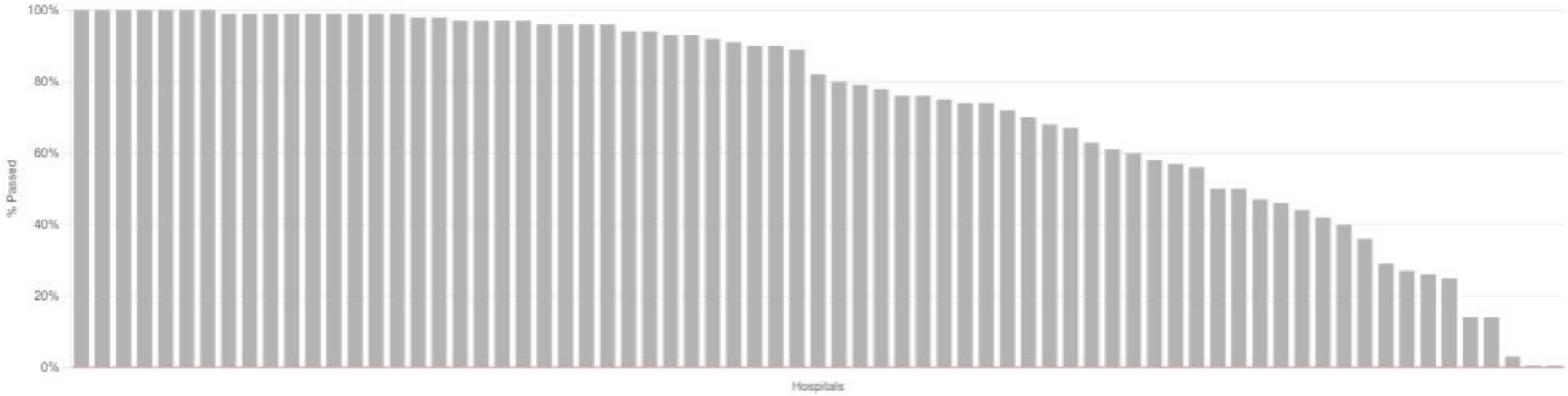
- **Description**
  - Percentage of adult patients undergoing open cardiac surgery who received a transfusion and had coagulation testing performed (a TEG, ROTEM, platelet count, PT/INR, PTT, or Fibrinogen) with administration of fresh frozen plasma, platelets, cryoprecipitate, factor concentrates, or fibrinogen concentrates.
- **Timing** Anesthesia Start to Anesthesia End
- **Success Criteria**
  - TEG, or ROTEM, platelet count, PT/INR, PTT, or Fibrinogen checked with administration of fresh frozen plasma, platelets, cryoprecipitate, factor concentrates, or fibrinogen concentrate.



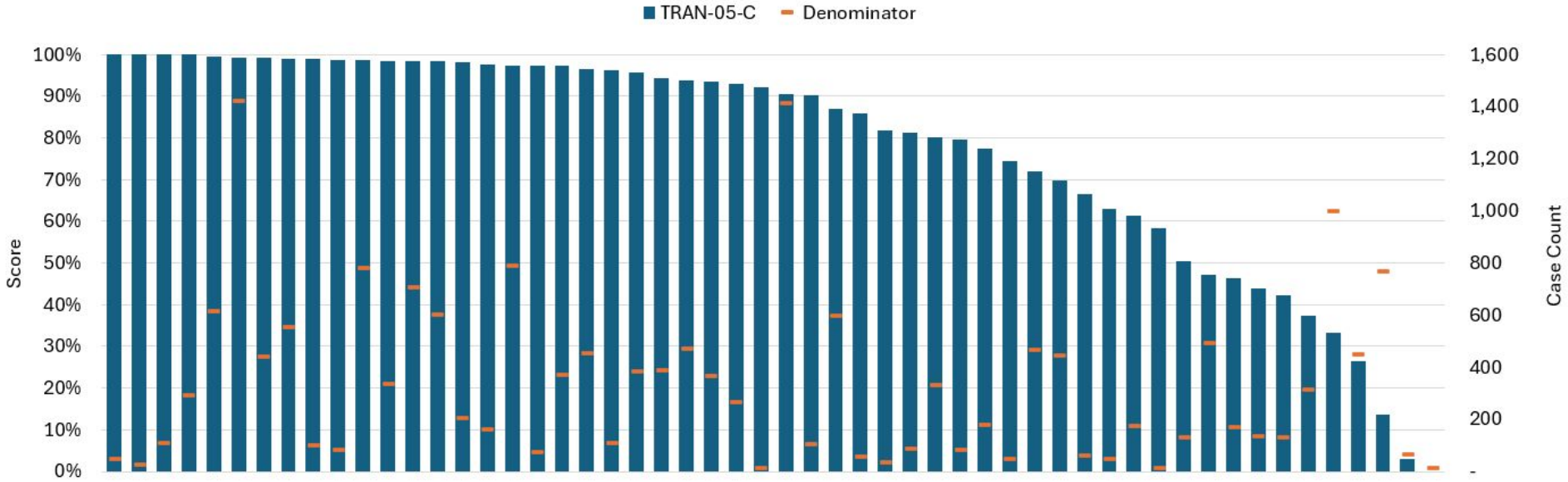
Result Reasons

Result	Reason	Case Count
Passed	TEG, ROTEM, Platelet Count, PT/INR, PTT, Or Fibrinogen Checked	337
Flagged	TEG, ROTEM, Platelet Count, PT/INR, PTT, Or Fibrinogen Checked	20
Excluded	Open Cardiac Procedure	86,296
Excluded	Patient Age	17,735
Excluded	Blood Products Given	823
Excluded	Only Autologus, Cell Saver, or Red Blood Cells Used	62
Excluded	ASA Class	3
Total		**105,276**

TRAN-05-C Performance Across All MPOG Hospitals



Performance across MPOG Cardiac Sites, Past 12 mo.



New Glucose Measure Proposal

Dr. Ashan Grewal, University of Maryland

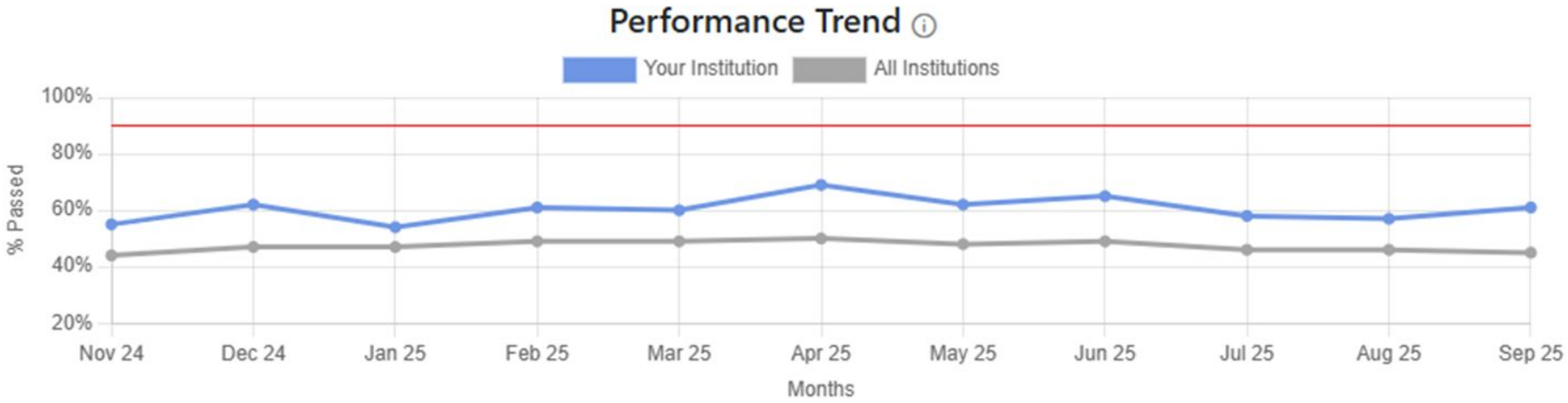
Current Cardiac Hyperglycemia Measures

- GLU-06-C: Percentage of adult patients undergoing an open cardiac procedure for whom any intraoperative blood glucose value did not exceed 180 mg/dL.

- GLU-08-C: Percentage of adult patients undergoing open cardiac surgical procedures for whom any blood glucose measure >/=180 mg/dL was either treated with insulin or rechecked and found to be <180 mg/dL within 30 minutes.

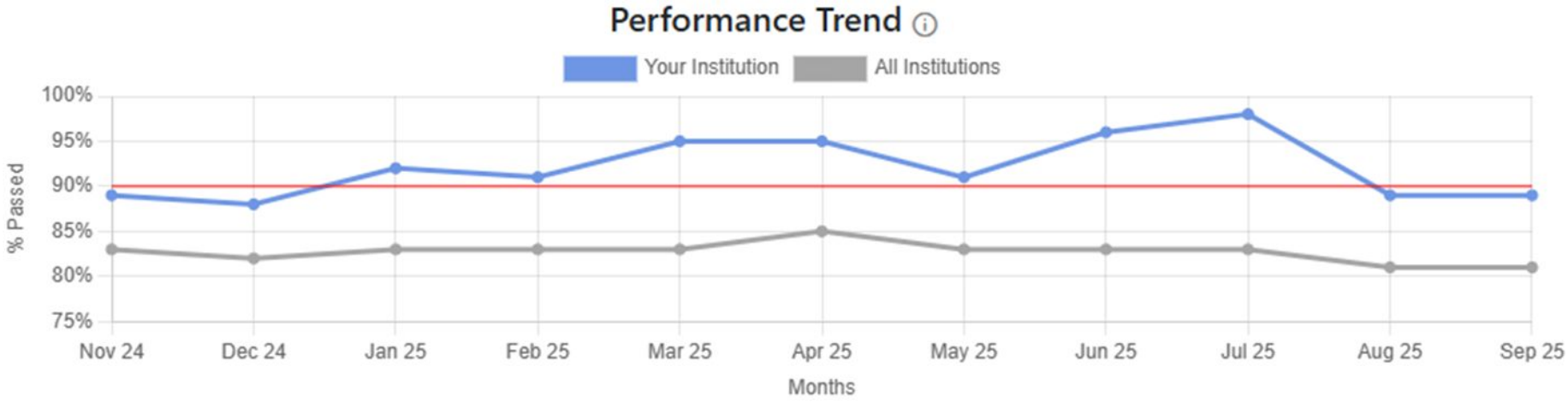
GLU-06-C Hyperglycemia Management, Open Cardiac (>180 mg/dL/>10.00mmol/L)

- Success: No Glu > 180



GLU-08-C Hyperglycemia Treatment, Open Cardiac (>180mg/dL/>10.00mmol/L)

- Success: Treatment of any Glu>180 within 90 minutes or recheck Glu<180



GLU-14-C: Cardiac Hyperglycemia Successful Treatment Measure

- **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 the **LAST** blood glucose measure did not exceed 180 mg/dL.
  - Note: open cardiac cases without ANY glucose values documented are flagged

- **Timing:**
  - Start: Anesthesia Start
  - End: Anesthesia End

GLU-14-C: Cardiac Hyperglycemia Successful Treatment Measure

- **Concepts Queried:**
  - Glucose MPOG Concept ID's:
  - 3361 POC - Glucose (Fingerstick) (mg/dL)
  - 3362 POC - Glucose (Unspecified Source) (mg/dL)
  - 3405 POC - Blood gas - Glucose (mg/dL)
  - 5003 Formal lab - Glucose, Serum/Plasma (mg/dL)
  - 5036 Formal lab - Blood gas - Glucose (mg/dL)

- **Attribution:**
  - The provider signed in for the last 90 minutes of the case.
  - In the event that two or more providers in the same role are signed in, both will receive the feedback

GLU-14-C: Cardiac Hyperglycemia Successful Treatment Measure

- **Inclusions:**
  - All patients, 18 years of age or older, both with and without diabetes, who undergo open cardiac surgical procedures (as determined by Procedure Type: Cardiac phenotype) under general anesthesia of 120 minutes duration or longer.

- **Exclusions:**
  - ASA 6
  - Organ harvest (CPT: 01990)
  - Non-cardiac cases as defined as those cases not meeting criteria for the cardiac case type phenotype
  - Within the general cardiac case type phenotype, exclude:
  - Transcatheter/Endovascular, EP/Cath groups and Other Cardiac
  - Cases with age <18

Unblinded Data Review

Reminder

- Per the terms and conditions outlined during the registration process:
  - A culture of openness and trust are critical to the development of such a collaborative effort to improve quality; and **a commitment for confidentiality is required to further the goals of ASPIRE.**

- The following examples are to be considered privileged and confidential information and should be discussed only within the confines of the Cardiac Subcommittee Meeting.
  - Any and all patient information.
  - Any and all patient identifiers/information which are considered privileged and protected health information as defined by current HIPAA laws.
  - Any specific MPOG QI registry case information.
  - Any information discussed regarding a specific site outcome.
  - Any reference to a specific MPOG site result or analysis.
  - All anesthesiology data presented including but not limited to outcome reports.
  - **Taking screenshots, pictures or videos of data slides is prohibited.**

Site Participation

- All sites that perform >75 open cardiac procedures annually are presented on the slides to follow
- This is a closed meeting: registration required to receive the Zoom link.
- Only those sites who have a participant on the cardiac subcommittee are unblinded
- Cardiac Anesthesia Champions were notified that unblinded data would be shared and were given the opportunity to opt out
- No sites emailed us to express a desire to be excluded from this review

GLU-06-C - Hyperglycemia Management, Open Cardiac (>180 mg/ dL/> 10.00mmol/L)

- **Description:**
  - Percentage of adult patients undergoing an open cardiac procedure for whom any intraoperative blood glucose value did not exceed 180 mg/dL.

- **Timing:**
  - Anesthesia Start to 30 minutes after Anesthesia End

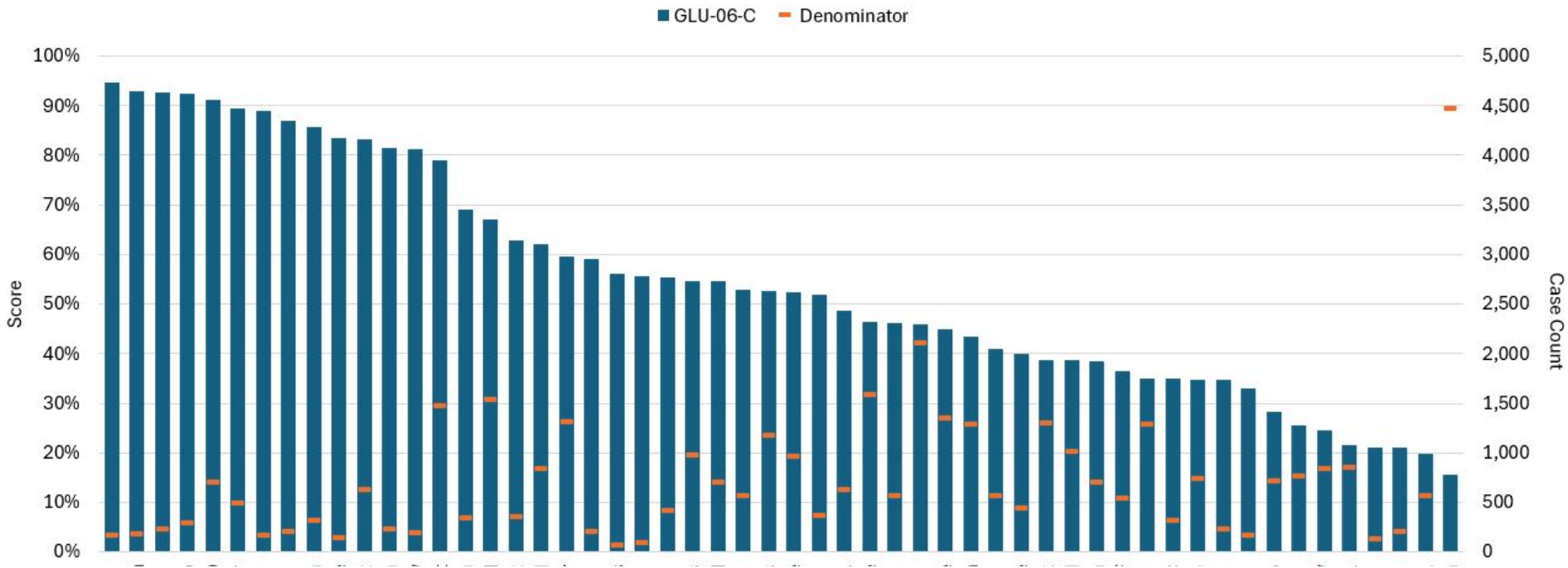
- **Success Criteria:**
  - The highest blood glucose was maintained at </=180 mg/dL, or
  - Glucose >180 mg/dL that was rechecked within 30-minutes and found to be ≤ 180 mg/dL.

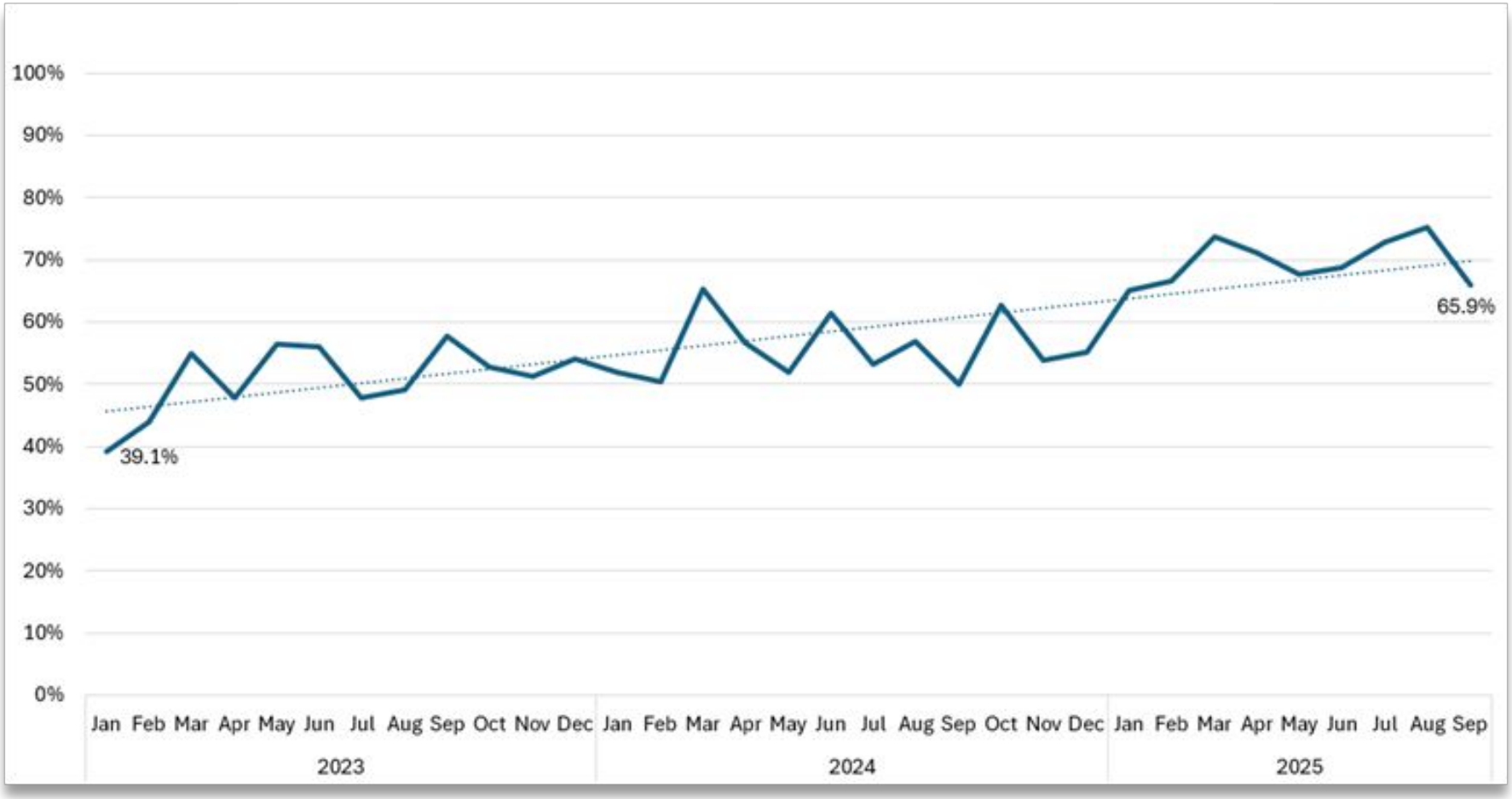
GLU-06-C - Hyperglycemia Management, Open Cardiac (>180 mg/ dL/> 10.00mmol/L) Considerations

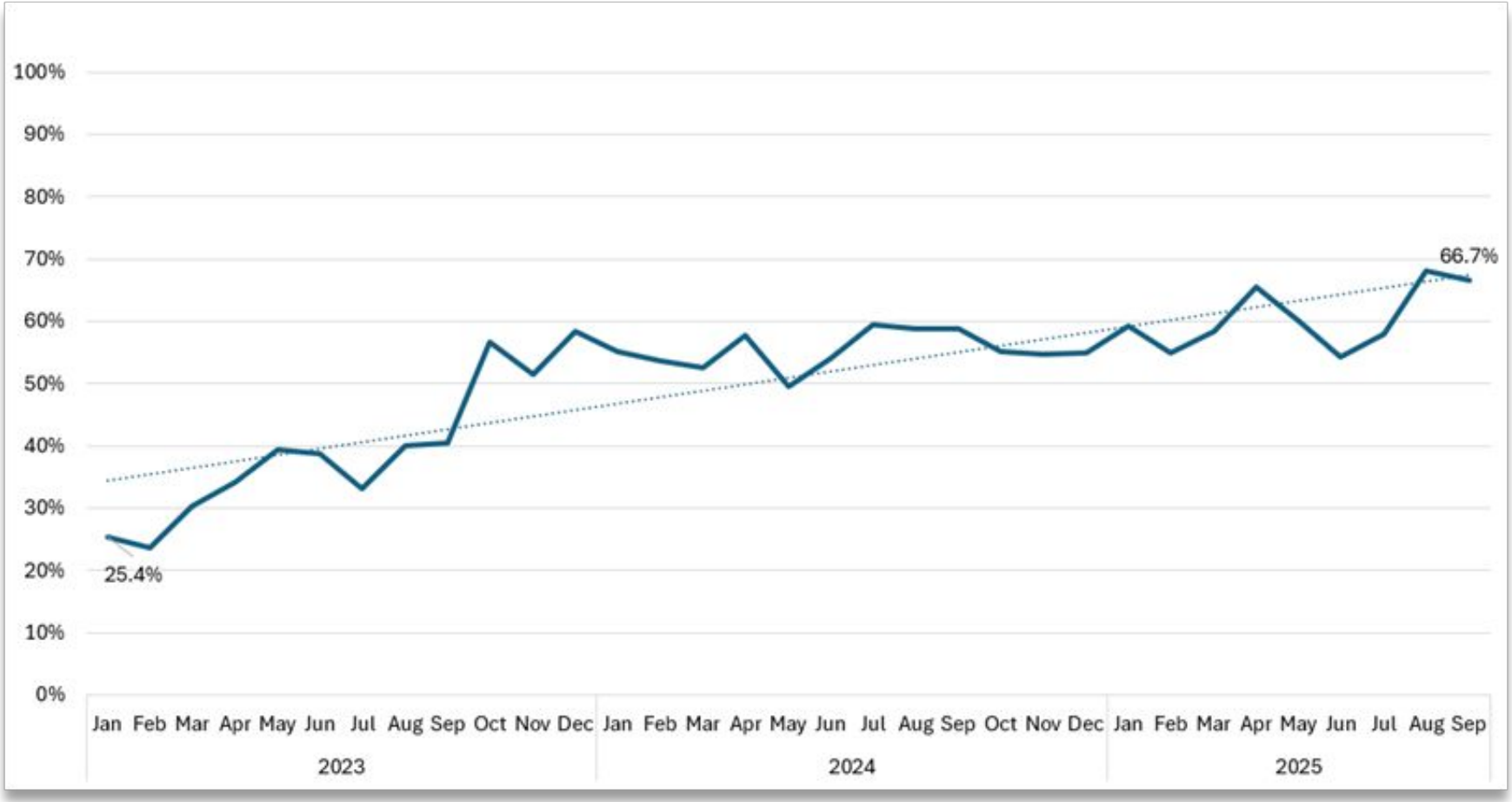
- **Inclusions:**
  - Adult patients undergoing open cardiac surgical procedures (determined by Procedure Type: Cardiac value code: 1).

- **Exclusions:**
  - Age < 18 years
  - ASA 6 (Organ Procurement - CPT: 01990)
  - Non-cardiac, Transcatheter/Endovascular, EP/Cath, and Other Cardiac cases (determined by Procedure Type: Cardiac value codes: 0, 2, 3, and 4)

GLU-06-C Performance Across MPOG, Past 12 mo.




100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
39.1%
65.9%
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2023
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2024
Jan Feb Mar Apr May Jun Jul Aug Sep
2025


100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
66.7%
25.4%
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2023
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2024
Jan Feb Mar Apr May Jun Jul Aug Sep
2025

GLU-07-C - Hypoglycemia Management, Open Cardiac (<70mg/dL/<3.885mmol/L)

- **Description:**
  - Percentage of adult patients, undergoing open cardiac surgery with any intraoperative blood glucose value < 70 mg/dL.

- **Timing:**
  - Anesthesia Start to 15 minutes after Anesthesia End

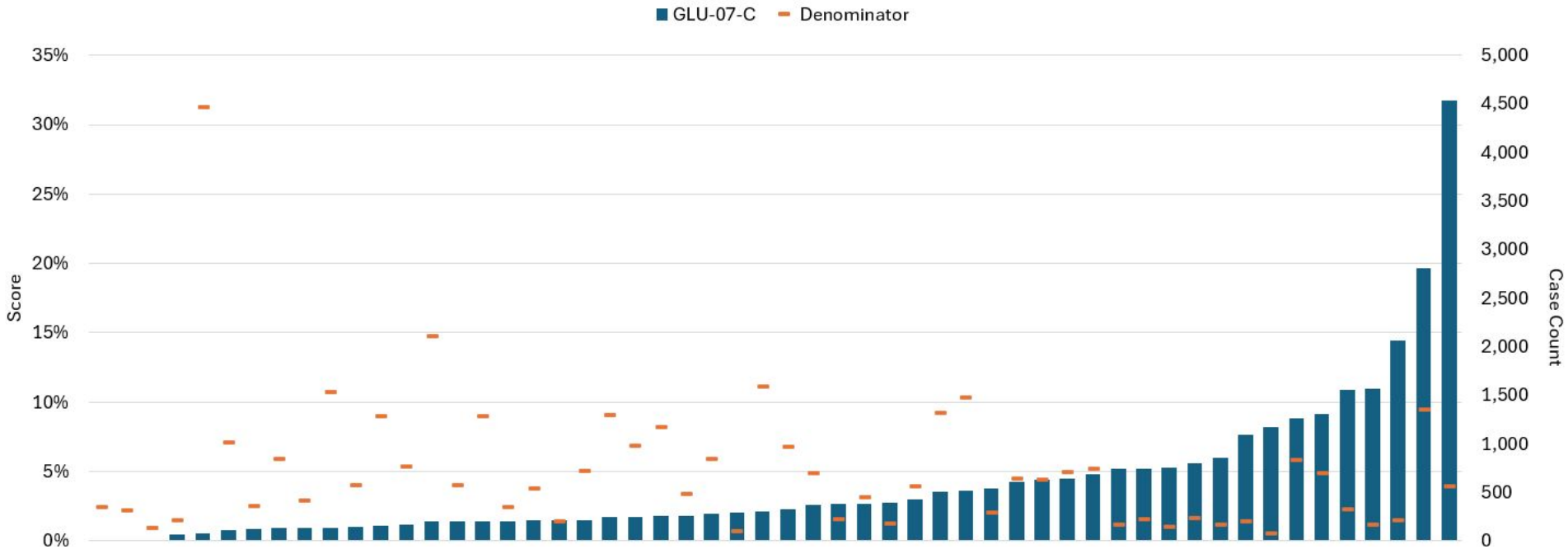
- **Success Criteria:**
  - The lowest blood glucose was maintained at >/=70 mg/dL, or
  - Glucose <70 mg/dL that was rechecked within 15 minutes and found to be >/=70 mg/dL.

GLU-07-C - Hypoglycemia Management, Open Cardiac (<70mg/dL/<3.885mmol/L) Considerations

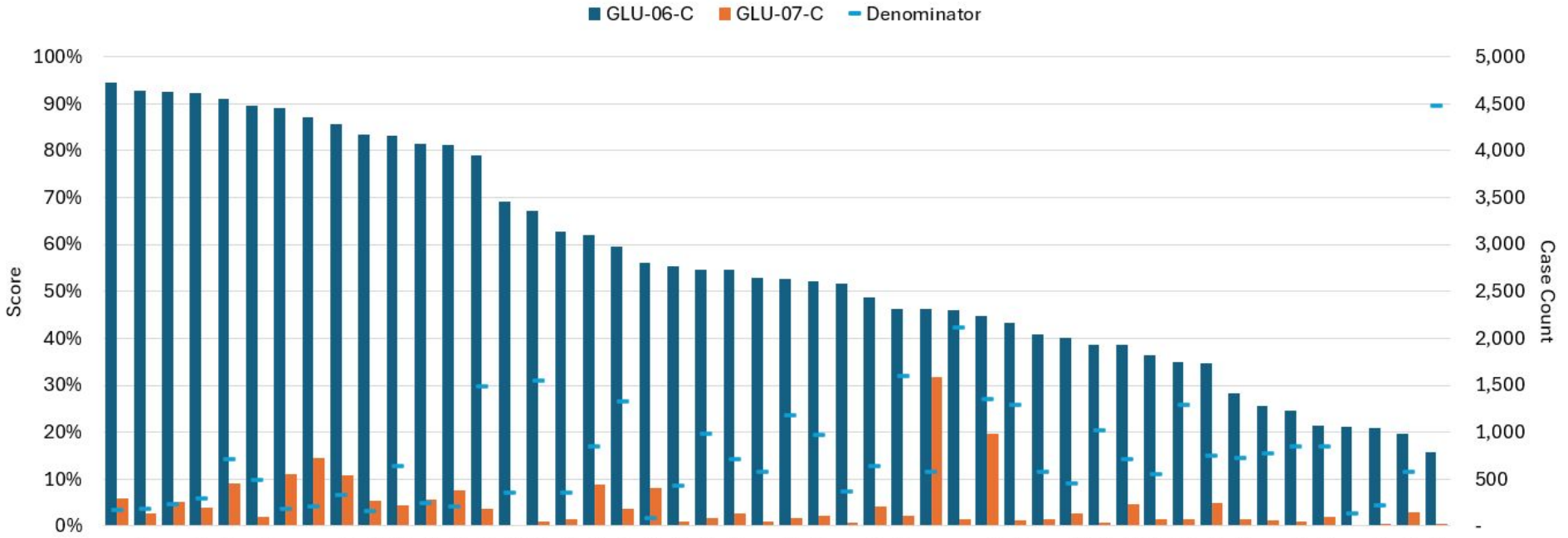
- **Inclusions:**
  - Adult patients undergoing open cardiac surgical procedures (determined by Procedure Type: Cardiac value code: 1).

- **Exclusions:**
  - Age < 18 years
  - ASA 6 (Organ Procurement - CPT: 01990)
  - Non-cardiac, Transcatheter/Endovascular, EP/Cath, and Other Cardiac cases (determined by Procedure Type: Cardiac value codes: 0, 2, 3, and 4)

GLU-07-C Performance Across MPOG, Past 12 mo.



GLU-06-C vs. GLU-07-C Performance



GLU-08-C - Hyperglycemia Treatment, Open Cardiac (>180 mg/dL/ >10.00 mmol/L)

- **Description:**
  - Percentage of adult patients undergoing open cardiac surgical procedures for whom any blood glucose measure >/=180 mg/dL was either treated with insulin or rechecked and found to be <180 mg/dL within 30 minutes.

- **Timing:**
  - Anesthesia Start to 30 minutes after Anesthesia End

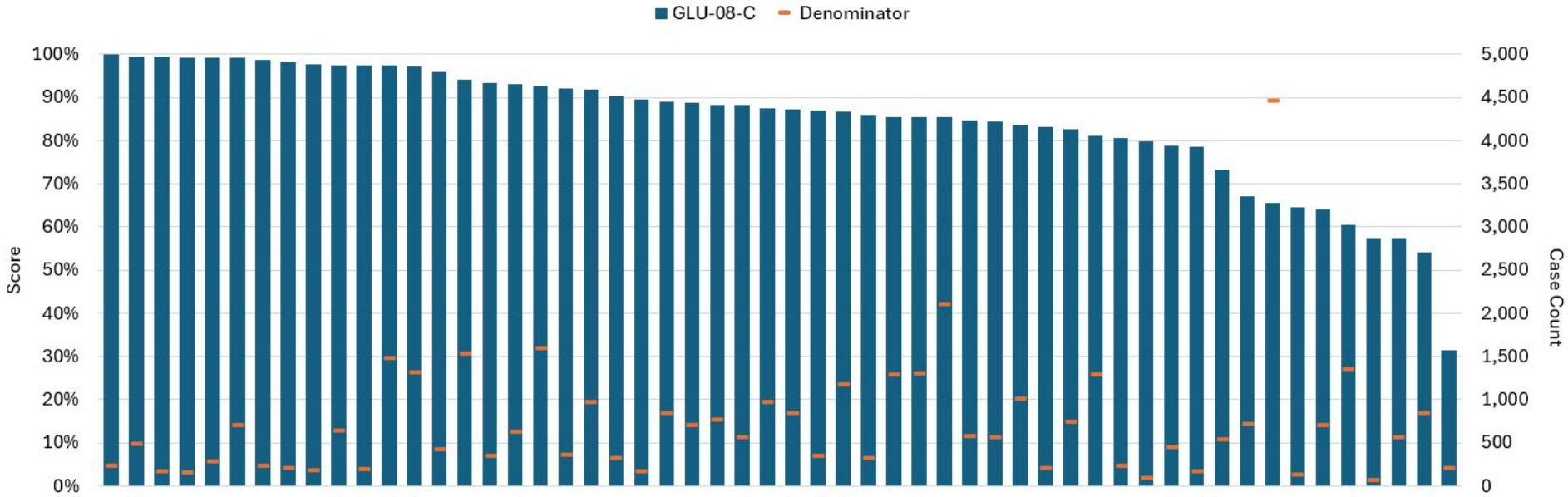
- **Success Criteria:**
  For any blood glucose ≥180 mg/dL, at least one of the following interventions are documented:
  - Treatment with insulin within 30 minutes, or
  - Glucose rechecked and found to be below 180 mg/dL within 30 minutes

GLU-08-C - Hyperglycemia Treatment, Open Cardiac (>180 mg/dL/>10.00 mmol/L) Considerations

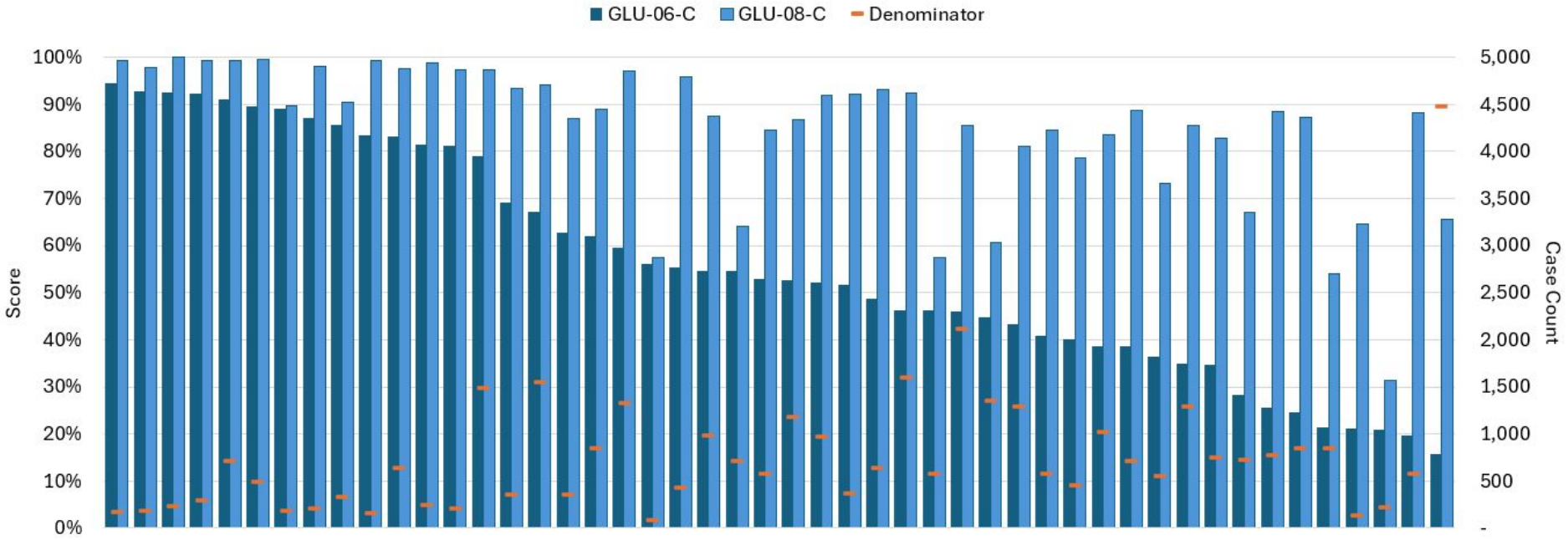
- **Inclusions:**
  - Adult patients undergoing open cardiac surgical procedures (determined by Procedure Type: Cardiac value code: 1).

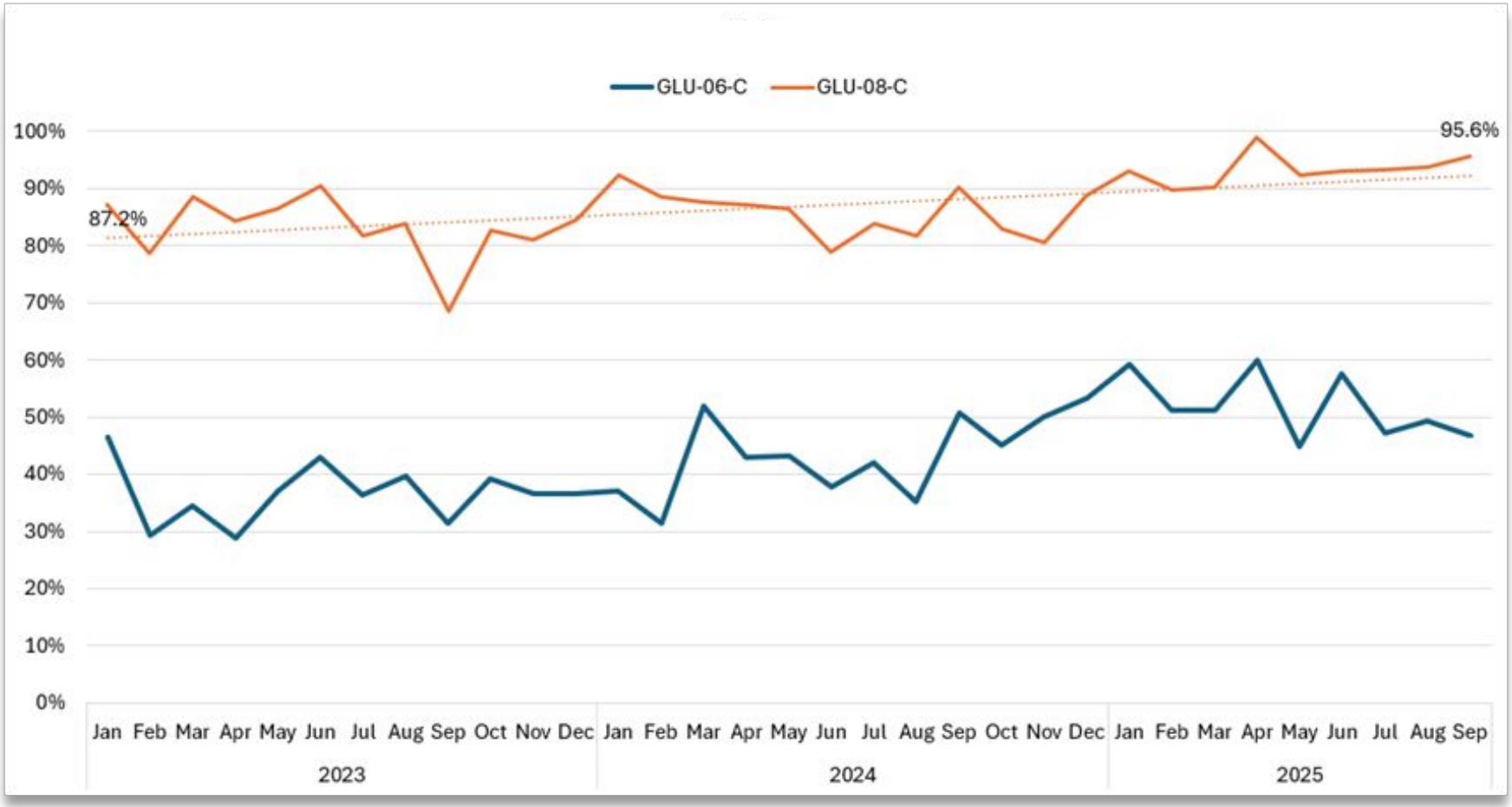
- **Exclusions:**
  - Age < 18 years
  - ASA 6 (Organ Procurement - CPT: 01990)
  - Non-cardiac, Transcatheter/Endovascular, EP/Cath, and Other Cardiac cases (determined by Procedure Type: Cardiac value codes: 0, 2, 3, and 4)

GLU-08-C Performance Across MPOG, Past 12 mo.



GLU-06-C vs. GLU-08-C Performance




GLU-06-C
GLU-08-C
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
87.2%
95.6%
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2023
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2024
Jan Feb Mar Apr May Jun Jul Aug Sep
2025

TEMP-06-C - Hypothermia Avoidance, Cardiac

- **Description:**
  - Percentage of adult patients undergoing an open cardiac procedure for whom any core temperature at the end of the case < 35.5° C (or 95.9° F).

- **Timing:**

  Measure Start:

  1. Cardiopulmonary Bypass Initiated (ID:50410), if not present,
  2. Cardiopulmonary Bypass Start Phenotype

  Measure End:

  1. 30 minutes after Anesthesia End

  *For cases without bypass: Anesthesia End to 30 minutes after Anesthesia End

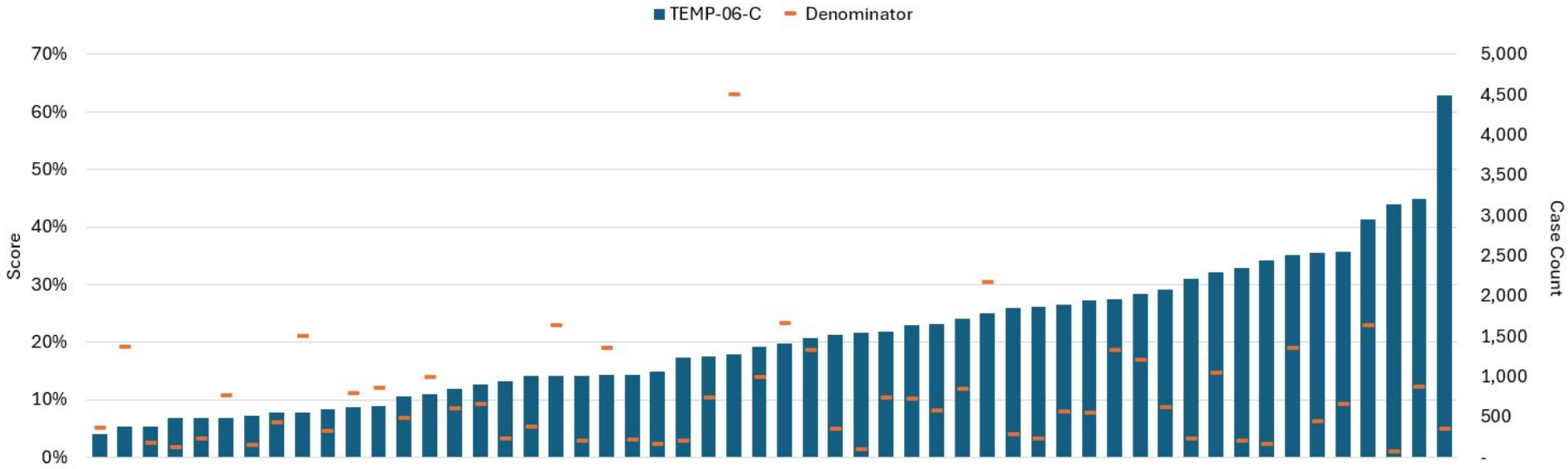
TEMP-06-C - Hypothermia Avoidance, Cardiac Considerations

- **Success Criteria:**
  - Last non-artifact body temperature ≥ 35.5 degrees Celsius (or 95.9 degrees Fahrenheit) at Anesthesia End (Prioritizes core temperature measurements)

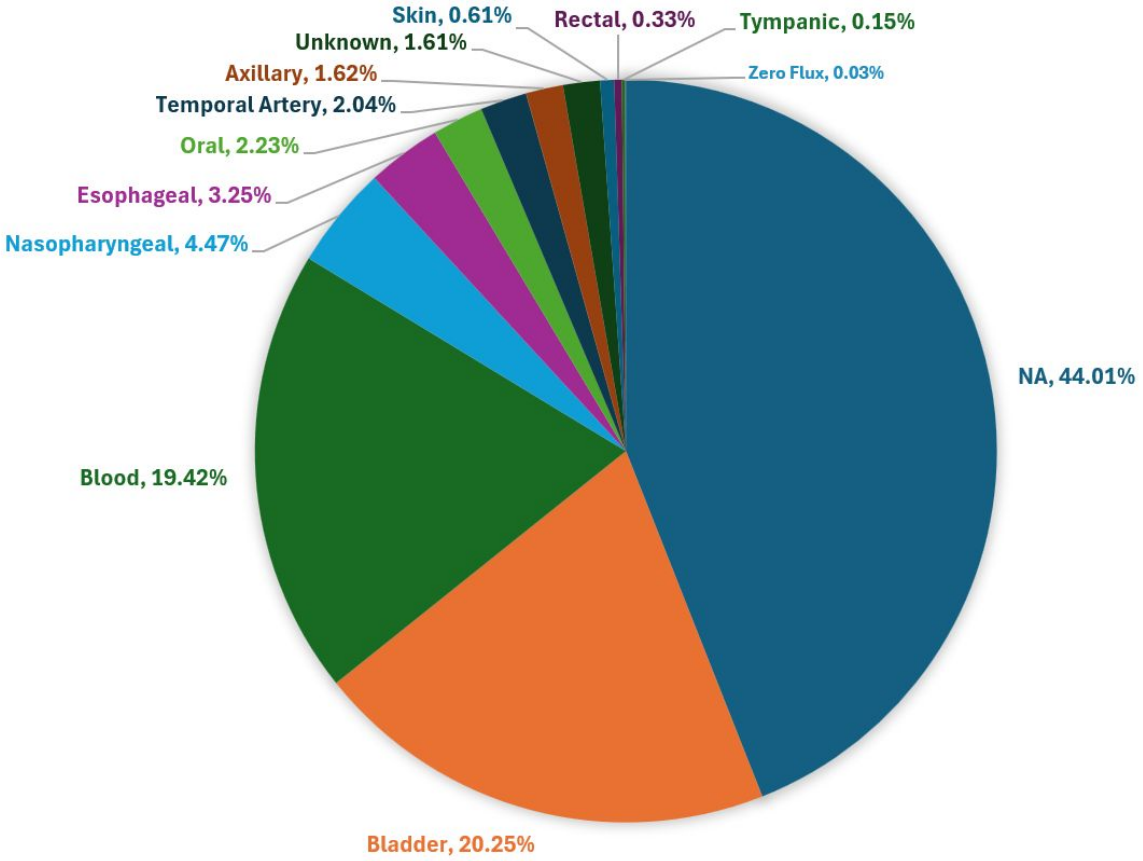
- **Inclusions:**
  - Adult patients undergoing open cardiac surgical procedures (determined by Procedure Type: Cardiac value code: 1)

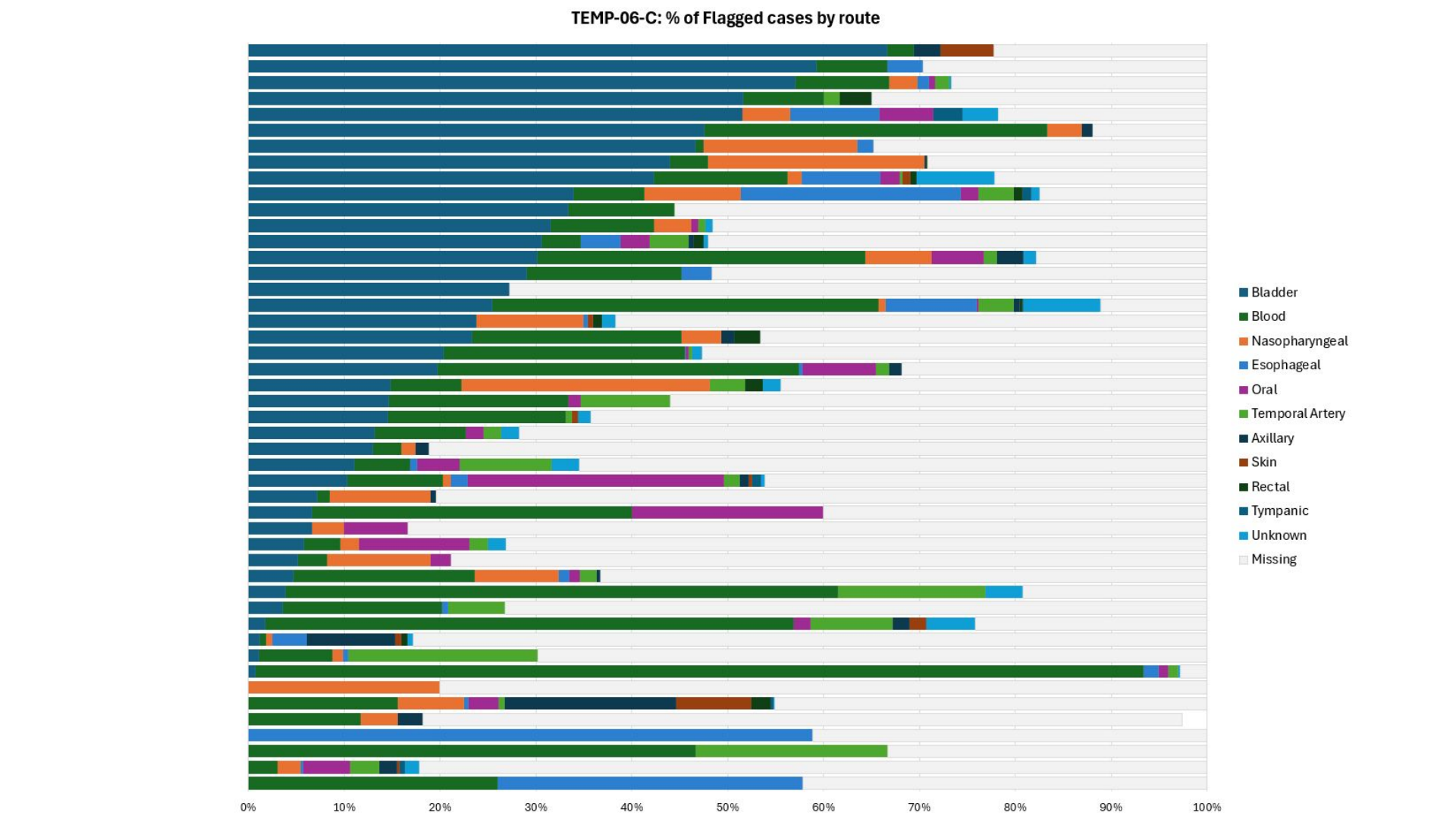
- **Exclusions:**
  - Age <18 years
  - ASA 6 including Organ Procurement (CPT: 01990)
  - Non-cardiac, Transcatheter/Endovascular, EP/Cath, and Other Cardiac cases (determined by Procedure Type: Cardiac value codes: 0, 2, 3, and 4)

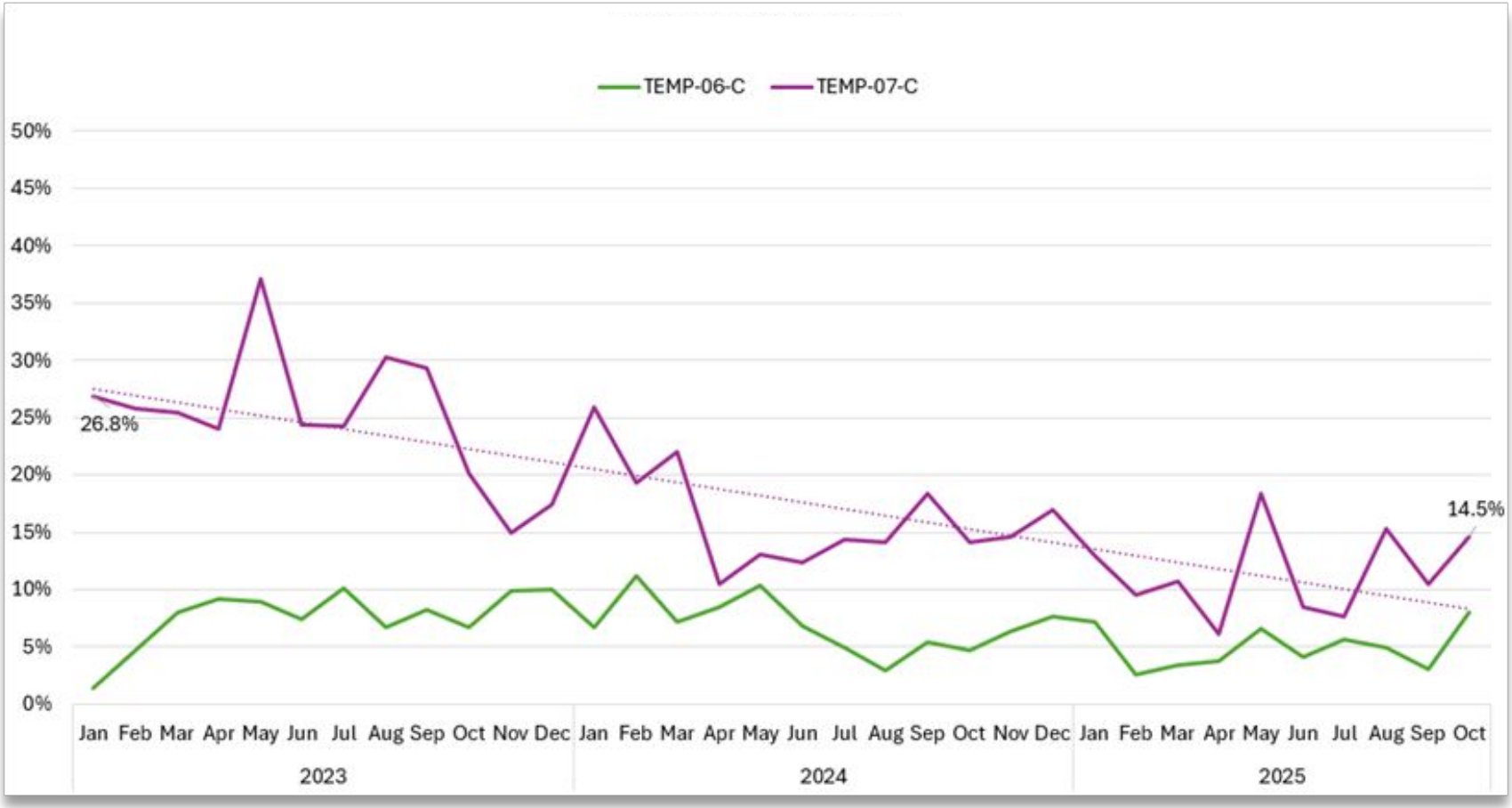
TEMP-06-C Performance Across MPOG, Past 12 mo. (lower is better)



TEMP-06-C: Breakdown of Flagged cases by Temp route




TEMP-06-C: % of Flagged cases by route
Bladder
Blood
Nasopharyngeal
Esophageal
Oral
Temporal Artery
Axillary
Skin
Rectal
Tympanic
Unknown
Missing
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%


TEMP-06-C
TEMP-07-C
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
26.8%
14.5%
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Jan Feb Mar Apr May Jun Jul Aug Sep Oct
2023
2024
2025

TEMP-07-C - Hyperthermia Avoidance, Cardiac

- **Description:**
  - Percentage of adult patients undergoing an open cardiac procedure for whom core temperature was >37.5° C (99.5° F) for more than 5 consecutive minutes while on cardiopulmonary bypass.

- **Timing:**

  Measure Start:
  - Cardiopulmonary Bypass Initiated (ID:50410), if not present,
  - Cardiopulmonary Bypass Start Phenotype

  Measure End:
  - Cardiopulmonary Bypass Terminated (ID: 50409), if not present,
  - Cardiopulmonary Bypass End Phenotype. If not present,
  - Anesthesia End

TEMP-07-C - Hyperthermia Avoidance, Cardiac Considerations

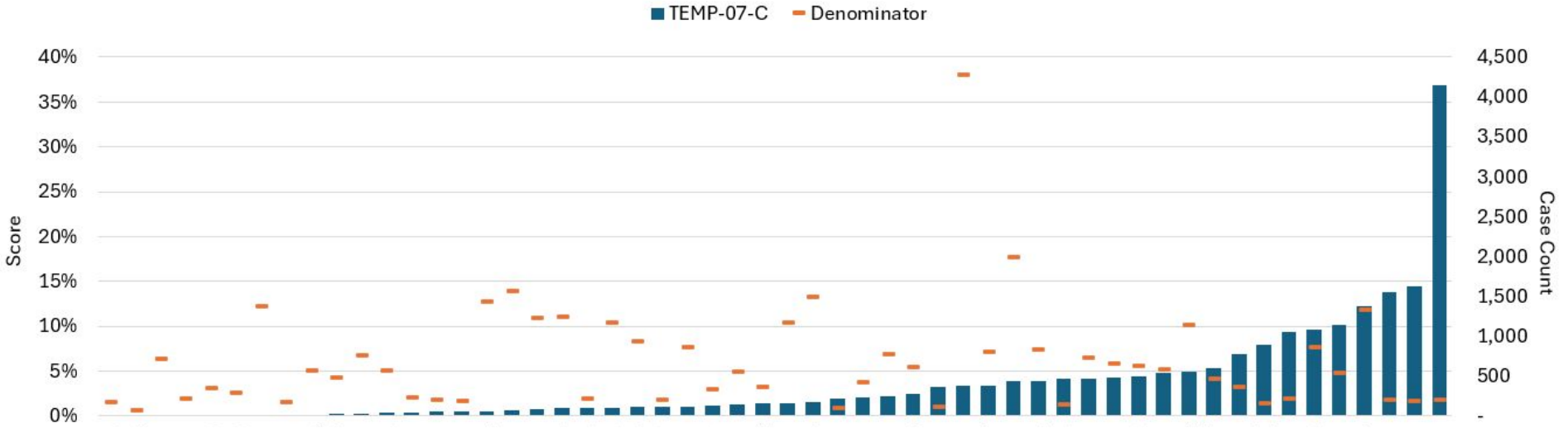
- **Success Criteria:**
  - Less than 5 consecutive minutes of non-artifact body temperature > 37.5 degrees Celsius between cardiopulmonary bypass start and cardiopulmonary bypass end. (Temperature hierarchy listed under “Other Measure Details”).
  - (Prioritizes core temperature measurements)

- **Inclusions:**
  - Adult patients undergoing open cardiac surgical procedures as determined by Procedure Type: Cardiac value code: 1 *and* requiring cardiopulmonary bypass

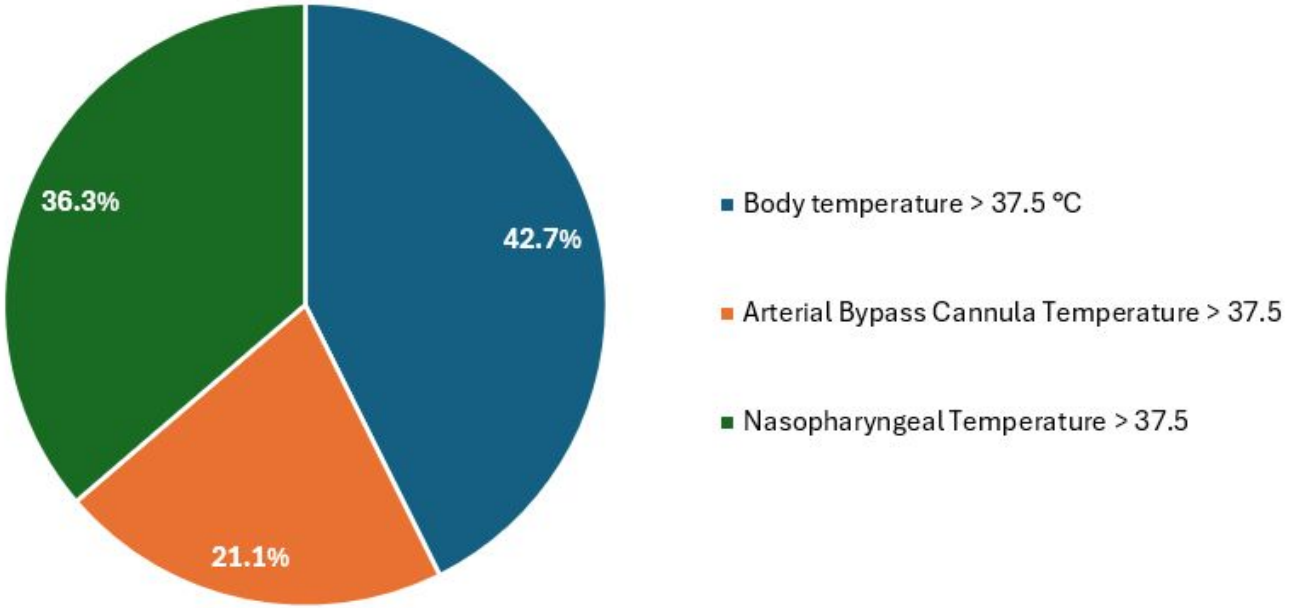
TEMP-07-C - Hyperthermia Avoidance, Cardiac Considerations

- **Exclusions:**
  - Age <18 years
  - ASA 6 including Organ Procurement (CPT: 01990)
  - Non-cardiac, Transcatheter/Endovascular, EP/Cath, and Other Cardiac cases (determined by Procedure Type: Cardiac value codes: 0, 2, 3, and 4)
  - Open Cardiac cases performed without bypass (determined by Procedure Type: Cardiac value code: 1, without any bypass start or bypass end concepts)

TEMP-07-C Performance Across MPOG, Past 12 mo. (lower is better)



TEMP-07-C: Breakdown by Flagged Reason



BP-07-C - Low MAP Avoidance < 55 during induction, Open Cardiac

- **Description:**
  - Percentage of adult patients undergoing open cardiac procedures where hypotension for greater than 5 minutes (defined as MAP < 55 mmHg) was avoided during the induction period until surgery start.

- **Timing:**
  - Anesthesia Start to Surgery Start

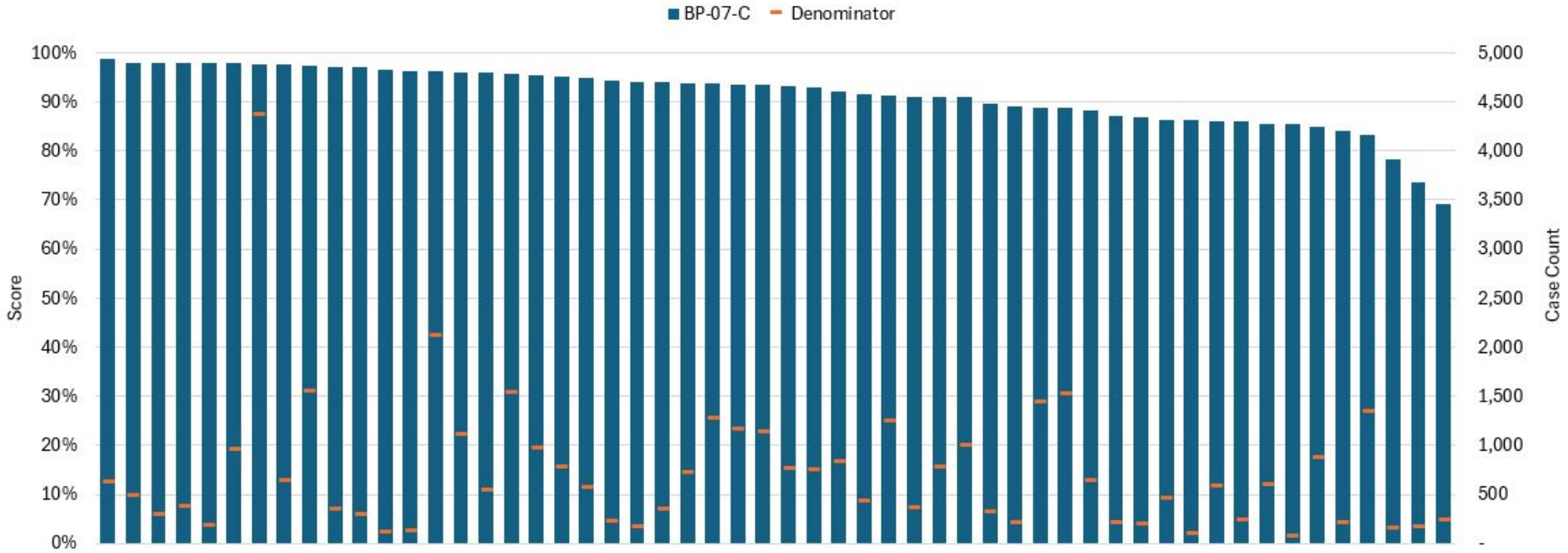
- **Success Criteria:**
  - MAP <55 mmHG that does not exceed cumulative time of 5 minutes during induction OR
  - MAP ≥55 mmHG throughout induction period.

BP-07-C - Low MAP Avoidance < 55 during induction, Open Cardiac Considerations

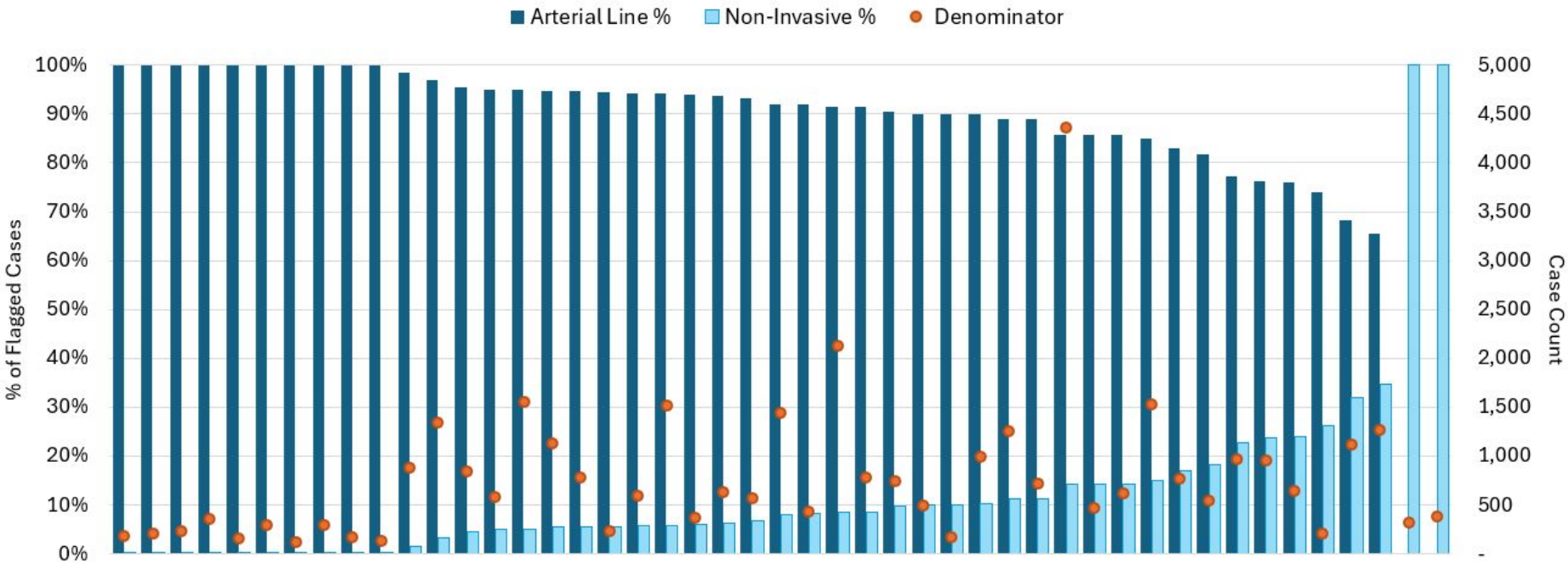
- **Inclusions:**
  - Adult patients undergoing open cardiac surgical procedures (determined by Procedure Type: Cardiac value code: 1)

- **Exclusions:**
  - Age < 18 years
  - ASA 6 including Organ Procurement (CPT:01990)
  - Non-cardiac, Transcatheter/Endovascular, EP/Cath, and Other Cardiac Phenotype by the Procedure Type: Cardiac (value codes: 0, 2, 3, and 4)
  - Lung Transplants

BP-07-C Performance Across MPOG, Past 12 mo



BP-07-C: Breakdown of Flagged Cases



Next Steps

- Open to all anesthesiologists or those interested in improving cardiothoracic measures
  - Do not have to practice at an active MPOG institution
- Meeting Schedule
  - February 2026
  - June 2026
  - November 2026
- Thank you for using the forum for discussion between meetings

Thank you!

Allison Janda, MD
MPOG Cardiac Anesthesia
Subcommittee Chair
ajanda@med.umich.edu