Welcome!

We will begin shortly…

ASPIRE Collaborative Meeting

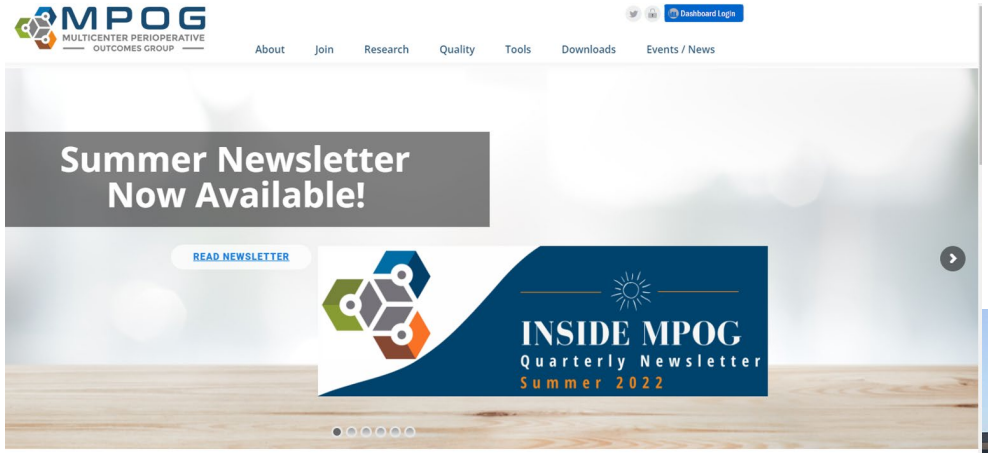
July 15th 2022

8:00 – 9:00	**Registration and Breakfast**
8:00 – 9:00	**ACQR Meeting** Four Seasons Room
9:00 – 9:30	**Intro and Business** Nirav Shah, MD
9:30 – 9:45	**Web Case Viewer** Nirav Shah, MD
9:45 - 10:15	**QI Stories (15-minutes each)** Dr. Benjamin Stam and Rebecca Johnson, Spectrum Health Dr. Meredith Hall and Denise Schwerin, Bronson Health
10:15 – 10:30	**Break**

10:30 – 11:10	**Hypotension Associated Outcomes, and Appropriate Definitions of Hypotension** Kamal Maheshwari, M.D., M.P.H. Cleveland Clinic
11:10 – 11:50	**Rational Vasopressor Selection** Allison Janda, MD MPOG / Michigan Medicine
11:50 – 12:00	**Discussion and Questions** Kamal Maheshwari, MD, MPH Allison Janda, MD
12:00 – 1:00	**Lunch**
1:00 – 2:30	**ASPIRE Performance Review**

Post Meeting Information on our website

- Presentation slides, notes, and recordings
- CME Information



Please note, the Performance Review information will not be recorded


THANK YOU!

MPOG Featured Member
July and August 2022

MORE INFO

Jerri Heiter, RN

Anesthesiology Clinical Quality Reviewer (ACQR)

Trinity St. Joseph Ann Arbor, Chelsea & Livingston

Upcoming Events

ACQR Retreat

September 16, 2022

DoubleTree Hotel, Ann Arbor

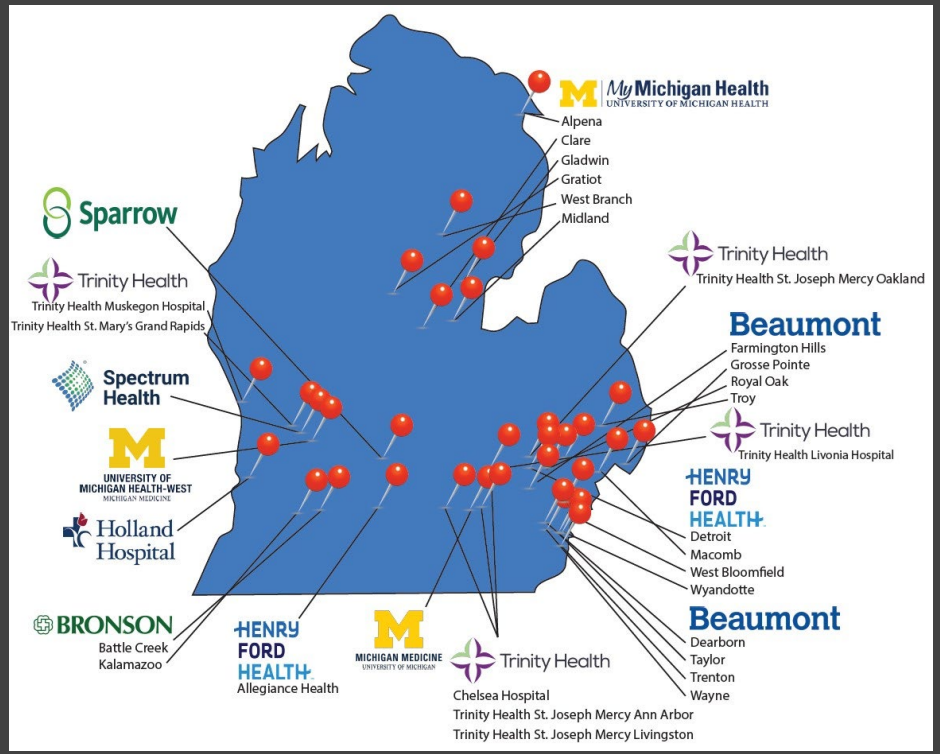
MPOG Annual Retreat

October 21, 2022
New Orleans, LA

In person + virtual

Recruitment 2023

Our perspective and plan



Have had steady recruitment last few years (University of Michigan Health West, Spectrum, MyMichigan, and others)

About 35 sites now across the state

No plans for aggressive recruitment, but understand that there are sites / providers that are unable to join because lack of hospital or IT support

Anticipate that there will be a few more health system sites added over time

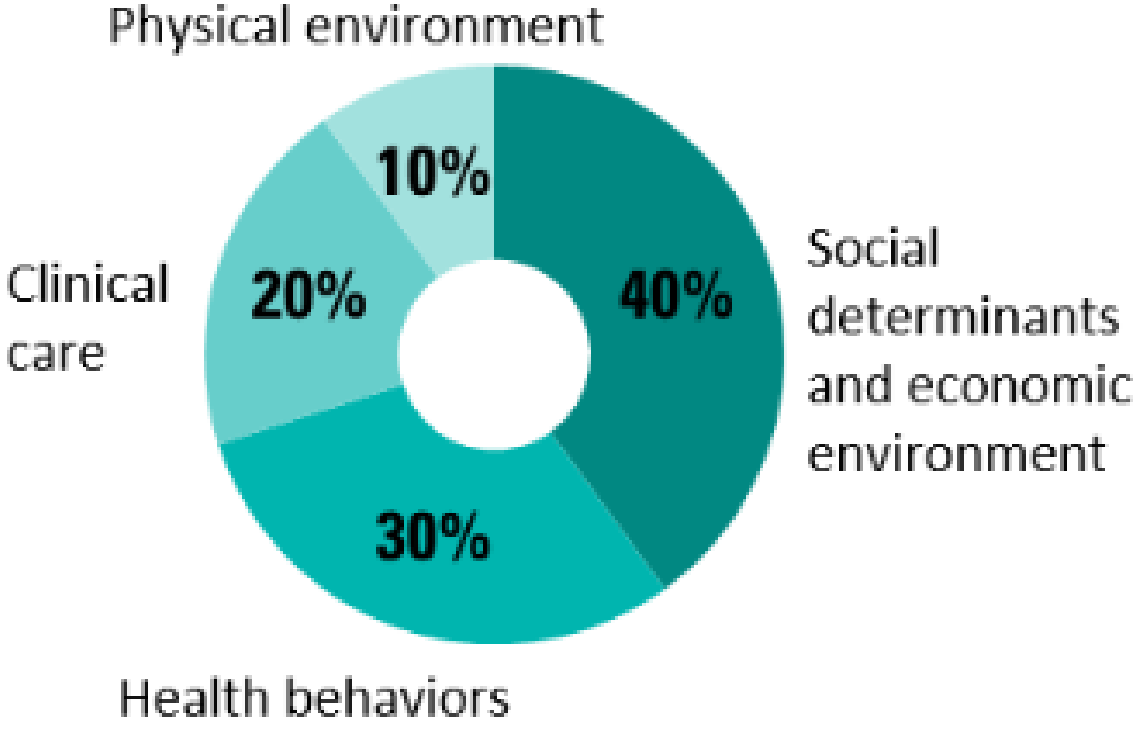
Health Equity and ASPIRE

MSHIELD CQI (Michigan Social Health Interventions to Eliminate Disparities) is a “partnering CQI”

MSHIELD has expertise in working with data involving social determinants of health and health disparities

One of MSHIELD’s primary goals is to be a partner to all existing CQIs to help each CQI achieve their quality improvement goals in a way that advances health equity

Social determinants of health account for 40% of health outcomes.



Their Mission and People

Identify: Identify social health needs in patients across the spectrum of care, from acute to chronic care and across patients with all medical and surgical conditions.

Connect: Connect all patients who have identified social health needs with community-based and social service resources to address these needs.

Evaluate: Evaluate the effectiveness of social health interventions within hospitals/health systems, CQIs, and community regions.

Grow: Support CQI efforts to understand and address social needs and inequities in their patient populations, and community and state efforts to improve upstream social determinants of health.

Renuka (Renu) Tipirneni, M.D., M.Sc.
Co-Director, MSHIELD

John Scott, M.D., M.P.H.
Co-Director, MSHIELD

Carol Gray, M.P.H.
Program Manager

Dilhara Muthukuda, M.P.H.
Health Equity Specialist

Jordan Greene, M.P.H.
Engagement Specialist

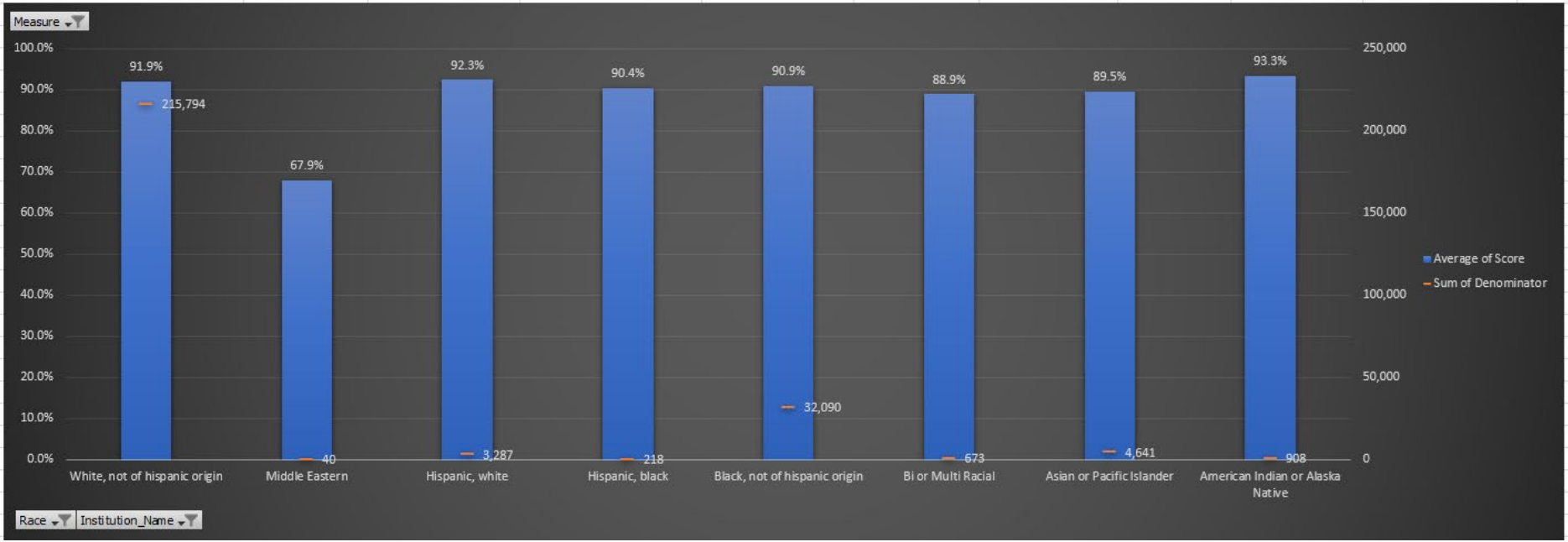
Sarah Gawne
Administrative Assistant Senior

CQI Requirements

Identify a Health Equity Champion

Build your Health Equity Dashboard

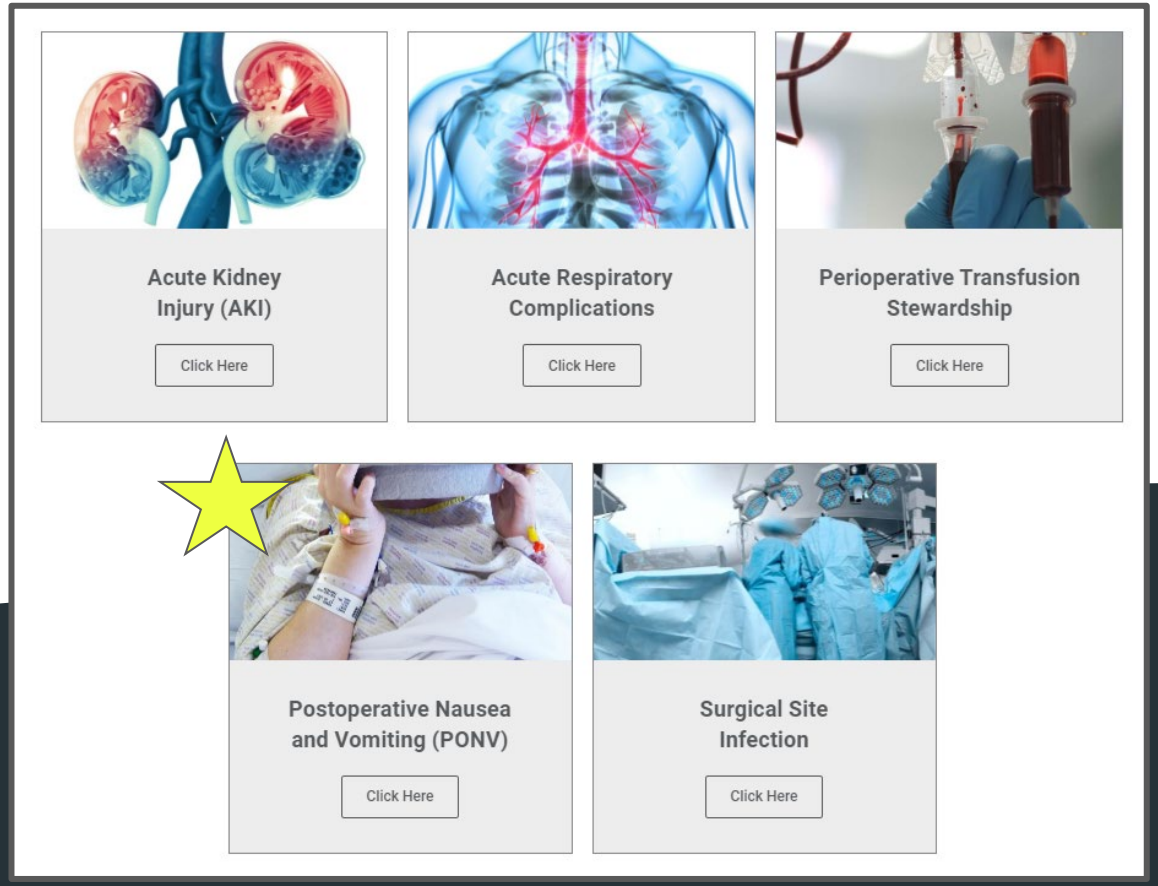
Connect patients in need to community resources



Race/Ethnicity	Average of Score	Sum of Denominator
⊞White, not of hispanic origin	91.9%	215,794
⊞Middle Eastern	67.9%	40
⊞Hispanic, white	92.3%	3,287
⊞Hispanic, black	90.4%	218
⊞Black, not of hispanic origin	90.9%	32,090
⊞Bi or Multi Racial	88.9%	673
⊞Asian or Pacific Islander	89.5%	4,641
⊞American Indian or Alaska Native	93.3%	908

PONV Toolkit is complete!

Existing Toolkits



Posto
QI To

Postoperative Nausea & Vomiting QI Toolkit

OVERVIEW: I

RECOMMENDATIONS: PREVENTION & TREATMENT

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Objectives

- Define postoperative nausea and vomiting (PONV)
- Discuss the incidence and impact of PONV
- Review the pathophysiology related to PONV
- Identify risk factors for PONV
- Review ASPIRE PONV measures

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Combination Therapy Recommended

4th Consensus Guidelines for the Management of Postoperative Nausea and Vomiting (ASER & SAMBA-2020) recommendations:

1) Combination antiemetic therapy (≥2) for patients at high risk (≥ 3 Risk Factors) for PONV.
2) Combination therapy should consist of medications from different classes, using minimum effective dosing
3) Use of multimodal PONV prophylaxis in patients with 1 or 2 risk factors (multimodal includes use of TIVA, alternative therapy, medications) [2,95]

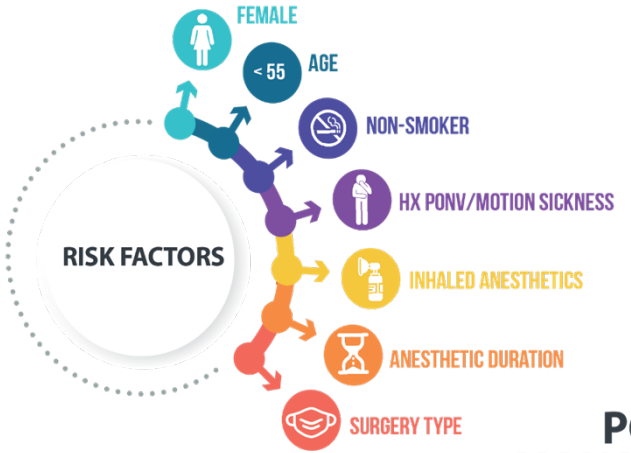
Table 5. Pharmacologic Combination Therapy for Adults and Children

Adults
- 5-HT_3 receptor antagonists + dexamethasone
  - Ondansetron: (A1)[158,159]
  - Palonosetron: (A2)[160-164]
  - Ramosetron: (A2)[165,166]
  - Granisetron: (A3)[167]
  - Tropisetron: (A3)[168]; with methylprednisolone (A3)[169]
- 5-HT_3 receptor antagonists + aprepitant
  - Ondansetron: (A2)[170,171]
  - Ramosetron: (A3)[172]
  - Palonosetron: (A3)[173]

Aprepitant + dexamethasone: (A2)[174,175]
- 5-HT_3 + droperidol
  - Ondansetron + droperidol: (A3)[176]
  - Granisetron + droperidol: (A3)[177]
  - Palonosetron + droperidol: (A3)[178]
- Other 5-HT_3 combination therapies:
  - Ondansetron + haloperidol: (A3)[179]
  - Haloperidol + dexamethasone + ondansetron: (A3)[180]
  - Ondansetron + betahistine: (A2)[181,182]
  - Ramosetron + gabapentin: (A3)[183]
  - Midazolam + ramosetron: (A3)[184]
- Other antidopaminergic combination therapies
  - Dexamethasone + haloperidol: (A2)[185,186]
  - Metoclopramide + dimenhydrinate: (A3)[187]
  - Amisulpride +1 nondopaminergic antiemetic: (A3)[188]
  - Haloperidol + midazolam: (A2)[189,190]

Acupoint stimulation + pharmacoprophylaxis: (A2)[191,192]
- Others
  - Propofol + dexamethasone: (A3)[193]
  - Dexamethasone + dimenhydrinate:[194] (A3)
  - Gabapentin + dexamethasone: (A3)[195]

Children
- Ondansetron + dexamethasone: (A1)[196]
- Ondansetron + droperidol (A3)[197]
- Tropisetron + dexamethasone (A3)[198]



ANESTHESIA CONSIDERATIONS

TIVA
Total IV Anesthesia (TIVA) minimizes use of volatile anesthetics

REGIONAL BLOCK
Avoid general anesthesia via neuraxial/regional techniques

NON-OPIOIDS
Multimodal pain management with non-opioid medication

PONV MANAGEMENT

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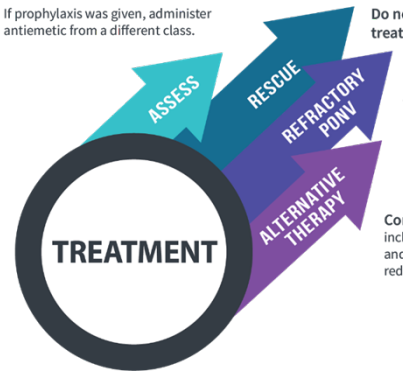
Assess for, and treat PONV immediately with rescue antiemetic.

If prophylaxis was not given, administer low-dose 5-HT_3 receptor antagonist.

If prophylaxis was given, administer antiemetic from a different class.

Preferred rescue antiemetics:
- 5-HT3 receptor antagonist
- Amisulpride
- Promethazine
- Metoclopramide
- Dimenhydrinate



Do not re-dose scopolamine patch for treatment

Assess possible causes of refractory PONV:
- Hypotension
- GI abnormality
- Excessive opioid use

Consider multi-modal therapy including PC6 stimulation, aromatherapy and non-opioid pain management to reduce symptoms

PROPHYLAXIS

5-HT_3 ANTAGONISTS: ONDANSETRON, DOLASETRON, GRANISETRON, PALONOSETRON

NK-1 ANTAGONISTS: APREPITANT, FOSAPREPITANT

CORTICOSTEROIDS: BETAMETHASONE, DEXAMETHASONE, METHYLPREDNISOLONE

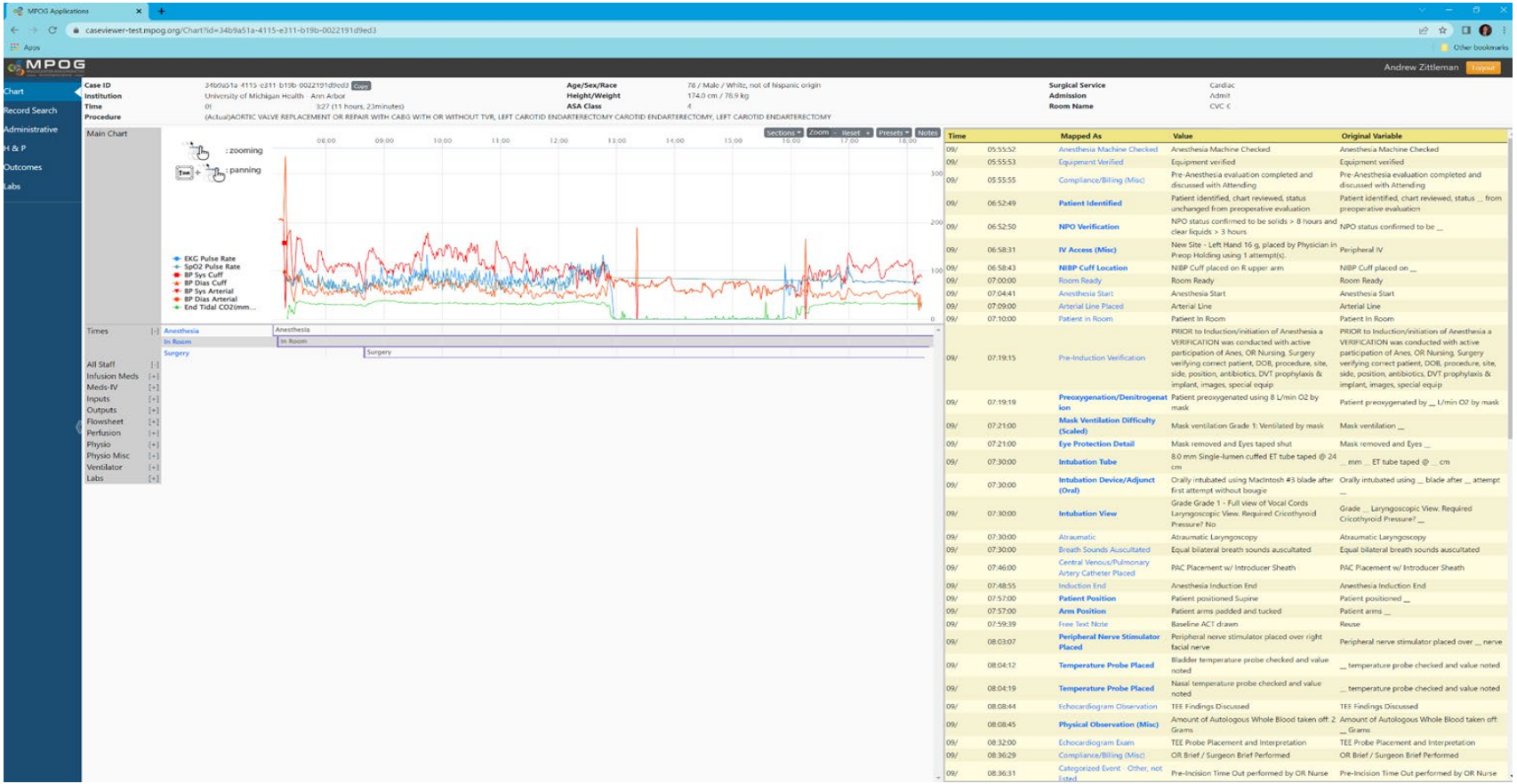
ANTICHOLINERGICS: SCOPOLAMINE

ANTIHISTAMINES: PROMETHAZINE, MECLIZINE, HYDROXYZINE, DIMENHYDRINATE, DIPHENHYDRAMINE

DOPAMINE ANTAGONISTS: AMISULPRIDE, PERPHENAZINE, DROPERIDOL, METOCLOPRAMIDE, CHLORPROMAZINE, HALOPERIDOL

Web Caseviewer

Updated Version of Web Case Viewer - A new version of Web Case Viewer will be released by August provider feedback emails

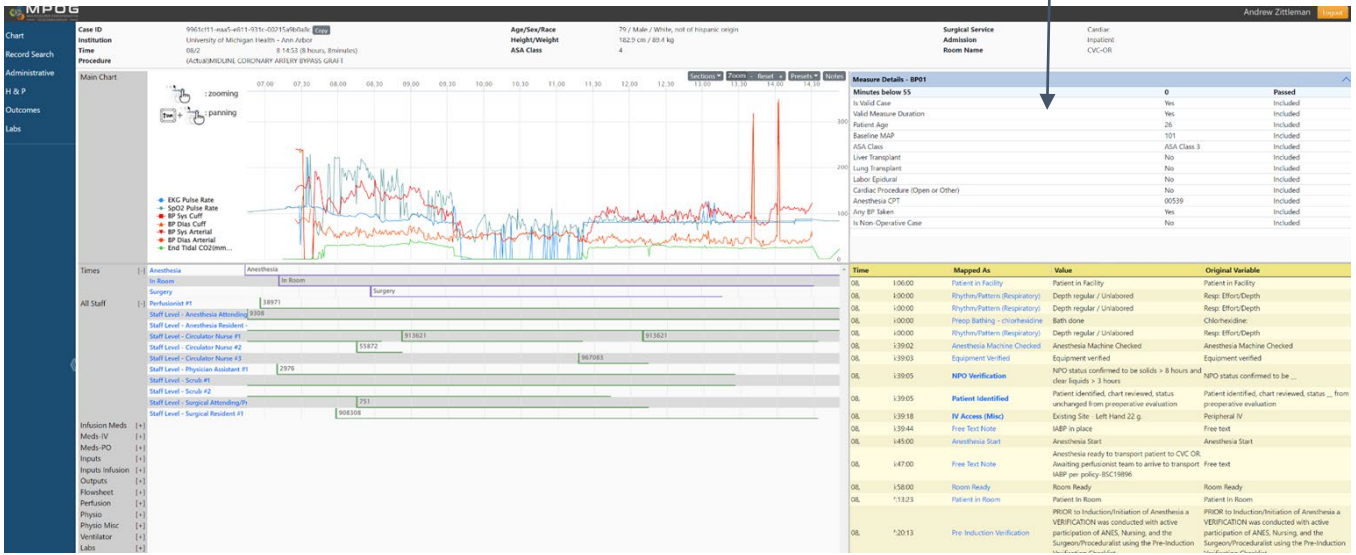


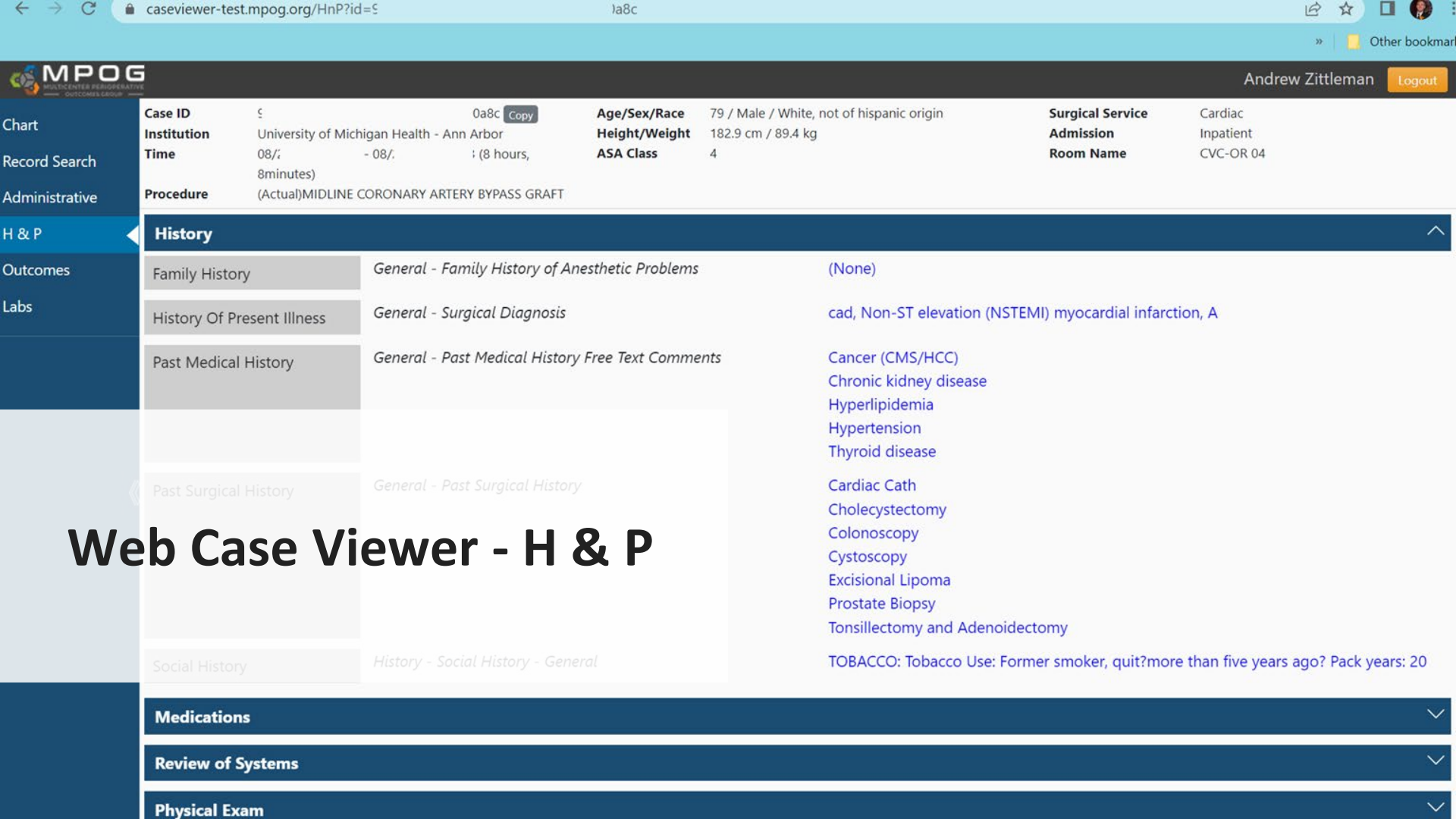
Web Case Viewer

Measure Details

The concepts used in the measure are brought to the top above the notes section for easy review

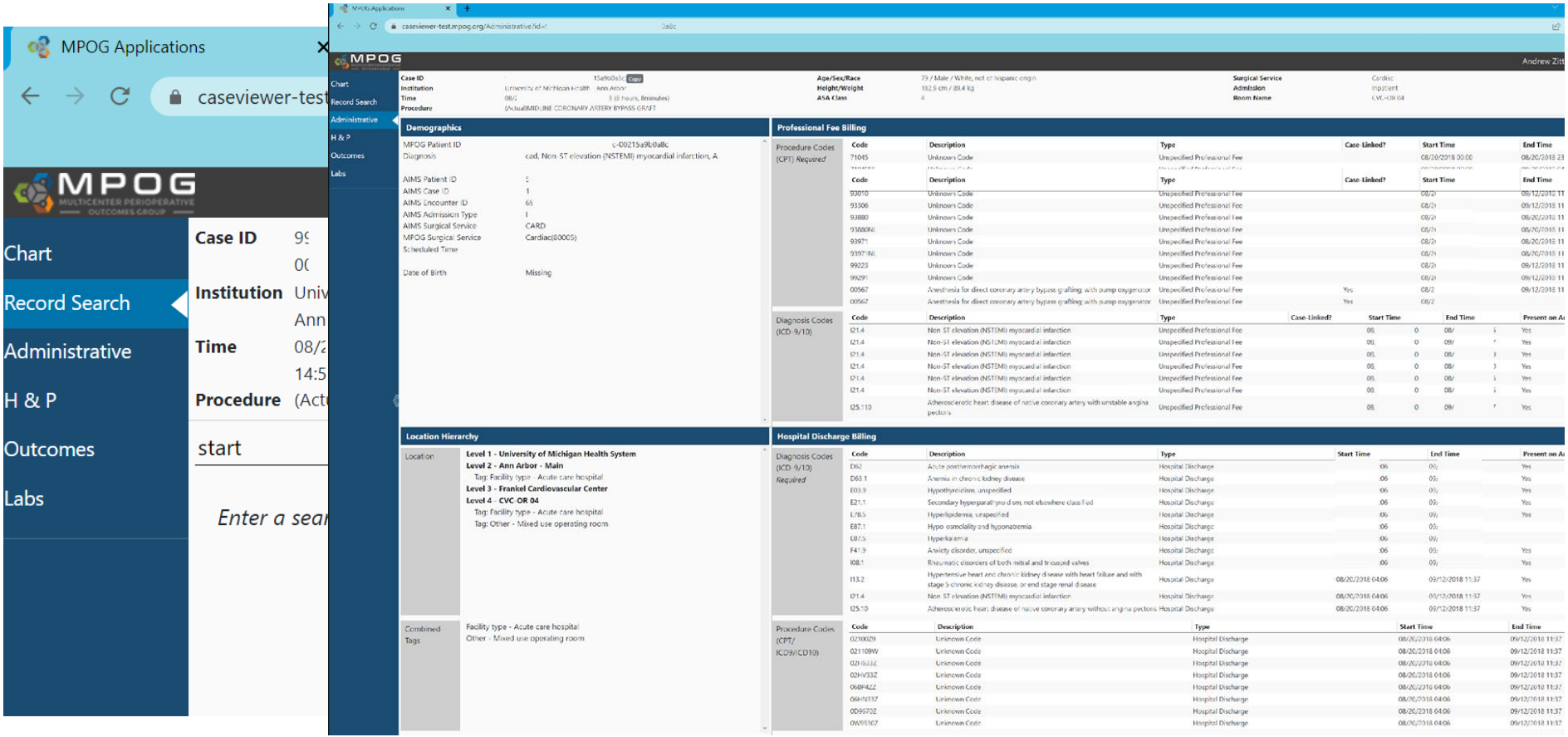
Measure Details - BP01		
Minutes below 55	**0**	**Passed**
Is Valid Case	Yes	Included
Valid Measure Duration	Yes	Included
Patient Age	26	Included
Baseline MAP	101	Included
ASA Class	ASA Class 3	Included
Liver Transplant	No	Included
Lung Transplant	No	Included
Labor Epidural	No	Included
Cardiac Procedure (Open or Other)	No	Included
Anesthesia CPT	00539	Included
Any BP Taken	Yes	Included
Is Non-Operative Case	No	Included





Web Case Viewer - H & P

Record Search and Administrative Sections



GLU 05 Update

GLU 05 Update

- Percentage of cases with a blood glucose >200 mg/dL with documentation of insulin treatment

- Previously identified issue: Inappropriate flagging of cases where subcutaneous insulin administered, glucose recheck > 200 mg/dL, but no additional insulin sq given within 90 minutes because still within the 2-3 hour window of peak insulin effect

Updates

- Insulin administrations within 90 minutes after high glucose value -> PASS

- If not treated, measure will assess if insulin sq was administered within 180 minutes prior to high glucose value
  - If yes, will ‘ignore’ that value
  - If no, then case will be flagged

- Only applies if MPOG is receiving insulin administration data at least 4 hours before anesthesia start (ie preop holding)

- These updates will improve measure scores to reflect treatment of hyperglycemia. However, there may still be gaps in which cases with poor glycemic control are now passed or excluded

- Also updated GLU to account for sq insulin administration

New Measure: BP 05

New Measure: BP 05

Percentage of cases where severe hypotension during anesthesia induction (defined as MAP < 55 mmHg) was avoided

Informational Measure Only

Measure Time Period: Induction Start through Induction End

Inclusions: All patients requiring general anesthesia

Exclusions:

- Patients <18 years old
- ASA 6 cases
- Baseline MAP <60 mmHG
- Labor Epidurals / Obstetric Non-Operative Procedures

Success Criteria: MAP > 55 mmHG throughout induction time period

Sustainability

Sustainability Bundle

SUS 01 - Low FGF (3 l/min) during anesthesia maintenance

SUS 02 - Global warming footprint of inhalational agents (maintenance)

SUS 03 - Global warming footprint of inhalational agents (induction)

SUS 04 - Low FGF (2 l/min) during anesthesia maintenance

SUS 05 - Low FGF (weight based) during induction - PEDS

SUS 06 - Nitrous yes/no during induction - PEDS

SUS - 02

Efficient use of inhalational agents and nitrous oxide during anesthesia maintenance period

Description

Percentage of cases where carbon dioxide (CO_2) equivalents normalized by hour for cases receiving halogenated agents and/or nitrous oxide is less than CO_2 equivalents of 2% sevoflurane at 2L FGF = 2.58 kg CO_2/hr during the maintenance period of anesthesia

Inclusions

Cases where halogenated hydrocarbons and/or nitrous oxide were administered during the maintenance phase of anesthesia

Exclusions

Cases without automated FGF data (ie those that are manually entered)

Other Measure Details

Requires inspired agent concentrations

How are CO2 Equivalents Derived?

Number of minutes of inhalational agent administered.

$$\sum [\text{Inspired agent (\%)} \times \text{Fresh Gas Flow (L/min)}]_{1\text{-}n} \quad x \quad GWP^{100}$$

- Convert agent % and FGF → mass of agent (mols/min)
- For Nitrous %
  a. Convert Nitrous % and FGF → Nitrous Flows (L/min)
  b. N2O flow → mass of agent (mols/min)

Agent	Molecular Weight (g/mol)	Global Warming Potential^{100}	Atmospheric Lifetime (years)
Isoflurane	184.5	565	3.2
Sevoflurane	200	144	1.1
Desflurane	169	2720	14
Nitrous Oxide	44	282*	114

SUS - 03

Exploration of environmental footprint during anesthesia induction

Description

Carbon dioxide equivalents normalized by hour for cases receiving halogenated agents and/or nitrous oxide during the induction period of anesthesia

Informational measure only - no threshold

Inclusion and exclusion criteria same as SUS 02

SUS 04

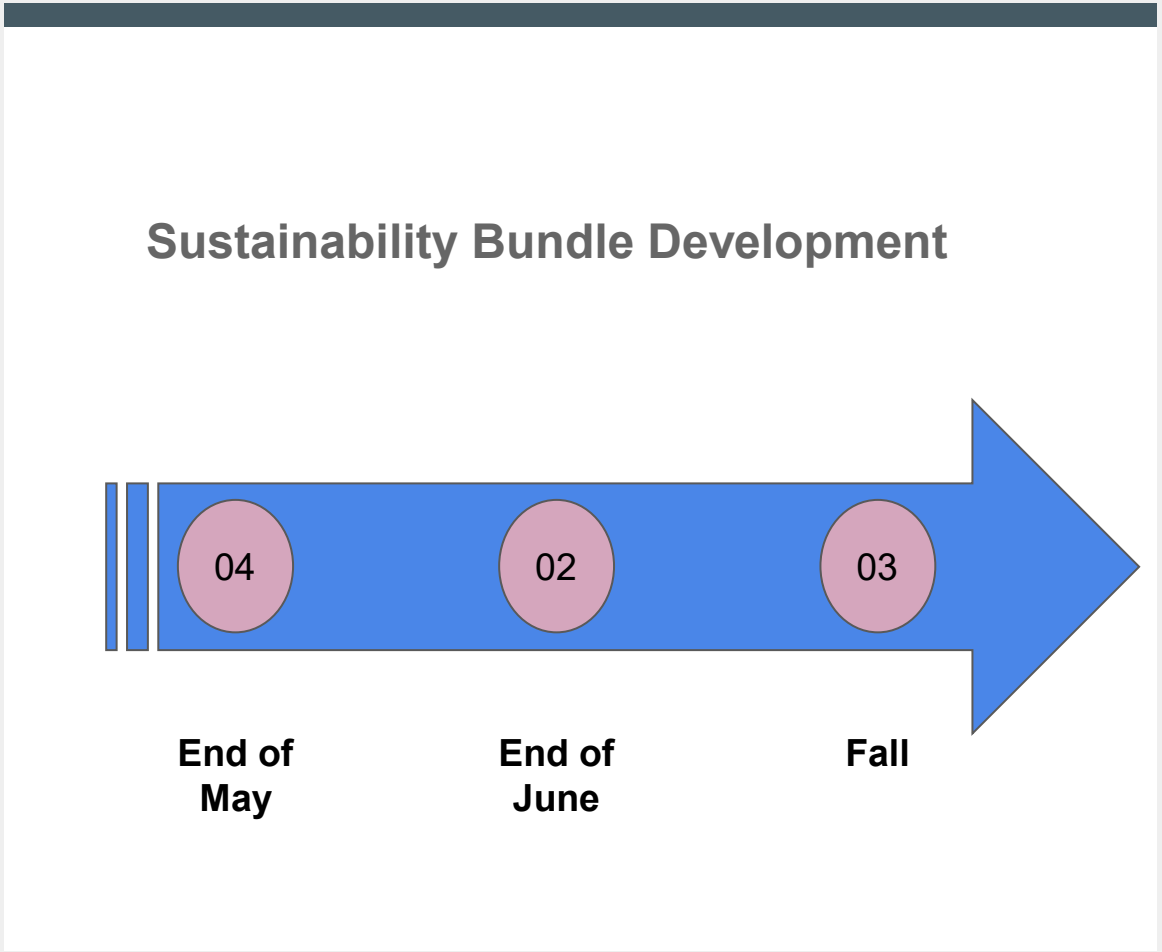
Seeks to identify high performing sites

Similar to SUS 01 except lowers success criteria from 3 l/min to 2 l/min

Most relevant for sites that have previously launched low FGF projects in their institutions

Continues MPOG's efforts to build best practice measures in addition to "acceptable" practice

Timeline


Sustainability Bundle Development
04
02
03
End of May
End of June
Fall

Provider Feedback Update

MEDICAL SCHOOL
UNIVERSITY OF MICHIGAN

LEARNING HEALTH SCIENCES

A scalable service to improve healthcare quality through precision audit and feedback

NIH National Library of Medicine, Project #1R01LM013894-01

Zach Landis-Lewis, Allison Janda, Allen Flynn, Nirav Shah

Proposal publication: https://www.researchprotocols.org/2022/5/e34990/

MPOG Precision feedback R01

Specific aims:

1. Systematically capture recipient requirements and preferences for precision feedback messages

2. Implement and assess a demonstration precision feedback service

3. Assess the effects of a precision feedback service on care quality and engagement

Progress to date

Aim 1:

- 35 provider interviews, 3 design iterations of prototype messages
- Preference survey under development and coming soon

Aim 2:

- Software development, performance testing, and integration ongoing

Aim 3: Assess the effects of a precision feedback service

- Preparation for pilot study in 2023, cluster-randomised trial in 2024

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Claim MOCA® Credit

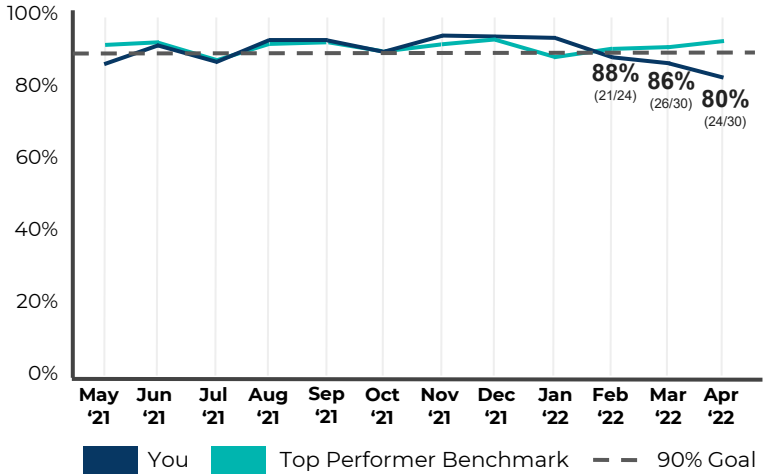
Dear Alex,

Your performance dropped below the goal for the measure: TEMP-02: Thermoregulation Monitoring - Core Temperature.

More information about the rationale for the measure TEMP-02 and how it is calculated is available here.

A case-by-case breakdown of your results are available at your clinical quality dashboard.

Below is your complete MPOG quality performance report...



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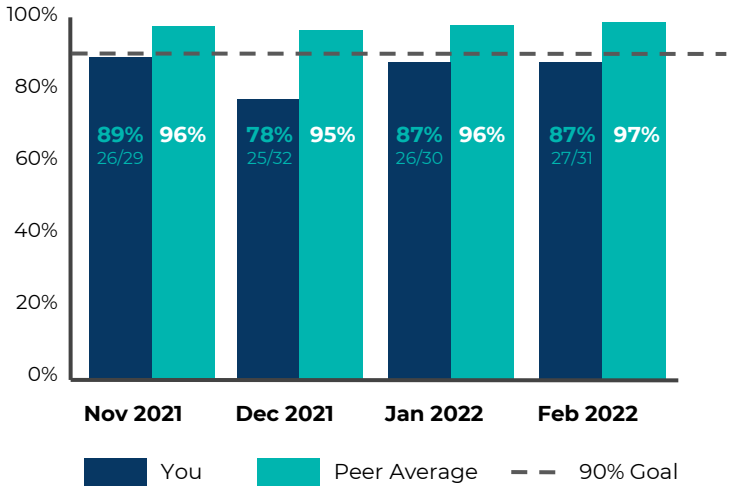
Claim MOCA® Credit

Dear Alex,

You may have an opportunity to improve your performance on measure NMB-01: Train of Four Taken, which measures the percentage of cases with a documented Train of Four (TOF) after last dose of non-depolarizing neuromuscular blocker.

More information about the rationale for the measure and how it is calculated is available here.

Below is your complete MPOG quality performance report...



MPOG
MULTICENTER PERIOPERATIVE OUTCOMES GROUP

Claim MOCA® Credit

Dear Alex,

In the last month there was a myocardial infarction within 72 hours after one of your operative cases.

Case details can be accessed by logging into your clinical quality dashboard, and information about how this case was identified is available in this measure spec on the MPOG website.

Below is your complete MPOG quality performance report...

Subcommittee Updates

Quality Committee

This group meets both virtually and in-person at collaborative meetings to review and determine the feasibility of new measure proposals and all other quality improvement efforts.

Quality Committee

July 25th

Cardiac Subcommittee

This group meets virtually once per quarter to discuss the development of cardiac-specific quality improvement measures.

Cardiac Subcommittee

August 22nd

Obstetric Subcommittee

This committee of anesthesiologists around the country meets quarterly via web conferencing. Topics of discussion include development of obstetric specific ASPIRE measures and modifications to general measures to accommodate OB procedures. This group provides expert opinion to inform ASPIRE work.

Obstetrics Subcommittee

July 20th

Pediatrics Subcommittee

This subgroup meets virtually once per quarter to discuss modifications to the existing ASPIRE measures for the pediatric population.

Pediatrics Subcommittee

August 17th

Thank You!