Quality Committee Meeting

July 25, 2022 @10:00 ET

Agenda

Announcements

- Matters arising
- PONV Toolkit
- Subcommittee Updates

Measure Review

- Drs Sunny Chiao (UVa) and Shafeena Nurani (Beaumont), TEMP 01
- Dr. Jonathan Kaper (Beaumont Trenton), TEMP 02

App Discussion

- WebCaseviewer
- Data Direct

MPOG

Meeting Minutes
February 2022

Roll Call – via Zoom or contact us

Announcements

MPOG Featured Member
July and August 2022

MORE INFO

Jerri Heiter, RN

Anesthesiology Clinical Quality Reviewer (ACQR)

Trinity St. Joseph Ann Arbor, Chelsea & Livingston

ASPIRE Collaborative Meeting

- Business and Updates
- QI Stories
  - Dr. Ben Stam (UM Health West)
  - Dr. Meredith Hall (Bronson Health)
- Hypotension Associated Outcomes
  - Dr. Kamal Maheshwari (Cleveland Clinic)
- Rational Vasopressor Selection
  - Dr. Allison Janda (UM Health Ann Arbor)
- ASPIRE Performance Review

Upcoming Events

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

September 26th

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

December 7th

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

ACQR Annual Retreat

September 16, 2022
DoubleTree Hotel, Ann Arbor

In person Only

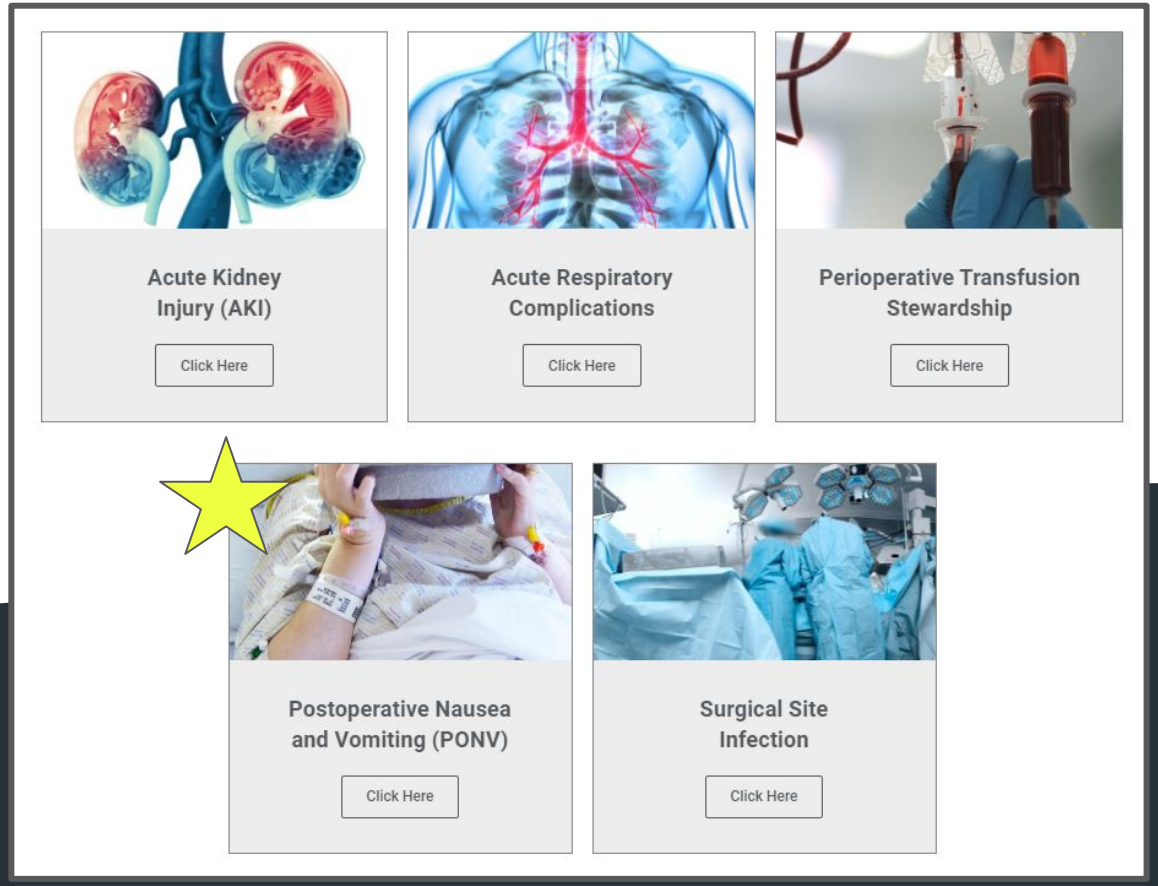
MPOG Annual Retreat

October 21, 2022
New Orleans, LA

In person + virtual

PONV Toolkit is complete!

Existing Toolkits



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

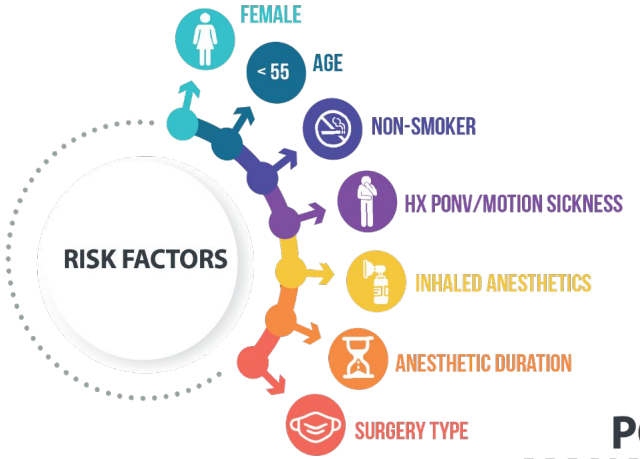
4th Consensus Guidelines for the Management of Postoperative Nausea and Vomiting (ASER & SAMBA-2020) recommendations:

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]

PONV MANAGEMENT



ANESTHESIA CONSIDERATIONS

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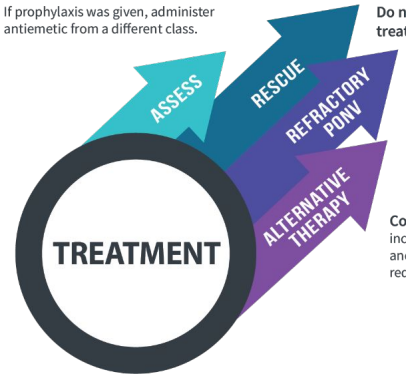
Assess for, and treat PONV immediately with rescue antiemetic.

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

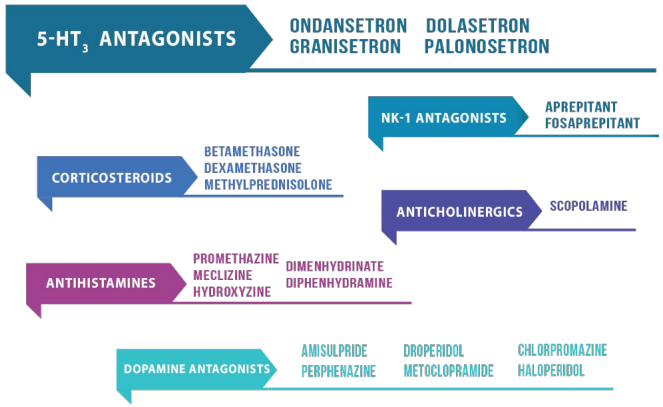


Do not re-dose scopolamine patch for treatment

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



Subcommittee Updates

Obstetric Anesthesia Subcommittee Updates

Met this past week with 20 participants in attendance

Slides, minutes, and recording posted on the website

- Reviewed results of the measure build survey that was sent in February
- Subcommittee voted to build a measure examining the percentage of cesarean delivery cases that converted to GA from an epidural (GA-03-OB)

Next meeting: December 7, 2022 1pm EST

If interested in joining the Obstetric Subcommittee, please contact Kate Buehler (kjbucrek@med.umich.edu)

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Measure Review

TEMP 01

Dr Sunny Chiao
University of Virginia

Dr. Shafeena Nurani
Beaumont Health System

Temp 01 Vote

1 vote/ site

Continue as is/ modify/ retire

Need > 50% to retire measure

Coordinating center will review all votes after meeting to ensure no duplication

Measure Review

TEMP 02

Dr. Jonathan Kaper
Beaumont Trenton

Temp 02 Vote

1 vote/ site

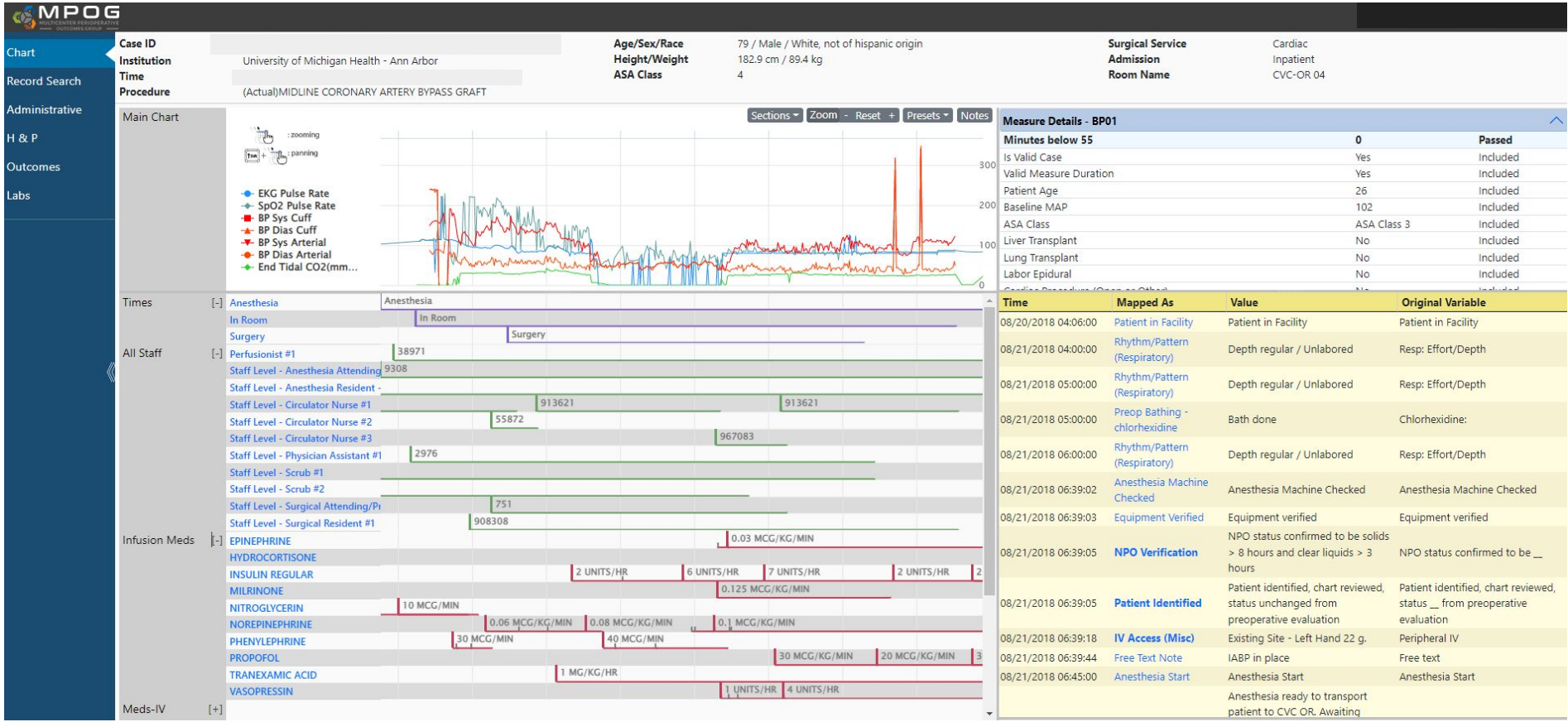
Continue as is/ modify/ retire

Need > 50% to retire measure

Coordinating center will review all votes after meeting to ensure no duplication

WebCaseviewer

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



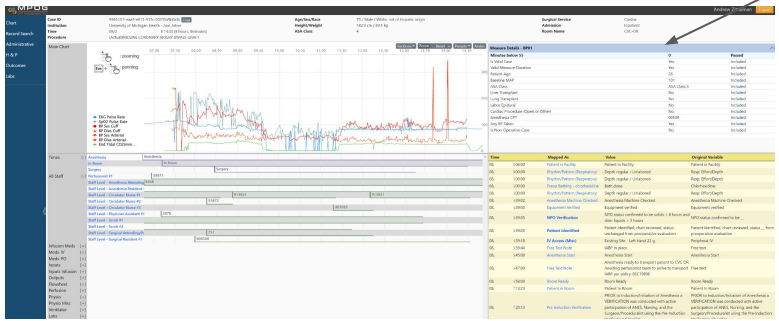
Web Case Viewer

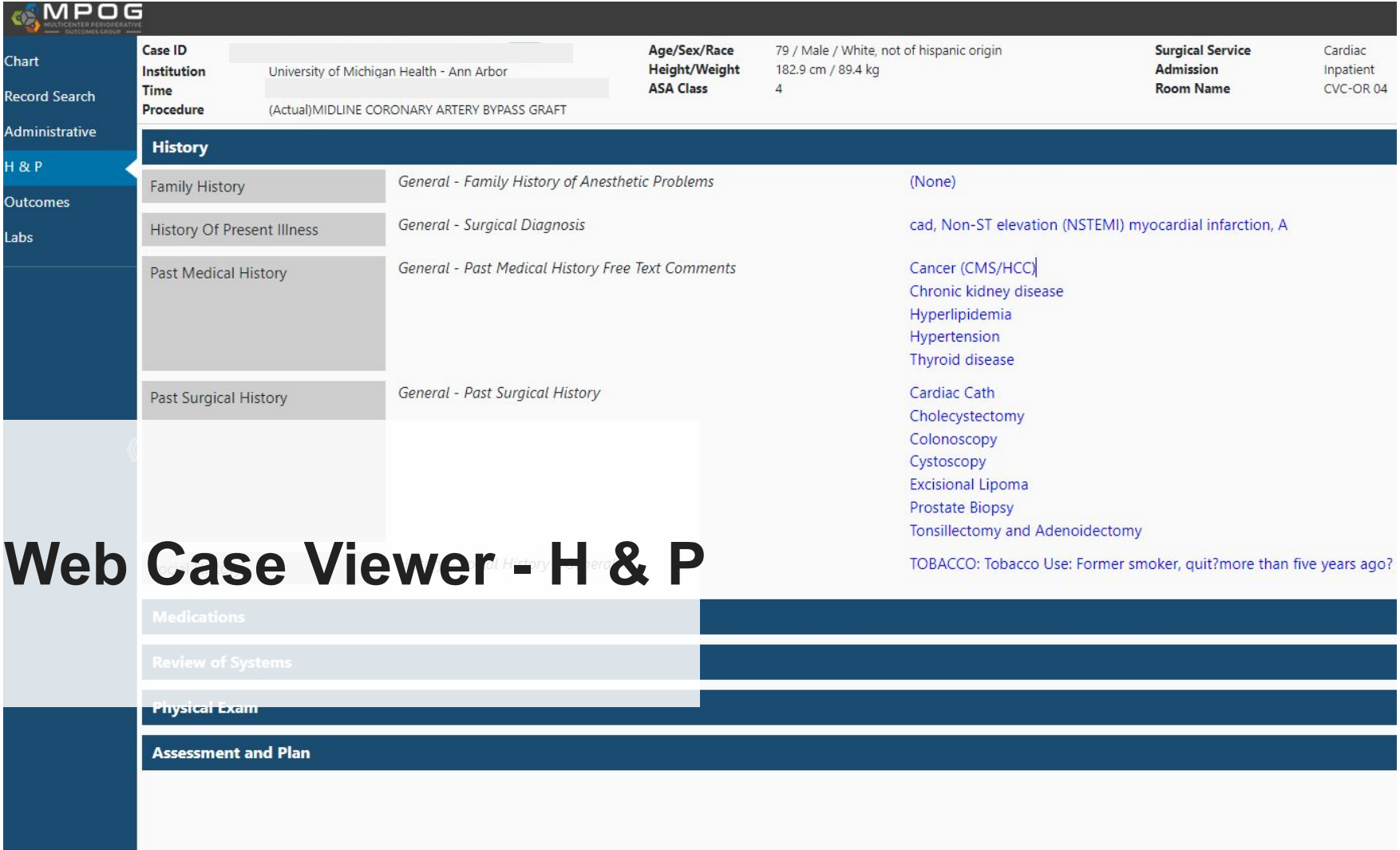
Measure Details

The result breakdown for the measure is brought to the top above the notes section for easy review

Measure Details - BP01

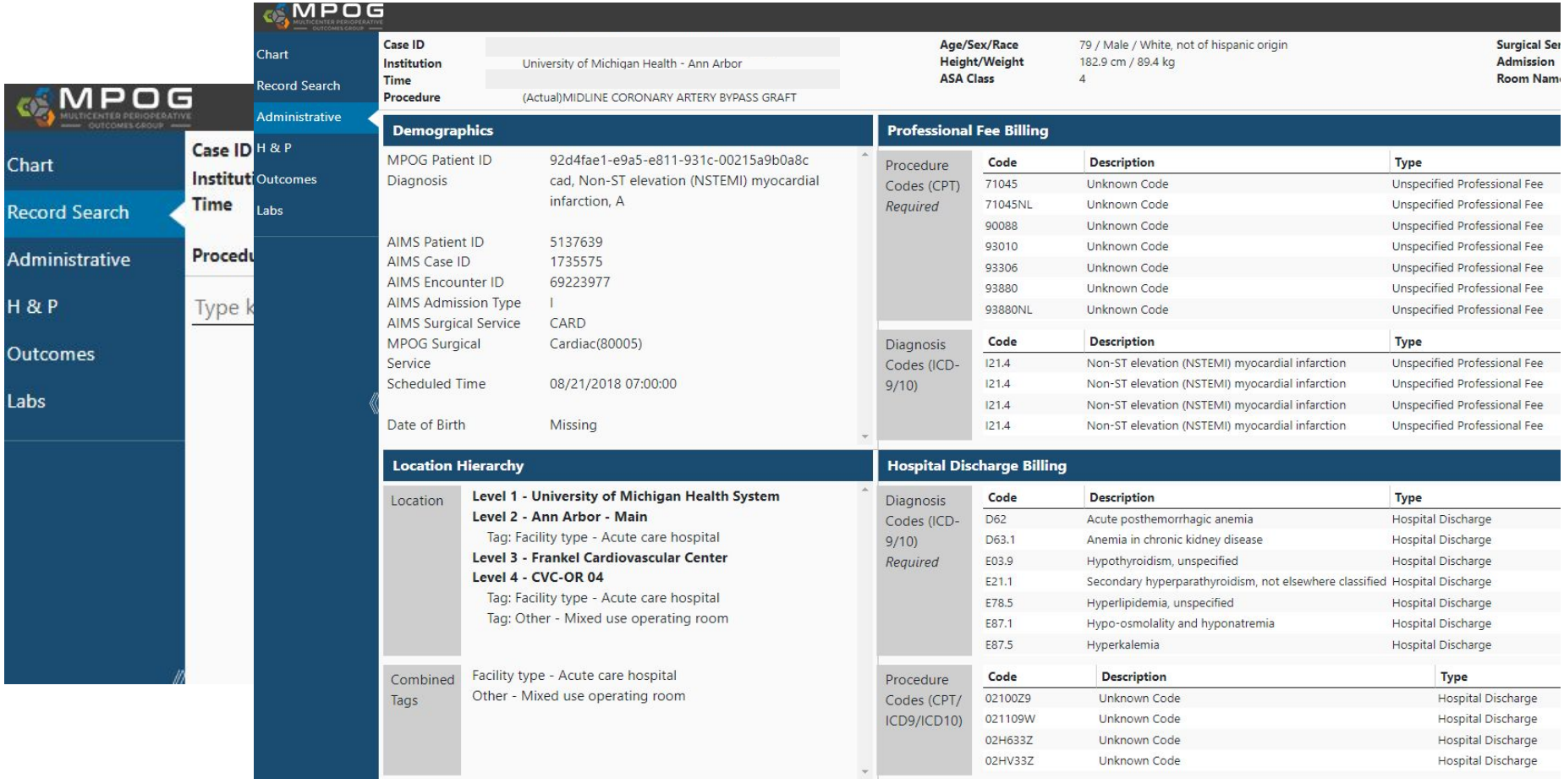
Minutes below 55	0	Passed
Is Valid Case	Yes	Included
Valid Measure Duration	Yes	Included
Patient Age	26	Included
Baseline MAP	101	Included
ASA Class	ASA Class 3	Included
Liver Transplant	No	Included
Lung Transplant	No	Included
Labor Epidural	No	Included
Cardiac Procedure (Open or Other)	No	Included
Anesthesia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





Web Case Viewer - H & P

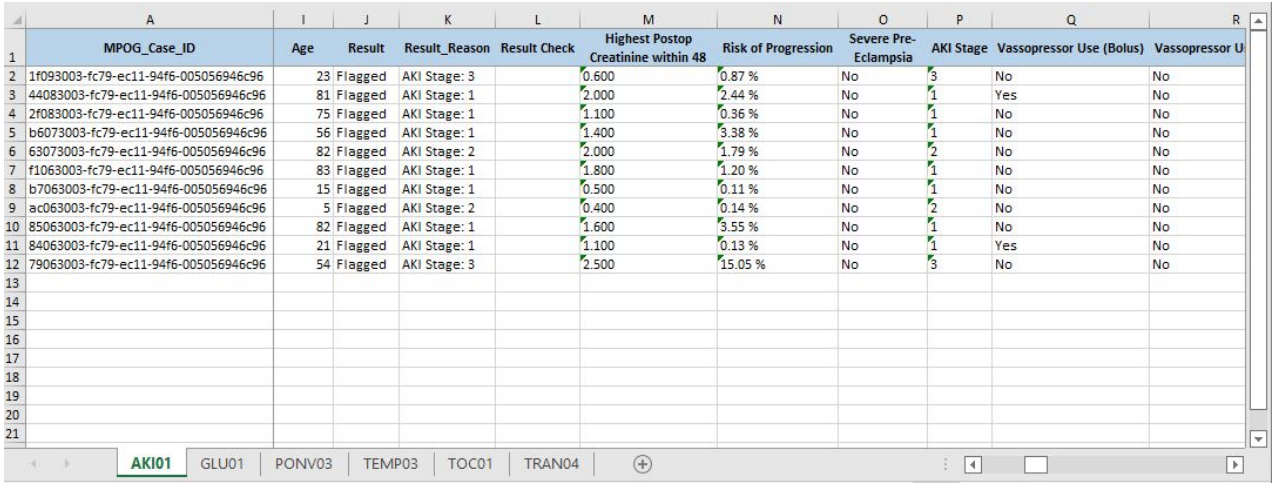
Record Search and Administrative Sections



MPOG QI Tools

Measure Case Report

- Standard columns for patient, procedure and anesthesia type
- Predetermined columns specific to measure to assist in flagged case review
- Not customizable by the end user



	A	I	J	K	L	M	N	O	P	Q	R
1	MPOG_Case_ID	Age	Result	Result_Reason	Result Check	Highest Postop Creatinine within 48	Risk of Progression	Severe Pre-Eclampsia	AKI Stage	Vassopressor Use (Bolus)	Vassopressor U
2	1f093003-fc79-ec11-94f6-005056946c96	23	Flagged	AKI Stage: 3		0.600	0.87 %	No	3	No	No
3	44083003-fc79-ec11-94f6-005056946c96	81	Flagged	AKI Stage: 1		2.000	2.44 %	No	1	Yes	No
4	2f083003-fc79-ec11-94f6-005056946c96	75	Flagged	AKI Stage: 1		1.100	0.36 %	No	1	No	No
5	b6073003-fc79-ec11-94f6-005056946c96	56	Flagged	AKI Stage: 1		1.400	3.38 %	No	1	No	No
6	63073003-fc79-ec11-94f6-005056946c96	82	Flagged	AKI Stage: 2		2.000	1.79 %	No	2	No	No
7	f1063003-fc79-ec11-94f6-005056946c96	83	Flagged	AKI Stage: 1		1.800	1.20 %	No	1	No	No
8	b7063003-fc79-ec11-94f6-005056946c96	15	Flagged	AKI Stage: 1		0.500	0.11 %	No	1	No	No
9	ac063003-fc79-ec11-94f6-005056946c96	5	Flagged	AKI Stage: 2		0.400	0.14 %	No	2	No	No
10	85063003-fc79-ec11-94f6-005056946c96	82	Flagged	AKI Stage: 1		1.600	3.55 %	No	1	No	No
11	84063003-fc79-ec11-94f6-005056946c96	21	Flagged	AKI Stage: 1		1.100	0.13 %	No	1	Yes	No
12	79063003-fc79-ec11-94f6-005056946c96	54	Flagged	AKI Stage: 3		2.500	15.05 %	No	3	No	No
13											
14											
15											
16											
17											
18											
19											
20											
21											

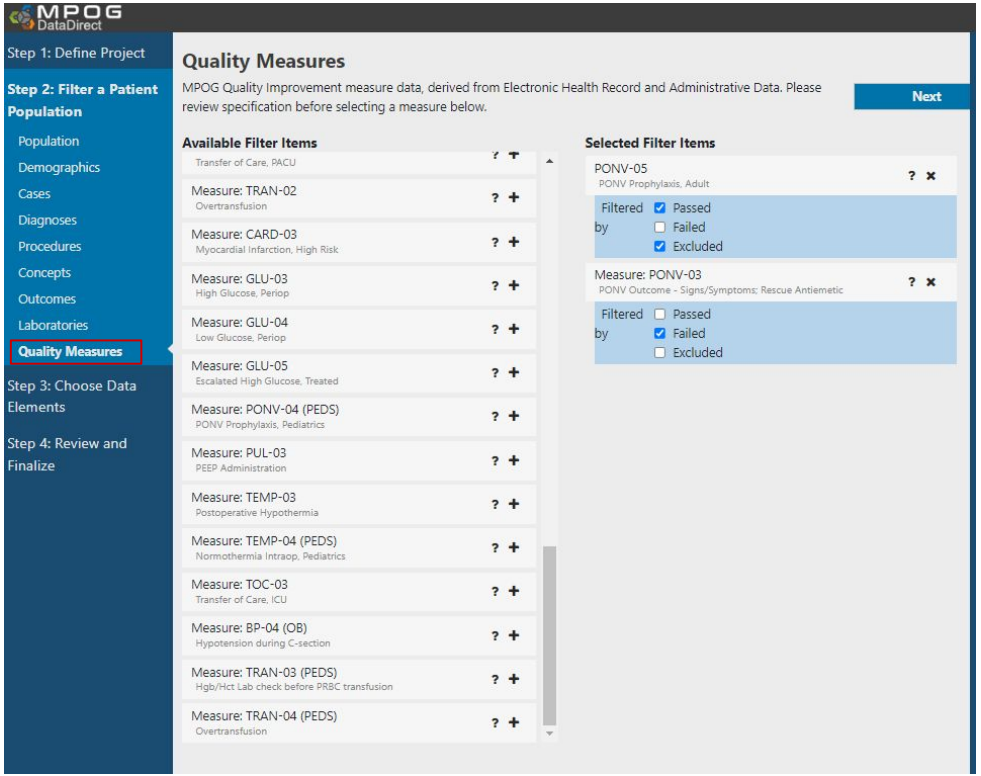
AKI01 | GLU01 | PONV03 | TEMP03 | TOC01 | TRAN04

Data Direct - Quality Mode

- All measures now available as filters and outputs
- Customizable columns

Current Limitations:

- Limited to measure result; does not include other measure details
- Columns limited to phenotypes and their definitions
- Exports results on multiple spreadsheets

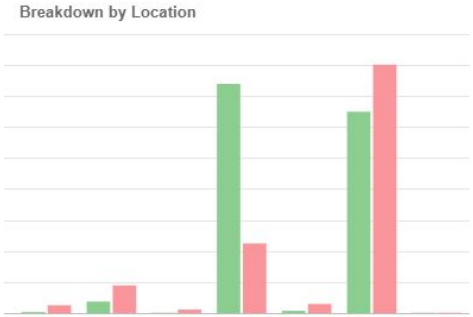


Next Steps

What modifications would be helpful in Data Direct?

Are there additional visualizations/filters that would be helpful in QI Reporting?

In general, are there additional reporting needs that MPOG could meet?



Thank You!

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

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OUTCOMES GROUP

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

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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

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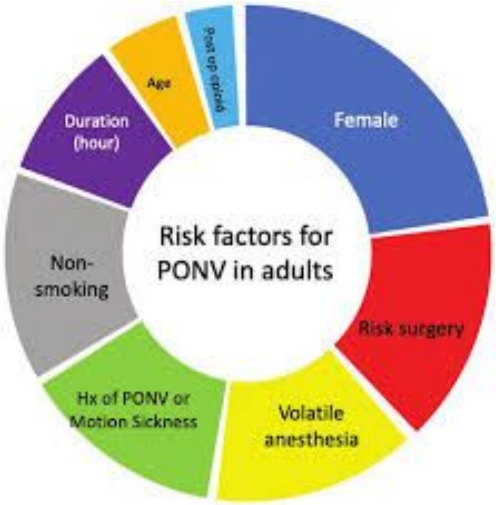
PONV 05 Updates

PONV 05 Revisions

- New Adult PONV prophylaxis measure released in January
- Upon review, sites have requested several modifications to PONV 05
- Plan to retire PONV 01/02 once revised version of PONV 05 released



Source: Fourth Consensus Guidelines for the Management of PONV

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Updates In Progress

1. Will now only consider actual CPT codes (not predicted) to assign procedure type risk factors (cholecystectomy, laparoscopy, gynecologic procedures)

2. ERCP (only) procedures will not trigger the cholecystectomy risk factor

3. Amulsipride will be added as an acceptable antiemetic agent

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Obstetric Population Updates (per OB Subcommittee)

- Include all cesarean delivery cases, regardless of age

- Adjust measure start time for labor epidural cases that convert to cesarean delivery: Include antiemetics given within 1-2 hours before surgery start time

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Amisulpride

- Antidopaminergic - IV formulation recently approved for management of PONV

- In a randomized, double-blind placebo-controlled trial (n=1,147), incidence of PONV significantly lower in the amisulpride group when given with a standard antiemetic *(Kranke et al., 2018, Anesthesiology)*

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Requested revisions pending Quality Committee vote

1. Add procedure exclusions for TEE and endoscopy procedures (even if GA is used)
2. Consider midazolam as an acceptable ‘antiemetic’
3. Remove intraop fentanyl as risk factor for PONV (part of the opioids for postoperative pain bucket of risk factors)

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Add Procedure Exclusions?

Procedure Type	Cases with PONV	Total Cases	% Cases with PONV	Recommendation
Cholecystectomy (control)	1453	11504	13%	Include
TEE	67	7000	1%	Exclude
Endoscopy	511	16891	3%	Exclude

MPOG Analysis:
806,978 Adult PONV 03b cases (05/2021-10/2021)

Overall PONV incidence: 5%

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Fentanyl as a risk factor

- Remove intraop fentanyl as a risk factor for PONV? (only consider other “long-acting” opioids?)

- Or, only include intraop fentanyl administrations if they meet a certain dose threshold for the case?

- Or, do we continue to include fentanyl as a risk factor?

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Midazolam

- 4th Consensus PONV Management Guidelines do not recommend midazolam use due to possibility of sedation-related adverse effects.

- Meta-analysis of 12 RCTs (n=841) found administration of IV midazolam to be associated with significantly reduced PONV *(Grant et al, 2016, Anesth & Analg)*

- No significant difference in PONV between midazolam and ondansetron given 30 minutes before end of surgery *(Lee et al., 2007, Anaesthesia)*

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Poll

1. Should we add a procedure exclusion for TEE?
2. Should we add a procedure exclusion for endoscopy
3. Should we add midazolam as an anti-emetic?
4. How do we handle fentanyl?
    a. Exclude fentanyl as an intraoperative PONV risk factor
    b. Include any dose of intraoperative fentanyl as a PONV risk factor (current state)
    c. Include dose dependent fentanyl as a PONV risk factor (dose TBD)

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Add Procedure Exclusions?

Procedure Type	Cases with PONV	Total Cases	% Cases with PONV	Recommendation
Cholecystectomy (control)	1453	11504	13%	Include
ECT	22	2857	1%	Exclude
TEE	67	7000	1%	Exclude
Radiology (CT/MRI/IR only)	333	5029	7%	?
Nerve Blocks	2365	126968	2%	Exclude
Cataracts	1878	17035	11%	Include
Endoscopy	511	16891	3%	Exclude
AV Fistula	79	1978	4%	Exclude
Cystoscopy	1506	269845	6%	?

MPOG Analysis: 806,978 Adult PONV 03b cases from 05/2021-10/2021

Overall PONV incidence: 5%

Add Procedure Exclusions?

Procedure Type	Cases with PONV	Total Cases	% Cases with PONV	Recommendation
I&D procedures	192	1673	11%	Include
Lumbar Puncture/Spinal tap/Line placement	6	306	4%	Exclude
Tympanoplasty	76	881	9%	?
Bronchoscopy/Intubation only	6	914	1%	Exclude
Dental Procedures	57	832	7%	?
Dilatation & Curettage (D&C)	173	3211	5%	Exclude
Others to consider?				

MPOG Analysis: 806,978 Adult PONV 03b cases from 05/2021-10/2021

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Pediatric Subcommittee

-

Cardiac Subcommittee

Posto
QI To

Postoperative Nausea & Vomiting QI Toolkit

OVERVIEW: I

RECOMMENDATIONS: PREVENTION & TREATMENT

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