ASPIRE Quality Committee Meeting

April 27th, 2020

Agenda

- Current Events
- Upcoming events
- Welcome University of Chicago!
- Updates
  - April Upgrade
  - Dashboard Update
  - Peds Subcommittee
  - OB Subcommittee
  - Proposal: Cardiac Subcommittee
- Measure Updates and Discussion
  - SSI measure
  - In hospital mortality measure
  - Hyperglycemia treatment

Thank You for all that you have been doing

COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU)

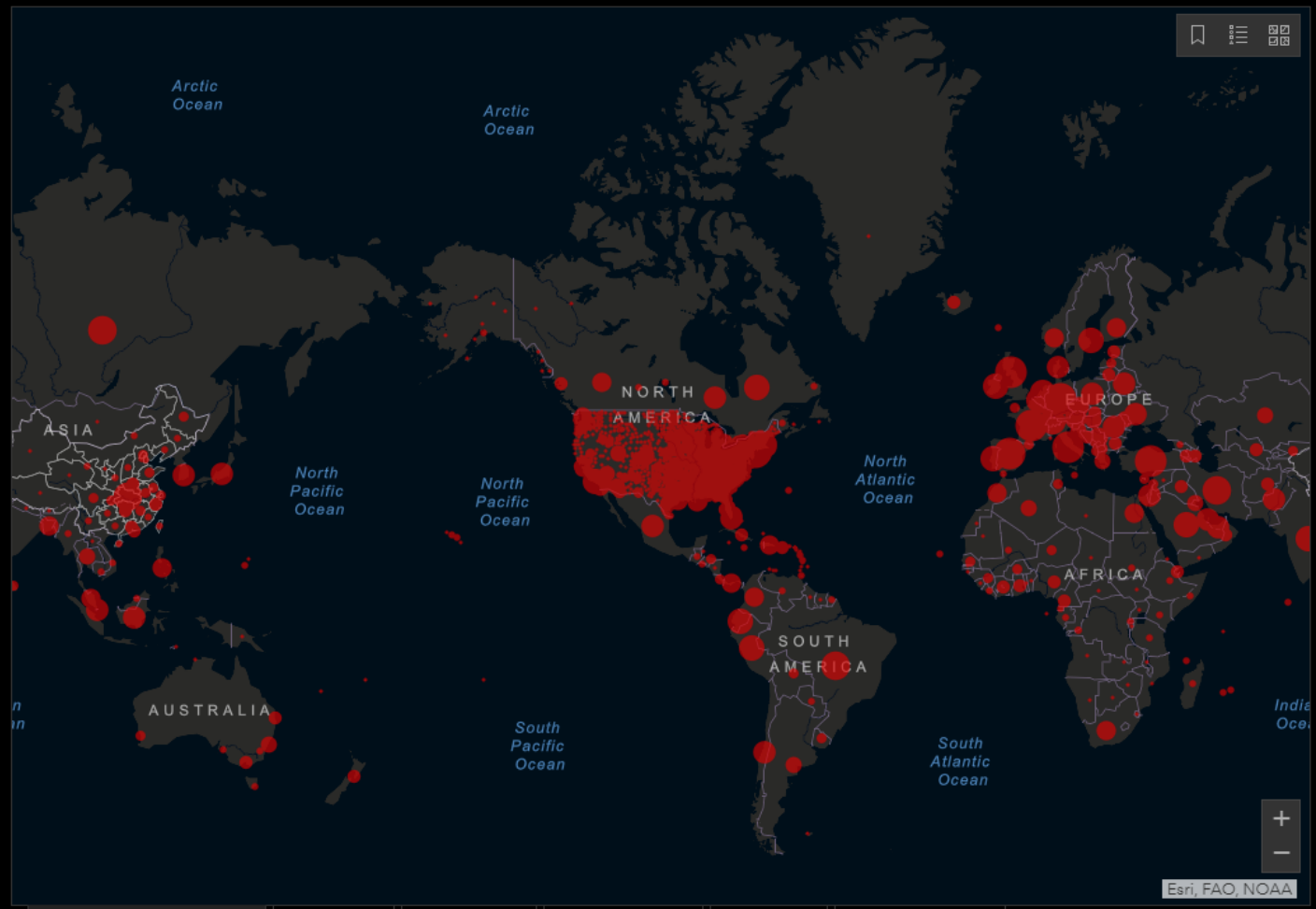
Total Confirmed
965,426

Confirmed Cases by Country/Region/Sovereignty

965,426	US
226,629	Spain
197,675	Italy
162,220	France
157,770	Germany
154,037	United Kingdom
110,130	Turkey
90,481	Iran
83,909	China
80,949	Russia
62,859	Brazil
47,143	Canada
46,134	Belgium
38,040	Netherlands
29,061	Switzerland
27,890	India
27,517	Peru
23,964	Portugal

Admin0 | Admin1 | Admin2

Last Updated at (M/D/YYYY)
4/26/2020, 8:31:19 PM



Cumulative Confirmed Cases | Active Cases | Incidence Rate | Case-Fatality Ratio | Testing Rate | Hospitalization Rate

185
countries/regions

Lancet Inf Dis Article: Here. Mobile Version: Here.
Lead by JHU CSSE. Automation Support: Esri Living Atlas team and JHU APL. Contact US. FAQ.

Data sources: WHO, CDC, ECDC, NHC, DXY, 1point3acres, Worldometers.info, BNO, the COVID Tracking Project (testing and hospitalizations), state and national government health departments, and local media reports. Read more in this blog.

Total Deaths
54,856

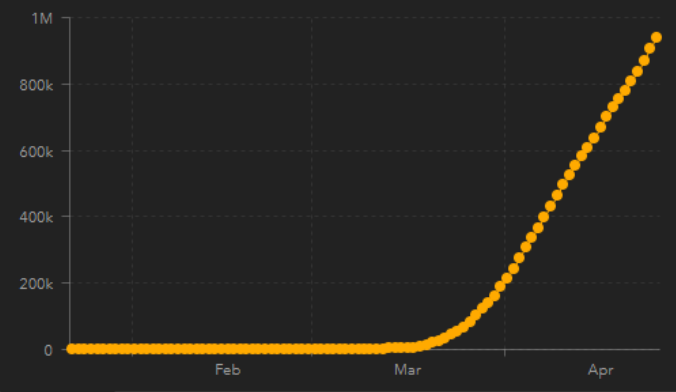
17,280 deaths	New York City **New York** US
1,587 deaths	Nassau **New York** US
1,560 deaths	Wayne **Michigan** US
1,313 deaths	Cook **Illinois** US
1,070 deaths	Suffolk **New York** US
1,023 deaths	Essex **New Jersey** US
955 deaths	Bergen **New Jersey** US
946 deaths	Westchester **New York** US

Deaths | Recovered

Total Test Conducted in U.S.
5,441,079

805,350 tested	New York US
526,084 tested	California US
344,613 tested	Florida US
276,021 tested	Texas US
236,100 tested	Massachusetts US
223,144 tested	New Jersey US
214,952 tested	Illinois US
198,593 tested	Pennsylvania US

US Tested | US Hospitalization



Confirmed | Logarithmic | Daily Cases

Meeting Minutes
February 2019

Roll Call – via webex or contact us

2020 Quality Committee Meetings on Monday

June 22, 2020 at 10:00 a.m.
August 24, 2020 at 10:00 a.m.
October 26, 2020 at 10:00 a.m.

Upcoming Events

First, thanks to our invited speakers for the cancelled March meeting

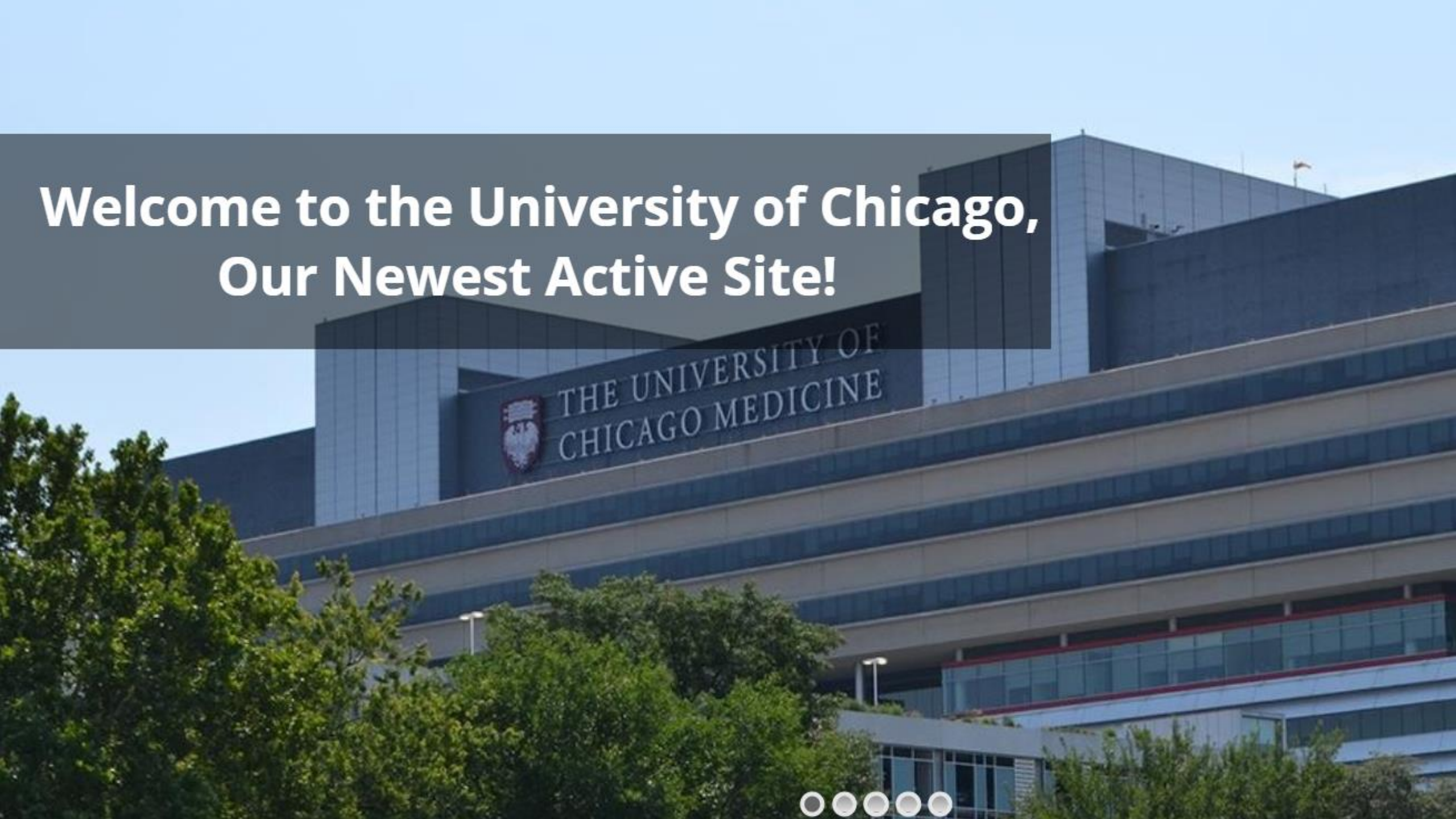
Tom Varghese, MD

Dan Clauw, MD

Eve Kerr, MD

ASPIRE Summer Meeting
July 17th 2020

Mark your calendars and keep your fingers crossed


Welcome to the University of Chicago,
Our Newest Active Site!
THE UNIVERSITY OF
CHICAGO MEDICINE

MPOG Featured Member

March and April 2020

MORE INFO

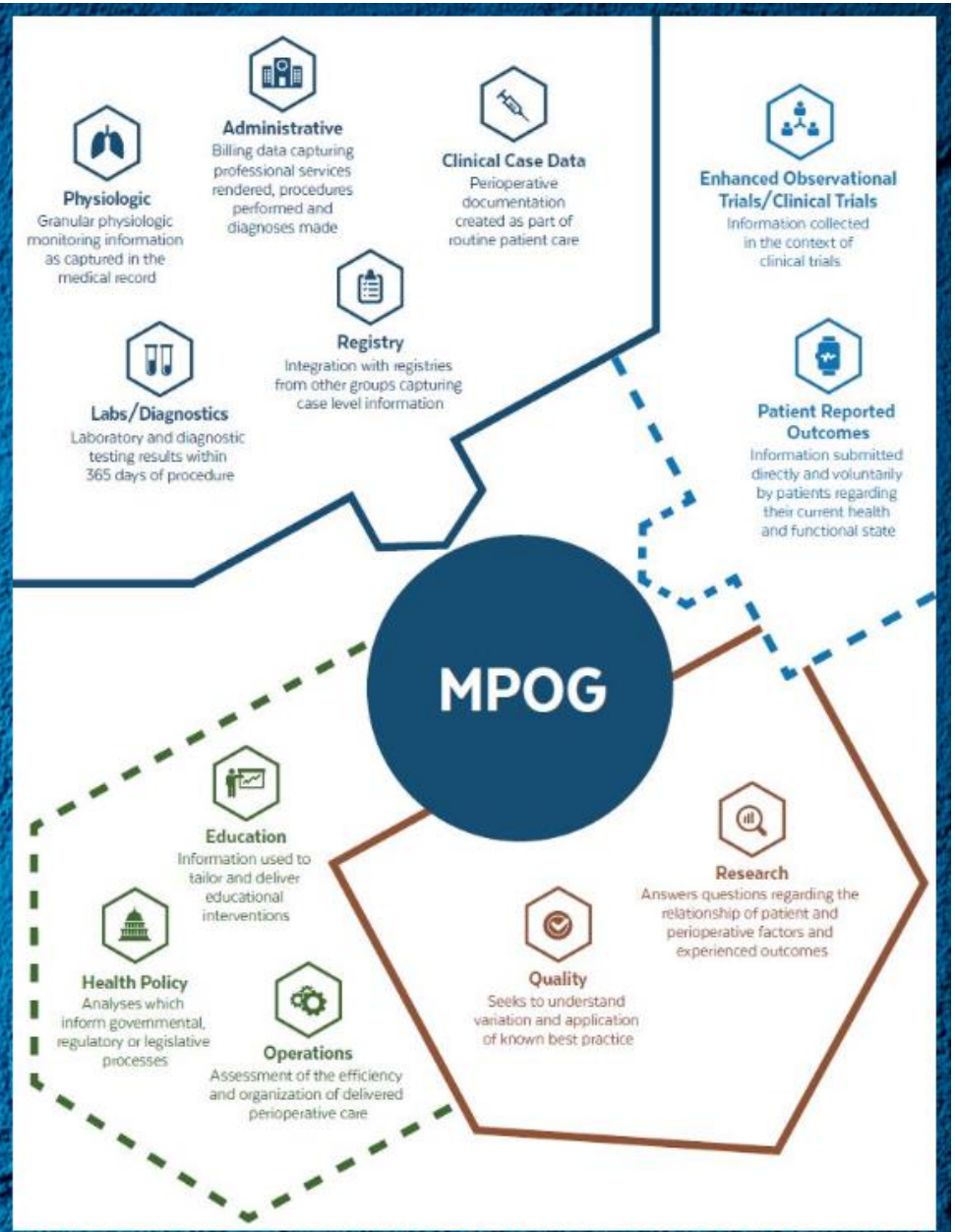
Penn Medicine

Lee A. Fleisher, MD

Robert D. Dripps Professor and Chair

The MPOG Approach to Research and Quality Improvement Featured in Anesthesia & Analgesia

MORE INFO



Technology, Computing, and Simulation

SPECIAL ARTICLE

Considerations for Integration of Perioperative Electronic Health Records Across Institutions for Research and Quality Improvement: The Approach Taken by the Multicenter Perioperative Outcomes Group

Douglas A. Colquhoun, MBChB, MSc, MPH,* Amy M. Shanks, PhD,* Steven R. Kapeles, MD,†
Nirav Shah, MD,* Leif Saager, DrMed, MMM,*‡ Michelle T. Vaughn, MPH,*
Kathryn Buehler, MS, RN, CPPS,* Michael L. Burns, MD, PhD,* Kevin K. Tremper, MD, PhD,*
Robert E. Freundlich, MD,§ Michael Aziz, MD,‖ Sachin Kheterpal, MD, MBA, [illegible]
Michael R. Mathis, MD*

April 2020 Upgrade

- MPOG Database and Application Suite Upgrade now available!
- Release Notes available on the MPOG website
- Contact support@mpog.zendesk.com for details or to confirm that your site completed the upgrade successfully

MPOG Upgrade Release Notes

April 1, 2020

Sections Updated

1. Case Validation
2. Data Diagnostics
3. Import Manager Assistant
4. Case Viewer 2.0

1. Case Validation

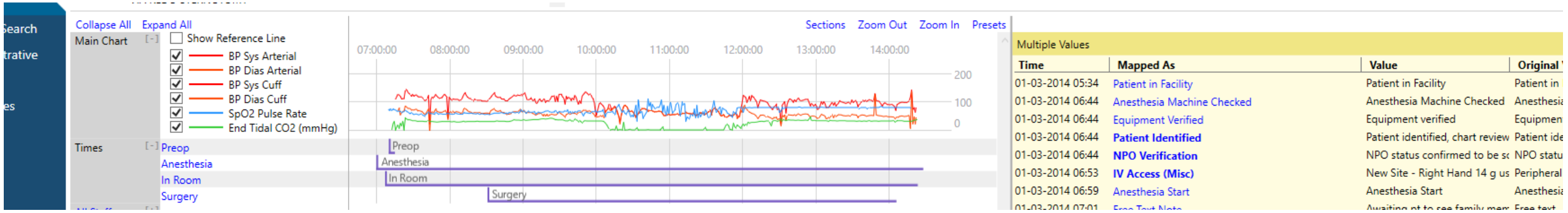
Overview

A. Sections were reordered by topics to assist case reviewers
B. Remove questions
C. New neurraxial / regional question
D. Postoperative recover question fixed
E. Postop physiologic
F. Intraop infusions

A. Sections were reordered by topic to assist case reviewers:
   - Case Information
   - Times
   - Staff
   - Physiologic
   - Medications
   - Labs

April Upgrade: Case Viewer Changes

- Original Case Viewer officially retired – replaced by new Case Viewer
- *NEW* Case Viewer User Guide available on the MPOG website
- Copy buttons for MPOG Case ID & MRN reinstated
- Added patient age filter on the Case Search page
- Notes section opens on the right side by default when you open a case now
- Date of death displays in banner, if available



April Upgrade: Case Validation Changes

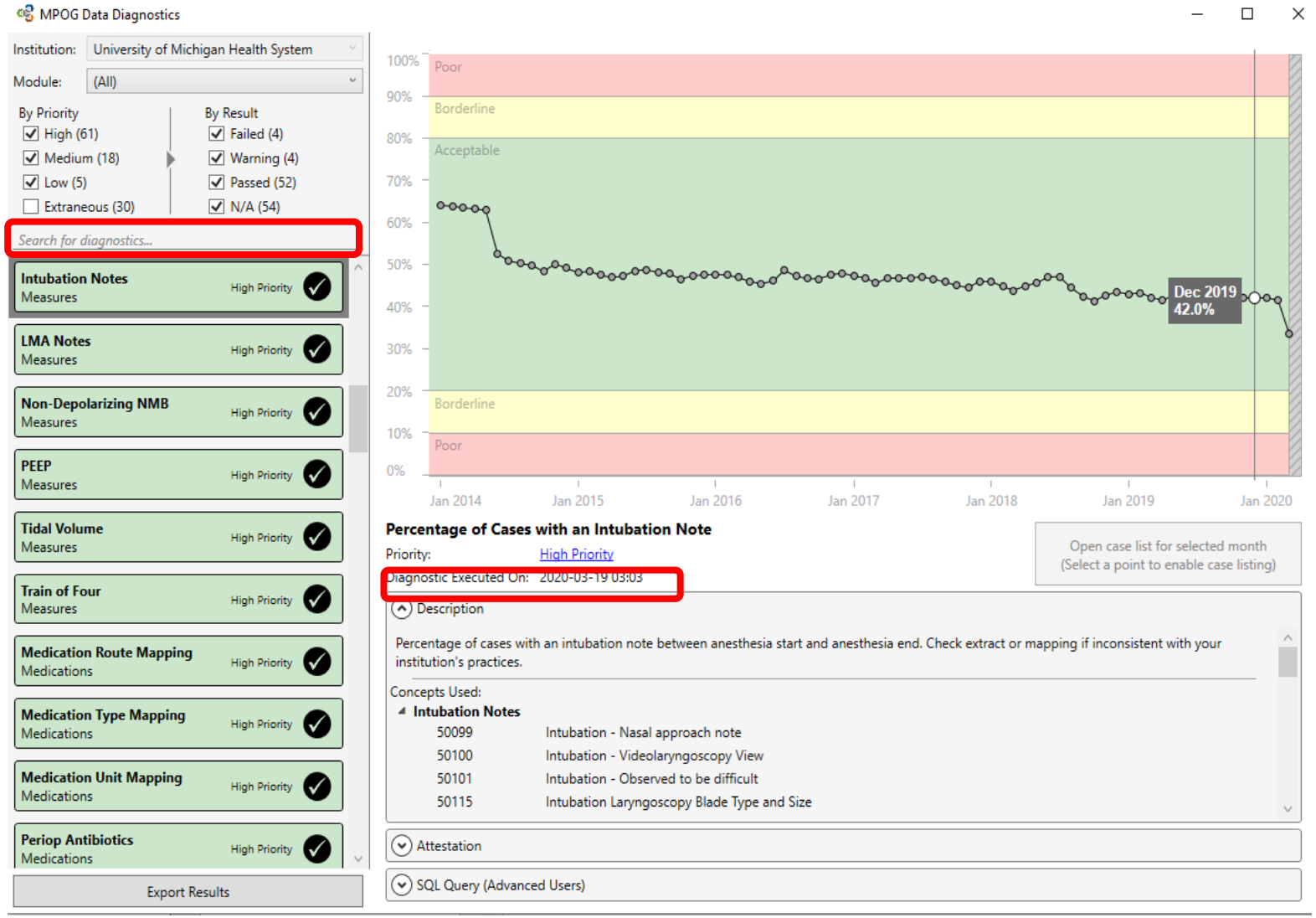
- Sections were reordered by topic to assist case reviewers:
  - Case Information
  - Times
  - Staff
  - Physiologic
  - Medications
  - Labs

Questions for Validation

Case Information	*No Time Restriction*
Preop	*From 4 Hours Before Anesthesia Start to Anesthesia Start*
Perioperative Times	*From 4 Hours Before Anesthesia Start to Anesthesia End + 6 Hours*
Intraop Staff	*No Time Restriction*
Preop Physiologic	*From 4 Hours Before Anesthesia Start to Anesthesia Start*
Intraop Physiologic	*From Anesthesia Start to Patient Out of Room*
Postop Physiologic	*From Patient Out of Room to Anesthesia End + 6 Hours*
Preop Medications	*From 4 Hours Before Anesthesia Start to Anesthesia Start*
Intraop Medications and Fluids	*From Anesthesia Start to Patient Out of Room*
Postop Medications	*From Patient Out of Room to Anesthesia End + 6 Hours*
Labs	*From Day Before to Day After*

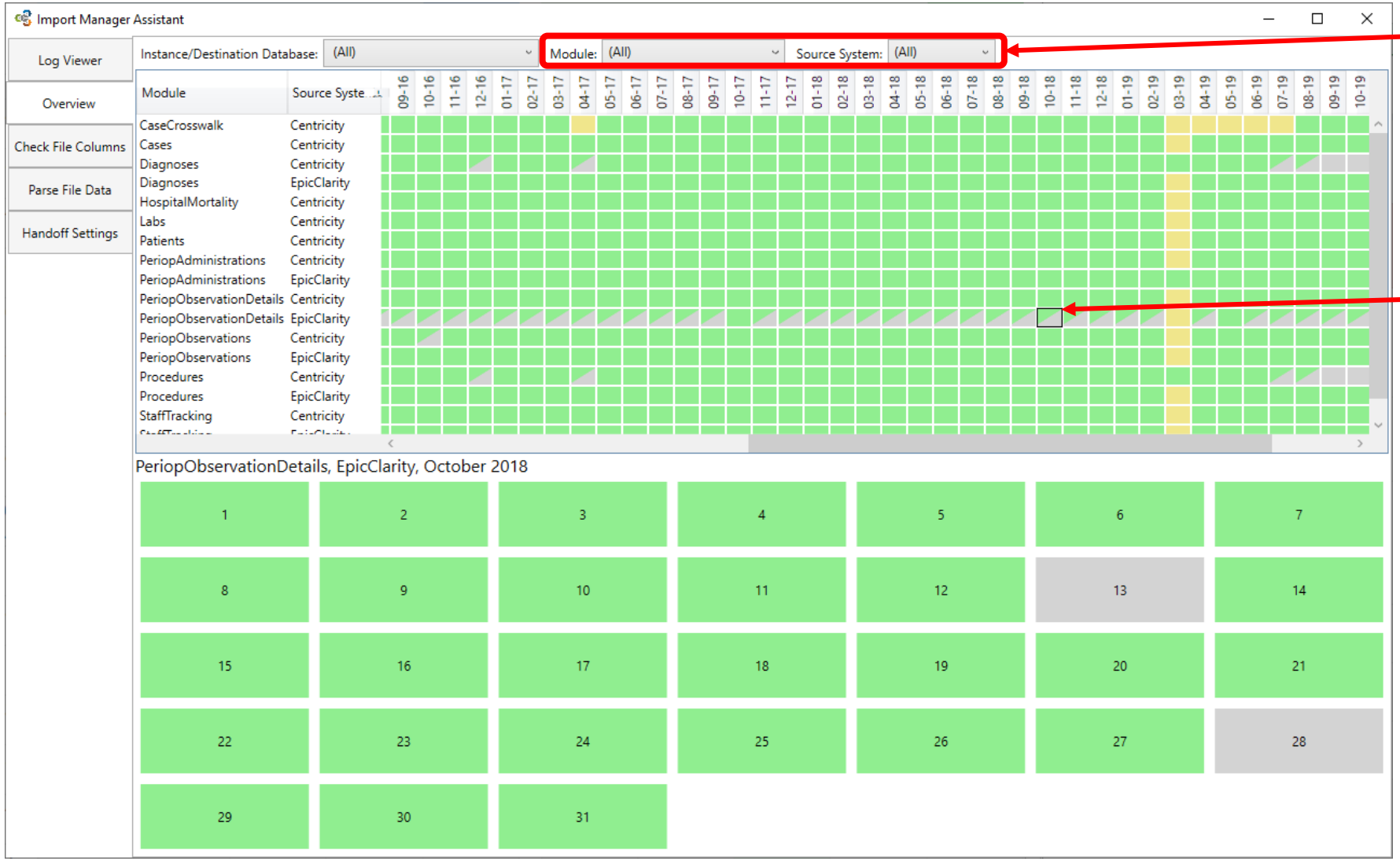
*Removed general anesthesia & preop medication questions
*Revised neuraxial/regional question
*Reworded some questions to make more clear

April Upgrade: Data Diagnostic Changes



- Added free text search filter
- Updated aesthetic - vertical guide allows for easier data point selection.
- “Diagnostic Executed On” now includes time.
- Various bug fixes

April Upgrade: IM Assistant Changes



Sort by source system and module columns

Months with partial data are indicated with a half green/half gray box

Application Updates

Dashboard 2.0

- Release by end of May
- Can use alongside existing dashboard
- Plan to retire old dashboard by MPOG retreat in October

Entity
University of Michigan Health System

Time Period
Past 12 Months

+ Surgical Service
+ Patient Age
+ Location
+ Provider Type

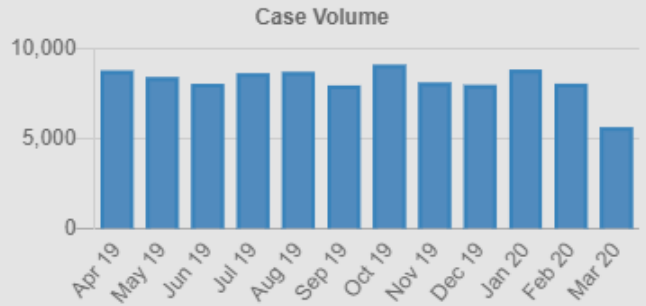
Departmental Focus

The following measures have been chosen by your site.

98,036 Cases

520 Providers

April 1, 2019 - March 31, 2020



Low MAP Prevention < 55
BP-01

The percentage of cases where sustained intraoperative hypotension (MAP < 55 mmHg for 20 mins or more) was avoided

Threshold ≥ 90%

99% Cases

Avoiding Monitoring Gaps
BP-02

The percentage of cases that avoid blood pressure monitoring gaps >10 minutes

Threshold ≥ 90%

95% Cases

Myocardial Infarction
CARD-02

The percentage of cases with significantly elevated postoperative troponin levels

Threshold ≤ 5%

Outcome

0.2% Cases

High Glucose Treated, Intraop
GLU-01

The percentage of cases with intraoperative high glucose (>200mg/dL) appropriately treated or rechecked

Threshold ≥ 90%

98% Cases

Low Glucose Treated, Intraop
GLU-02

The percentage of cases with intraoperative low glucose (<60mg/dL) appropriately treated or rechecked

Threshold ≥ 90%

91% Cases

Avoiding Medication Overdose
MED-01

The percentage of cases with adminsitration of naloxone or flumazenil

Threshold ≤ 5%

Outcome

0.1% Cases

Train of Four Taken
NMB-01

The percentage of cases with administration of a non-depolarizing neuromuscular blocker and documentation of a TOF value

Threshold ≥ 90%

96% Cases

Reversal Administered
NMB-02

The percentage of cases with appropriate neuromuscular reversal administration

Threshold ≥ 90%

99% Cases

PONV prophylaxis
PONV-01

The percentage of cases with appropriate anitemetic administration for postoperative nausea and vomiting prophylaxis

Threshold ≥ 90%

93% Cases

MPOG Reporting

Dashboards | Measure Summary | Provider List | Case List

Entity
University of Michigan Health System

Time Period
Past 12 Months

- Surgical Service
- Patient Age
- Location
- Provider Type

NMB-01: Train of Four Taken

The percentage of cases with administration of a non-depolarizing neuromuscular blocker and documentation of a TOF value. More Info

Overall Score

Threshold: > 90%

Result Counts

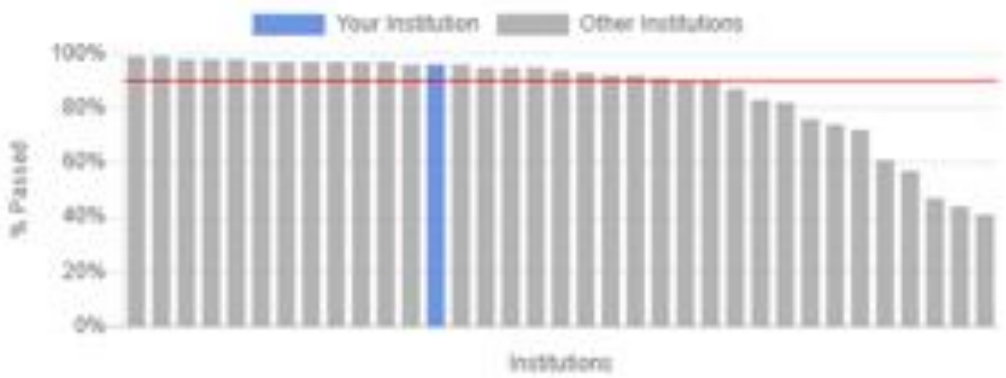
Result	Case Count
Passed	2,217
Flagged	85
Excluded	5,741
Total	**8,043**

Go to Case List

Go to Provider List

Performance Trend

Institution Comparison



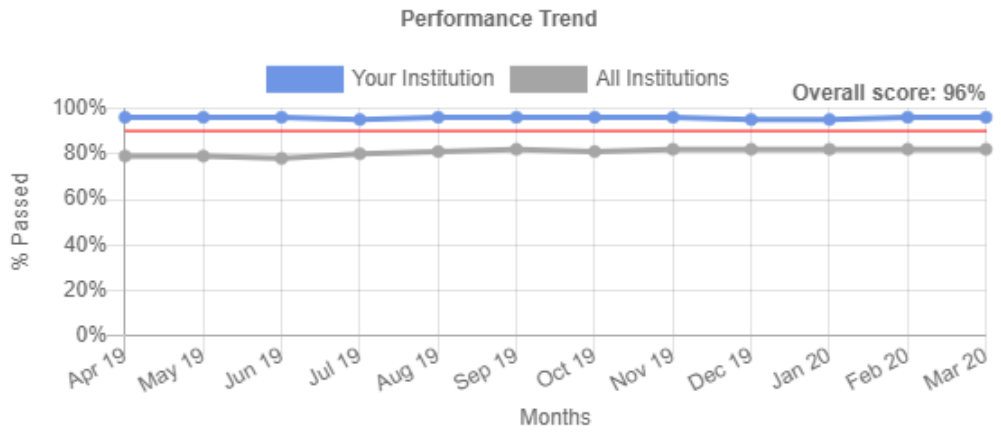
MPOG Reporting

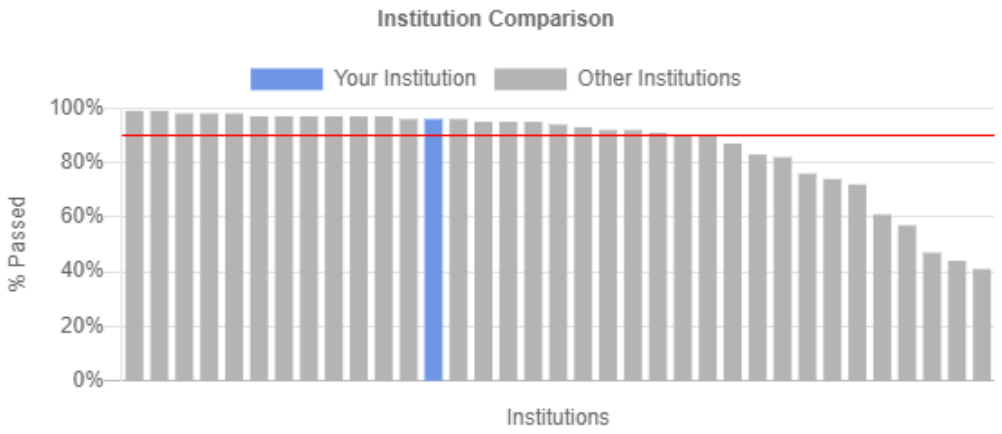
Dashboards | Measure Summary | Provider List | Case List

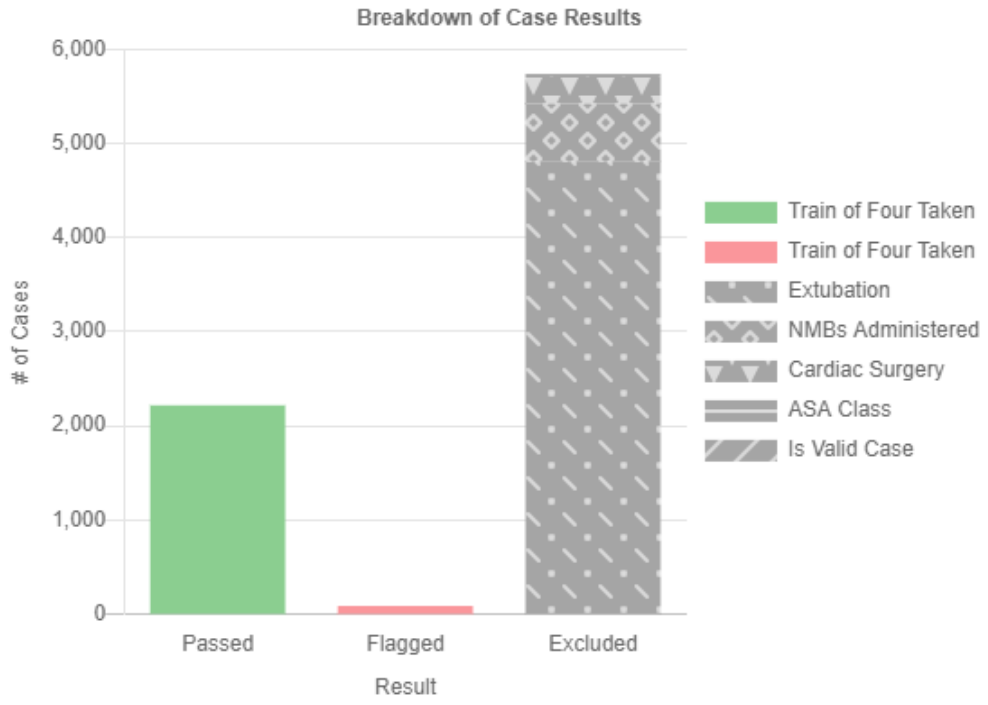
Entity
University of Michigan Health System

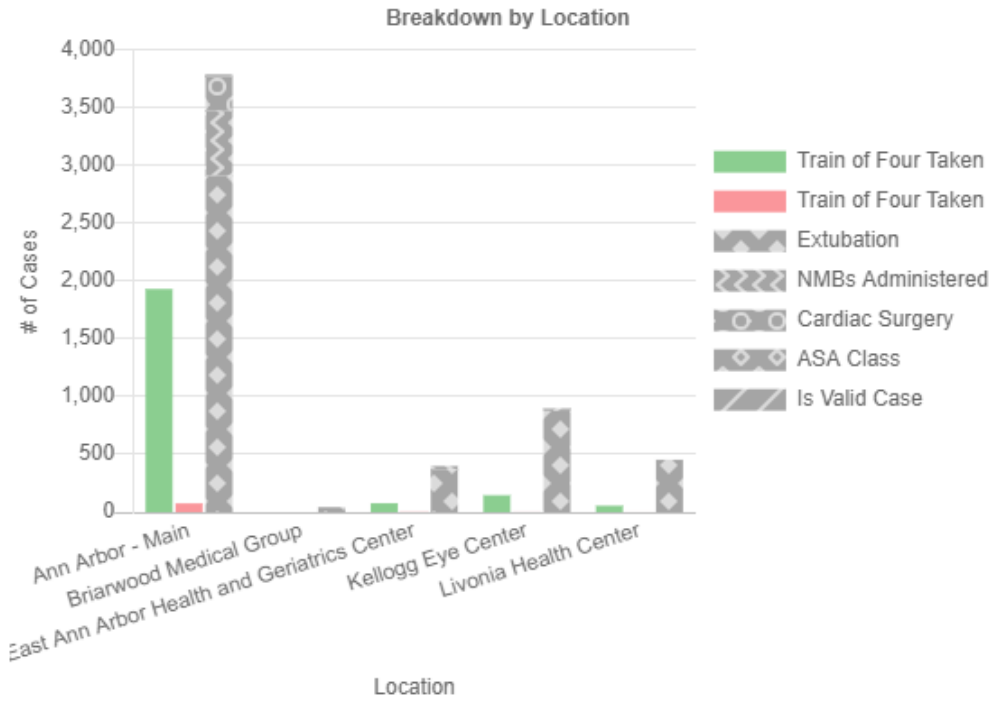
Time Period
Past 12 Months

+ Surgical Service
+ Patient Age
+ Location
+ Provider Type









ASPIRE Pediatric Subcommittee Update

Pediatric Subcommittee Update

- Peds group met on April 21st
  - 30 Pediatric Anesthesiologists were in attendance
  - Partnering with SPA Q&S Workgroup, established to inform the MPOG pediatric subcommittee of best practices in pediatric anesthesia. First meeting October 2020 at ASA-Washington, D.C.
    - Liaisons: Brad Taicher (Duke) and Vikas O'Reilly-Shah (Seattle Children's)
  - UM Peds Quality Champion – Bishr Haydar and Lisa Vitale
- Temperature Management Measure Criteria Confirmed (TEMP-04-Peds)
  - **Description:** Percentage of patients < 18 years old who undergo any procedure greater than 30 minutes whom have a **median** core temperature < 36°C (96.8°F) or **nadir** temp < 35°C (95°F)
  - **Measure Time Period:** Patient in Room → Patient out of Room
  - **Exclusions**
    - Cases < 30 minutes duration
    - MAC/Sedation Cases
    - Cases without documentation of a core or near core temperature route
    - ASA 5 and 6
    - Cardiac Surgery

Next Steps – Finalize Opioid Equivalency Specification

- Adding Tonsillectomy and/or Adenoidectomy for pediatric patients < 18yo
- Cases included: CPT code 00170 **and** with procedure text ‘tonsil’ and/or ‘adenoid’

CARDIAC
Average administration: Based on a 6.7 hour case and 70kg patient (mg morphine IV)
76 Average (all sites) 75

SPINE
Average administration: Based on a 3.3 hour case and 70kg patient (mg morphine IV)
15 Average (all sites) 19

UPPER ABDOMEN
Average administration: Based on a 3.1 hour case and 70kg patient (mg morphine IV)
21 Average (all sites) 21

LOWER ABDOMEN
Average administration: Based on a 2.7 hour case and 70kg patient (mg morphine IV)
18 Average (all sites) 19

HYSTERECTOMY
Average administration: Based on a 3.7 hour case and 70kg patient (mg morphine IV)
22 Average (all sites) 21

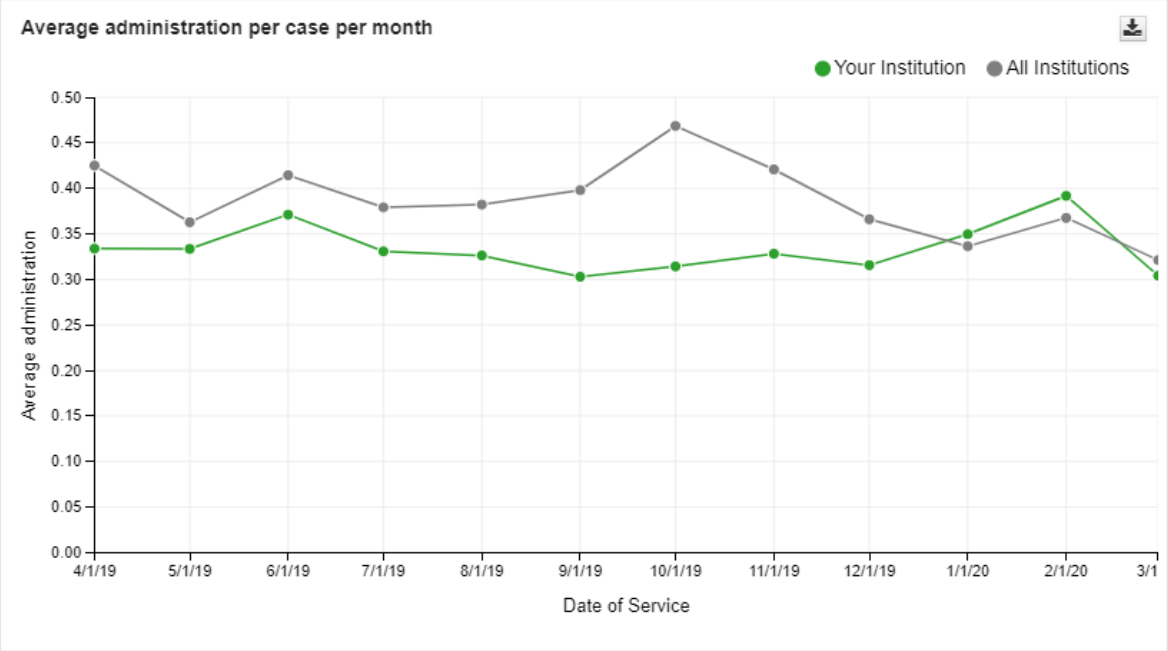
KNEE/POPLITEAL
Average administration: Based on a 2.5 hour case and 70kg patient (mg morphine IV)
7 Average (all sites) 9

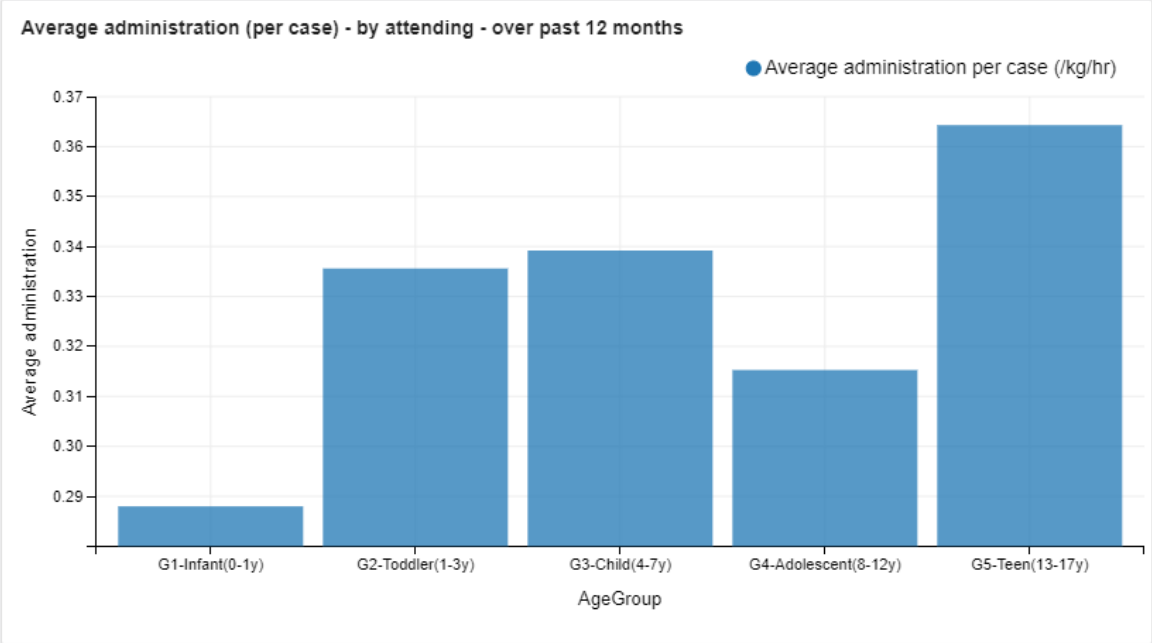
HIP
Average administration: Based on a 2.5 hour case and 70kg patient (mg morphine IV)
8 Average (all sites) 11

TONSIL/ADENOID (Peds)
Average administration by weight and case length (/kg/hr)
0.33 Average (all sites) 0.40

Opioid Equivalency Dashboard (Peds)

- Informational measure only (no flagging of cases)
- Allows sites to compare practices across all other MPOG institutions





* Test data – not actual representation of practice

MPOG Obstetric Anesthesia Subcommittee

Obstetric Anesthesia Subcommittee Update

- Last meeting March 17th
  - Decision to proceed with ABX 01 (OB): Antibiotic Timing for Cesarean Deliveries
    - Anticipated release: May 2020
  - Discussion on BP 04 (OB): Prolonged Hypotension for Cesarean Deliveries
    - Committee able to reach consensus on initial measure build
    - Measure specification in progress

BP 04 OB: Hypotension during Cesarean Deliveries

Description:

- Total cumulative minutes of hypotension after spinal placement
- Total cumulative minutes of hypotension will be resulted for two time periods: spinal placement to delivery and delivery through anesthesia end
- For patients with pre-eclampsia, hypotension is defined as >20% decline from baseline systolic blood pressure
- For patients without pre-eclampsia, hypotension is defined as SBP<90mmHg

Inclusions:

- All cesarean deliveries (Determined using the MPOG Obstetric Anesthesia Type phenotype) with neuraxial anesthesia only
- Patients undergoing cesarean section with hysterectomy (CPT: 01969)

Exclusions:

- Cesarean delivery with general anesthesia only (without neuraxial anesthesia)- determined using Anesthesia Technique-Neuraxial MPOG phenotype
- Emergency cesarean delivery with diagnosis of placental abruption (ICD-10: O45*)
- Rupture of uterus (spontaneous) before onset of labor (ICD-10: O71.0)
- Newborn affected by intrauterine blood loss from ruptured cord (ICD-10: P50.1)
- Abnormal uterine or vaginal bleeding, unspecified (ICD-10: N93.9)
- Placenta previa with hemorrhage, third trimester (ICD-10: O44.13)
- Hemorrhage from placenta previa, antepartum condition or complication (ICD-10: 641.13)
- Hemorrhage from placenta previa, delivered, with or without mention of antepartum condition (ICD-10: 641.11)

Cardiac Subcommittee Proposal

- Many current ASPIRE measures either exclude cardiac cases or do not incorporate cardiac-specific factors
- We have brainstormed about potential cardiac ASPIRE measures but want more input from the group
- Please join our the Cardiac Subcommittee!
- Contact Allison Janda (ajanda@med.umich.edu) or Nirav (nirshah@med.umich.edu) if you wish to participate

Measure Updates

Surgical Site Infection (SSI 01)
In hospital mortality (MORT 01)

Surgical Site Infection Measure (SSI 01)

- Includes only cases that were present in both the MSQC and ASPIRE registries (denominator)
- Displays surgical site infection data (superficial, deep, organ space, and ALL)
  - Using MSQC sample of cases
  - SSI data abstracted by nurse abstractors in each participating site
- Will display the previous 12 month trend over time including risk-adjusted and non risk-adjusted rates
- Refreshed quarterly (based on data integration schedule with MSQC)
- Ability to filter by surgical procedure (MSQC covers general surgery, vascular surgery, and hysterectomy)
- Available at institution level only (not on provider emails), on new dashboard
- Opportunity for Quality Champions to review with ASPIRE process measures affecting surgical site infection
- Can enable for sites submitting NSQIP data at quarterly intervals.

Entity
University of Michigan

Time Period
Past 12 Months

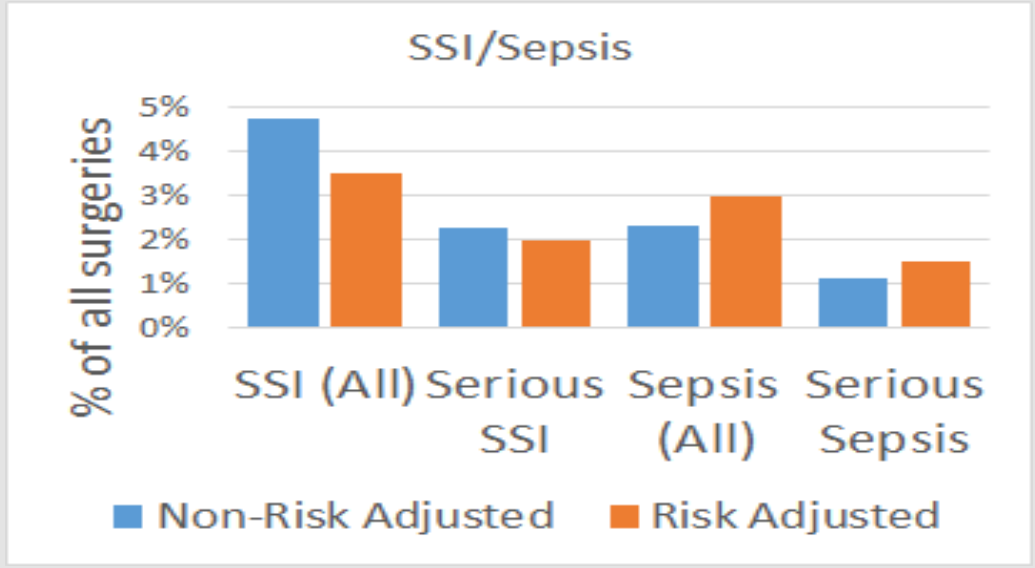
SPECIALTY
General Surgery

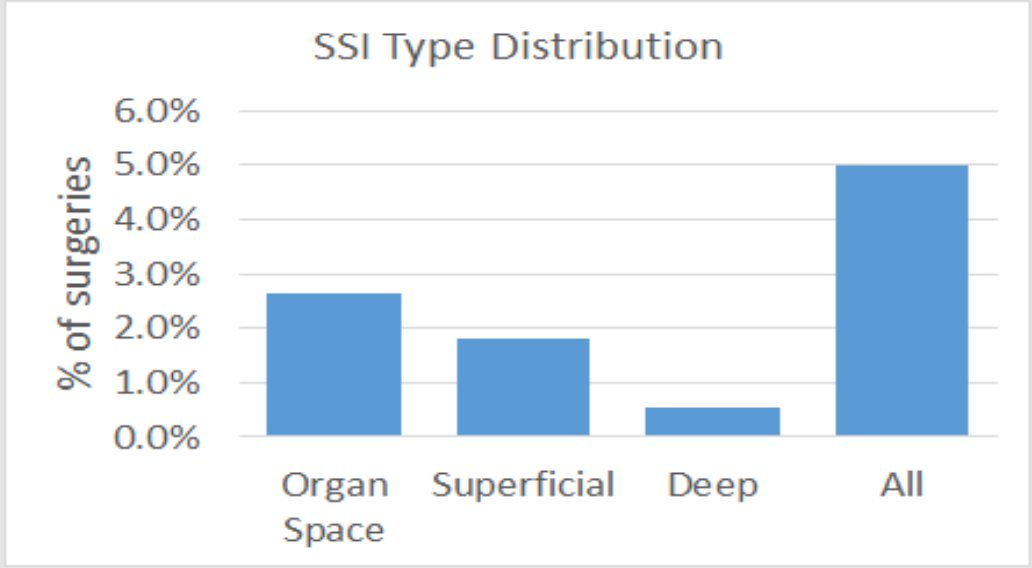
GENERAL SURGERY PROCEDURES
All General Surgery

- All General Surgery
- Appendectomy
- Cholecystectomy
- Colectomy
- Proctectomy
- Esophagectomy
- Gastrectomy
- Hepatectomy
- Hernia Repair
- Pancreatectomy
- Anti-reflux surgery
- Small Bowel Repair
- Splenectomy
- Other Esophageal Procedure
- Other Gastric Procedures

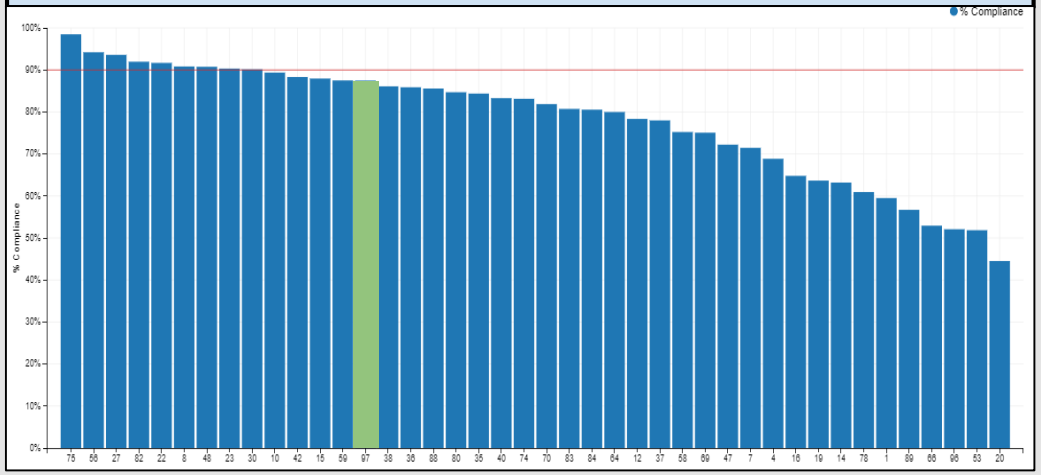
MSQC - All

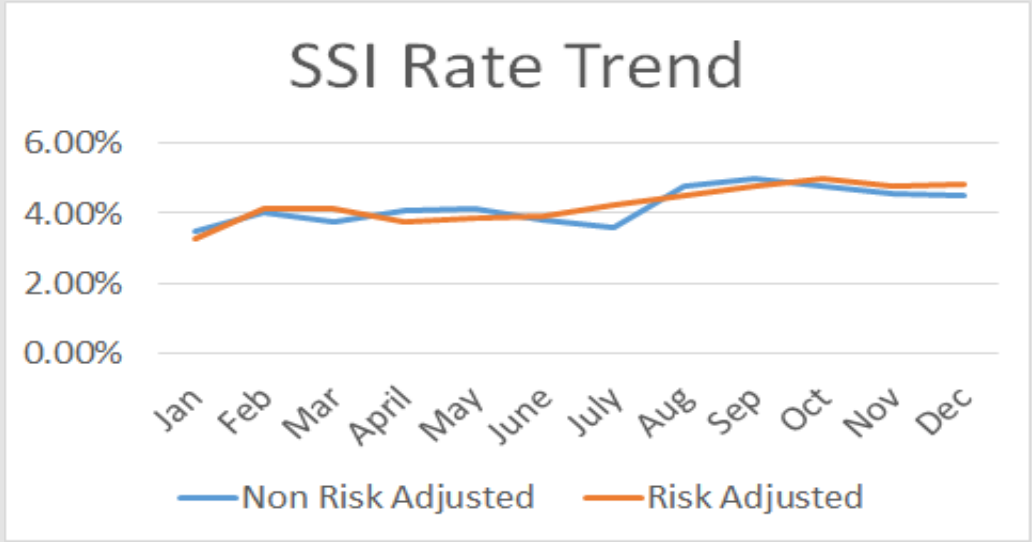
Description: The surgical site infection data below was provided by Michigan Surgical Quality Collaborative (MSQC) and includes only those cases that matched to a case in the ASPIRE registry. Denominator = All MSQC cases that matched to an ASPIRE case; Numerator = Surgical Site Infections as entered by an abstractor into the MSQC registry.





SSI Rate - Institutional Risk Adjusted Comparison





Measure Updates: In hospital mortality (MORT 01)

Description:

- Percentage of patients where inpatient death was reported within 30 days after anesthesia

Post Anesthesia Mortality Rate:

$$\frac{\text{\# of cases where pt died within 30 days (exclude subsequent cases, only count one case per pt)}}{\text{total \# of cases performed}}$$

Inclusions:

- All patients undergoing anesthesia

Exclusions:

- ASA 6
- Anesthesia for access to central venous circulation (00536)
- Diagnostic imaging

Responsible Provider

- No provider attribution

Measure Discussion

Attribution for GLU 03 and GLU 04
Treatment of Hyperglycemia

GLU 03/04 Attribution

- Glucose 03 (perioperative hyperglycemia treated or rechecked) and Glucose 04 (perioperative hypoglycemia treated or rechecked) were introduced at the last Quality Committee meeting and rolled out to institution level dashboards only
- Originally built with no provider attribution
- After single center review, we think alerting providers on flagged GLU 03/04 cases will be helpful
- Proposed attribution strategy
  - For cases that were flagged for GLU 03/04 preoperatively, notification would go to the provider signed in at the start of the case
  - For cases that were flagged intraoperatively, attribution would be to provider signed in when the treatment or rechecking should happen (GLU 01/02 model)
  - For cases that were flagged postoperatively, notification would go to the provider signed in at the end of the case

New glycemic management measure - Need your feedback

Description: Percentage of cases with perioperative glucose > 180 mg/dL with administration of insulin within 60 minutes of original glucose measurement

Inclusions:

- All patients with glucose level greater than 180 mg/dL between Preop and PACU

Exclusions:

- ASA 5 and 6 cases
- Patients < 12 years of age.
- Glucose measurements > 180 mg/dL within 60 minutes before PACU out
- Outpatient cases with Anesthesia Start to Anesthesia end time less than 4 hours long
- Obstetric Non-Operative Procedures - CPT 01958, 01960, 01967
- Obstetric Non-Operative Procedures with procedure text: “Labor Epidural”

Responsible Provider: The provider signed in at the first administration of insulin. If no insulin administration occurred, then the responsible provider is the one signed in 60 minutes after the high glucose measurement

Feedback

- Does it make sense to separate glucose checking from hyperglycemia treatment?
- If yes…
  - Is > 180 mg/dL the right threshold?
  - Is < 60 minutes the right response time?
  - Additional exclusions?
- If yes…
  - Should we also create a glucose checking measure?
- If no…
  - Other ideas for glucose management measures?

Thank you