

Updates from the Quality Improvement folks

Objectives

- Keep most of you awake
- What we did last year
- Our plans for next year

Disclosures

- No personal consulting, financial, or board membership with any company
- I am a PI/Co-I on projects that receive grant funding from
 - Blue Cross Blue Shield of Michigan (Anesthesia QI)
 - Apple, Inc (wearables)
 - NIH (induction dosing in elderly population)
 - Edwards Lifesciences (intraoperative hypotension)

New sites or sites
that are interested
in joining



What is the MPOG QI Landscape Across Our Sites?



Duration of participation



Existing QI infrastructure



Relevance of measures



Departmental support



Emails/ no emails



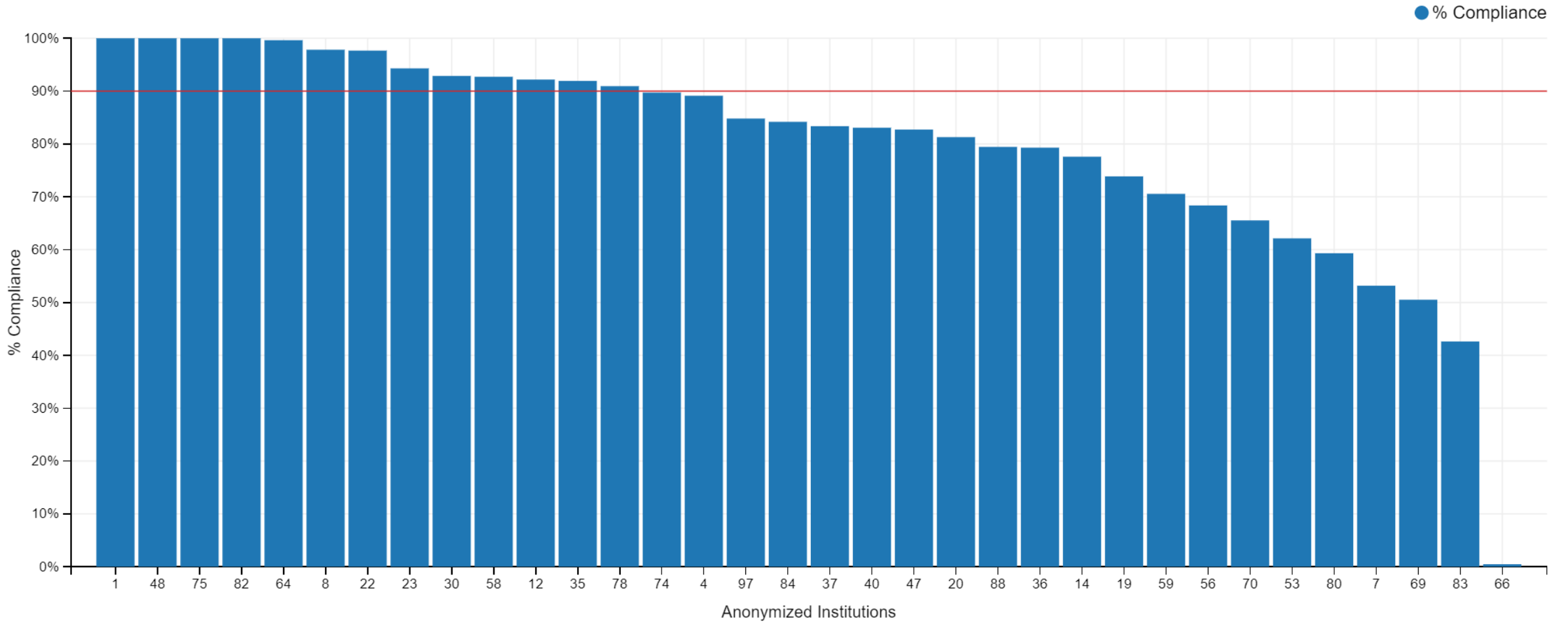
MOCA/ no MOCA

New Measures

SUS 01

- Sustainability
- Is there an opportunity to deliver halogenated agents/ nitrous oxide more efficiently?
- Are your fresh gas flows ≤ 3 l/min between intubation and extubation?

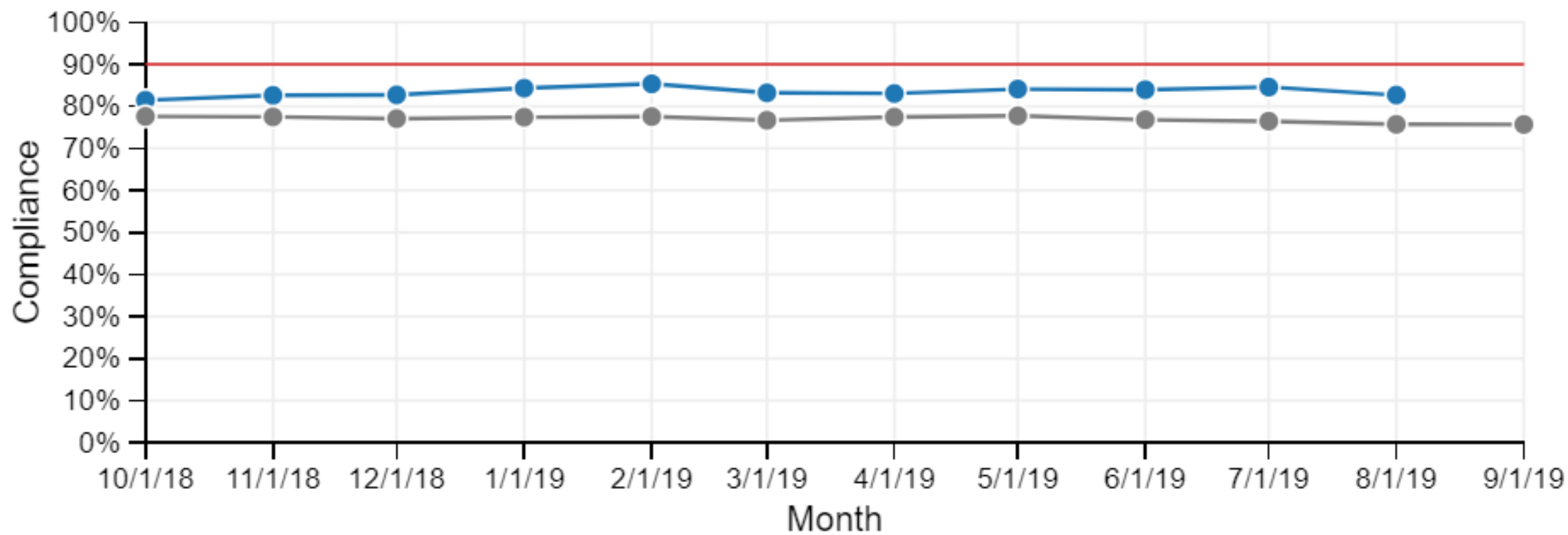
Compliance by Institution



Trend



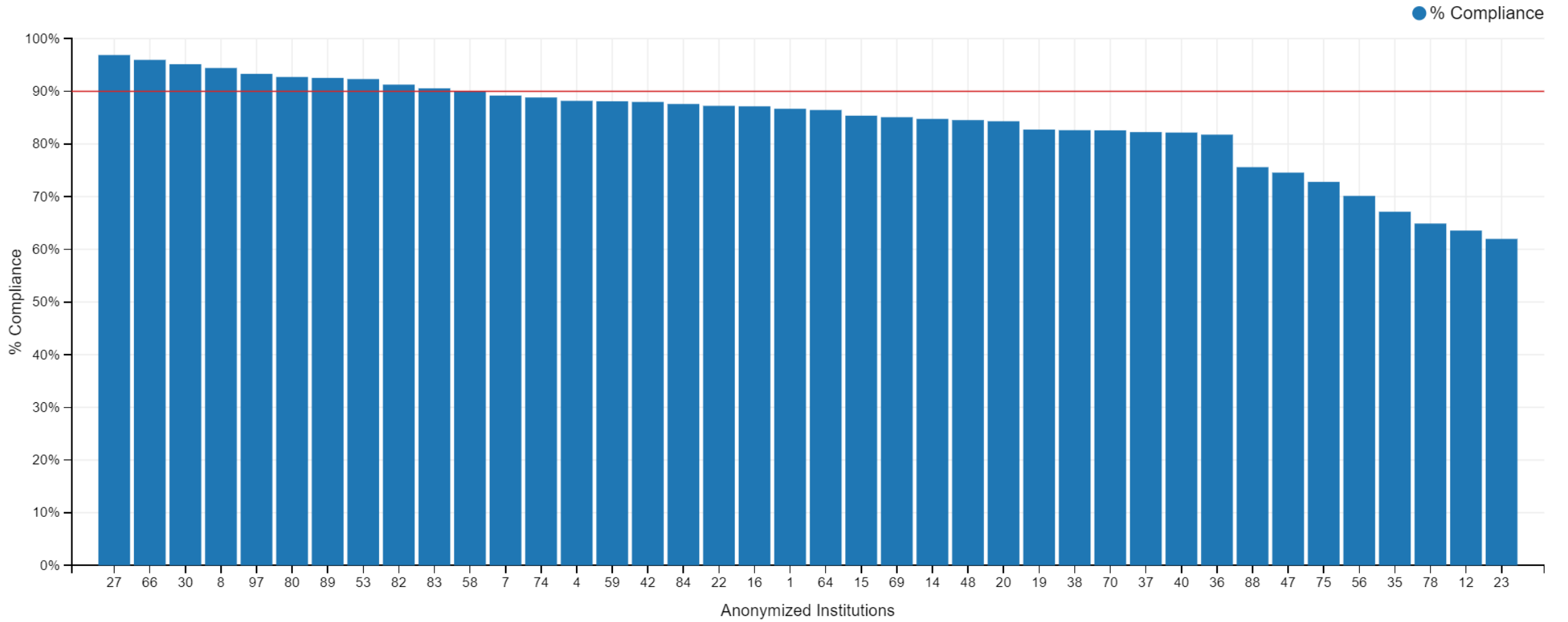
● Your Institution ● All Institutions



BP 03

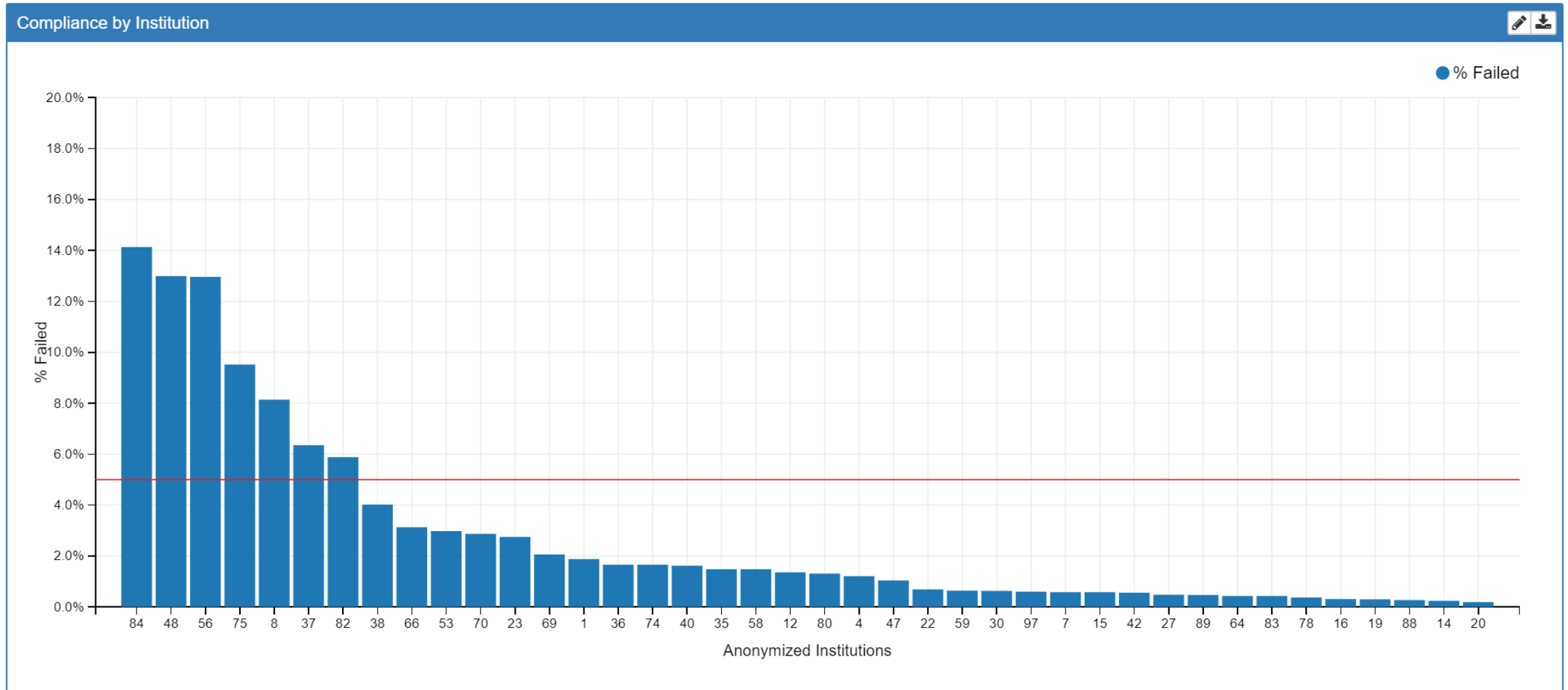
- Avoiding hypotension (MAP 65) for cumulative duration of 15 minutes or more
- Reflects current practice more accurately than BP 01
- Same inclusion/exclusion criteria as BP 01 (cardiac, liver txp, labor epidurals, etc)

Compliance by Institution



PONV 03

- Percentage of patients, regardless of age, who undergo a procedure and have a documented nausea/emesis occurrence postoperatively OR receive a rescue antiemetic in the immediate postoperative period.



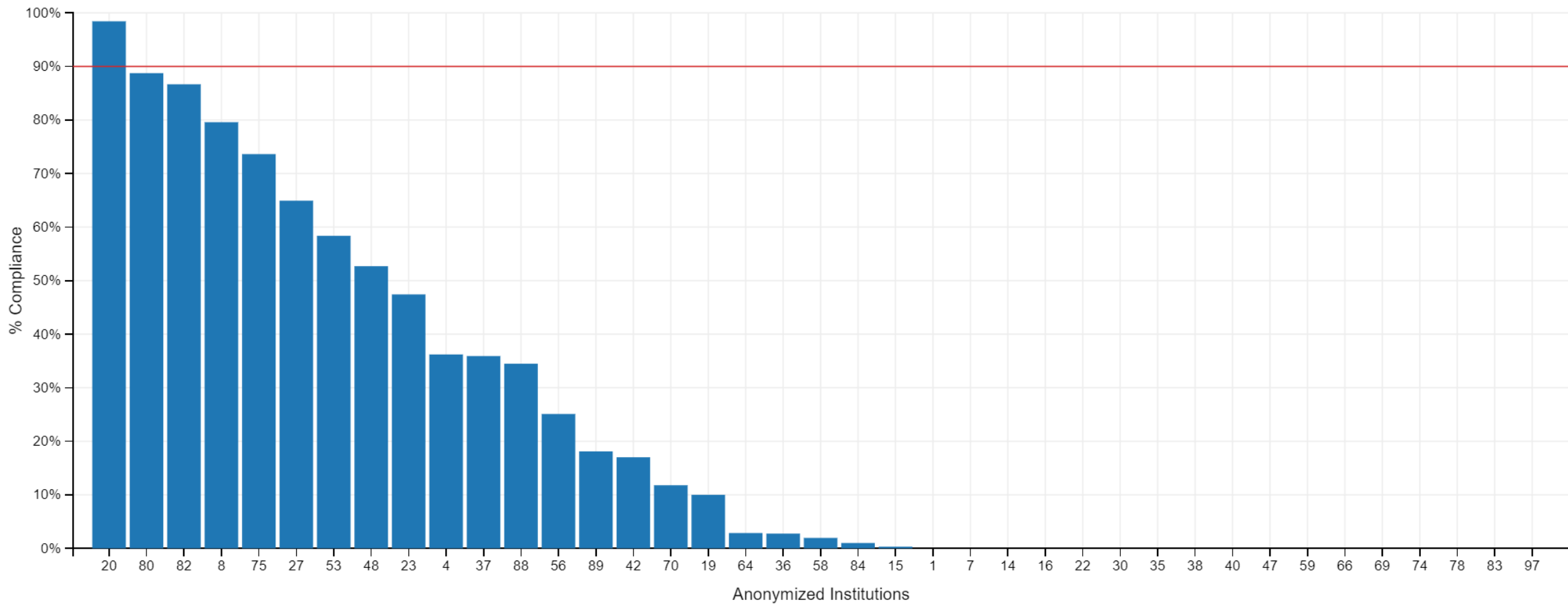
TOC 01

- Intraoperative Transfer of Care
- Percentage of cases in which a permanent intraoperative anesthesia staff change occurred, that have a documented use of a checklist or protocol for the transfer of care from the outgoing anesthesia provider to the incoming anesthesia practitioner

Compliance by Institution

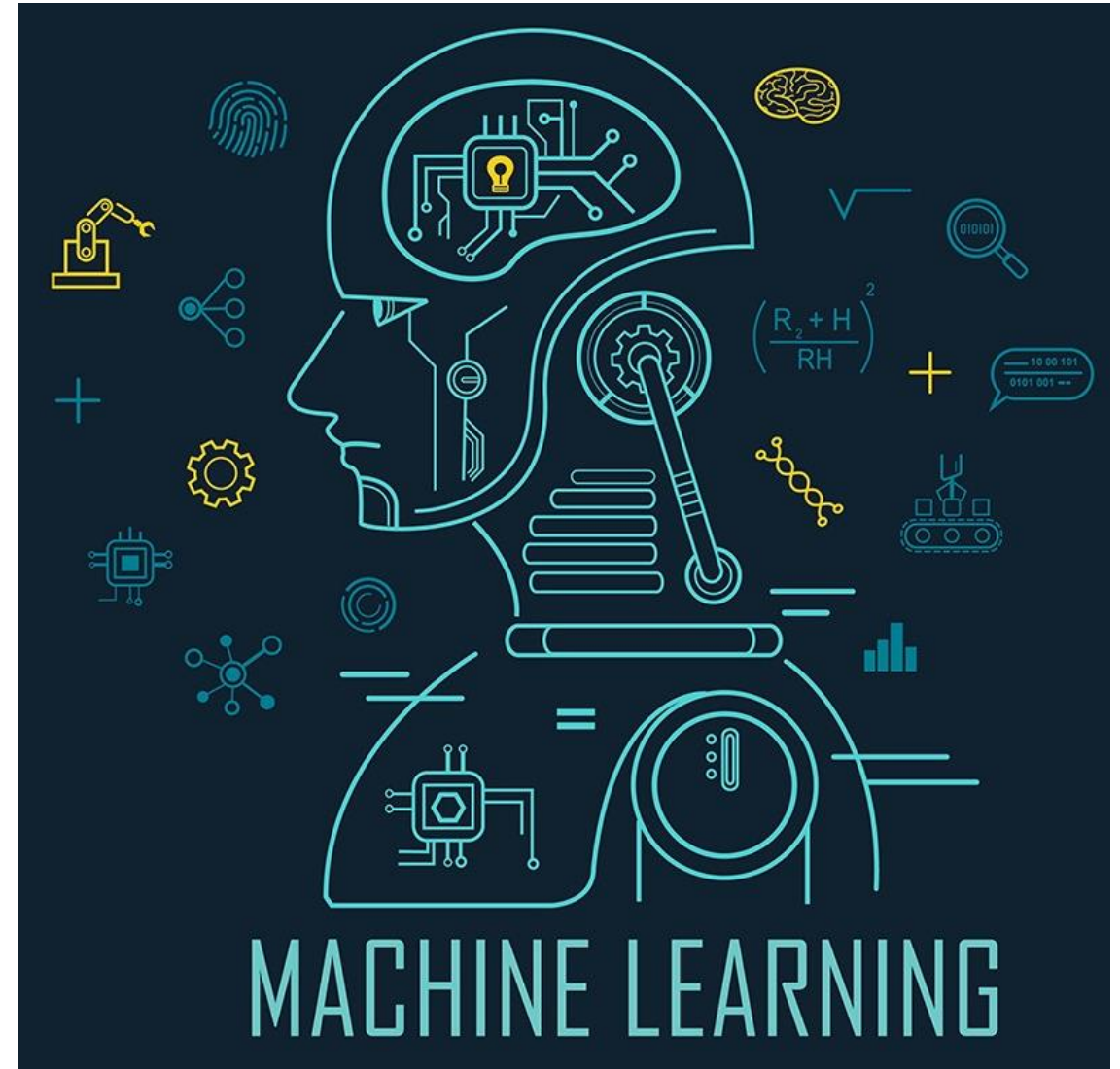


● % Compliance



New Phenotypes – CPT Prediction

- Reminder: phenotypes are the data building blocks by which we create measures
- CPT Prediction phenotype generated an anesthesia code based on procedure text and ML algorithms
- Implemented this summer across all of our measures
- Enables more accurate inclusion/exclusions
- Replaced by submitted pro fee data once that is submitted



Partnerships to extend the QI mission



MQUARK Audits

- Over 2000 PACU handoff audits across 20 hospitals
- 10/month/hospital
- Data on quality of handoffs
- Ready for new projects and analyses

5. ALL STOP: Direct Attention to provider leading handoff

YES

NO

6. Handoff Start

7. Background

Introductions (Nursing/Anesthesia/Surgery) ⓘ

Identification of Patient ⓘ

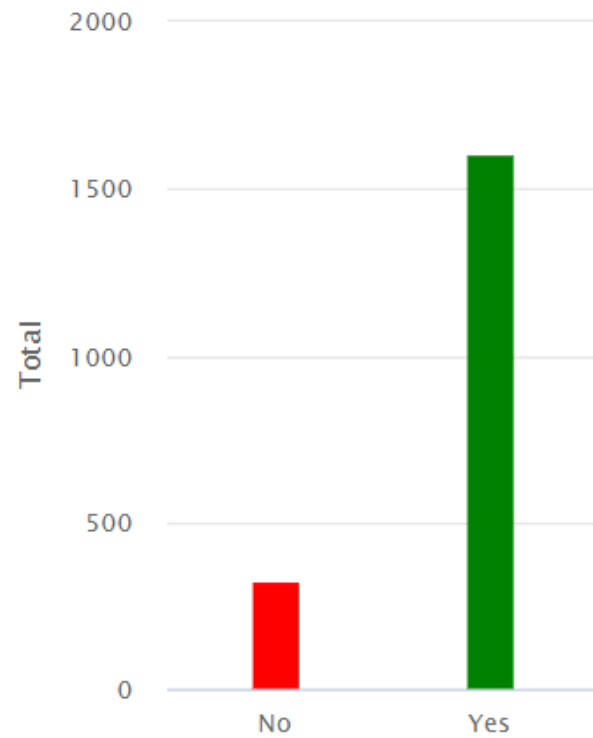
Discussion of Procedure Performed ⓘ

Pertinent PMH/PSH ⓘ

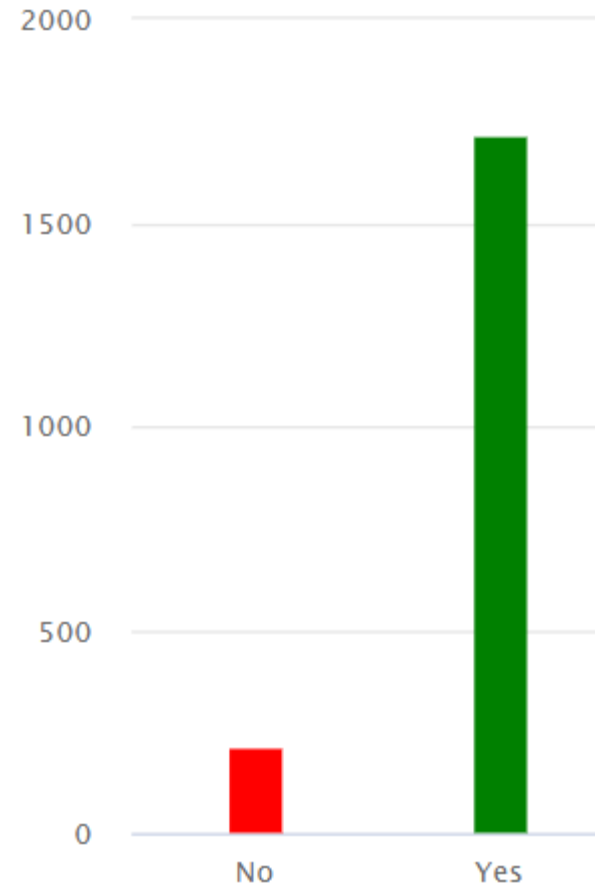
Allergies ⓘ

Contact Precautions (if applicable) ⓘ

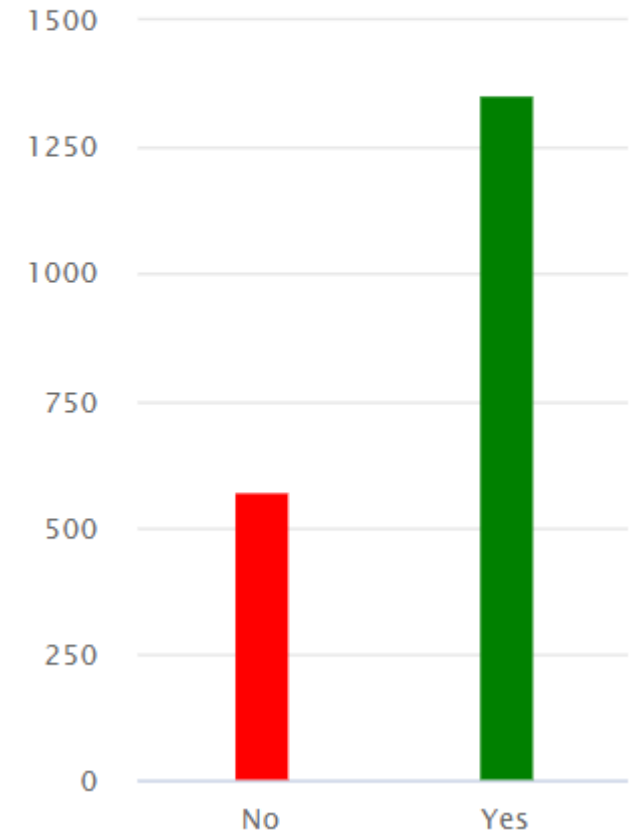
Introductions (Nursing/Anesthesia/Surgery)



Allergies



Antibiotics Administered



New Toolkit - SSI



Avoiding Respiratory Complications Toolkit

This toolkit encompasses ASPIRE Measures PUL01, NMB01, and NMB02.

[Click Here](#)



Perioperative Transfusion Stewardship Toolkit

This toolkit encompasses ASPIRE Measures TRAN 01 and TRAN 02 with a focus on best transfusion practices in cardiac, orthopedic, and general surgery.

[Click Here](#)



Surgical Site Infection Toolkit

This toolkit encompasses ASPIRE Measures TEMP 01, TEMP 02, TEMP 03 and GLU 01.

[Click Here](#)

MOCA Part IV

- 350 providers
- Up to 25 points
- Click MOCA button on emails
- Review flagged cases
- Do it 12 times in 18 months

Nirav Shah (nirshah@med.umich.edu)

Institution : University of Michigan Health System
Date of Enrollment : 3/28/2018 1:42:32 PM
Measures : NMB01,NMB02,TEMP01,BP01,PUL01
Start Month : 04/2018
Email Received: 18
Payment Information: \$150 paid (Confirmation #: 370643118, Date: 4/25/2019 5:25:42 PM)

Your attestation period is from **April 2018** to **September 2019**. To receive the full 5 points per measure, you must review your failed cases for each selected measure and complete the attestation activity each month. You must complete 12 attestations within the 18-month time frame to receive full credit. Your MOCA progress is as follows:

MOCA Countdown	
Attestations Complete	12
Attestations Expired	5
Attestations Remaining	0
Remaining Months in Attestation Period	1

Attestation status



Our plans for next year

Our Measures

- Focus on measures that need to be addressed on a systems level
- Evolve our attribution philosophy from “failed” case to “flagged” case
- Fully release ourselves from the shackles of MIPS/QCDR

Existing domains where we can create additional depth

- Glycemic management
 - Separate appropriate glucose checking and treatment into two measures
 - Add preop and PACU data
- Transfusion management
 - Extend into PACU
- Respiratory management
 - Use respiratory complications phenotype
 - Sugammadex usage
- Hypotension
 - Add risk adjustment
- Sustainability
 - Calculate global warming footprint of anesthetic gases

Current Dashboard

- Overview
- Opioid Management
- Opioid Equivalency
- Neuromuscular Monitoring
- NMB-01
- NMB-02
- Glucose Management
- GLU-01
- GLU-02
- Transfusion Management
- TRAN-01
- TRAN-02
- Blood Pressure
- BP-01
- BP-02
- BP-03
- Pulmonary
- PUL-01
- PUL-02
- PUL-03
- Sustainability
- SUS-01
- Normothermia
- TEMP-01
- TEMP-02
- TEMP-03
- Transfer of Care
- TDC-01
- TDC-02
- TDC-03
- PONV
- PONV-01
- PONV-02
- PONV-03
- Fluids
- FLUID-01-NC
- FLUID-01-C
- Myocardial Injury
- CARD-02
- CARD-03
- AKI
- AKI-01
- Medication Overdose
- MED-01

Neuromuscular Monitoring		Glucose Management		
NMB-01 ✓ 96% Target 90%	NMB-02 ✓ 99% Target 90%	GLU-01 ✓ 98% Target 90%	GLU-02 ✓ 95% Target 90%	
Transfusion Management		Blood Pressure		
TRAN-01 ✗ 79% Target 90%	TRAN-02 ✓ 97% Target 90%	BP-01 ✓ 99% Target 90%	BP-02 ✓ 96% Target 90%	BP-03 ✗ 85% Target 90%
Pulmonary			Sustainability	
PUL-01 ✓ 99% Target 90%	PUL-02 ✗ 81% Target 90%	PUL-03 i 100%	SUS-01 ✗ 83% Target 90%	
Normothermia				
TEMP-01 ✓ 93% Target 90%	TEMP-02 ✓ 97% Target 90%	TEMP-03 ✓ 99% Target 90%		
Transfer of Care				
TDC-01 ✗ 1% Target 90%	TDC-02 ✓ 97% Target 90%	TDC-03 ✓ 94% Target 90%		
PONV		Fluids		
PONV-01 ✗ 89% Target 90%	PONV-02 ✗ 78% Target 90%	FLUID-01-NC i 100%	FLUID-01-C i 82%	
Selected Outcome Measures Lower number is better				
Myocardial Injury		AKI	Medication Overdose	
CARD-02 ✓ 0.2% Threshold < 5.0%	CARD-03 ✓ 0.4% Threshold < 5.0%	AKI-01 Risk Adjusted Performance ✓ 8.1% Threshold < 10.0% Unadjusted Performance 9.1%	MED-01 ✓ 0.2% Threshold < 5.0%	

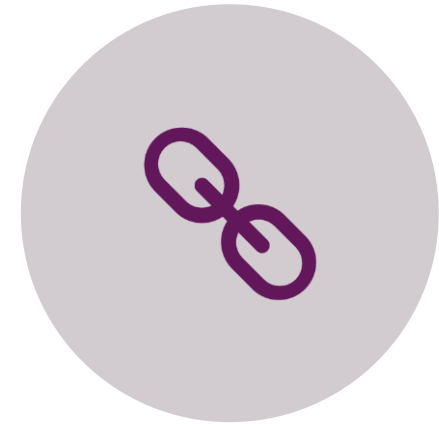
Dashboard 2.0



FLEXIBLE



**VISUALLY
INTERESTING**



**LINKS TO OTHER
MPOG APPS**

Measure maintenance

- Every three years
- Review specifications
- Relevance
- Inclusion/Exclusions
- Make Recommendations
- Recruit Quality Champions



CaseViewer and DataDirect Upgrade

MPOG Case Viewer

40 years old

Case ID: be139bd2-0710-e911-8da6-00215a9b0a8c

Institution: University of Michigan Health System

Time: 01-03-2019 09:15 - 01-03-2019 15:57

Procedure: LEFT INTRAOP MRI CRANIOTOMY - ADULT

Patient IDs

Age/Sex/Race

Height/Weight

ASA Class

Find a Case
Fast Case Lookup

Chart

Record Search

Administrative

H&P

Outcomes

Labs

Preferences

Times	Monitors
Anesthesia	Anesthesia
In Room	In Room
Surgery	

All Staff	Staff Level
	Staff Level - Anesthesia Attending #1
	Staff Level - Anesthesia CRNA #1
	Staff Level - Scrub Nurse #1
	Staff Level - Surgical Attending/Procedure
	Staff Level - Surgical Resident #1

Bolus Medications	Quantity
ACETAMINOPHEN	
CEFAZOLIN	
CISATRACURIUM	10
DEXAMETHASONE	
FENTANYL	100
FUROSEMIDE	
KETAMINE	
LEVETIRACETAM	
LIDOCAINE/EPINEPHRINE 0.5%	
MANNITOL	
MIDAZOLAM	2
ONDANSETRON	
PROPOFOL	200

Infusion Medications	Quantity
KETAMINE	

Inputs	Quantity
LACTATED RINGERS	
SALINE 0.9%	

Outputs	Quantity
ESTIMATED BLOOD LOSS	
URINE OUTPUT	

Vitals - O2	Value
SpO2 %	94

Vitals - Pulse	Value
EKG Pulse Rate	80
SpO2 Pulse Rate	77

Vitals - BP	Value
BP Combined Arterial Line (Invasive, Peripheral)	7
BP Dias Arterial Line (Invasive, Peripheral)	7

MPOG DataDirect

Step 1: Define Project

Step 2: Filter

Demographics

Cases

Comorbidities

Diagnoses

Procedures

Medications

Notes

Physiologic

Labs

Outcomes

Step 3: Define Output

Step 4: Finalize

Neurosurgery

Admit

M-OR 20

14:00:00 15:00:00 16:00:00

2

25

4

300 | 100 | 200 | 100

99 | 99 | 99 | 99 | 97

89 | 96 | 105 | 99 | 97

56 | 59 | 50 | 55 | 130/72

Renew Pediatric and Obstetric Anesthesiology subgroups

- Partner with specialty organizations
- Identify Pediatric and Obstetric Champions
- Build measures/tools specific for those subspecialties
- Recruit freestanding pediatric hospitals



Emails

- Working with Dr. Zach Landis Lewis, UM Learning Health Sciences
- Submitting grant to study effectiveness of email design, primarily focused on “tailored messaging”
- Planning redesign, but not sure about 2020



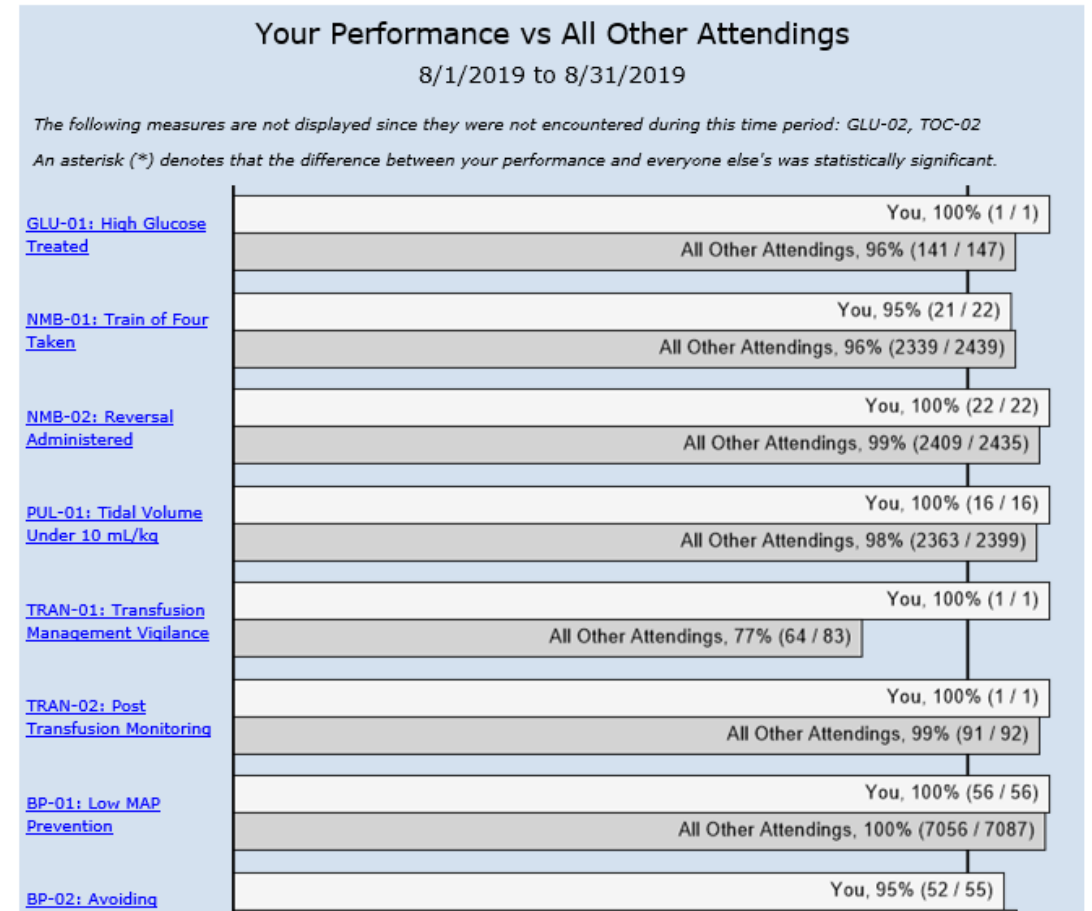
Claim MOCA® Credit

Hello Nirav,

Below is your new MPOG Quality performance report. For a case-by-case breakdown of each measure's result, click on the graph's label and you will be taken to our reporting website (login required).

If you have any questions, please read our [FAQ](#) or send them to support@mpeq.zendesk.com. Thank you for your participation in MPOG Quality.

Sincerely,
The MPOG Team

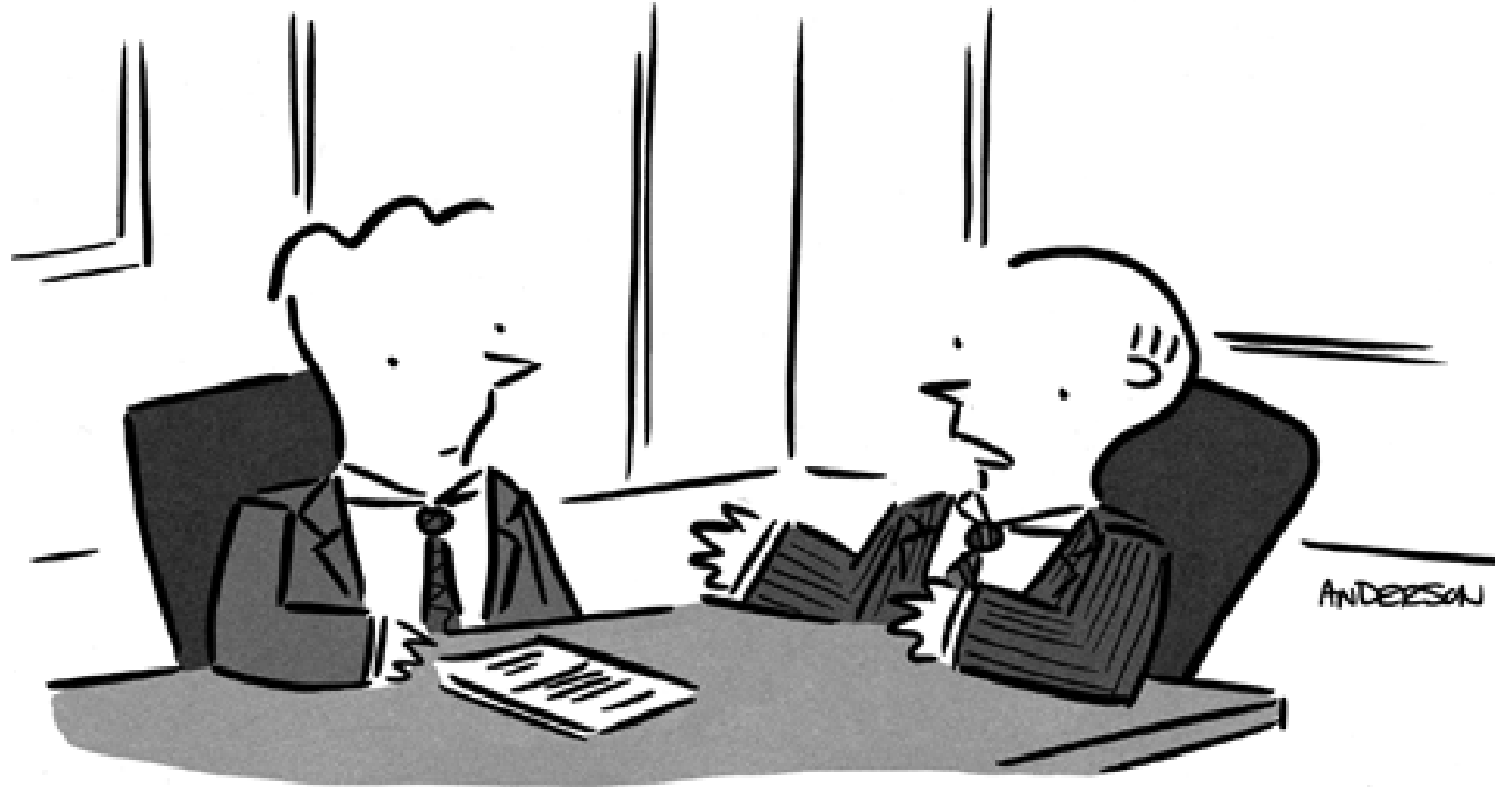


Need to adapt and listen to stay relevant

- Need your feedback
- Need to stay nimble
- Need to take calculated risks
- Need your new ideas

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"I'm looking for a strategy to leverage our core competencies with big data across multiple synergized paradigms. Or something that rhymes. Either way."

Thank You



1st floor