



MSQCC

Michigan Surgical Quality Collaborative



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MSQC Program Director



QI initiative	Year Initiated	2012 Baseline Rate	2016 Baseline Rate	Current Rate (2020)	Target
Reduce Morbidity Rates (all procedures)	2012	11.8%	10.9%	6.26%	9%
Reduce Sepsis Rates (all procedures)	2012	2.63%	2.58%	2.30%	2%
Reduce SSI Rates (all procedures)	2012	3.67%	3.23%	3.05%	2.5%
Reduce Readmissions (all procedures)	2014	6.74%	6.49%	5.61%	5.8%
Reduce ED Visits (all procedures)	2014	9.45%	8.36%	7.09%	7.3%
Reduce LOS (all procedures)	2014	3.87 days	3.18 days	2.89 days*	4.2 days
Reduce Opioid Prescribing (average OME prescribed for all procedures)	2017	N/A	N/A (2017 baseline = 193)	80.7 OME	<180 OME

Hernia Lap Chole Colectomy Hysterectomy Whipple

MSQC Hernia Care Pathway

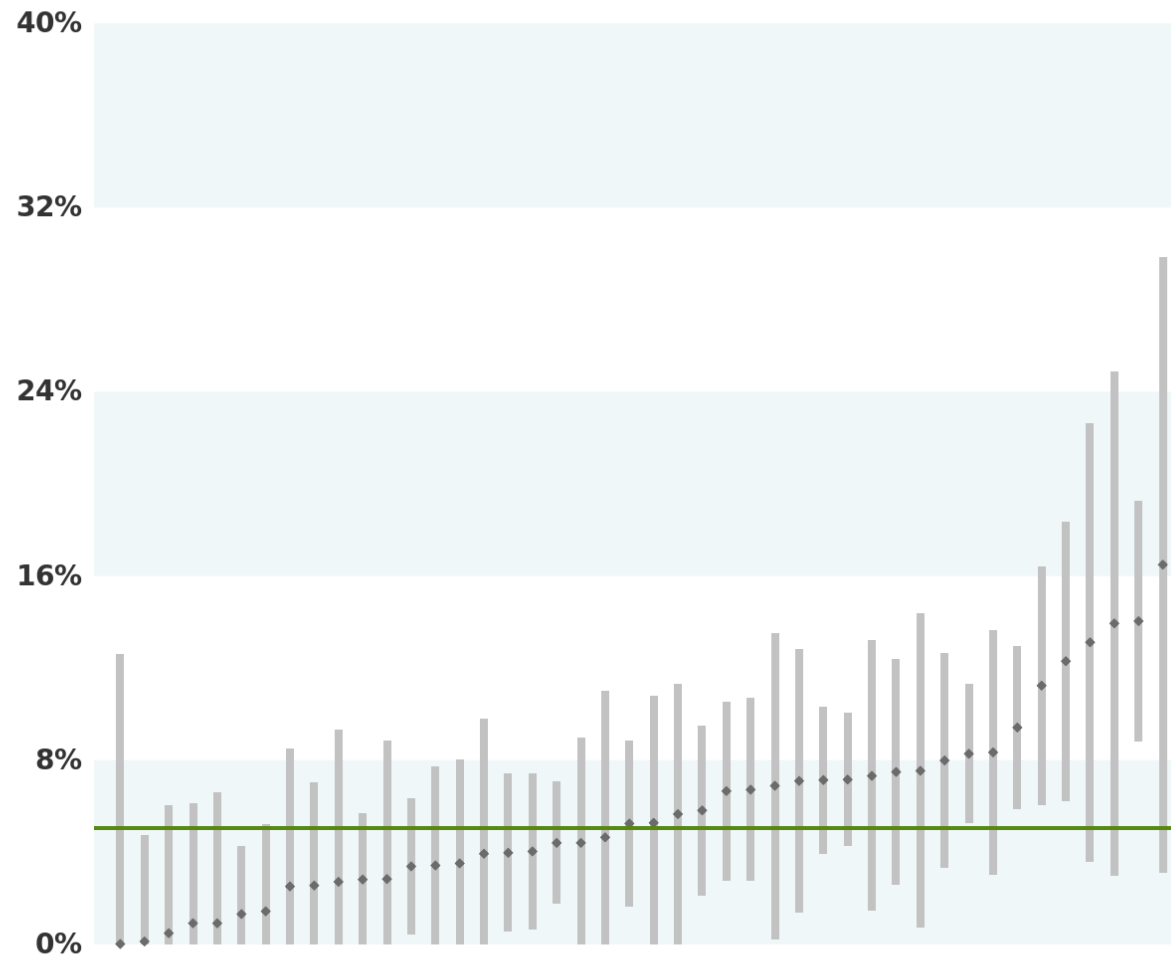
PreOp	<p>Patient Education</p> <ul style="list-style-type: none"> -Pain expectations/ management -Wound care -Postoperative ambulation and activity guidelines -Return to work 	<p>Preoperative Planning/ Prehabilitation</p> <ul style="list-style-type: none"> -Tobacco cessation: 4 month prior to surgery -Weight loss counseling for BMI>40 <p>-Simple, uncomplicated cases: Perform in ambulatory setting when feasible</p> <p>Bilateral inguinal hernias consider RME</p>	<p>Labs/Radiology</p> <p>labs</p> <ul style="list-style-type: none"> -Fasting glucose or HbA1C <p>-Simple, uncomplicated cases: No routine imaging</p> <p>-Major/Complex cases: Noncontrast CT w/ contrast MRIs as alternative if contraindication to CT</p>	<p>Glycemic Control</p> <ul style="list-style-type: none"> -HbA1c meaning for one or more characteristic with in the categories below: <ul style="list-style-type: none"> - Diabetes: Type 1, Type 2, Gestational DM or Family history of DM - Metabolic Syndrome: low HDL, High Triglycerides or PCOS - Patient Characteristics: Age >65, BMI>30, Blood Pressure >120/80 or HTN <p>Preoperative</p> <ul style="list-style-type: none"> -HbA1C <6.5%-<6.5% Consult PCP or endocrinology for management of glycemic control -HbA1C >6.5% or glucose >250 mg/dL: Consult PCP or endocrinology for management of glycemic control AND consider postponing surgery date 	
Immediate PreOp	<p>Preoperative Planning/ Prehabilitation</p> <ul style="list-style-type: none"> -Tobacco cessation: 1 month prior to surgery -Weight loss counseling for BMI>40 <p>-Simple, uncomplicated cases: LME form in ambulatory setting when feasible</p> <p>Bilateral inguinal hernias consider MS</p>	<p>Preoperative Shower/Bath</p> <ul style="list-style-type: none"> -Shower with soap or antiseptic agent on at least the night before surgery -Provide product and clear instruction 	<p>Appropriate M Prophylactic Antibiotics</p> <ul style="list-style-type: none"> -Simple, uncomplicated cases: Contraindicated if wound class is considered clean and mesh not indicated Major, Complex Cases: <ul style="list-style-type: none"> -Indicated for repairs requiring mesh -Cefazolin 2g IV for patients <120kg -Cefazolin 2g IV for patients >120kg -Administer 30-60 minutes before incision -See ASHP guidelines in resources for other acceptable antibiotic regimens and beta-lactam alternatives 	<p>Multimodal Analgesia</p> <ul style="list-style-type: none"> -Review pain management plan preop holding -Acetaminophen 1000mg 	<p>Prevention of PONV</p> <ul style="list-style-type: none"> -Screen all patients for PONV risk -Administer antiemetic regimen based risk assessment score -Risk Assessment example: <ul style="list-style-type: none"> 4 Primary Risk Factors: Female; Nonsmoker; History of motion sickness; previous PONV. Expected administration of postoperative opioids Score: 1 for each applicable risk factor 0-1 risk factors: Ondansetron 4mg 15m in prior to end of case 2 risk factors: Choose one of two agents listed below 3 risk factors: Choose one of two agents listed below 4 risk factors: Apply Scopopolamine patch at least 2 hours before induction, Administer Dexamethasone 4-8mg IV after induction, Ondansetron 4mg IV at end of surgery
IntraOp	<p>Normothermia</p> <ul style="list-style-type: none"> -Maintain body temperature of 96.2°F [36°C] <p>Redosing of Antibiotics</p> <p>Interim:</p> <ul style="list-style-type: none"> -Cefazolin 4 hours -Refer to ASHP guidelines in resources 	<p>Lung Protective Ventilation</p> <ul style="list-style-type: none"> -For patients with normal pulmonary function undergoing general anesthesia with endotracheal intubation, administer increased PEEP during surgery and after extubation in the immediate postoperative period. -To optimize tissue oxygen delivery, maintain perioperative normothermia and adequate volume replacement. <p>Multimodal Analgesia</p> <ul style="list-style-type: none"> -Administer 2 non-opioid analgesic medications Examples: <ul style="list-style-type: none"> -IV Lidocaine -Local wound infiltration with long-acting anesthetic -TAP or regional block if not done preop -Inguinal and iliohypogastric nerve blocks for open inguinal hernia repairs -Spinal anesthesia -Ketamine -Etomidate 30mg IV at end of case for routine inguinal repairs -Infuse all portsites with short-acting local anesthetic 	<p>Alcohol-based Skin Preparation</p> <ul style="list-style-type: none"> -Use alcohol-based prep <p>Operative Note Dictation</p> <ul style="list-style-type: none"> -Type of hernia[s] -Type of mesh utilized -Mesh placement/location and fixation such as suture, tie, etc.] 	<p>Euvolemia</p> <ul style="list-style-type: none"> -Tibior infusion of crystalloids to avoid excess fluid administration <p>Avoidance of Tubes</p> <p>Riley Catheter</p> <ul style="list-style-type: none"> -Simple, uncomplicated cases: Consider no Foley catheter -Complex cases: Consider removal of catheter at end of case <p>Nesogastric tube</p> <ul style="list-style-type: none"> -Consider as appropriate for large ventral hernia repairs; laparoscopic repairs; bowel manipulation or lysis of adhesions <p>Postop drains</p> <ul style="list-style-type: none"> -If large skin flaps or large mesh insertion, drains may reduce seroma/fluid accumulation 	
PostOp	<p>Multimodal Analgesia</p> <ul style="list-style-type: none"> -Follow Michigan OPEN opioid prescribing recommendation: Oxycodone 5mg 30 tablets https://opioidprescribing.info/ -Schedule non-opioid analgesics instead of PRN for first 72 hours -Alternating Acetaminophen 650mg with Ibuprofen 600mg every 3 hours with 6 hours between dosing of acetaminophen and ibuprofen -Use opioids for breakthrough pain only 	<p>Normothermia in PACU</p> <ul style="list-style-type: none"> -Maintain temperature >96.2°F [36°C] in PACU -Utilize forced air warmer Bair Hugger PRN 	<p>Patient Education</p> <ul style="list-style-type: none"> -Pain expectations/ management -Wound care -Activity Expectations/Return to Work 		
Post Discharge	<p>Contact Patient within 2 business days</p> <ul style="list-style-type: none"> -Make postop phone call to patients within 2 days of discharge [2 hours if Friday case] -Ensure patient has contact information for postoperative questions -Increase follow up contact for patients at high risk for ED visits or readmissions 	<p>Clinic Visit within 2-4 weeks</p> <ul style="list-style-type: none"> -Single return clinic visit for uncomplicated cases -May utilize telemedicine for some follow up visits 	<p>References</p> <ul style="list-style-type: none"> -Centers for Disease Control and Prevention guideline for the Prevention of Surgical Site Infection [2017]. https://www.cdc.gov/mmwr/pdf/mm12/mm12017a.pdf -Michigan Opioid Prescribing and Engagement Network [2018]. https://opioidprescribing.info/ 		

New quality metrics needed



POSITIVE MARGIN FOLLOWING COLORECTAL CANCER SURGERY

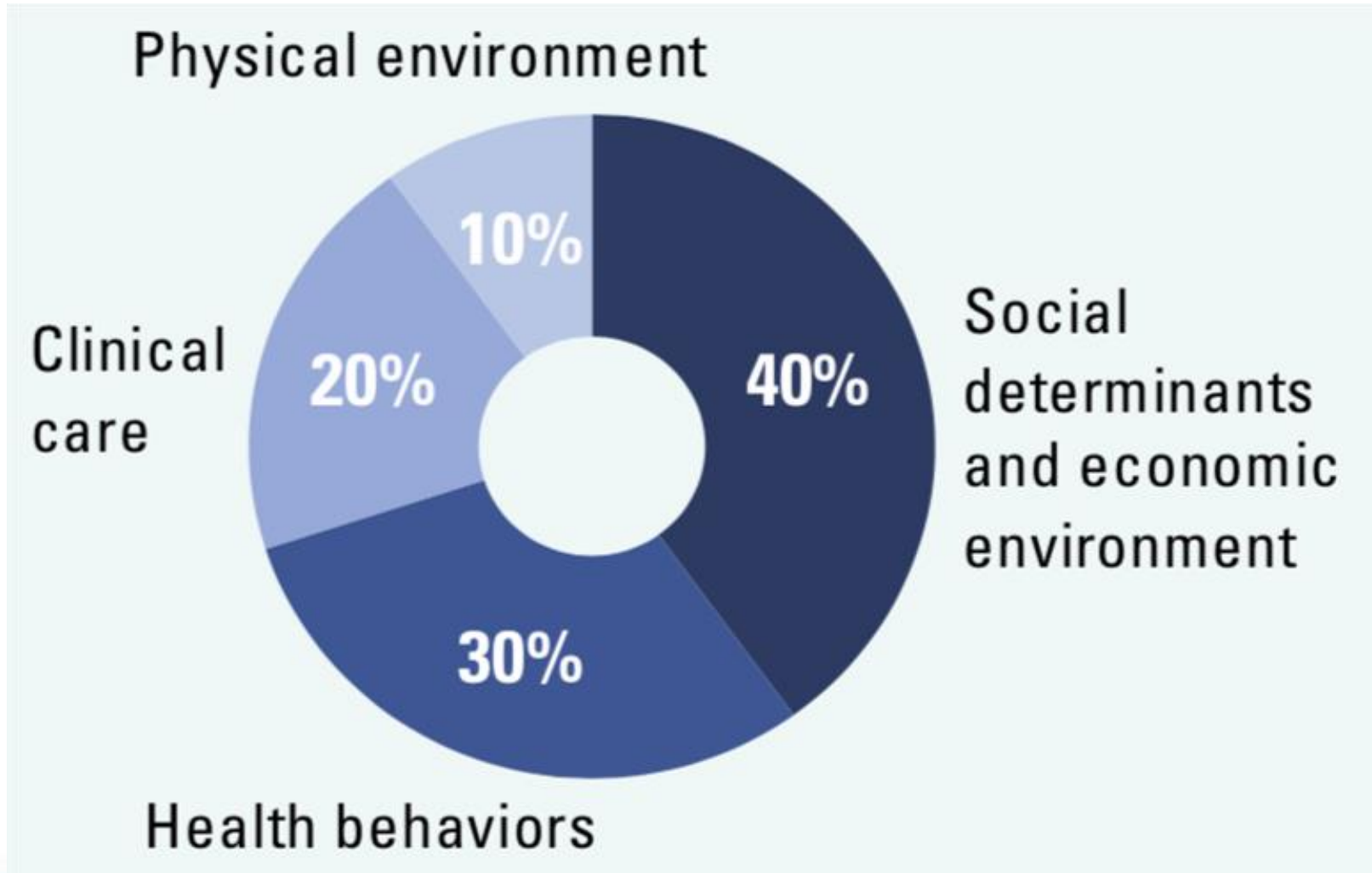
Case Mix - Positive Margin Rate
Elective



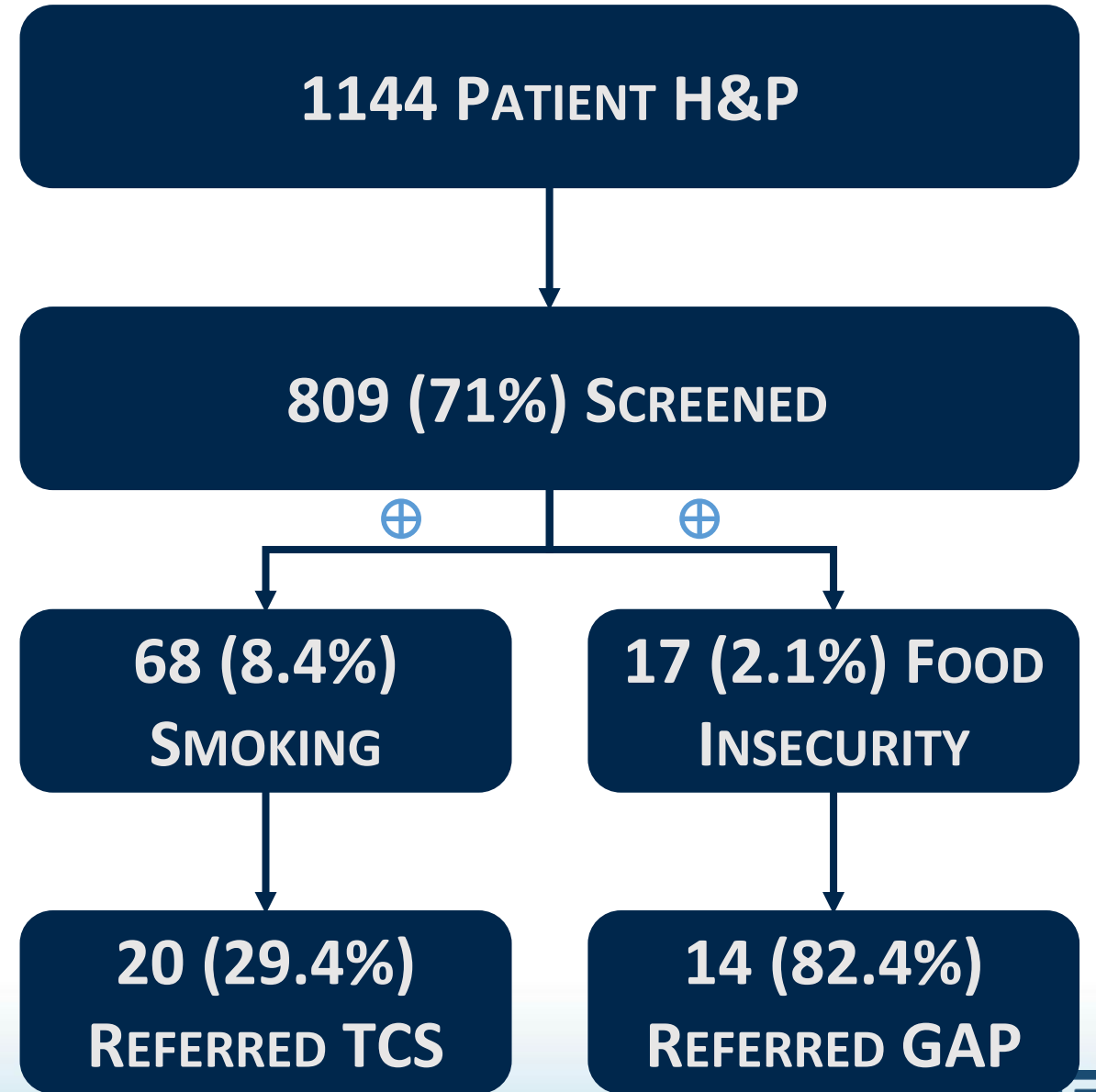
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LEGEND ■ Other Hospitals — MSQC - All | 95% Confidence Interval

What contributes to health?



PILOT
MAR 8 – MAR 26



New quality metrics needed



SUCCESS Study:

Surgical Urinary Catheter Care Enhancement Safety Study

- Stakeholder Advisory Board meeting at 1pm today – Members, please use the Zoom link in your calendar invite
- We are still looking for volunteers to serve on this board which guides this important project. Please contact Jessica Ameling if you are interested:
jameling@umich.edu



Nirav Shah, MD
ASPIRE Quality Improvement Program
Director



MPOG

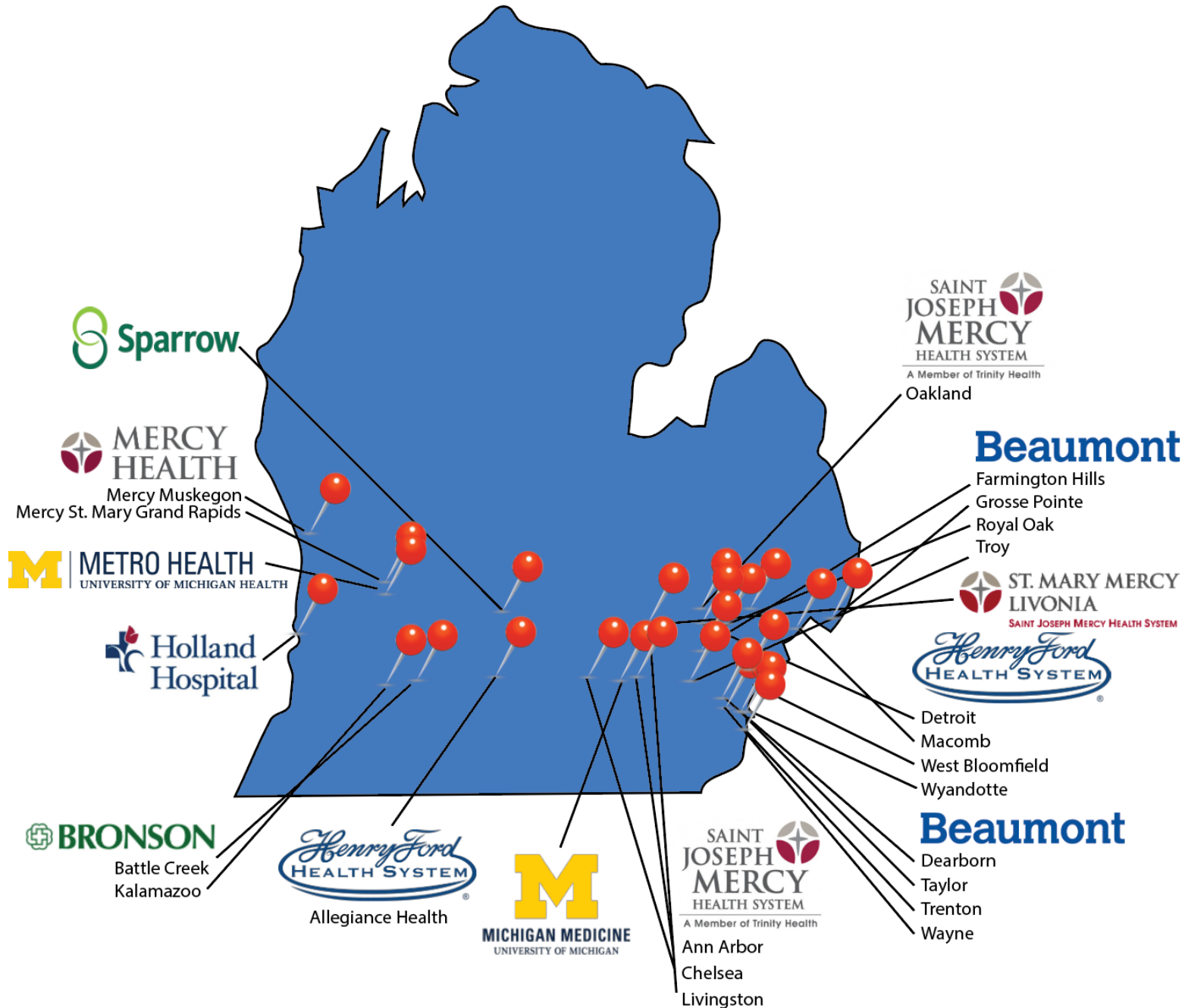
MULTICENTER PERIOPERATIVE
OUTCOMES GROUP

MSQCC

Michigan Surgical Quality Collaborative



2021 Michigan Sites



Welcome



Current measure list on our new QI reporting tool

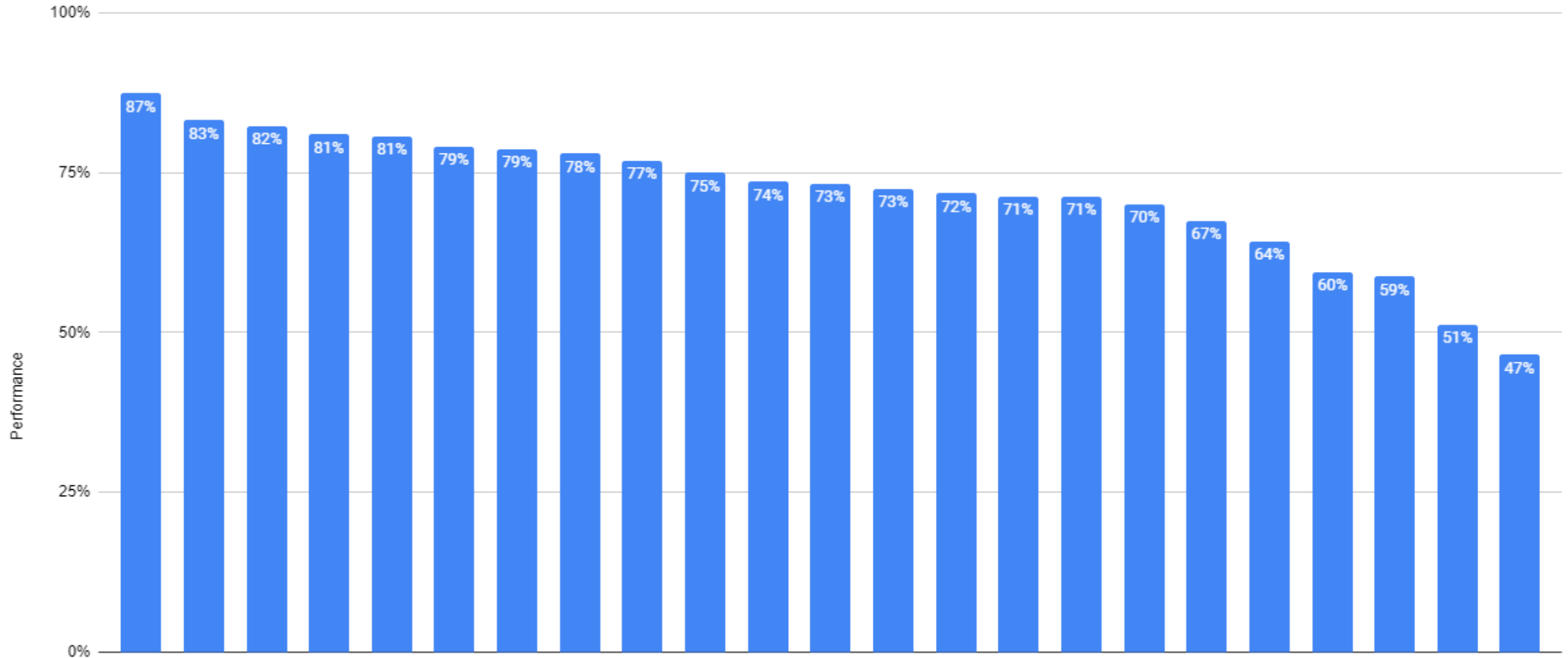
<p>ABX-01-08 Antibiotic Timing for Cesarean Delivery</p> <p>91% Cases Threshold = 90%</p>	<p>AKI-01 Acute Kidney Injury</p> <p>8.2% Cases Threshold = 10%</p> <p>Outcome</p>	<p>BP-01 Low MAP Prevention < 55</p> <p>97% Cases Threshold = 90%</p>	<p>BP-02 Avoiding Monitoring Gaps</p> <p>96% Cases Threshold = 90%</p>
<p>BP-03 Low Map Prevention < 65</p> <p>60% Cases Threshold = 90%</p>	<p>BP-04-08 SBP > 90 in Cesarean Deliveries</p> <p>95% Cases Threshold = 90%</p>	<p>CARD-02 Myocardial Infarction</p> <p>0.3% Cases Threshold = 5%</p> <p>Outcome</p>	<p>CARD-03 Myocardial Infarction, High Risk Patients</p> <p>0.7% Cases Threshold = 5%</p> <p>Outcome</p>
<p>FLUID-01-C Minimizing Colloid Use (Cardiac)</p> <p>100% Cases No threshold</p>	<p>FLUID-01-NC Minimizing Colloid Use (Non-Cardiac)</p> <p>99% Cases No threshold</p>	<p>GA-01-08 General Anesthesia During Cesarean Deliveries</p> <p>7.9% Cases No threshold</p> <p>Outcome</p>	<p>GLU-01 High Glucose Treated, Intraop</p> <p>97% Cases Threshold = 90%</p>
<p>GLU-02 Low Glucose Treated, Intraop</p> <p>95% Cases Threshold = 90%</p>	<p>GLU-03 High Glucose Treated, Periop</p> <p>84% Cases Threshold = 90%</p>	<p>GLU-04 Low Glucose Treated, Periop</p> <p>78% Cases Threshold = 90%</p>	<p>GLU-05 Escalated High Glucose Treated</p> <p>68% Cases Threshold = 90%</p>
<p>MED-01 Avoiding Medication Overdose</p> <p>0.3% Cases Threshold = 5%</p> <p>Outcome</p>	<p>MORT-01 30 Day Post-Op In-Hospital Mortality Rate</p> <p>0.7% Cases No threshold</p> <p>Outcome</p>	<p>NMB-01 Train of Four Taken</p> <p>92% Cases Threshold = 90%</p>	<p>NMB-02 Reversal Administered</p> <p>99% Cases Threshold = 90%</p>
<p>PAIN-02 Multimodal Analgesia</p> <p>84% Cases No threshold</p>	<p>PAIN-01-Peds Multimodal Analgesia, Pediatrics</p> <p>79% Cases No threshold</p>	<p>PONV-01 PONV prophylaxis</p> <p>86% Cases Threshold = 90%</p>	<p>PONV-02 PONV prophylaxis, Pediatrics</p> <p>93% Cases Threshold = 90%</p>
<p>PONV-03 Post Operative Nausea or Vomiting</p> <p>14.9% Cases Threshold = 10%</p> <p>Outcome</p>	<p>PONV-03b Post Operative Nausea or Vomiting</p> <p>5.9% Cases Threshold = 10%</p> <p>Outcome</p>	<p>PUL-01 Protective Tidal Volume, 10 mL/kg PBW</p> <p>99% Cases Threshold = 90%</p>	<p>PUL-02 Protective Tidal Volume, 8 mL/kg PBW</p> <p>85% Cases Threshold = 90%</p>
<p>PUL-03 Administration of PEEP</p> <p>99% Cases No threshold</p>	<p>SUS-01 Low Fresh Gas Flow</p> <p>96% Cases Threshold = 90%</p>	<p>TEMP-01 Thermoregulation Vigilance - Active Warming</p> <p>94% Cases Threshold = 90%</p>	<p>TEMP-02 Thermoregulation Monitoring - Core Temperature</p> <p>91% Cases Threshold = 90%</p>
<p>TEMP-03 Perioperative Hypothermia</p> <p>2.9% Cases Threshold = 10%</p> <p>Outcome</p>	<p>TEMP-04-Peds Pediatric Temperature Management</p> <p>65% Cases Threshold = 90%</p>	<p>TOC-01 Intraoperative Transfer of Care</p> <p>60% Cases Threshold = 90%</p>	<p>TOC-02 Postoperative Transfer of Care to PACU</p> <p>96% Cases Threshold = 90%</p>
<p>TOC-03 Postoperative Transfer of Care to ICU</p> <p>N/A Cases Threshold = 90%</p>	<p>TRAN-01 Transfusion Management Vigilance</p> <p>42% Cases Threshold = 90%</p>	<p>TRAN-02 Overtransfusion</p> <p>13.5% Cases Threshold = 10%</p> <p>Outcome</p>	

Your challenge is to pick measures that are relevant to your site and providers

Our challenge is to pick measures that are relevant across site and providers

Multimodal Analgesia across MI

Use of non-opioid adjunct (acetaminophen, nsaids, ketamine, dexmedetomidine)

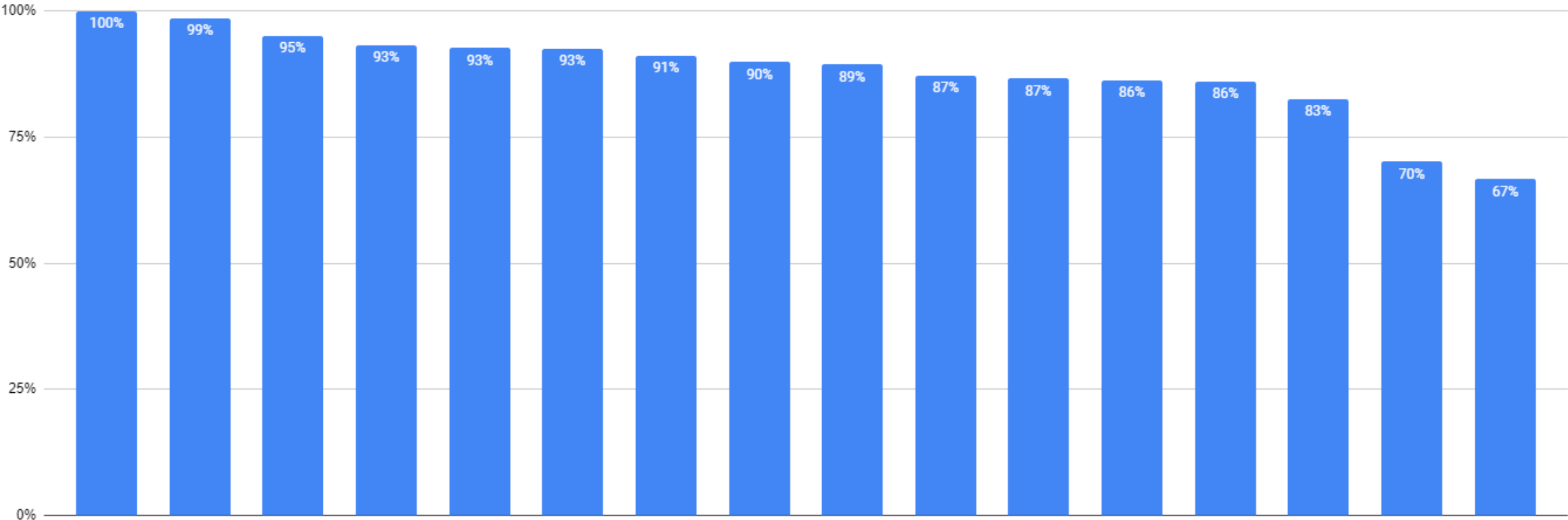


Sustainability across Michigan



Decarbonizing the Operating Room
Emily Johnson, BS, MSc, MD Candidate
University of Michigan Medical School

Low fresh gas flow across when using inhalational agent



Association of race or ethnicity with QI measure performance

Title of Study or Project:	Is Patient Race or Ethnicity Associated with Adherence to Anesthesiology Quality Metrics?
Primary Institution:	Michigan Medicine
Primary Author:	Nirav J Shah
Co-Authors:	Matthew Wixson, Eric Sun, Michael Mathis; Douglas Colquhoun, Allison Janda, Sachin Kheterpal, Graciela Mentz; Michelle T. Vaughn. Potential collaborators from across MPOG sites.
Statisticians:	Graciela Mentz, PhD; Michelle T. Vaughn, MPH
Type of Study:	<input checked="" type="checkbox"/> Retrospective Observational
IRB Number and Status:	Pending
Hypotheses/Aims:	Most intraoperative anesthesiology processes of care used in ASPIRE have no clinical reason for variation by race or ethnicity. However, previous literature has demonstrated disparities in the use of specific obstetric and pediatric anesthesiology techniques. We hypothesize that among adult patients undergoing non-cardiac surgery, very few, if any, of the current process of care quality measures in ASPIRE will demonstrate a clinically significant variation associated with race or ethnicity.

Welcome to RADAR

Our vision is a more diverse and inclusive community in academic anesthesiology.

Whether you're a student thinking about a career in medicine, a leader in the field, or somewhere in between, we invite you to explore our website, connect with us at an event, and join us as we lead transformative change in the field.



Thank you

