

# Opportunities to Work Across Registries

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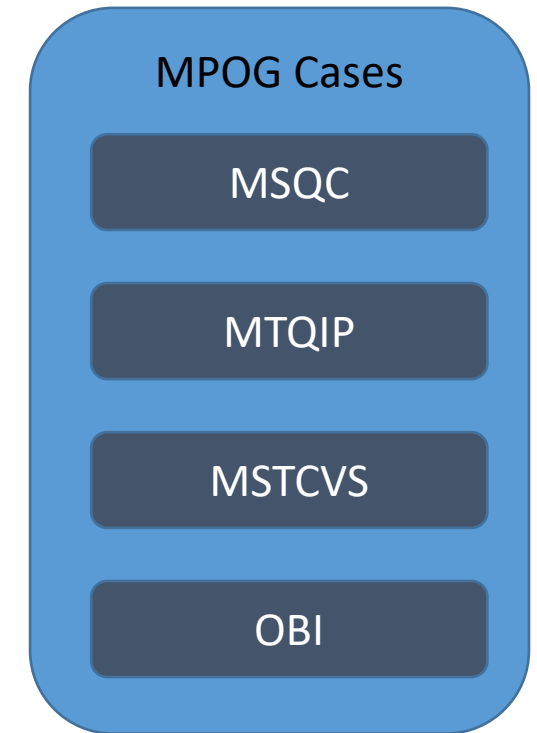


# Thinking Broadly About our Registries

Feature	MSQC (or Surgical Registry)	MPOG
<b>Data Entry</b>	Trained Abstractor Reviewing Patient Records	
<b>Data Source</b>	Entire Record + Patient Contact	
<b>Case Inclusion</b>	(Sampled) eligible cases	
<b>Validation</b>	Cross Checking + Agreement	
<b>Key Strength</b>	Rigorously Defined Outcomes	
<b>Scalability</b>	Limited by Abstractors	

# MPOG is a Non-Traditional Registry

- Every electronic charted episode of Anesthesia Care is in MPOG
  - The “denominator” of surgical activity in a hospital
- No insight into non-anesthesia cases (ie some L&D)
- MPOG does not contain direct identifiers by design (except dates of service)



# Linking Registries is “Best of Both”

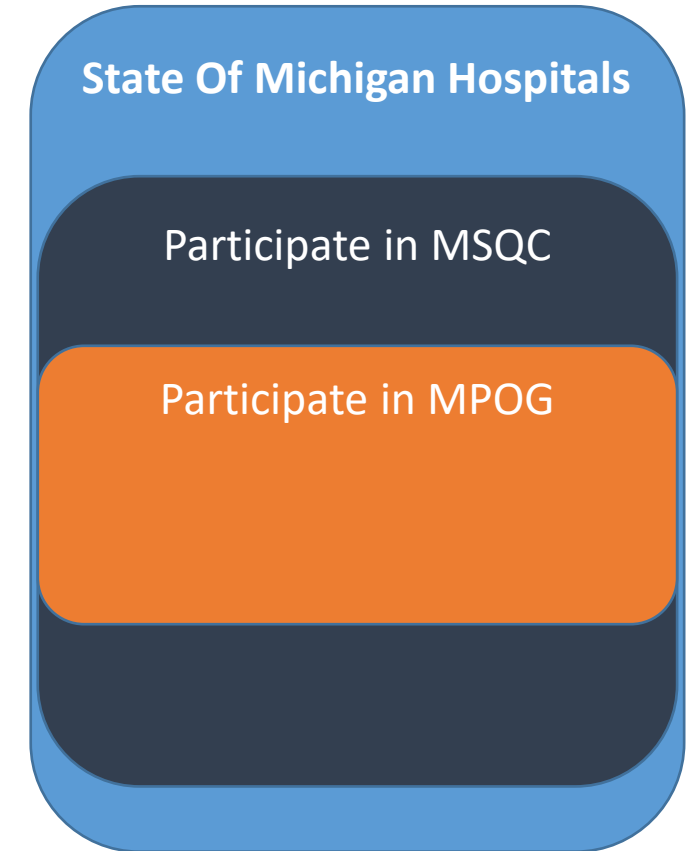
- Each Brings a Key Strength:
  - Great exposure information from MPOG
  - Great outcome data from MSQC/Other Registry
- Opportunities for partnership:
  - Quality
  - Research
  - Operations
- Seeking to do this at the Coordinating Centers, to minimize impact on sites

# How can this be done?

- While ideal would be true matching on names/unique identifiers:
  - This data isn't available
  - Incurs a different level of privacy consideration
  - Not needed for the purposes of the match
- Commonly available case characteristics, in combination are quite identifying:
  - Your institution may look after 100 surgical patients today
  - Of those 6 cases might be bowel resection cases
  - 4 may be female
  - Only 2 might be in their 72 years old
  - Only one was started at 7:45am

# Using 2018-2019 Data To Develop Process:

- Looked at MSQC Cases from 2018-2019 from institutions participating in MPOG and MSQC
  - n = 21,942 (2018)
  - n = 13,757 (2019)
- Cases were validated through manual review.
- Review process included the match parameters and comparison of the **MPOG “procedure text”** variable and the **MSQC surgical CPT code descriptions**
- ~70% cases from 2019 were reviewed



### Method #1

#### Required:

- Age
- Sex
- Institution name
- Operation Date

#### Optional

- CPT Code
- ASA

#### Match Rate

92.81% (2019)  
92.09% (2018)

#### # of Duplicates

17 (2019)  
39 (2018)

### Method #2

- Age
- Sex
- Institution name
- Procedure Start date/time AND
- In Room date/time OR
- Anesthesia Start date/time

#### Match Rate

97.48% (2019)  
96.65% (2018)

#### # of Duplicates

0 (2019)  
1 (2018)

### Method #3

- Age (+/- 1 year)
- Sex
- Institution name
- Procedure Start date/time AND
- In Room date/time OR
- Anesthesia Start date/time

#### Match Rate

97.74% (2019)  
96.86% (2018)

#### # of Duplicates

3 (2019)  
8 (2018)

### Method #4

- Age (+/- 1 year)
- Sex
- Institution name
- Procedure Start date/time AND
- In Room date/time (+/- 10 min) OR
- Anesthesia Start date/time (+/- 10 min)

#### Match Rate

99.19% (2019)  
98.95% (2018)

#### # of Duplicates

36 (2019)  
71 (2018)

### Method #5

- Age (+/- 1 year)
  - Sex
  - Institution name
  - Procedure Start date/time AND
  - In Room date/time (+/- 10 min) OR
  - Anesthesia Start date/time (+/- 10 min)
- ❖ Ranked matching

#### Match Rate

99.19% (2019)  
98.95% (2018)

#### # of Duplicates

0 (2019)  
0 (2018)

### Method #6

- Age (+/- 1 year)
  - Sex
  - Institution name
  - 1. Procedure Start date/time AND
  - In Room date/time (+/- 10 min) OR
  - Anesthesia Start date/time (+/- 10 min)
  - 2. Procedure Start date/time (+/- 1 min) AND
  - In Room date/time OR
  - Anesthesia Start date/time
- ❖ Ranked matching

#### Match Rate

99.26% (2019)  
99.05% (2018)

#### # of Duplicates

0 (2019)  
0 (2018)



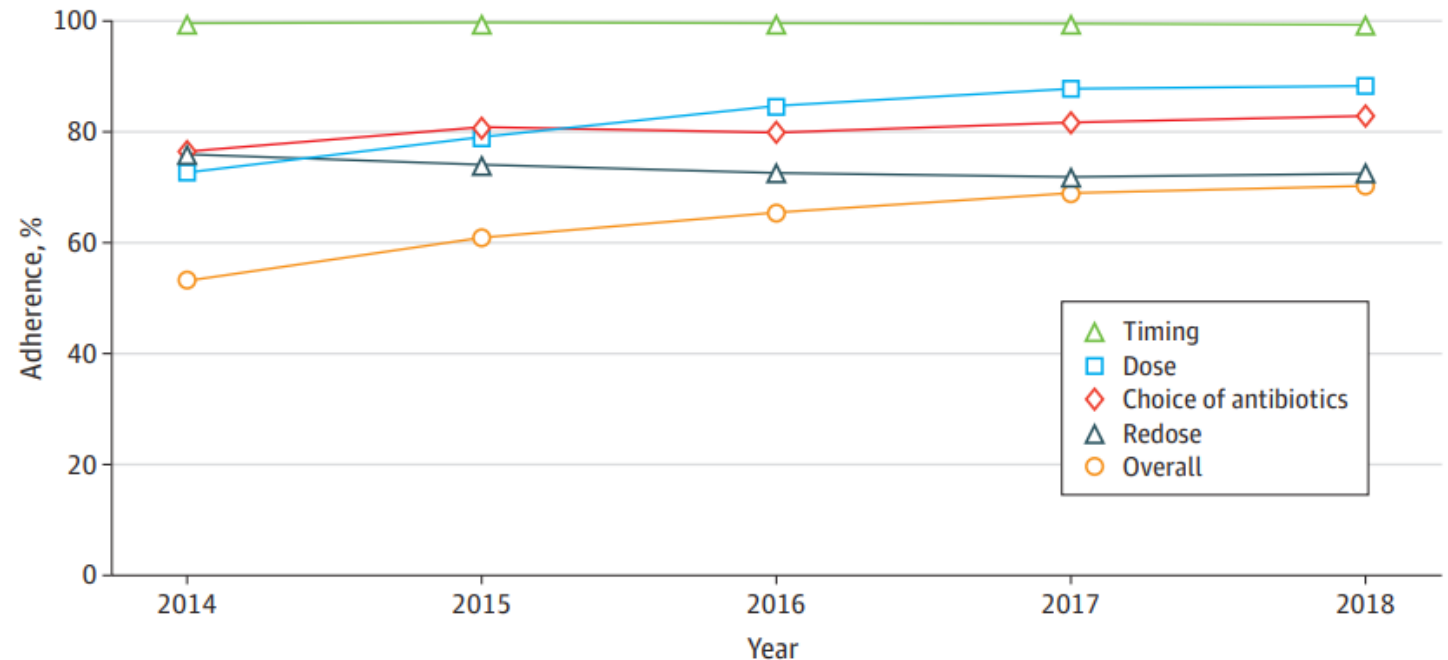
# Can you work with other registries?

- Ongoing collaborations with MTQIP
- Dependent on heterogeneity in included population:
  - May not work well for OBI (example) given limited age and sex distribution
  - High volume of cases may make this more difficult.

# Specific Example Project: SSI

- Team lead by Amit Bardia (MGH)
- AHRQ R01
- One aspect is to associate detail of antibiotic compliance (MPOG) with SSI outcomes
- Using surgical registries of SSI

Figure 1. Temporal Trends in Adherence to Perioperative Antibiotic Administration Guidelines From 2014 to 2018



The overall adherence to guideline-based antibiotic administration was noted to improve over time. The overall rates of adherence in the 4 domains were 80.4% for choice, 99.4% for timing, 82.9% for dosing, and 73.2% for redosing.

*Bardia A et al. JAMA Network Open. 2021;4(12):e2137296*

# On the horizon: Joint Quality Measures

- Glucose management?
- Non – opioid adjuncts?
- Surgical Site Infections?

# Takeaway Points:

- Thank you for collaboration between organizations
  - Joining these registries is the best of both worlds
- Achievable while maintaining privacy and culture of each organization
- Excellent opportunities for expanding quality and research horizons

Thank you