

# Drive Quality Through Your American Joint Replacement Registry Data

Jeffrey B. Stambough, MD

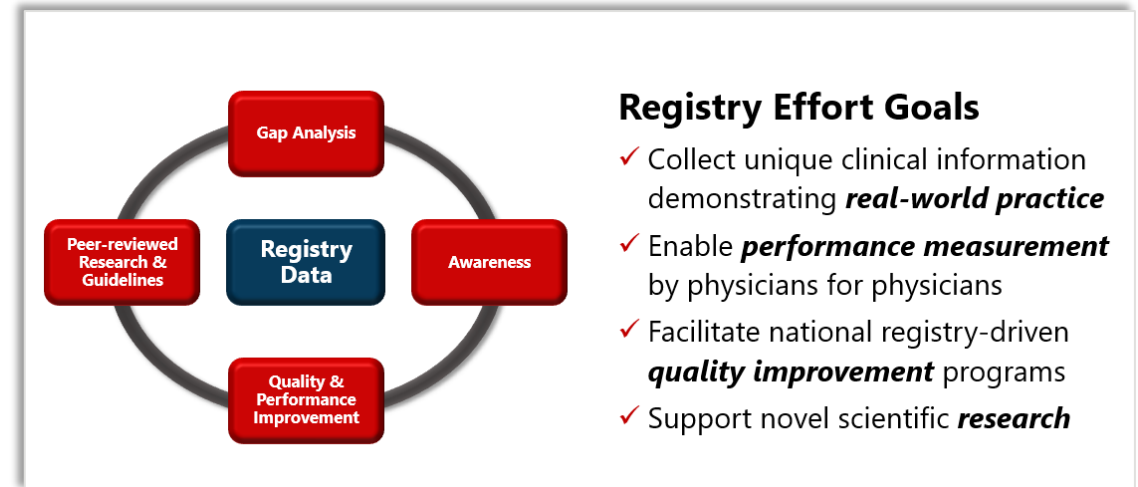
AAHKS Representative, AJRR Steering Committee  
University of Arkansas For Medical Sciences



[www.aaos.org/registries](http://www.aaos.org/registries)

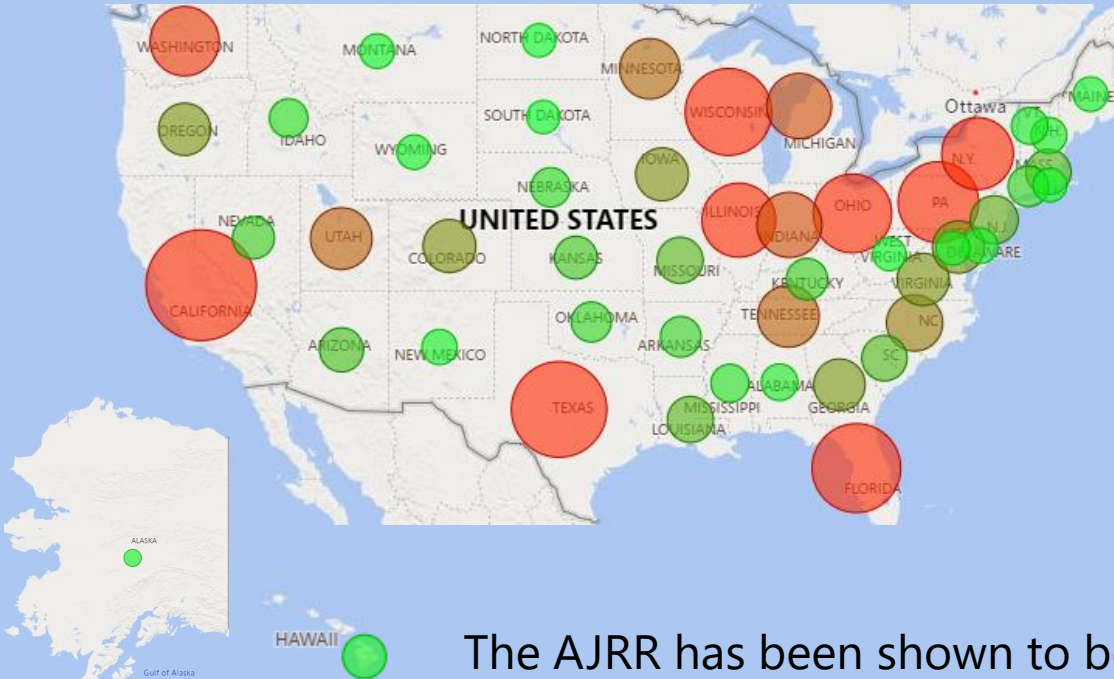
# Agenda

- American Joint Replacement Registry (AJRR) Overview
- Leveraging Registries for:
  - Orthopaedic Certifications
  - Payer Programs
  - CMS Requirements
- Dashboard Feedback
- Q&A



# Participation Across the Registries

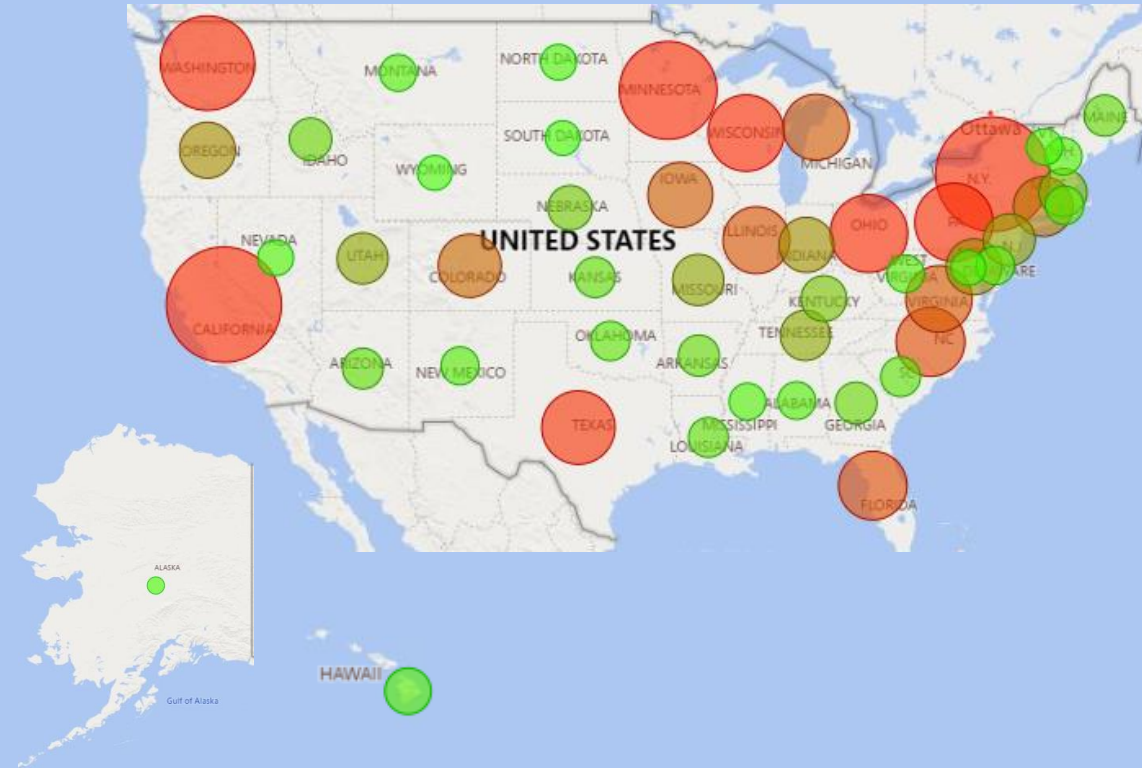
## Sites by State



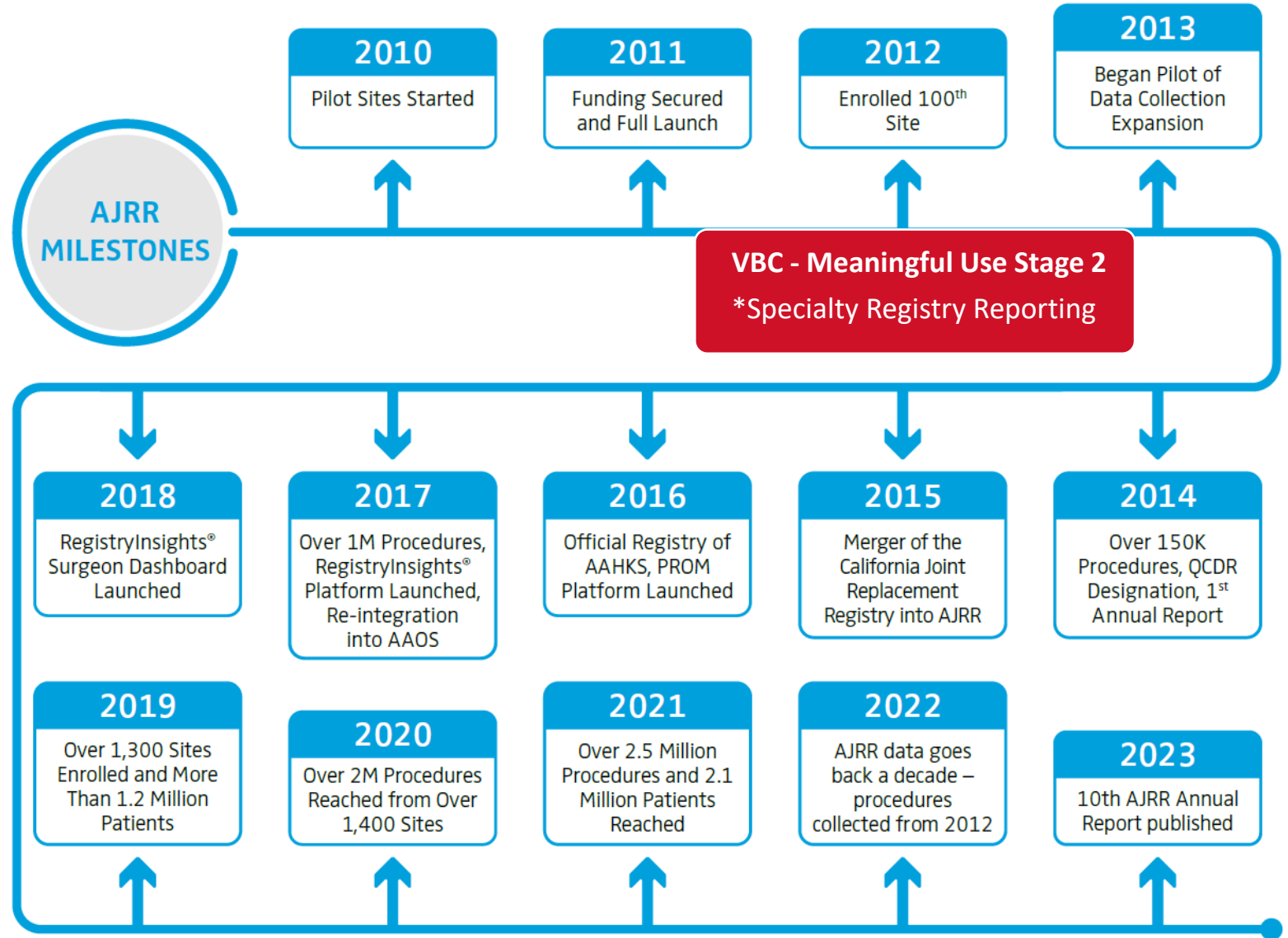
The AJRR has been shown to be representative of national trends and contains data representing over 3.5M procedures.

Over 1,400 participating sites contracted and 14,000 registered surgeons across all 50 states.

## Procedures by State



# AAOS Registry Program | History



# Registry Data Collection | Data Elements

## Procedure

- Patient Demographics
- Site/Surgeon Identifiers
- Procedure Codes (CPT, ICD-10, ICD-9)
- Diagnosis Codes
- Implants
- Admission/Discharge Dates
- Operative Start & End Times
- Comorbidities & Complications
- Anatomic-specific elements relevant to procedure type
- Measure-related Data Elements

## Post-Discharge

- Matching Patient & Procedure Identifiers
- Readmission Diagnosis Codes
- Readmission Procedure Codes
- Comorbidities & Post-Operative Complications
- Implants (2024)

## Patient-Reported Outcome Measures (PROMs)

- Matching Patient & Procedure Identifiers
- Examples:
  - Global Health Assessments
    - PROMIS-10
    - VR-12
  - Anatomic/Joint-Specific Assessments
    - HOOS/KOOS Jr.

# Registry Data Access| Surgeon Dashboards

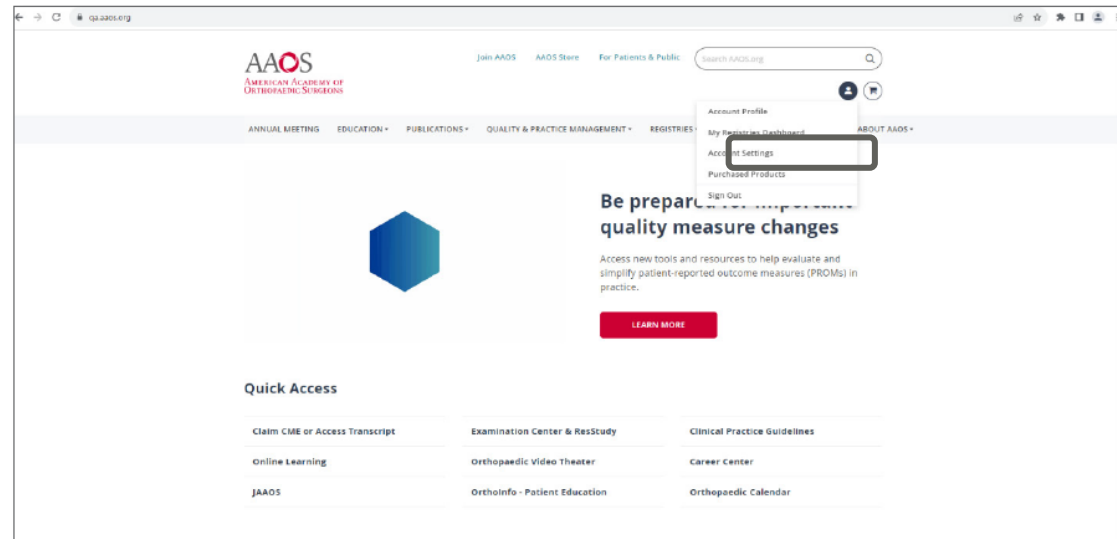
Inform your practice through  
surgeon-specific dashboards

- Individual procedure, post-discharge, & PROMs data on the RegistryInsights® platform
- National & Institution level comparisons
- Complications & Patient-Reported Outcomes (PRO) tracking

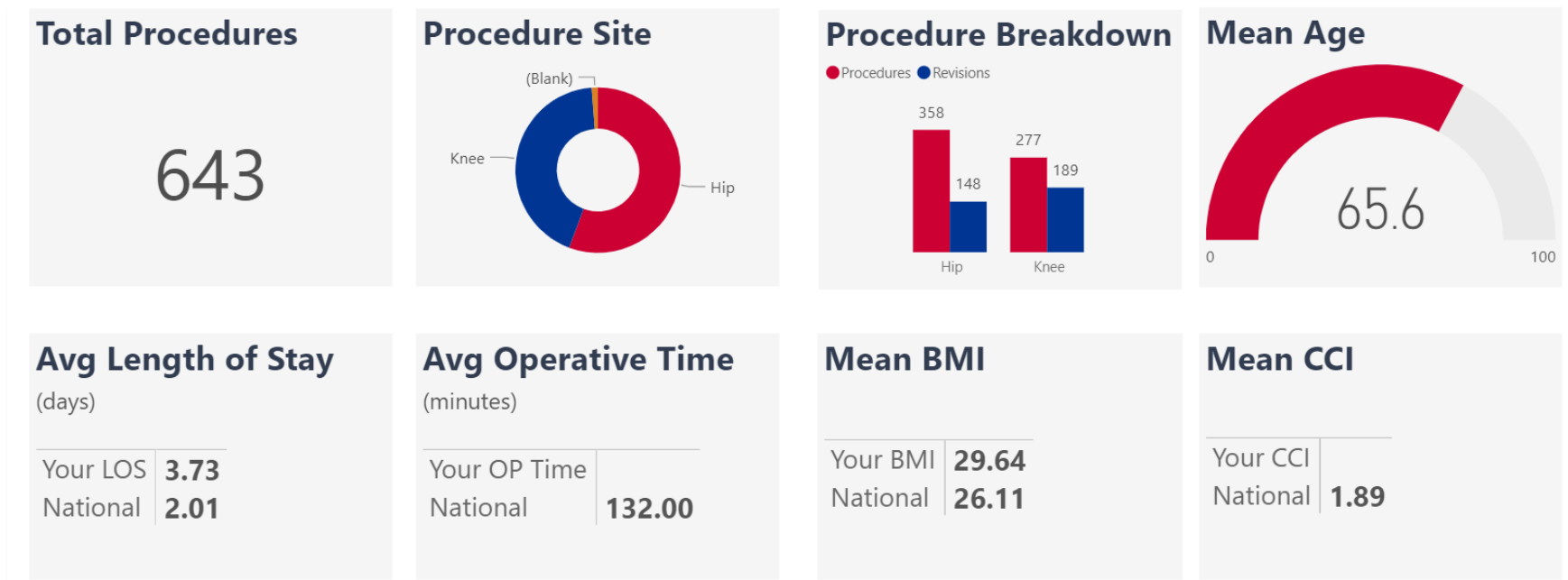
## How to Access the Registry Surgeon Dashboards on AAOS.org

Below are steps to access surgeon authorized dashboards via the AAOS website:

1. Go to AAOS.org and choose to login.
2. Enter your username and password.
3. Click on the MyAccount icon (small person next to the shopping cart icon on the top right under the search box) and choose "My Registries Dashboard."



# Registry Data in Practice | Dashboards



**Data considerations** – Is comorbidity index higher or lower than your peers? Are there different approaches for your specific patient population based on outcomes data in the dashboard?



# Registry Data in Practice | Dashboards

The image shows a dashboard filter interface with the following elements:

- Procedure Type**: All
- PX Code Type**: All
- Diagnosis**: All
- Length of Stay**: All
- Payer Status**: All
- Institution**: All
- Age Groups**: All
- Gender**: All
- Race**: All
- Institution Type**: All
- Bed Count**: All
- Teaching Status**: All

A red-bordered box highlights the bottom three filters (Institution Type, Bed Count, Teaching Status) with the text: *\*These filters only affect the "National" values in the visuals below*

## Filters & Benchmarks

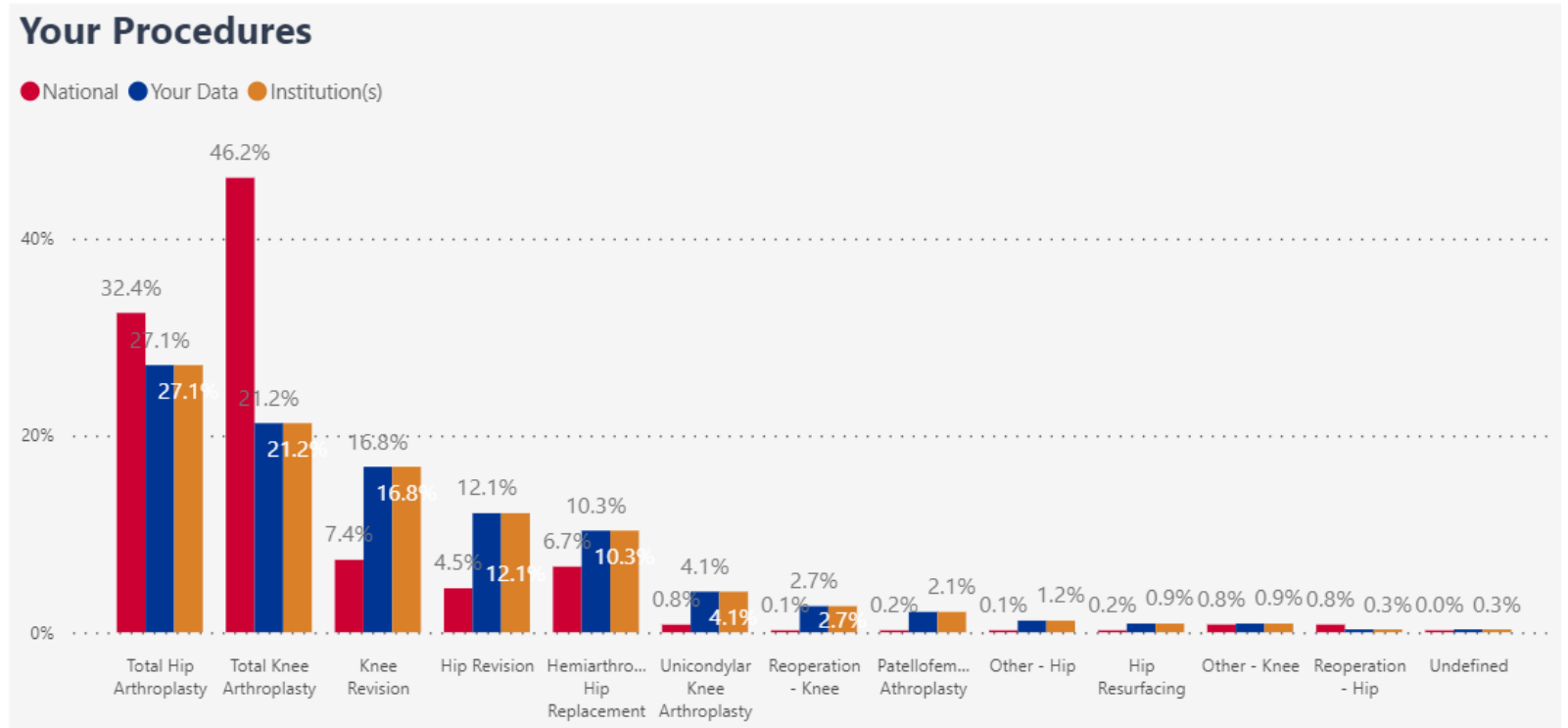
- Providing different views of your surgical data set
- Identify variations in outcomes across gender, race, age, and care setting (IP vs OP)
- Focus on primary total joints or filter to your non-elective cases
- National benchmark filters for comparison against like institutions & peers
  - Ex: Surgeon operating at an Ambulatory Surgical Center can view national surgical site infection rate of other ASCs submitting to AJRR



# Registry Data in Practice | Dashboards

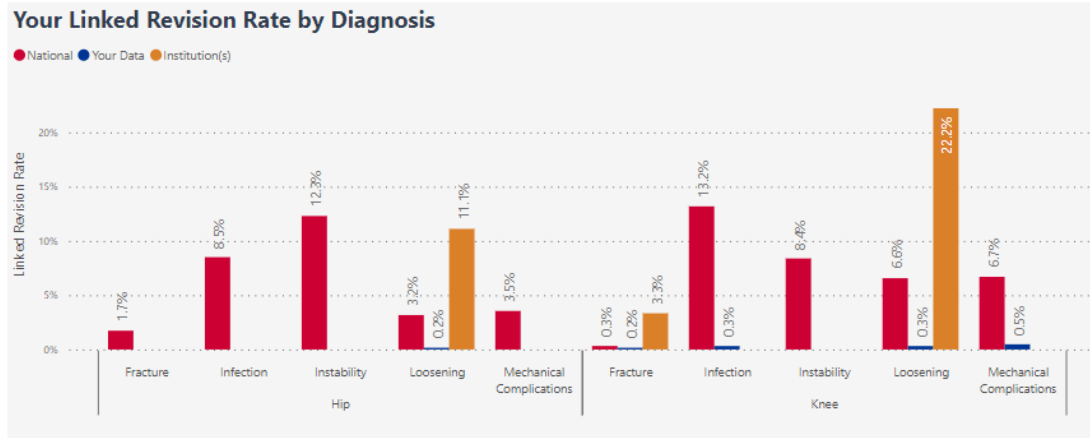
## Procedure Type Breakdown

Procedure Type	Procedures
Total Hip Arthroplasty	92
Total Knee Arthroplasty	72
Knee Revision	57
Hip Revision	41
Hemiarthroplasty/Partial Hip Replacement	35
Unicondylar Knee Arthroplasty	14
Reoperation - Knee	9
Patellofemoral Athroplasty	7
Other - Hip	4
Hip Resurfacing	3
Other - Knee	3
Reoperation - Hip	1
Undefined	1



# Registry Data in Practice | Dashboards

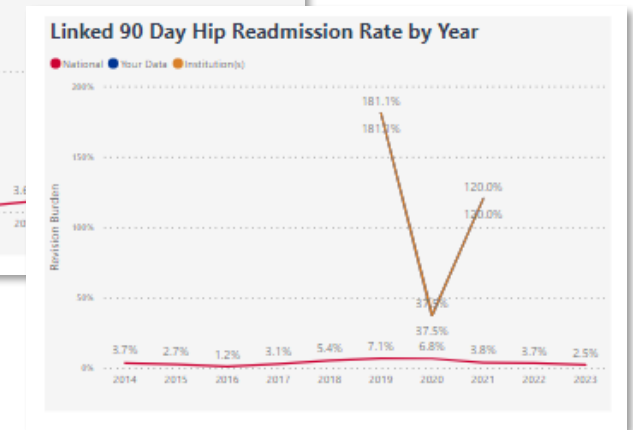
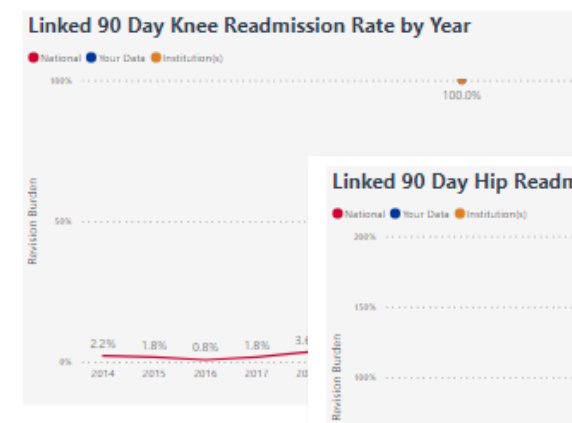
Diagnosis	Hip	Knee
Fracture		1
Infection		2
Instability		2
Loosening	1	2
Mechanical Comp...		3



- **National:** all sites who submit to AJRR
- **Your Data:** Surgeon specific
- **Institution Data:** All surgeons in one institution (reported only if number is greater than 3)

## Case Example: Your 90-day TKA & THA complication rates for mechanical complications are trending higher than your institution average

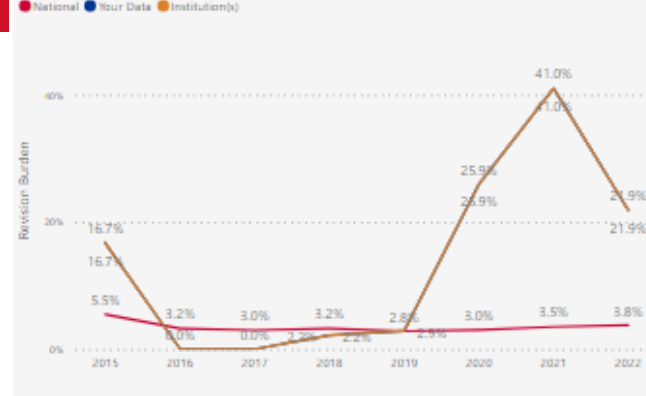
- Are you utilizing a different approach? Different component system?
- What is your baseline patient population compared to your peers (BMI, age, etc)?
- You pull this visual from the dashboard for a discussion with your team on pre-op patient education & perioperative care processes



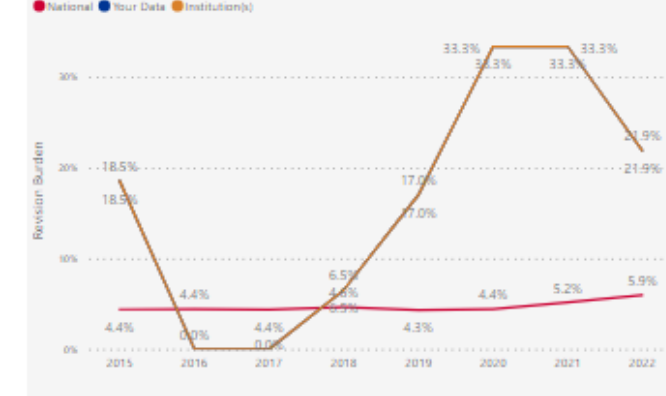
# Registry Data in Practice | Dashboards

Trend lines for revisions over time and LOS over time provide a quick glance at significant changes in outcomes

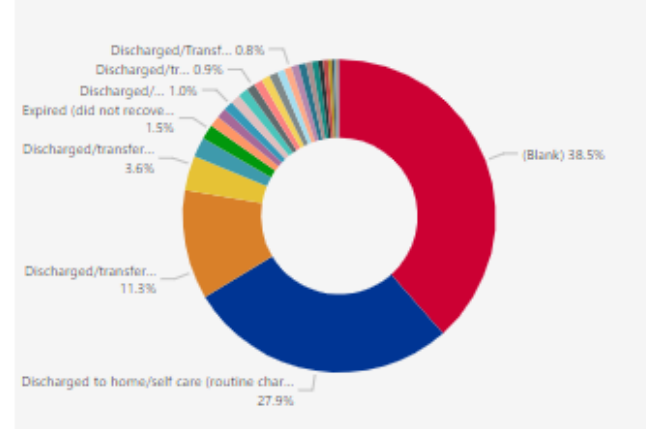
- Case example: A sudden revision increase above the national average is noted in September 2021
- Narrowing the dashboard to this procedure month provides insight into the patient population, associated diagnoses, and procedure types performed for further assessment



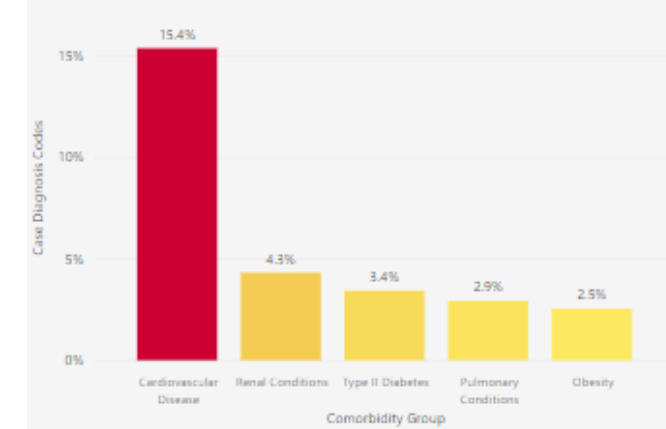
\*For this performance measurement, 0.0% means that there is qualifying procedure but no assessments vs when nothing shows up there were no qualifying procedures.



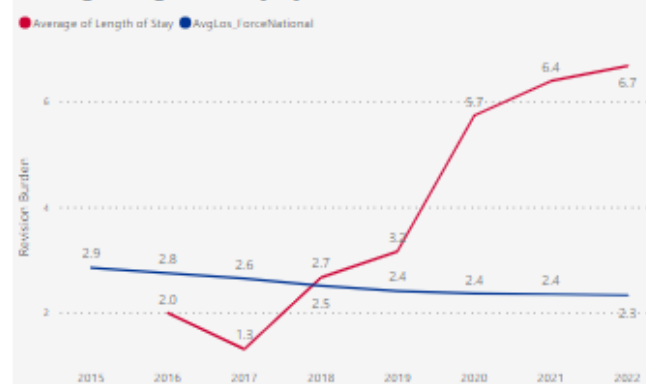
Discharge Disposition Distribution for Your Institution(s)



Comorbidities Present for Your Institution(s)



Average Length of Stay by Year for Your Institution



# Registry Data in Practice | PROMs

## Your PROMs

### Linked PROMs

HOOS JR  
714  
PreOp Assessment Count

KOOS JR  
1063  
PreOp Assessment Count

PROMIS-10 Mental Health  
1784  
PreOp Assessment Count

PROMIS-10 Physical Health  
1784  
PreOp Assessment Count

### HOOS Jr. Mean Scores for Your System

All Procedures    Your Procedures

Track PROMs Completion Rate and Outcomes Over Time with National Outcomes Comparison

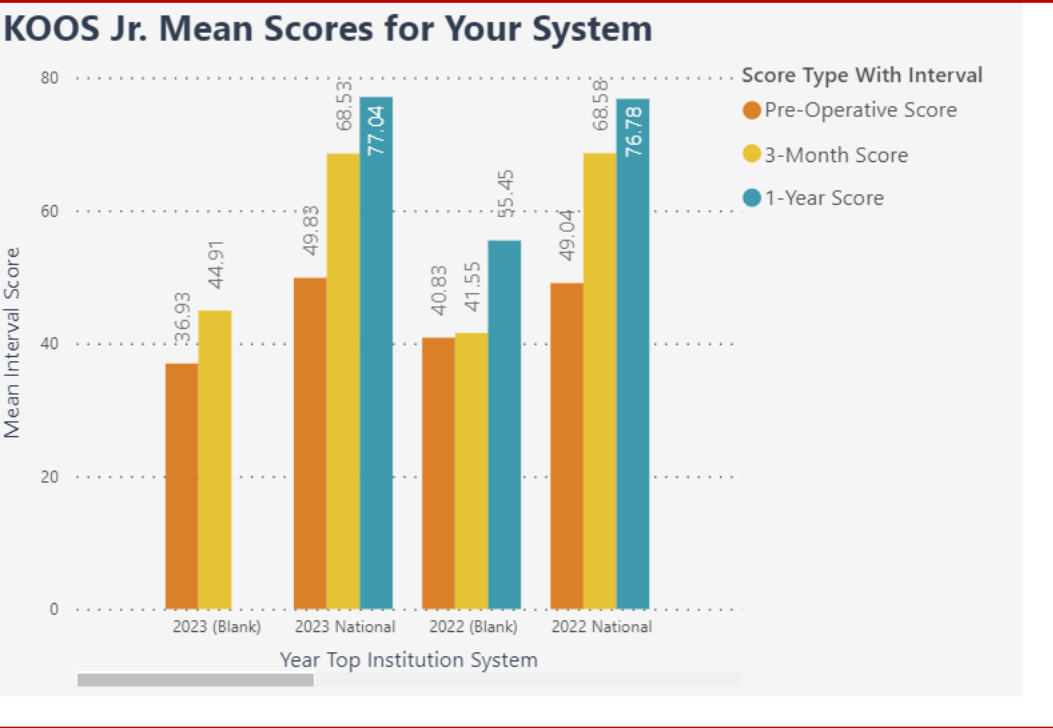
0.00%    % Linked at 3 Months PostOp    2.94%    % Linked at 12 Months PostOp

90.48%  
% MCID Achieved at 12 Months PostOp

80.00%  
% MCID Achieved at 12 Months PostOp

10.71%  
% MCID Achieved at 12 Months PostOp

48.21%  
% MCID Achieved at 12 Months PostOp



Your Performance Measures

# CMS IQR PRO-PM | AJRR Support

## CMS Inpatient Quality Reporting Total Hip and Knee Replacement PROMs Performance Measure (IQR THA/TKA PRO-PM)

- IQR PROMs Extractable Performance Report
- Submission to CMS via AJRR
- **3 new data elements**
  1. Medicare Beneficiary ID
  2. Narcotics use  $\geq$  90 Days
  3. Person Completing Assessment



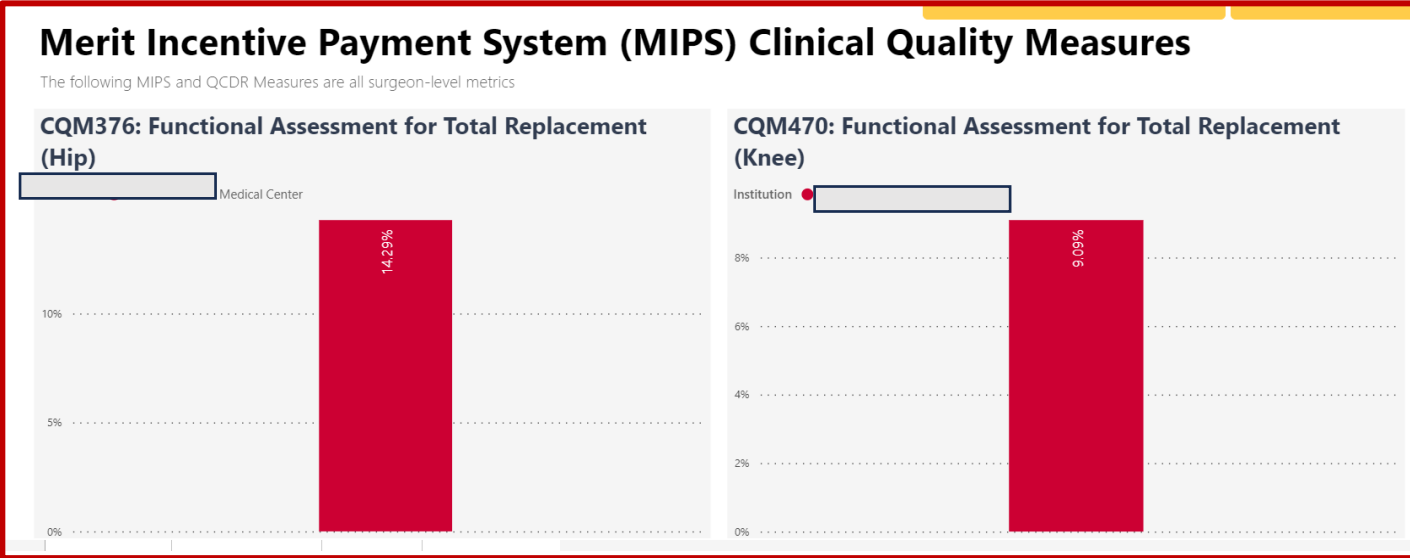
## AAOS PROMs In Practice Workgroup PRO-PM FAQ

Answers to the **Who, What, When, & Why?**

# Registry Data in Practice | Performance Measures

## CMS MIPS Measures & Qualified Clinical Data Registry (QCDR) Measures

Calculated at the surgeon level and display for all sites & surgeons, even if not using registry data for CMS QPP

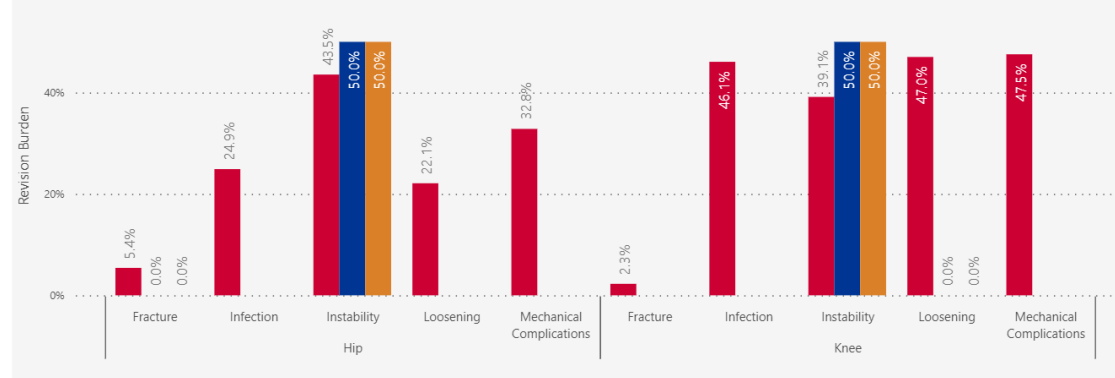


1<sup>st</sup> Risk-Adjusted Metric in the Dashboards for Discharge to home with additional risk-adjustment for complications in future

# Registry Data in Practice | SAE Credits

## Your All-Time Revisions by Diagnosis

● National ● Your Data ● Institution(s)



Surgeons participating in AJRR & utilizing their dashboards are eligible to obtain **10 SAE credits per year** for ABOS Maintenance of Certification Part II

- Download your MOC letter from RegistryInsights
- Submit to [RegistryInfo@aaos.org](mailto:RegistryInfo@aaos.org) with the years you would like to claim credit
- Our team will upload the SAE credits to your transcript



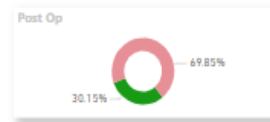
# Data Element Quality & Coverage

Institution: All Procedure Site: All Encounter Date Range: 1/1/2014 - 12/31/2040

## Data Elements Quality and Coverage

### Level 1: Minimum Data Set

\*Level 1 elements are required for processing and thus are required for every submission. If these requirements are met, then the completeness is designated in the color green, indicating a %100 submission. The color orange indicates completeness from %90-%99. Anything less than 90% is indicated in the color red.



### Index Procedures

Patient First Name 100.00% Pat_First	Patient Last Name 100.00% Pat_Last	Patient Sex 82.15% Pat_Sex	Patient Date of Birth 100.00% Patient_DOB
Facility Name 100.00% InstitutionName	Institution NPI 89.70% Inst_NPI	Operation Date 100.00% Operation_Date	Procedure Code 48.51% PX_01
Manufacturer Lot Numbers 73.68% Lot_#	Manufacturer Catalog Numbers 89.93% Cat_1	Manufacturer Name 93.59% Mfr_01	Diagnosis Code 0.00% DX_01
Surgeon NPI 100.00% Sur_NPI	Zip Code 100.00% Pat_Zip	Length of Stay 36.16% LOS	Laterality 97.48% Laterality
Disch Disposition 30.89% Discharge			

Track submission completeness for 3 levels of data:

- **Level 1** = Minimum Data Set
  - 17 elements
- **Level 2** = Enhanced Data Set
  - Elements heavily utilized in research
- **Level 3** = PROMs
  - Preoperative and postoperative PROMs that were collected for index procedures

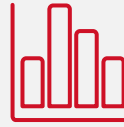
\*As an **AJRR surgeon champion**, you can work with your site to utilize this view to submit complete data and make the most of the dashboards and quality measure calculations\*

# How do the registries support quality care?

**Dashboards Supporting Continuous Quality Improvement**

**Payer Quality Programs**

**Orthopaedic Certifications**



Compare your practice to **national performance benchmarks**



Access to on-demand practice specific **reports and dashboards**



Qualify for **Advanced Certifications** such as TJC's THKR Advanced Hip & Knee Replacement, DNV, & AAAHC



Attain **continuing education credits** for ABOS MOC & ABNS CC



Facilitate site, practice-specific, **payer-incentivized performance improvement programs** such as Aetna IOQ & BCBS Blue Distinction



Use for reporting to **quality improvement programs** such as the QPP Merit-based Incentive Payment System (MIPS) & IQR PRO-PM



Inform orthopaedic practice & contribute to **orthopaedic advocacy**



Improve the **value of care** delivered to Patients

Improving orthopaedic  
care through **data.**



**Questions?**

