

# AJRR Year In Review

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

# Registry Staff

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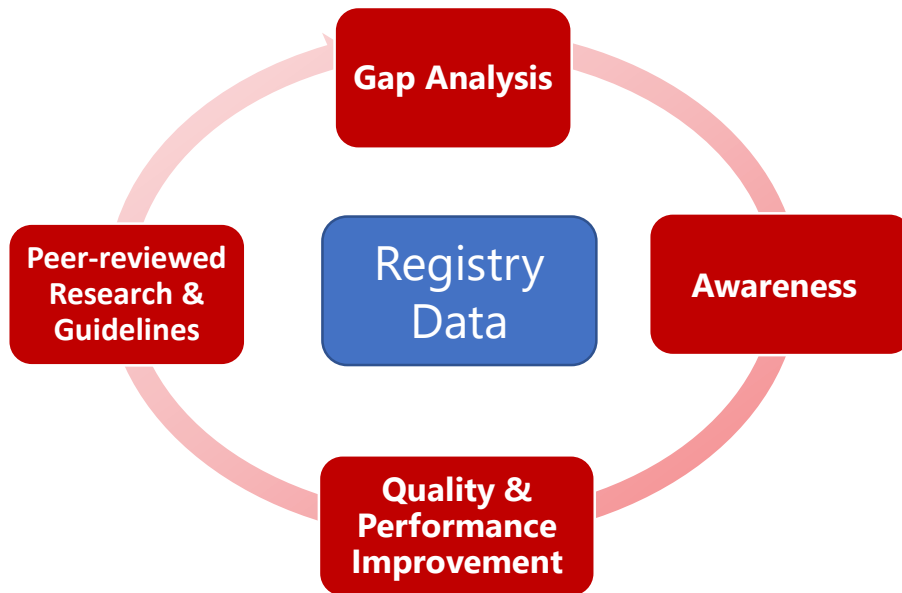
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# 2019 Highlights

- Launched Surgeon Dashboards
- Enhanced Platform Functionality
- Increased Data Reuse Opportunities
- Strengthened Partnerships With Healthcare Organizations
- Launched Registry Analytics Institute
- Published 2019 Annual Report

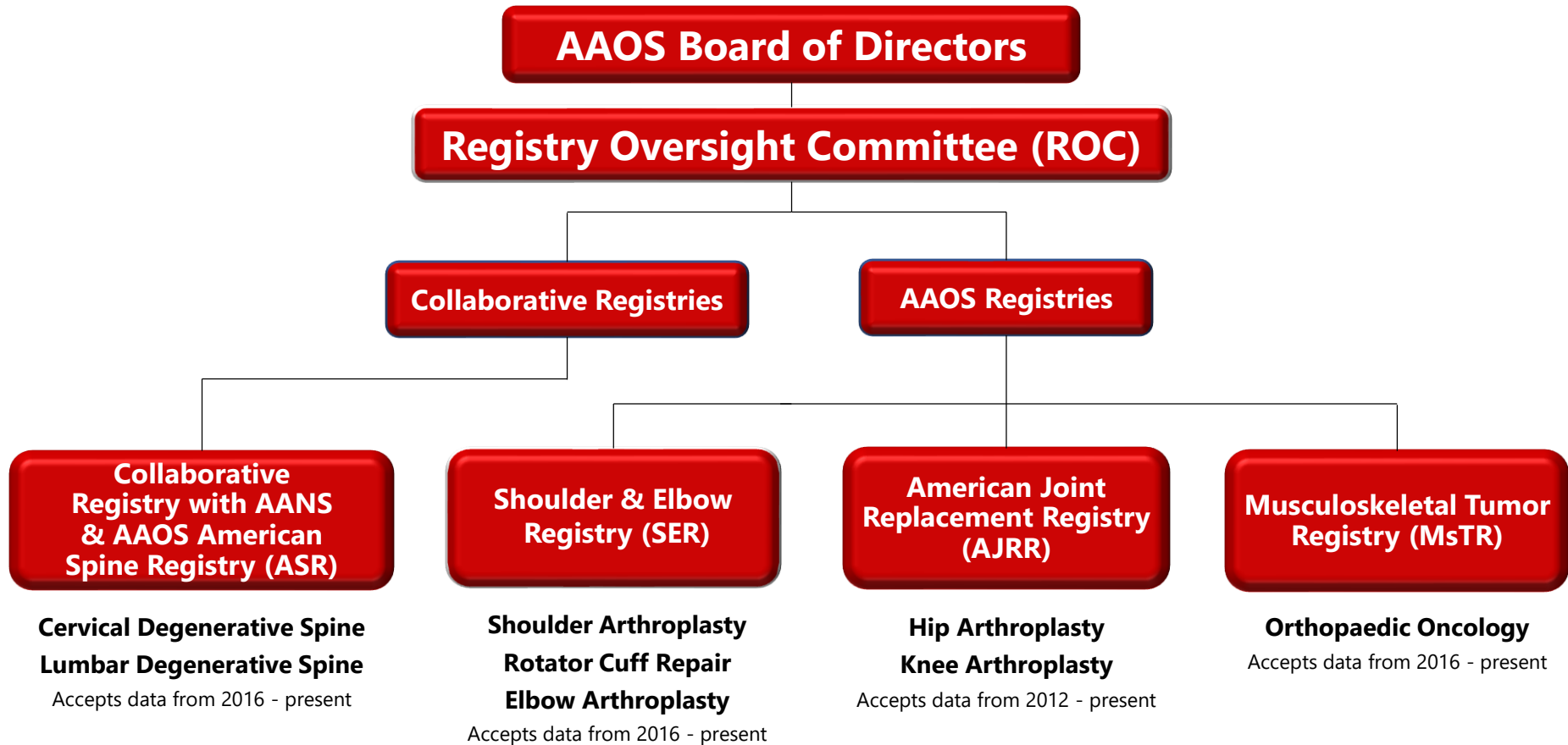
# At the Core of Academy Strategy



## Registry Effort Goals

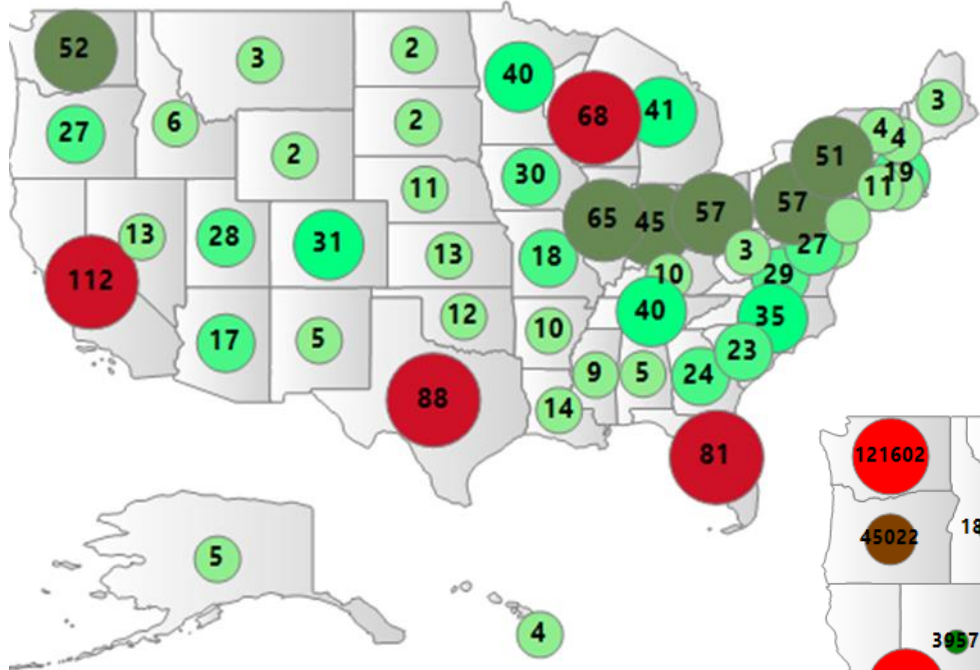
- ✓ Collect unique clinical information demonstrating ***real-world practice***
- ✓ Enable ***performance measurement*** by physicians for physicians
- ✓ Facilitate national registry-driven ***quality improvement*** programs
- ✓ Support novel scientific ***research***

# AAOS Family of Registries



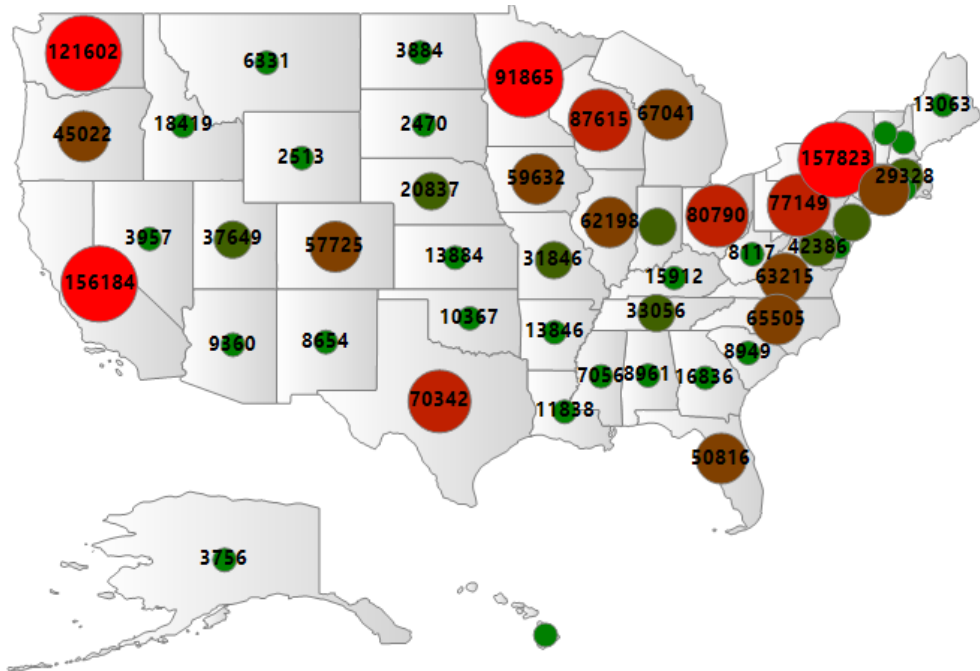
# Registry Participation

Sites by State



Over 1,450 participating sites contracted and 11,200 registered surgeons across all 50 states.

Procedures by State



Data representing over 1,860,000 procedures capturing over 40% of all US TJA volume annually.

# AJRR Data Element Summary

## Procedure

### Patient

- Name, Date of Birth, SSN
- Diagnosis (ICD-9/10)
- Gender
- Race/Ethnicity
- Weight, Height/BMI
- Payer Status

### Site of Service

- Name and Address (TIN, NPI)

### Surgeon

- Name (NPI)
- Trainee

### Procedure

- Type (ICD-9/10, CPT)
- Date of Surgery, Length of Stay
- Surgical Approach
- Surgical Technique
- Laterality
- Implants (Manufacturer, Lot #)
- Anesthesia

## Comorbidities and Complications

- Comorbidities (ICD-9/10)
- CJR Risk Variables
- Height + Weight/Body Mass Index
- Length of Stay
- American Society of Anesthesiologists Score
- Charlson Index
- Operative and Post-operative Complications

## Patient-reported Outcomes

### *Recommended:*

- PROMIS-10 Global
- VR-12
- HOOS Jr.
- KOOS, Jr.

### *Also Accepted:*

- SF-36 v1
- HOOS/KOOS
- Oxford Hip and Knee Scores
- Knee Society Knee Scoring System
- Harris Hip Score
- WOMAC (Modified via HOOS and KOOS)
- SF-12, EQ-5D, WOMAC (only accepting final scores)

# Decreasing Data Burden

- AAOS has partnered with technology vendors to facilitate the data submission process
- Re-use data that already exists in medical record, practice management and PRO systems
- Direct data submission and management can be handled by a technology provider with sites able to fix rejected files



AAOS Registry Program  
**Authorized Vendor**

American Joint Replacement Registry  
 Shoulder & Elbow Registry



Registry Program  
 Improving Orthopaedic Care Through Data





# Surgeon Level Dashboards:

HOME DASHBOARD & REPORTS TOOLS & RESOURCES

PRINT MOC COVERSHEET

PRINT DASHBOARD

Procedure Site: All | Procedure Type: All | Gender: All | Age Groups: All | Encounter Date Range: 1/1/2011 - 12/31/2020 | 3/2/2020 3:24:15 PM

## All Procedures - Nationally

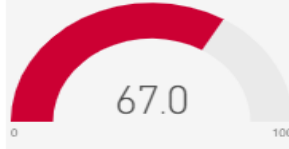
### Total Procedures

1.88M

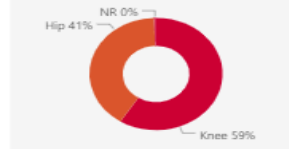
### Gender Distribution



### Mean Age

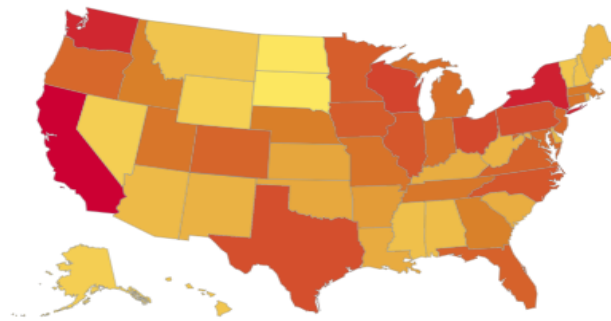


### Primary Procedures



Gender	N	%
Total	1,879,213	100.00%
Female	1,106,826	58.90%
Male	771,573	41.06%
Not Reported	814	0.04%

### Total Number of Procedures by State



Revision Flag	Procedure Joint	N	%
Total		1,879,213	100.00%
Primary	Total	1,726,365	91.87%
	Knee	1,025,707	54.58%
	Hip	691,700	36.81%
	NR	8,958	0.48%
Revision	Total	152,848	8.13%
	Knee	82,471	4.39%
	Hip	70,377	3.75%

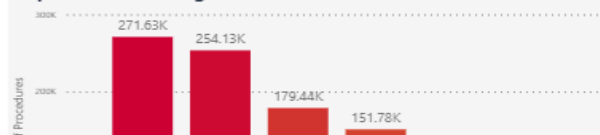
### Procedure Joint Mean Age (years)

Procedure Joint	Mean Age (years)
Total	67.04
Knee	66.68
Hip	67.57

### Top 10 ICD-10 Procedure Codes



### Top 10 ICD-10 Diagnosis Codes



Unlimited Surgeon Accounts with access to surgeon and national level dashboards

Self service functionality for surgeon and site dashboards

# Enhanced Dashboards

- Self Service Functionality
- Added Performance Measures Tab

TOOLS & RESOURCES DATA MANAGEMENT ADMINISTRATION

PRINT PARTICIPATION LETTER PRINT DASHBOARD

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Age Groups Encounter Date Range

1/1/2011 12/31/2020

ion

Female

Mean Age

67.0

Primary Procedures

NR 0% Hip 41% Knee 59%

Procedure Site Procedure Type Gender Age Groups Encounter Date Range 3/3/2020 2:36:28 PM

All All All All 1/1/2011 12/31/2020

Institution All

### Modified 109 Measure

Hip Arthroplasty Patients with Pre-operative Functional Assessment for Your Institution(s)

Institution National AJRR Test Hospital 2 AJRR Test Hospital 4

Year	National	AJRR Test Hospital 2	AJRR Test Hospital 4
2020	1.48%		
2019	3.44%		
2018	6.55%	33.33%	
2017	6.89%	100.00%	40.00%
2016	2.78%		
2015	0.56%		

Hip Arthroplasty Patients with Pre-operative Functional Assessment for Your System

National System PFATHA Score

Year	National	System PFATHA Score
2020	1.48%	
2019	3.44%	
2018	6.55%	11.11%
2017	6.89%	35.45%
2016	2.78%	
2015	0.56%	

Your PROMs Your Performance Measures

All Procedures Your Procedures All Post-Operative Data Your Post-Operative Data All PROMs Your PROMs Your Performance Measures

# Increased Data Reuse Opportunities

Participation in the American Academy of Orthopaedic Surgeons (AAOS) Registry Program offers a wide variety of data reuse opportunities including requirements for quality initiatives and state collaboratives.

- AAOS RegistryInsights Platform Standard Reports and personalized dashboards
- AAOS RegistryInsights National Benchmarks
- Accreditation Association for Ambulatory Health Care (AAAHC) Advanced Orthopaedic Certification
- American Board of Orthopaedic Surgeons (ABOS) Maintenance of Certification (MOC) Program
- BlueCross BlueShield Blue Distinction Specialty Care
- Blue Shield of California waiver of prior authorization
- Bree Collaborative
- Centers for Medicare & Medicaid Services (CMS) Bundled Payments for Care Improvement Advanced (BPCI-A)
- CMS Comprehensive Care for Joint Replacement (CJR) Model
- CMS Merit-based Incentive Payment System (MIPS) Promoting Interoperability (PI) and Quality Payment Program (QPP)
- DNV GL Orthopaedic Center of Excellence
- The Alliance QualityPath
- The Joint Commission Advanced Certification for Total Hip & Knee Replacement
- Aetna Institutes of Quality
- Cigna Surgical Treatment Support Program

# New & Enhanced Partnerships

- Joint Commission Advanced Certification
- Aetna Institutes of Quality
- ASCA Pilot
- OrthoForum

# Advanced Certification for Total Hip and Total Knee

Sites can now track the four measures for the Joint Commission Advanced Certification for Total Hip and Total Knee through AJRR

- Regional Anesthesia
- Postoperative Ambulation on Day of Surgery
- Discharged to Home
- Preoperative Functional/Health Status Assessment

Field Name	Required
TJC_AnesthesiaType	Required for TJC Certification
TJC_Rgnl_Ansth_Exemption	Required for TJC Certification
TJC_Ambulation	Required for TJC Certification
TJC_DSCHDISPCODE	Required for TJC Certification
TJC_Discharge_Exclusion	Required for TJC Certification
TJC_Admit_Source	Required for TJC Certification

# Aetna Institutes of Quality

- AAOS partnered with AETNA to help sites achieve the Institutes of Quality designation
  - Consent Form
  - Sites will be able to track and report the performance measures set by AETNA through AJRR, with future plans to add the functionality on RegistryInsight Platform.

# Registry Analytics Institute

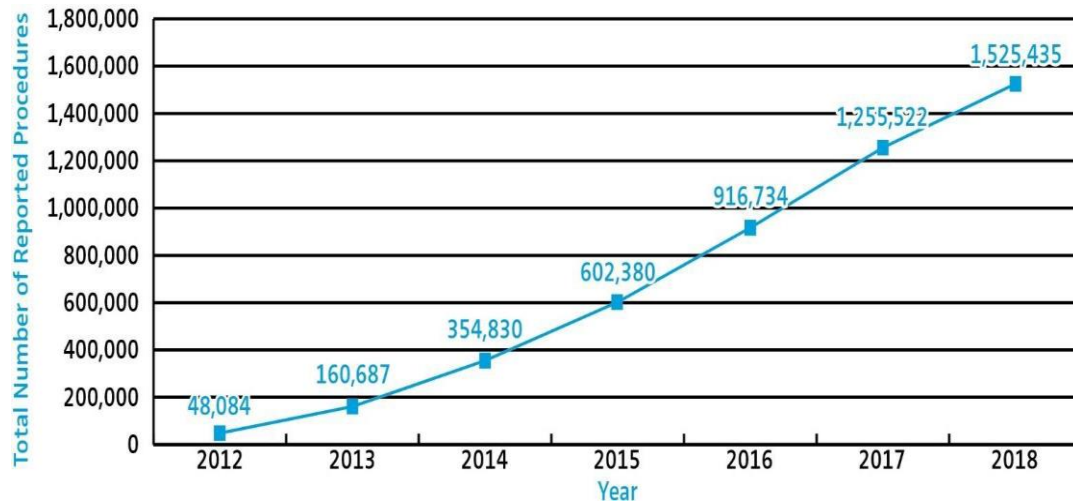
The goal of the AAOS Registry Analytics Institute is to provide a resource to the scientific community to further understand and improve orthopaedic and musculoskeletal care by making data available to examine outcomes related to orthopaedics.

- The Institute provides clinicians and clinician-scientists the opportunity to submit proposals for analytic insight that are contained within its various Registries.
- Selected awardees receive statistical support, data analyses, and potential monetary support

# 2019 AJRR Annual Report Highlights

- Over 1.5 million hip and knee procedures representing over 1,200 enrolled sites of service
  - 28.5% growth compared to 2018

**Figure 1.1: Cumulative Procedural Volume by Year, 2012-2018 (N=1,525,435)**





# AJRR Annual Report Highlights Continued

- Age and sex adjusted clinical survivorship curves
- Patient-reported outcomes

## **PATIENT-REPORTED OUTCOME MEASURES (PROMs): *New in 2019:***

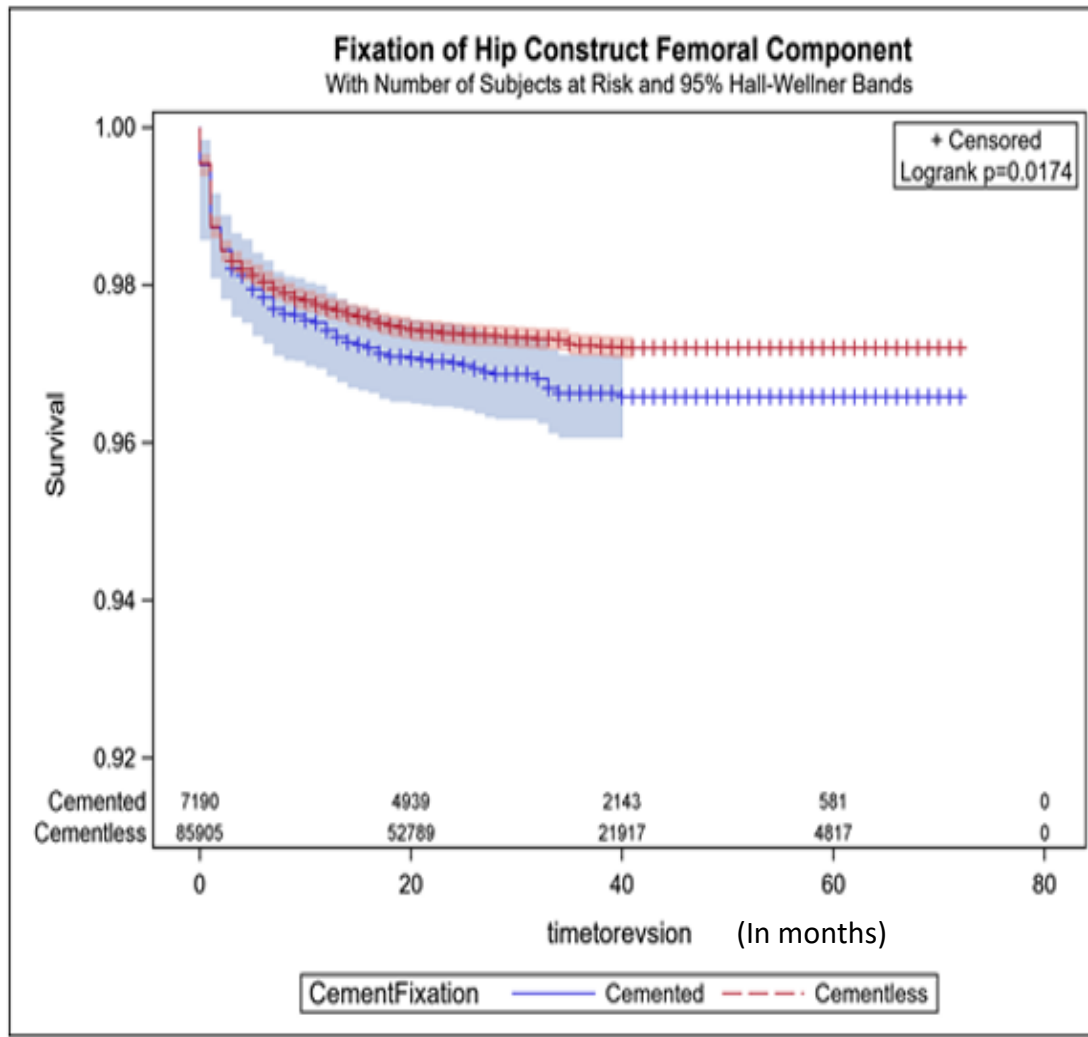
*The number of PROMs in the Registry has doubled.*

PROMs are increasingly being utilized to evaluate success of a hip or knee arthroplasty procedure. By the end of 2018, 61 sites out of 821 (7.4%) submitted PROMs, compared to 6.3% the year prior. As of June 30, 2019, this number has more than doubled to 155.

Patient-Reported Outcome Measure	Patients with Preoperative Score	Patients with Linked Postoperative Score	Percentage of Patients Who Completed a Preoperative and 1-year Score (%)	Patients with Meaningful Improvement (%)
<b>HOOS, JR</b> <i>(Hip Disability and Osteoarthritis Outcome Score, Junior)</i>	16,508	3,284	19.9%	92.7%
<b>KOOS, JR</b> <i>(Knee Injury and Osteoarthritis Outcome Score, Junior)</i>	28,262	6,539	23.1%	88.5%

- New hip and knee arthroplasty analyses
- Download [www.AJRR.net/publications](http://www.AJRR.net/publications)

# Integration of Medicare Data



Access to **Medicare claims** inclusive of inpatient (148 data elements), outpatient (122 data elements) & National Death Index

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2012-2018 for all patients represented in Registry with Medicare records

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Participants have access to custom reports that compare their site to the national Annual Report analyses, inclusive of survivorship curves

# Why Do Sites Participate?

- Compare your practice to **national performance** benchmarks
- Access to on-demand practice specific **quality reports and dashboards**
- Facilitate tracking and monitoring of **longitudinal** patient outcomes
- Facilitate site, practice-specific, **payer-incentivized performance improvement** programs such as Blue Distinction and Centers of Excellence
- Qualify for **national distinction programs** such as the Joint Commission Advanced Certification and AAAHC
- Use for reporting **to quality improvement programs** such as MIPS, BPCI-A & ABOS MOC
- Early access to **surveillance alerts** for poorly performing implants
- Improve the **value of care** delivered to patients



# Questions?

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