

American Joint Replacement Registry

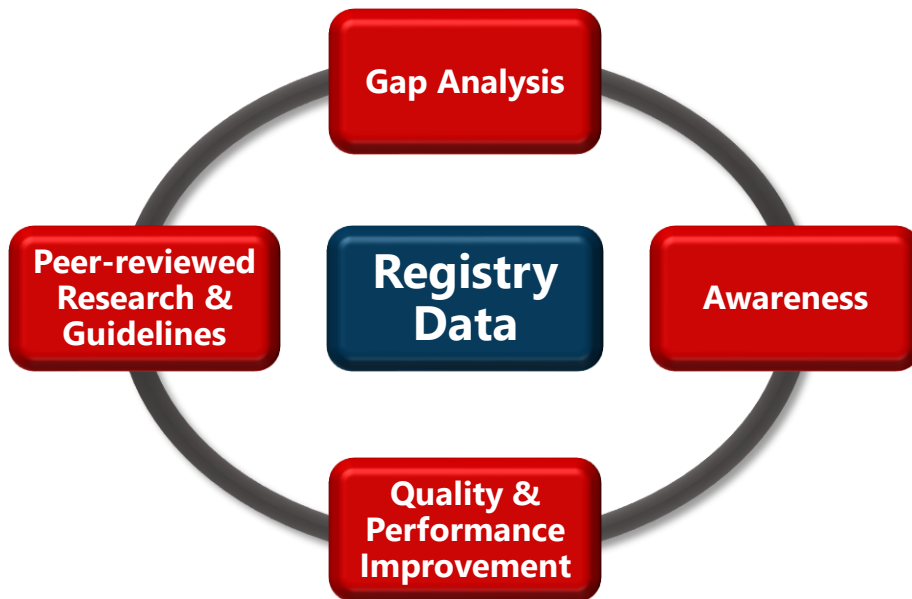
*Accessing Data from the World's Largest Hip and Knee
Registry by Annual Procedure Count*

www.aaos.org/registries

Introductions

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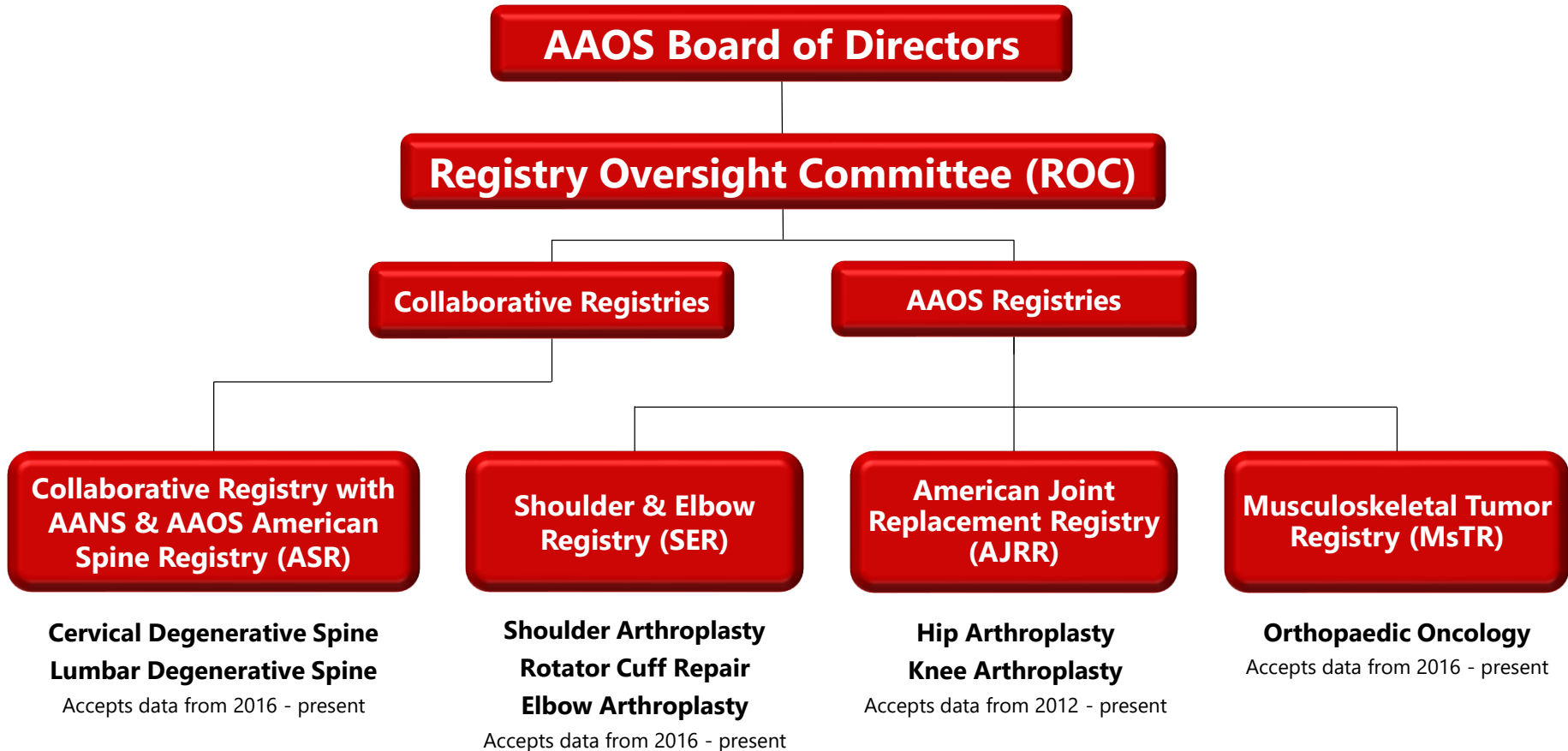
At the Core of Academy Strategy



Registry Effort Goals

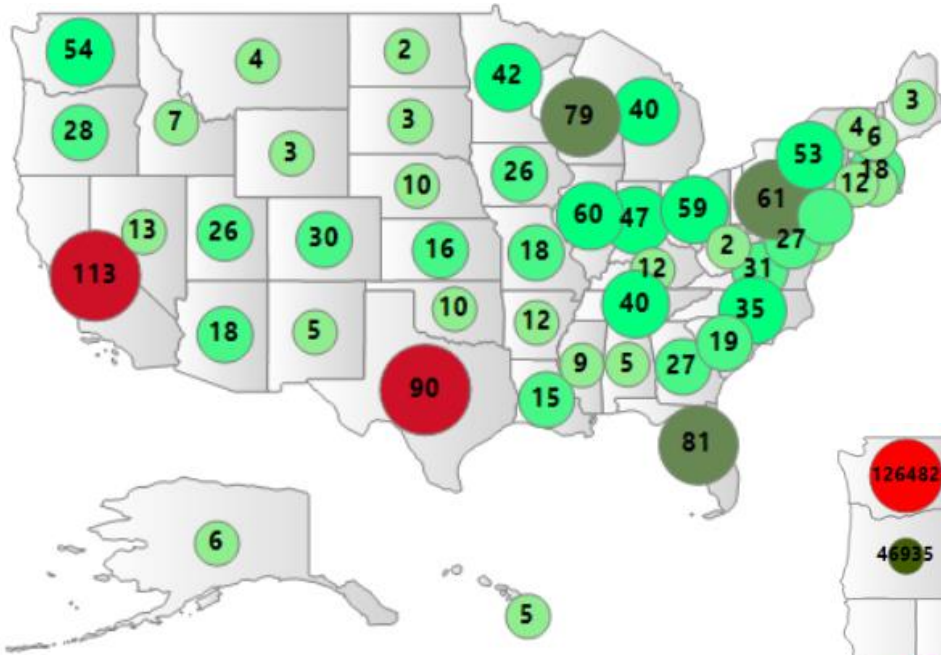
- ✓ Collect unique clinical information demonstrating ***real-world practice***
- ✓ Enable ***performance measurement*** by physicians for physicians
- ✓ Facilitate national registry-driven ***quality improvement*** programs
- ✓ Support novel scientific ***research***

AAOS Family of Registries



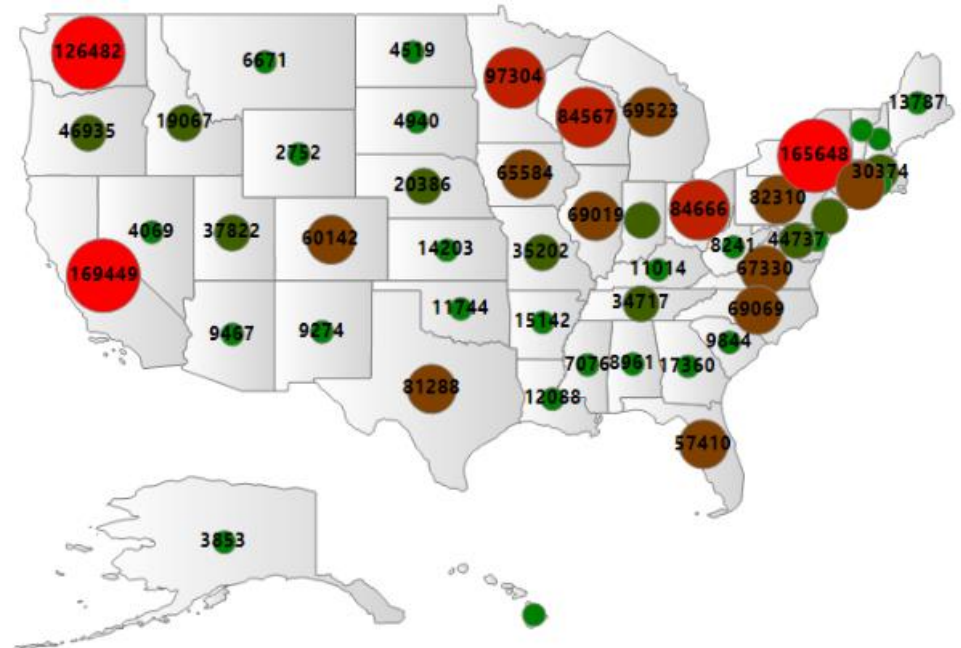
Registry Participation

Sites by State



Over 1,600 participating sites contracted and 11,700 registered surgeons across all 50 states.

Procedures by State



Data representing over 2,000,000 procedures capturing over 40% of all US TJA volume annually.



American Joint Replacement Registry

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)

COVID-19 ICD-10 CODE NOW BEING COLLECTED IN AAOS REGISTRIES

- The AAOS Registry Program is collecting COVID-19 data through the capture of the ICD-10 code for COVID-19 confirmed diagnosis, U07.1
- The ICD-10 code, U07.1, can be submitted as a preoperative comorbidity or prior diagnosis present on admission and as a reason for readmission
- Tracking this information will help your site and the registries analyze
 - Impact of COVID-19 on outcomes
 - Trends of surgery based on the pause in elective surgery
 - Trends of patient-reported outcomes (PROMs) due to delayed procedures
 - Potential impact on Centers for Medicare & Medicaid Services (CMS) value-based payment models and coverage for patients recovering from COVID-19

COVID-19 IMPACT & RESPONSE

- AAOS Registries are for surgeons by surgeons
 - AAOS is here to support our members to ensure registry participation does not cause burden
 - Capturing U07.1 does not change your site's workflow; it is added as an accepted value
- If you have any questions about submitting the new code, please reach out to AAOS Registry Support at RegistrySupport@aaos.org.

Steps to a Successful Start

Contract & Welcome

- Execute contract
- Schedule a Welcome call to identify your sites key contacts and roles with the Registry

Data Collection & File Build

- Walkthrough file development and file build
- File submission (SFTP/HTTPS) account creation

Test File Submission

- Two rounds of test file submissions

Live File Submission

- Final production set up and first live data submission

RegistryInsights® Walkthrough

- Once data has been submitted, sites will have a walkthrough with staff to review dashboards, reports, PROMs and other platform functionality

Three Ways to Access Data

**Registry Insights®
Dashboards**

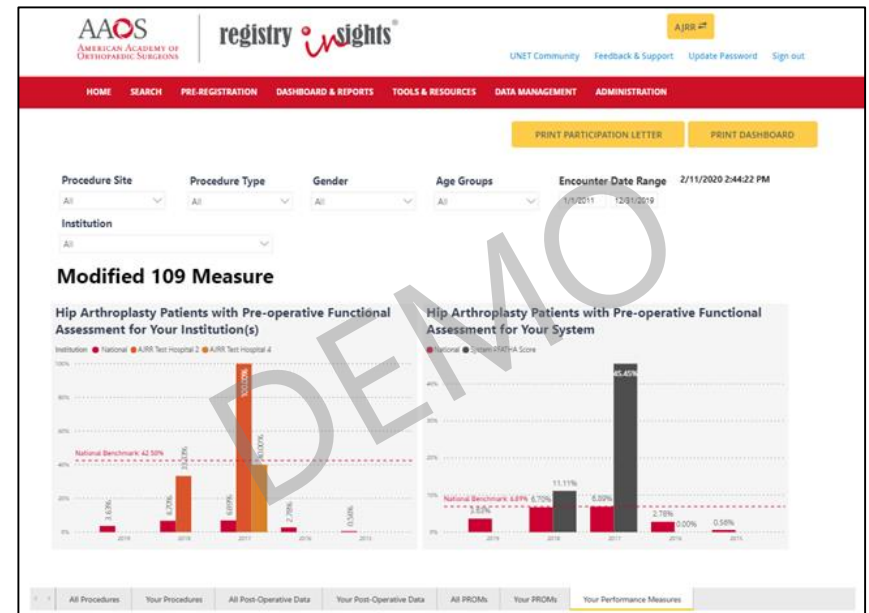
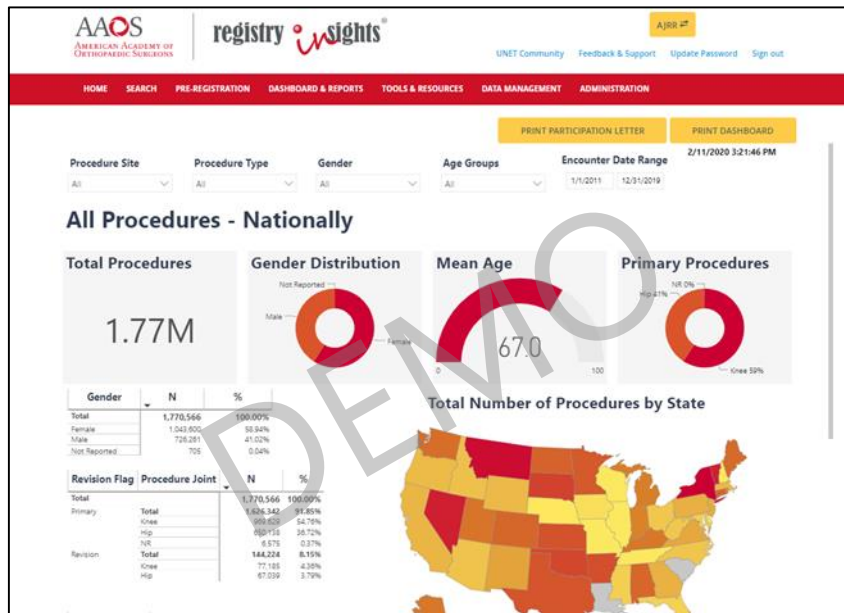


Custom Reports

**Registry Analytics
Institute®**

RegistryInsights® Dashboards

- On-demand practice specific dashboards
- Compare your practice to national performance benchmarks
- Unlimited surgeon accounts with access to system, site, and surgeon level dashboards



PROM Management

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UNET Community Feedback & Support Sign out

HOME SEARCH PRE-REGISTRATION DASHBOARD & REPORTS TOOLS & RESOURCES DATA MANAGEMENT ADMINISTRATION

HOME / REPORTS

Procedure Reports Patient Reported Outcomes Reports

Count of Components by Type Assessment Summary

Count of Procedures by ICD-10 Procedure Codes Patient Status Report

PRE-REGISTRATION FORM PRE-REGISTRATION UPLOAD

This form allows AJRR Users to pre-register patients prior to surgery for pre-operative, patient-reported outcome measures (PROMs) data collection. Once the form has been submitted, a patient pre-operative case will be added to the Registry. The pre-registration process permits users to collect PROMs from patients via the AJRR platform through the patient kiosk or through manual entry of a patients' PROMs responses into the platform if collected by paper or clinician/surrogate administration.

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UNET Community Feedback

HOME SEARCH PRE-REGISTRATION DASHBOARD & REPORTS TOOLS & RESOURCES DATA MANAGEMENT ADMINISTRATION

HOME / REPORTS / PROM PATIENT STATUS REPORT

Entries 10

ACCOUNT ID	HOSPITAL/ASC NAME	PATIENT ID	PATIENT LAST NAME	PATIENT FIRST NAME	PATIENT DATE OF BIRTH	PATIENT EMAIL ADDRESS	PATIENT PHONE TYPE	PATIENT PHONE NUMBER	PROCEDURE	LATERALITY	PLANNED SURGERY DATE	
1041062	SER Test Hospital 1	PRP30258	ataAOS	johnny	1/1/1980				Shoulder Arthroplasty	Left	1/24/20	
1041062	SER Test Hospital 1	PRP30258	ataAOS	johnny	1/1/1980				Shoulder Arthroplasty	Left	1/24/20	
1041061	SER Test Hospital 5	PRP30261	Bobby	Ricky	7/16/2019				Rotator Cuff Repair	Left	2/28/20	
1041061	SER Test Hospital 5	PRP30261	Bobby	Ricky	7/16/2019				Rotator Cuff Repair	Right	2/28/2019	1619012200 Bi Ct
1041062	SER Test Hospital 1	PRP30246	Brown	Charlie	1/1/1980				Shoulder Arthroplasty	Left	1/20/2019	.
1041062	SER Test Hospital 1	PRP30246	Brown	Charlie	1/1/1980				Shoulder Arthroplasty	Left	1/20/2019	.
1041062	SER Test Hospital 1	PRP30235	butkus	dick	1/1/1980				Shoulder Arthroplasty	Left	1/20/2019	.

PART 2: Pre-Operative Case Information

Please complete all applicable required and optional fields of the pre-operative case section. Case information is required for all cases to be added to the Registry. Please note that all case data requested pertains to future procedures.

Planned Proc Date

Procedure Site

Select One

Shoulder

Elbow

Institution

Select One

Surgeon

Select One

Payer Info

Select One

SUBMIT

PART 1: Patient demographic details

Please complete all applicable required and optional fields of the patient demographic section. Note: Email is conditionally required, however if you are administering assessments via email you must provide a patient email or the system will not be able to send the email to the patient.

If the Patient Social Security Number (SSN) is not available, please select the 'Not Available' option next to the Social Security field. Please note that the Registry also accepts the last 4 digits of the SSN. Patient SSN assists the Registry with achieving its mission through the ability to track longitudinal device information.

Social Security*

Not Available

Email

Custom Reports

Custom reports created by our analytics team to help understand and package your site data in an actionable format

Custom reports can include site specific metrics and shape continuous improvements to the canned dashboards provided

Aggregated reports and national benchmarks for every metric across all data submitted including procedural, post-operative and PROMs data can be provided at your site level

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

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
- Aetna Institutes of Quality (IOQ) Orthopaedic Surgery
- American Board of Neurological Surgery (ABNS) Continuous Certification (CC)
- 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
- CMS Merit-based Incentive Payment System (MIPS) Promoting Interoperability (PI) and Quality Payment Program (QPP)
- Centers for Medicare & Medicaid Services (CMS) Bundled Payments for Care Improvement Advanced (BPCI-A)
- CMS Comprehensive Care for Joint Replacement (CJR) Model
- Cigna Surgical Treatment Support Program
- DNV GL Orthopaedic Center of Excellence
- The Alliance QualityPath
- The Joint Commission Advanced Certification for Total Hip & Knee Replacement

AJRR Annual Report

Available Now!

2019 Annual Report
and Supplement at:
www.aaos.org/registries/publications

*7th Annual Report to be
released in November of
2020*



2019 Annual Report

- Summary Statistics
 - Procedure, institution, and patient distributions
- Data Completeness
- Hip Arthroplasty
- Knee Arthroplasty
- Revision Procedures
- Component/Case Survivorship
- Patient Reported Outcome Measures (PROMs)

2019 Annual Report

Sample Results

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

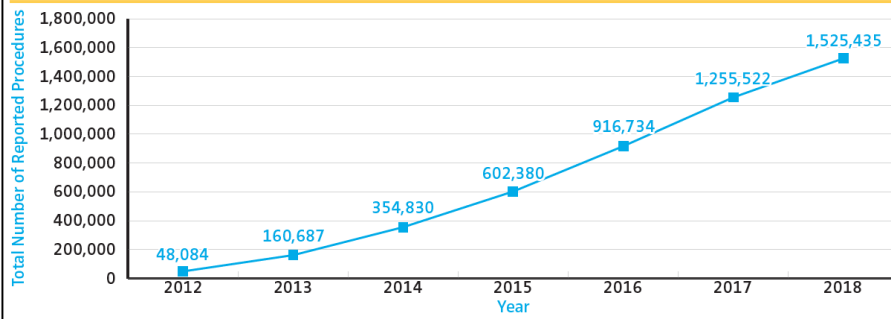


Figure 2.24 Femoral Stem Fixation for Elective Primary Total Hip Arthroplasty 65 Years of Age with Primary Osteoarthritis Age and Sex Adjusted, 2012-2018*

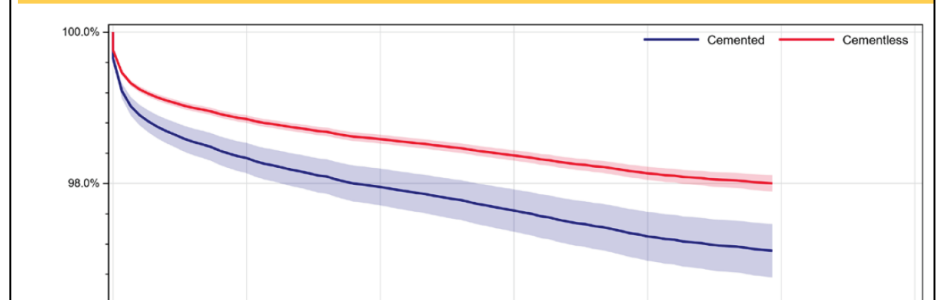


Figure 2.29 ICD Diagnosis Codes for All Early "Linked" Hip Revisions, 2012-2018 (N=3,923)*

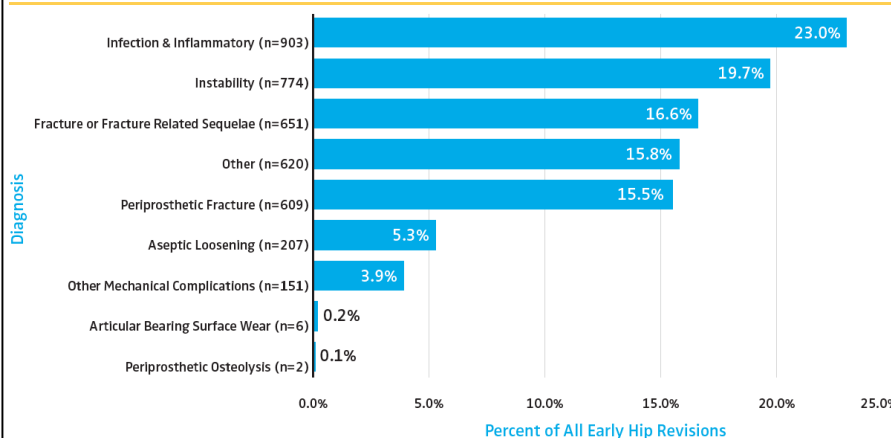


Table 2.5 Change Between Preoperative and 1-Year Postoperative Patient Reported Outcome Measure (PROM) Scores After Primary Hip Arthroplasty, 2012-2018

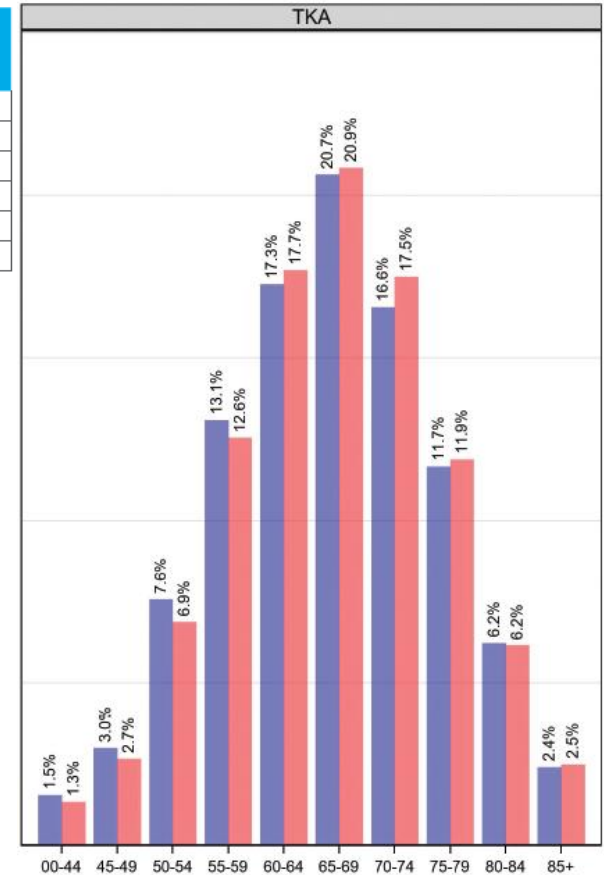
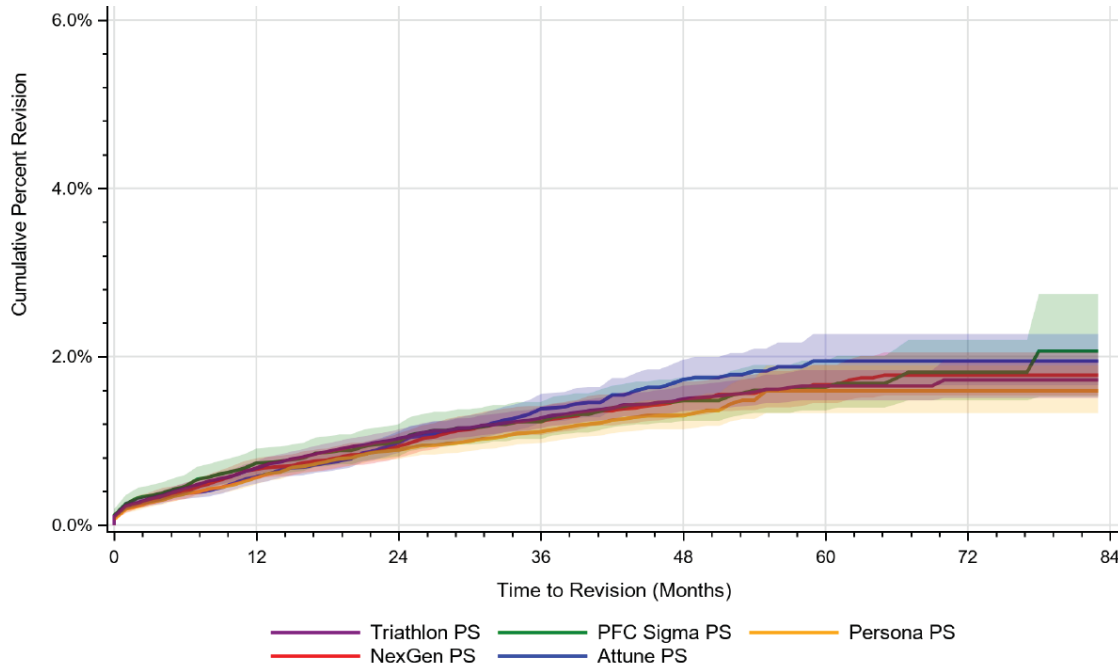
Patient-Reported Outcome Measure (PROM)	PROM Component	Patients with Preoperative Score	Patients with Linked Postoperative Score	Response Rate, Percentage of Patients Who Completed a Preoperative and 1-year Score	Patients with Meaningful Improvement*
HOOS, JR. (Hip disability and Osteoarthritis Outcome Score)	Score	16,508	3,284	19.9%	92.7%
PROMIS-10 (Patient-Reported Outcomes Measurement Information System 10)	Mental T	9,803	1,878	19.2%	40.4%
	Physical T	9,803	1,878	19.2%	75.6%
VR-12 (The Veterans RAND 12 Item Health Survey)	Mental Health Component	10,667	2,917	27.4%	40.3%
	Physical Health Component	10,667	2,917	27.4%	78.3%

2019 Report Supplement

- Device Specific Survivorship
 - Comparing survival to revision over time among top components submitted to AJRR
- AJRR Representativeness Study
 - Comparing procedure and demographic trends between AJRR and the national inpatient sample (NIS) database

2019 Report Supplement Sample Results

Group Name	Total	Failure Events	Not Failed	Competing Events (Death)	Percent without Event
Triathlon PS	42,331	469	41,303	559	98.9%
Persona PS	33,915	297	33,369	249	99.1%
NexGen PS	18,171	239	17,561	371	98.7%
Attune PS	29,699	317	29,141	241	98.9%
PFC Sigma PS	11,569	143	11,155	271	98.7%
Total	135,685	1,465	132,529	1,691	98.9%





Questions?

RegistryInfo@aaos.org