Introduction to the American Joint Replacement Registry

www.aaos.org/registries/ajrr

Bryan D. Springer, MD, FAAOS - AJRR Steering Committee Chair

Disclosure

Bryan D. Springer, MD, FAAOS (Chair)
Submitted on: 04/24/2020
AJRR: Board or committee member
American Association of Hip and Knee Surgeons: Board or committee member
Arthroplasty Today: Editorial or governing board
Ceramtec: Paid presenter or speaker
Convatec: Paid consultant
ICJR: Board or committee member
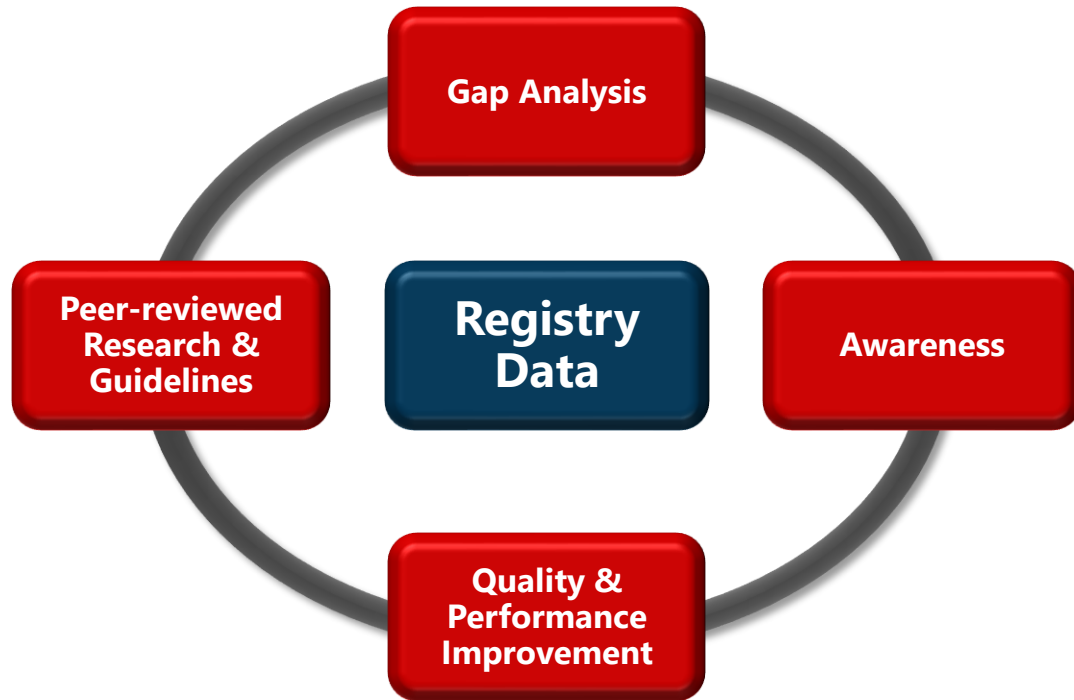Joint purifications systems.: Other financial or material support
Journal of Arthroplasty: Editorial or governing board
Knee Society: Board or committee member
osteoremedies: Paid consultant
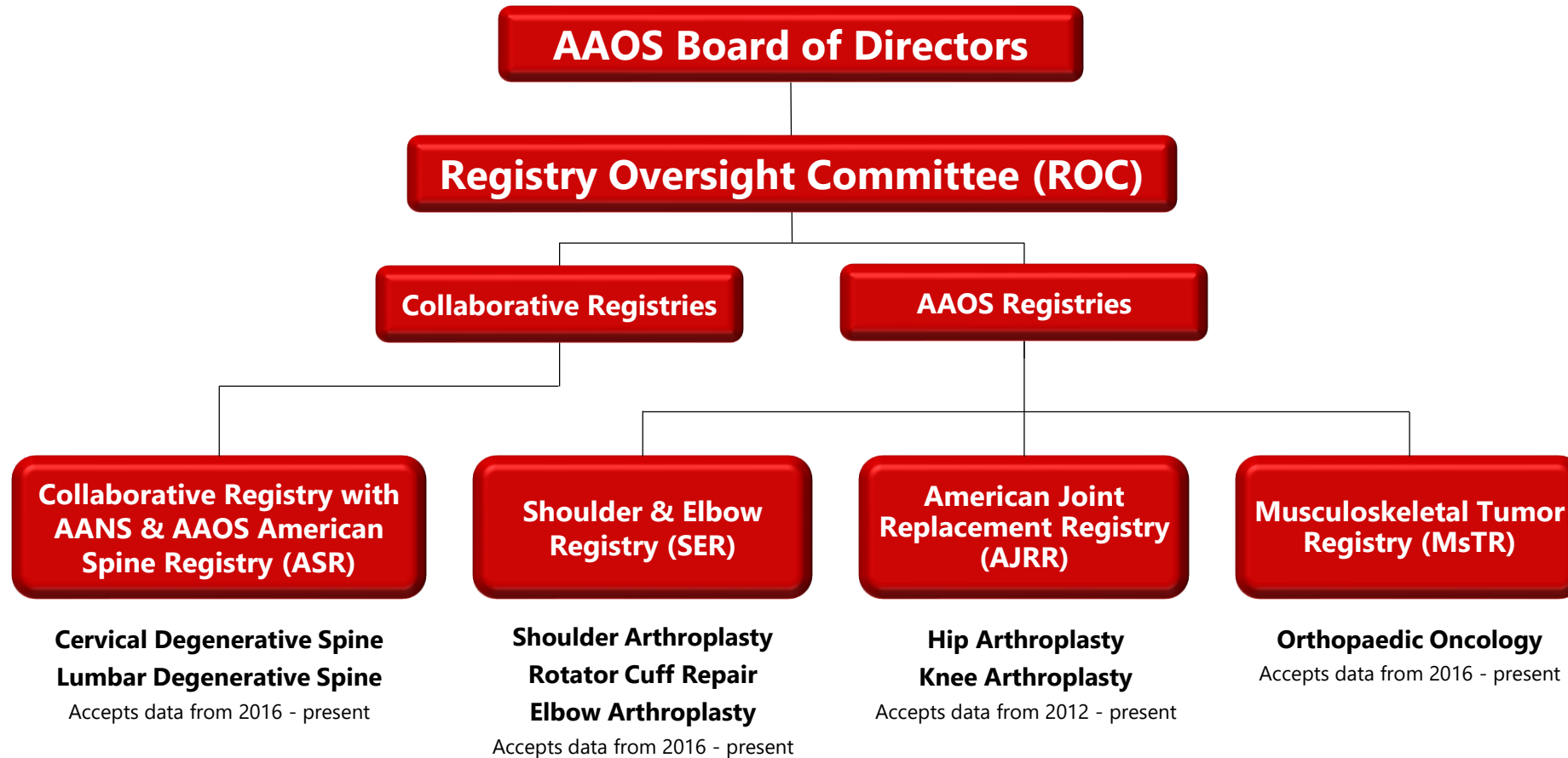Stryker: IP royalties; Paid consultant

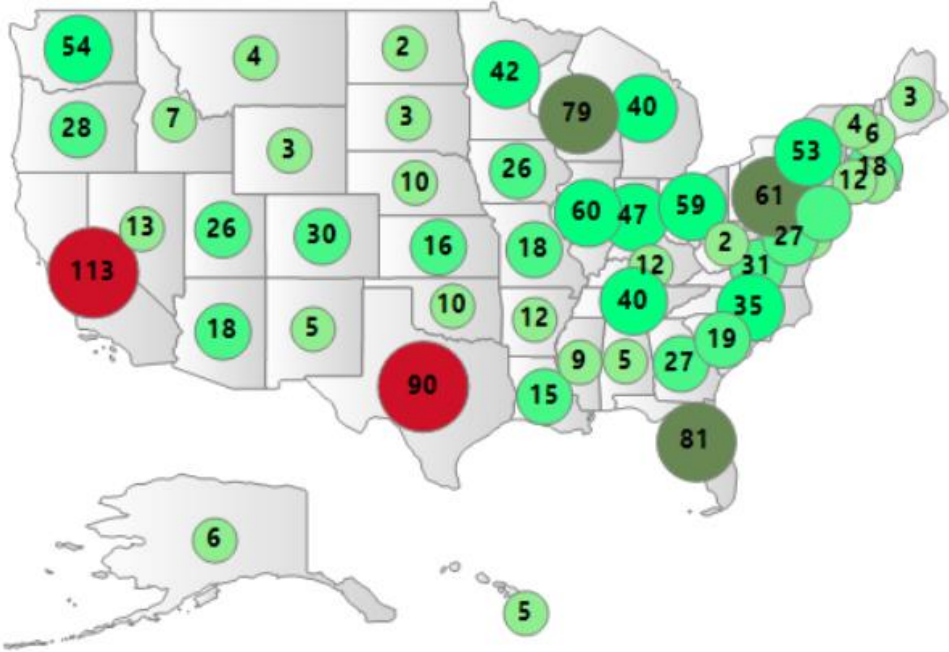# At the Core of Academy Strategy

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

AAOS Board of Directors

Registry Oversight Committee (ROC)

Collaborative Registries

AAOS Registries

Collaborative Registry with AANS & AAOS American Spine Registry (ASR)

Shoulder & Elbow Registry (SER)

American Joint Replacement Registry (AJRR)

Musculoskeletal Tumor Registry (MsTR)

Cervical Degenerative Spine
Lumbar Degenerative Spine
Accepts data from 2016 - present

Shoulder Arthroplasty
Rotator Cuff Repair
Elbow Arthroplasty
Accepts data from 2016 - present

Hip Arthroplasty
Knee Arthroplasty
Accepts data from 2012 - present

Orthopaedic Oncology
Accepts data from 2016 - present

Participation Across the Registries

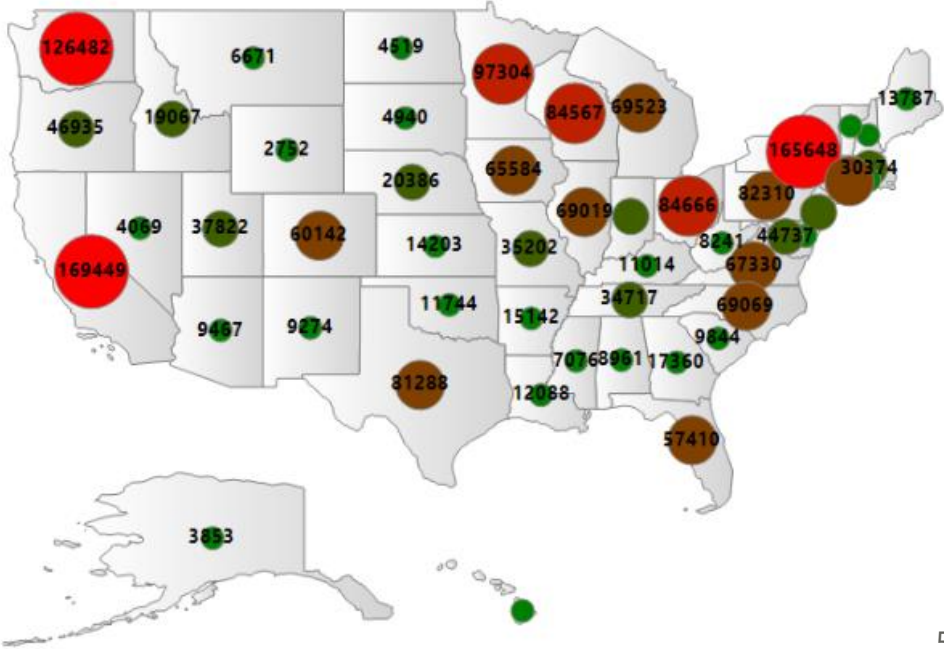## Sites by State

Over 1,600 participating sites contracted and 12,200 registered surgeons across all 50 states.

Procedures by State

Data representing over 2,090,000 procedures capturing over 40% of all US TJA volume annually.

AAOS | AJRR American Academy of Orthopaedic Surgeons | American Joint Replacement Registry

5

Registry Informed Advocacy

- Real-world data about orthopaedic care

- Participation in both Fee-for Service (FFS) and Fee-for-Value (FFV) based payment models

- Providing for data re-use opportunities

Qualified Clinical Data Registry

- AAOS maintains a QCDR designation

- Specialty society driven participation in the Merit-Incentive Based Payment System (MIPS)

- QCDR provides participants access to Promoting Interoperability (PI) and Quality Payment Program (QPP) credit

- Additional opportunities for alternative reporting for the bundled payment through BPCI-A episodes

AJRR Steering Committee

- **Bryan D. Springer, MD, FAAOS, Chair**
  OrthoCarolina
- **James Huddleston, III, MD, FAAOS, Vice Chair**
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- **James D. Slover, MD, FAAOS, MS**
  NYU Langone Health
- **Jeffrey B. Stambough, MD, FAAOS**
  University of Arkansas

AJRR 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)

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

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

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%
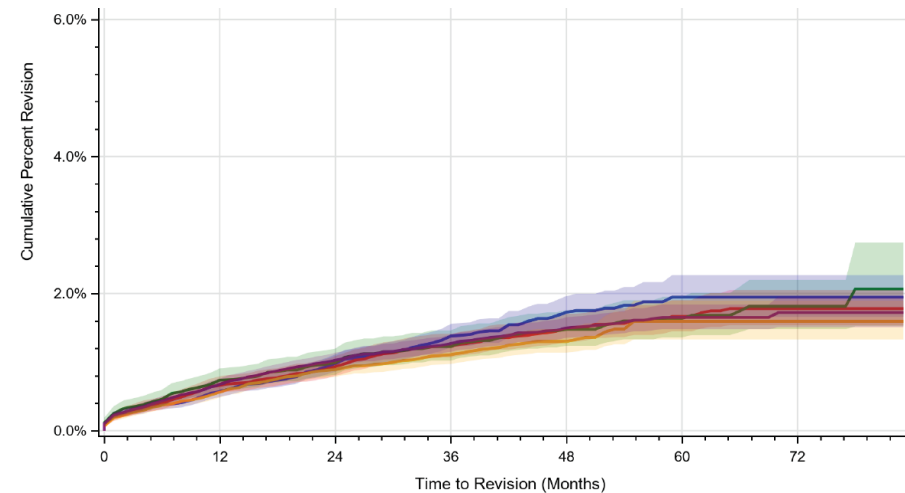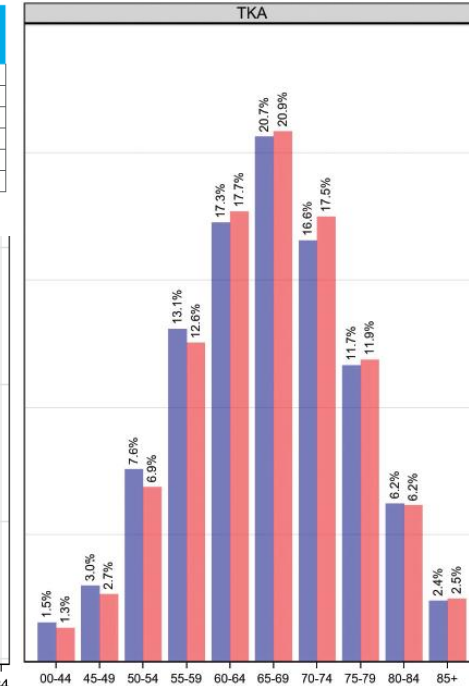
AJRR Data Element Overview

Two Modules: Hip Arthroplasty & Knee Arthroplasty

Procedure

Patient
- Name, Date of Birth, SSN
- Diagnosis (ICD-9/10, CPT)
- Gender
- Race/Ethnicity
- Height + Weight/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, CPT)
- 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)

This page is a summary of the AJRR data elements and is not all inclusive.

Integration of Medicare Data

- Access to **Medicare claims** inclusive of inpatient (148 data elements), outpatient (122 data elements) & National Death Index
- Linked by full identifiers for longitudinal tracking
- 2012-2019 Medicare data for all patients represented in Registry with quarterly updates
  - Medicare files ~ 1 year delayed
  - National Death Index ~ 2 years delayed
  - National Inpatient Sample (NIS) integrated as reference data for representative analyses
  - NPPES dataset incorporated for NPI validation
- Access to custom reports that compare their site to the national Annual Report analyses, show migration trends, etc.
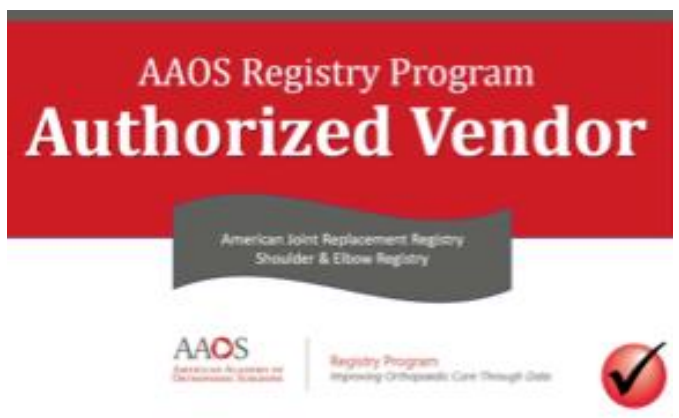
Decrease Data Collection Burden

- 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

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

Three Ways to Access Data

Custom Reports

RegistryInsights® Dashboards

Registry Analytics Institute®

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

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ORTHOPAEDIC SURGEONS

AJRR
American
Joint Replacement
Registry

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
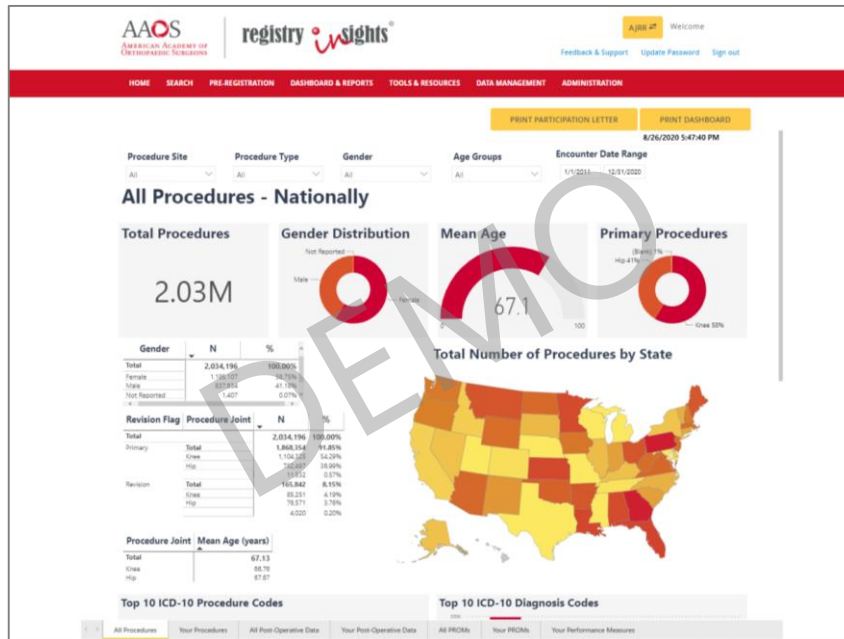
Surgeon Dashboards

- Personalized dashboard and a summarized status of a Surgeon Authorized User's individual procedural, post-operative, and PROMs data

- National benchmarks for comparison

- Request custom reports

- Submit data for quality initiatives (e.g. ABOS MOC, QPP, BPCI-A)

PROM Management

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

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 & ABNS CC
- Early access to **surveillance alerts** for poorly performing implants
- Improve the **value of care** delivered to patients

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ORTHOPAEDIC SURGEONS

AJRR American
Joint Replacement
Registry

Questions?

RegistryInfo@aaos.org
www.aaos.org/registries

Reference Slides

Participation Fee

- Single institution, 1-year licensing fee **$3,500**
- **$750** 1x configuration fee
- Includes Access to:
  - ✓ AAOS RegistryInsights® Platform standard reports and personalized dashboards
  - ✓ AAOS RegistryInsights national benchmarks
  - ✓ PRO Platform for survey collection
  - ✓ Ongoing support
  - ✓ Inclusion in User Group Network (Unet)

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