AAOS
American Academy of Orthopaedic Surgeons

Registry Program
Improving Orthopaedic Care Through Data

Registries 101:

Benefits for ASCs and Private Practices

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Introductions

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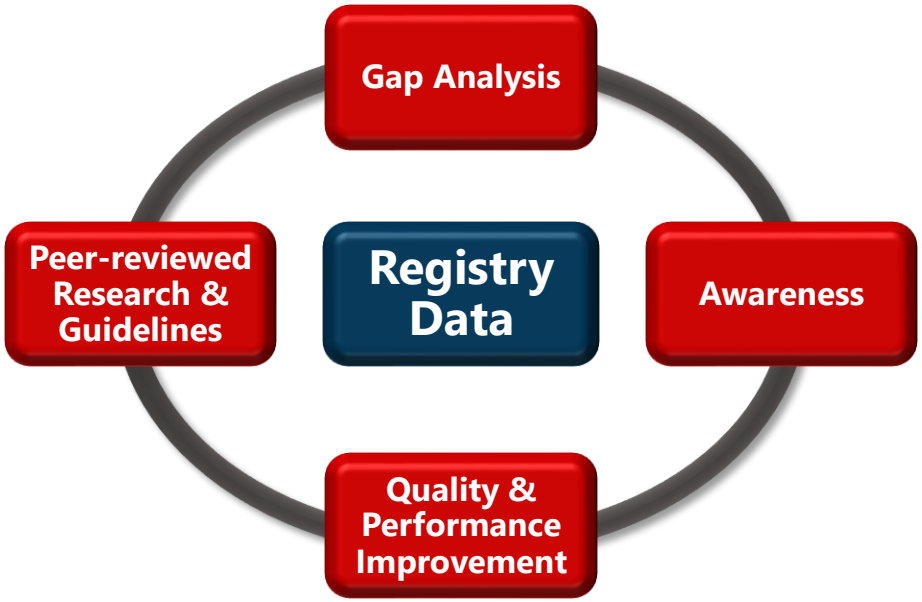
At the Core of Academy Strategy



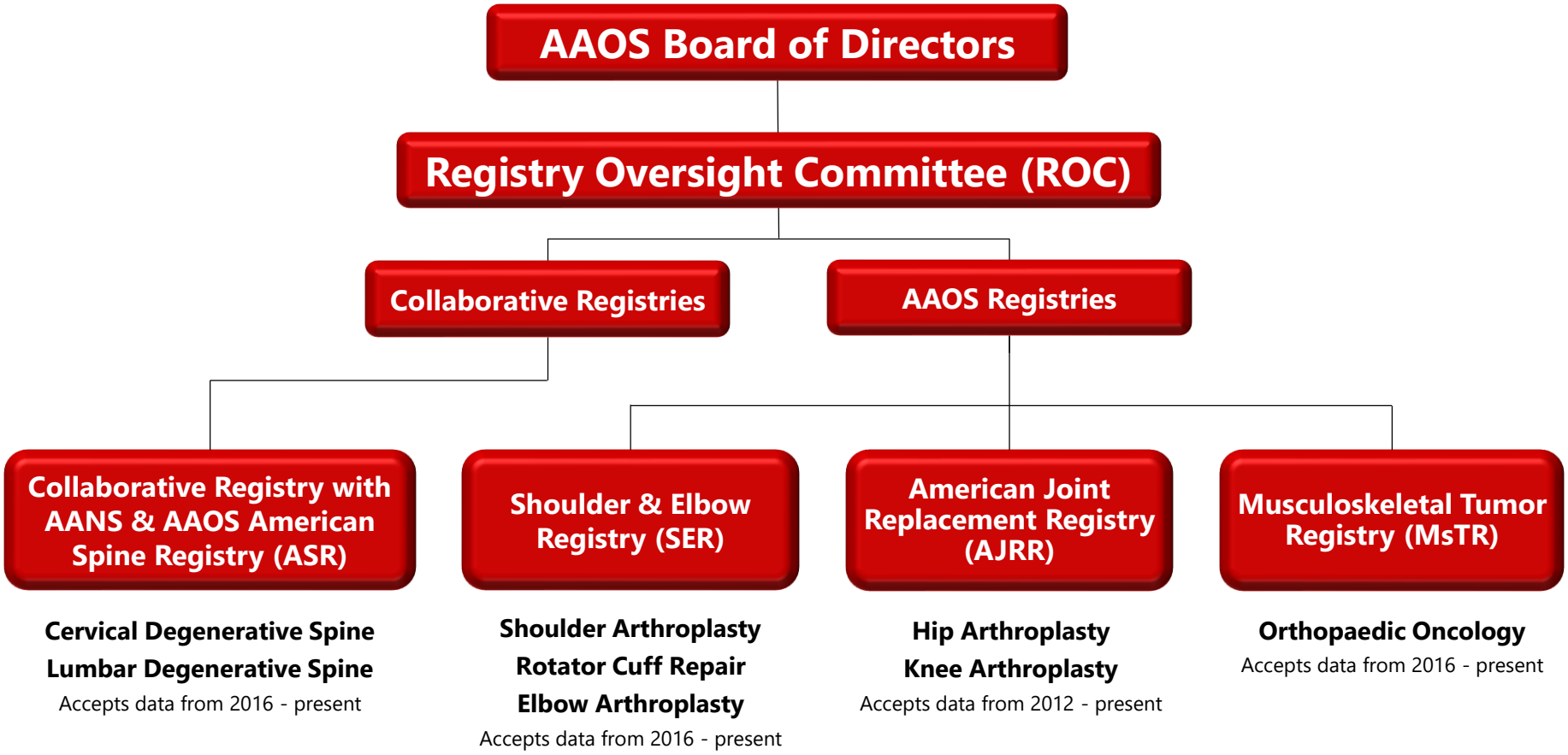
Registry Effort Goals

- ✓ 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***

Registry Informed Advocacy

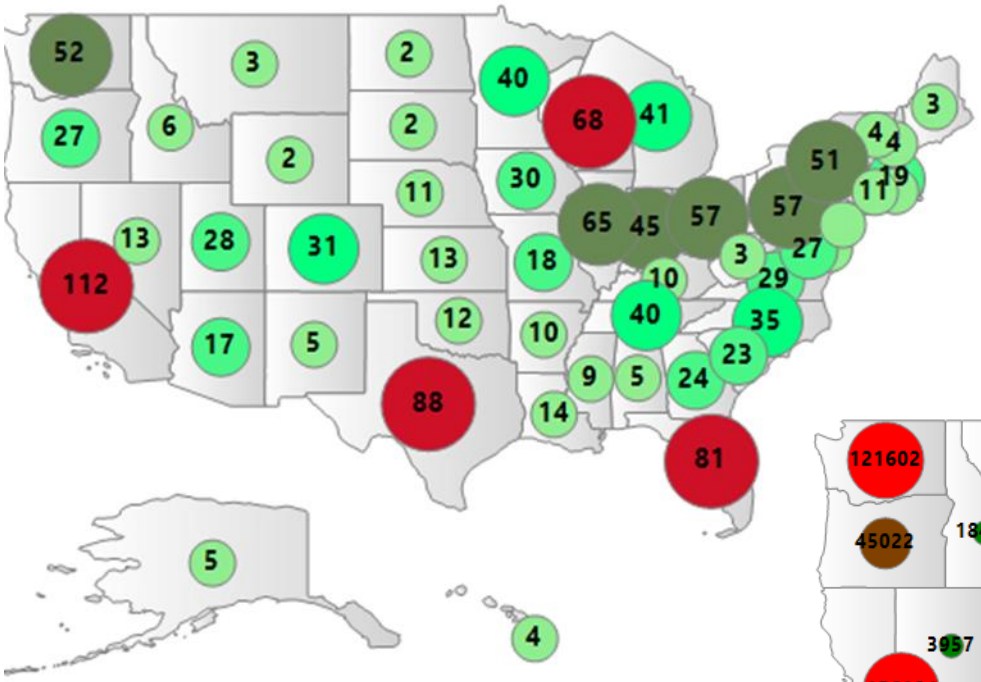
- Real-world data about orthopaedic care
- Participation in both Fee-for Service (FFS) and Fee-for-Value (FFV) based payment models
- Providing for data re-use opportunities

AAOS Family of Registries



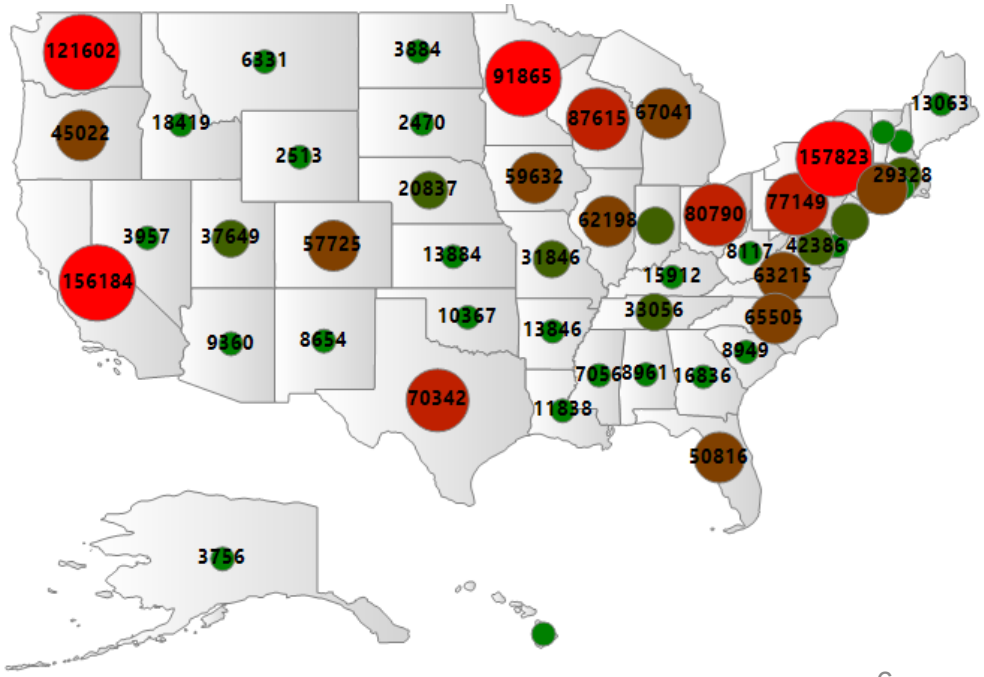
Registry Participation

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.

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AJRR American Joint Replacement Registry

American Joint Replacement Registry

THE HIP SOCIETY
FOUNDED IN 1968

AAHKS
AMERICAN ASSOCIATION OF HIP AND KNEE SURGEONS

THE KNEE SOCIETY
Founded in 1983

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Shoulder & Elbow Registry
Improving Orthopaedic Care Through Data

Shoulder & Elbow Registry

American Shoulder and Elbow Surgeons 1982

ASSH | American Society for Surgery of the Hand

AANA | Arthroscopy Association of North America

aossm™ American Orthopaedic Society for Sports Medicine

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Musculoskeletal Tumor Registry
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Musculoskeletal Tumor Registry

MSTS

American Spine Registry

A partnership between

American Association of Neurological Surgeons
American Academy of Orthopaedic Surgeons

American Spine Registry

American Association of Neurological Surgeons

A Need for Spine Data

- Degenerative spine disease is one of the most prevalent and costly disease states worldwide. In the U.S. alone, the total direct cost of treating low-back pain is estimated at $100 billion.
- Nationally, more than 1.2 million spinal surgeries are performed each year, including spinal fusion and decompression, or discectomy, surgery, according to the National Center for Health Statistics.
- The fastest-growing types the past decade have been lumbar spinal fusion surgeries that range from $60,000 to $110,000 per procedure.
- Medicare Part B Physician Data:
  - **Allowed charges** for spine procedures performed by **ortho/neurosurgeons** in 1991: $211 million; in 2018: $882 million.
  - **Frequency** in 1991: 199,860; in 2018: 1.2 million (*Note the total costs to Medicare, including non-surgeon services such as PT, chiropractic, injections, etc. are obviously significantly higher)

ASR

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How Do Sites Participate?

Collect, Submit, Access

AJRR Data Element Overview

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)

Two Modules Available

- Hip Arthroplasty
- Knee Arthroplasty

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

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

SER Data Element Overview

Procedure

Patient

- Name, Date of Birth, SSN
- Diagnosis (ICD-10, CPT)
- Gender
- Race/Ethnicity
- Height + Weight/Body Mass Index
- Payer Status

Site of Service

- Name and Address (TIN, NPI)

Surgeon

- Name (NPI)
- Trainee

Procedure

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

Module-specific Procedural Elements

- Shoulder Arthroplasty Module: Includes codes for replacements, revisions, and fractures
- Elbow Arthroplasty Module: Ulnar Nerve Management
- Rotator Cuff Repair Module: Expanded ICD-10 and CPT options for shoulder, including muscle, tendon, and arthroscopy codes

Comorbidities & Complications

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

Patient-reported Outcome

- PROMIS-10 Global
- VR-12
- SANE
- ASES

Three Modules Available

- Shoulder Arthroplasty
- Elbow Arthroplasty
- Rotator Cuff Repair

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

ASR Data Element Overview

Procedure

Patient

- Name (Last, First), Date of Birth, SSN
- Diagnosis (ICD-10, CPT)*
- Gender
- Race/Ethnicity

Site of Service

- Name and Address (TIN/NPI)

Surgeon

- Name (NPI)

Procedure

- Type (ICD-10, CPT)*
- Date of Surgery
- Spinal Approach
- Implants and Grafts
- Comorbidities (ICD-10, CPT)
- Height + Weight/Body Mass Index
- Length of Stay
- American Society of Anesthesiologists Score

** Vanguard sites utilize an operative form for additional procedural & diagnosis detail*

Post-Operative

- Operative and Post-operative Complications
- Secondary Surgical Procedures
- Anticoagulation

Patient-reported Outcomes*

Recommended

- Numeric Rating Scale (NRS)
- PROMIS Physical Function ***or*** Oswestry Disability Index (ODI) 2.1/ Neck Disability Index (NDI)
- PROMIS-10 ***or*** VR-12

Additional Options Accepted

- PROMIS-29 ***or*** PROMIS-CAT
- PROMIS Emotional Distress – Depression
- PROMIS Emotional Distress – Anxiety
- PROMIS Pain Interference
- EQ-5D

** Vanguard sites pursue longer PROMs post-operative follow-up (min 1 year) compared to standard sites (min 90 days)*

Two Modules Available

- Cervical
- Lumbar

ASR

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

Musculoskeletal Tumor Data Element Overview: Baseline

Patient
- Name, Date of Birth, SSN
- Diagnosis (ICD-10, CPT)
- Gender
- Race/Ethnicity
- Height + Weight/Body Mass Index
- Payer Status

Site of Service
- Name and Address (TIN, NPI)

Surgeon
- Name (NPI)
- Trainee

Surgical Intervention
- Procedure Type (ICD-10, CPT)
- Date of Surgery
- Implants
- Details surrounding surgery type
- Comorbidities (ICD-10)

Non-Surgical Intervention
- Chemotherapy
- Radiation
- Clinical Trial

Tumor Baseline
- Size
- Metastasis at diagnosis
- Margins
- Tissue Type
- Biopsy Type

One Module Available
- Orthopaedic Oncology

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

Musculoskeletal Tumor Data Element Overview: Encounters & PROs

Encounters

- Comorbidities (ICD-10, CPT)
- Hospital Admission
- Procedure (ICD-10, CPT)
- Diagnosis (ICD-10, CPT)
- Recurrence
- Chemotherapy
- Radiation

Patient-reported Outcomes

- PROMIS-10 Global
- VR-12
- MSTS
- TESS

Each Tab Includes Basic Demographic Information

Patient

- Name (Last, First)
- Date of Birth
- Social Security Number
- Diagnosis (ICD-10)
- Gender
- Race/Ethnicity
- Payer Status

Site of Service

- Name and Address (TIN, NPI)

Surgeon

- Name (NPI)

COVID Impact & Response

- All registries will ***capture COVID-19 confirmed diagnosis, U07.1, as a preoperative comorbidity*** or ***prior diagnosis present on admission***
- All registries will ***capture COVID as a reason for readmission***
- Tracking this information will help your site and the registries analyze
  - the impact of COVID-19 on outcomes
  - trends of surgery based on the pause in elective surgery
  - the trends of patient-reported outcomes (PROMs) due to delayed operations
  - if COVID has an impact on CMS Value-Based Payment Models with forgiveness of penalties due to COVID
- 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.

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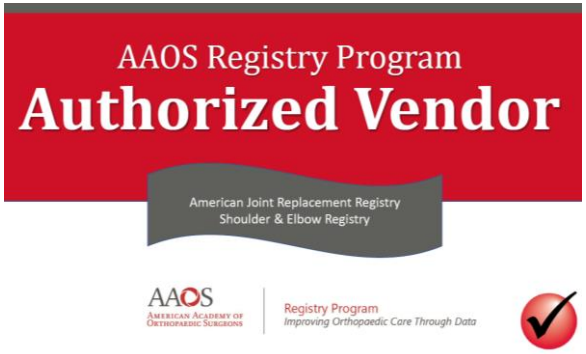
Submission Best Practices

- Most participants submit monthly
- Ideally, uploads are automated
- Monitor uploads through RegistryInsights

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



Integration of Medicare Data

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

*****

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

*****

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

Three Ways to Access Data

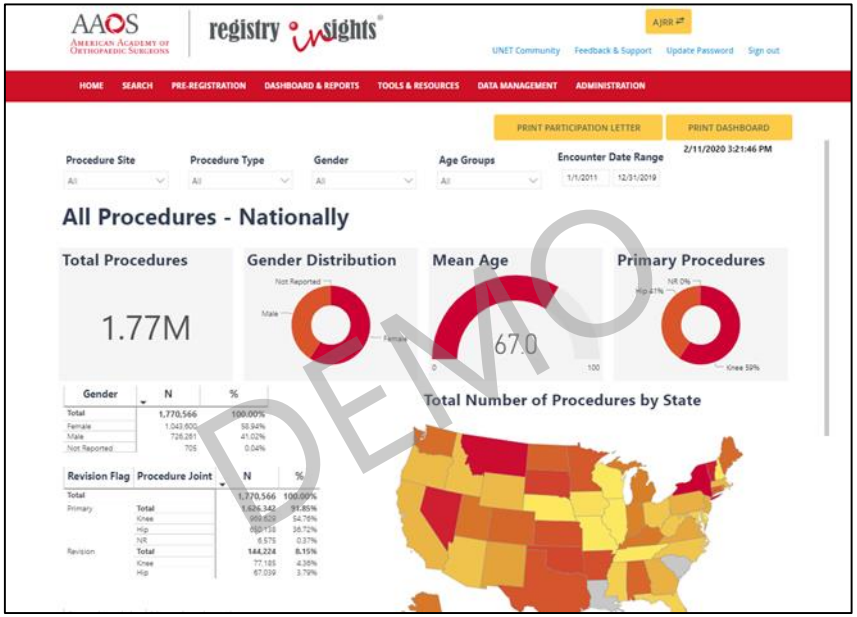
Registry Insights® Dashboards

Custom Reports

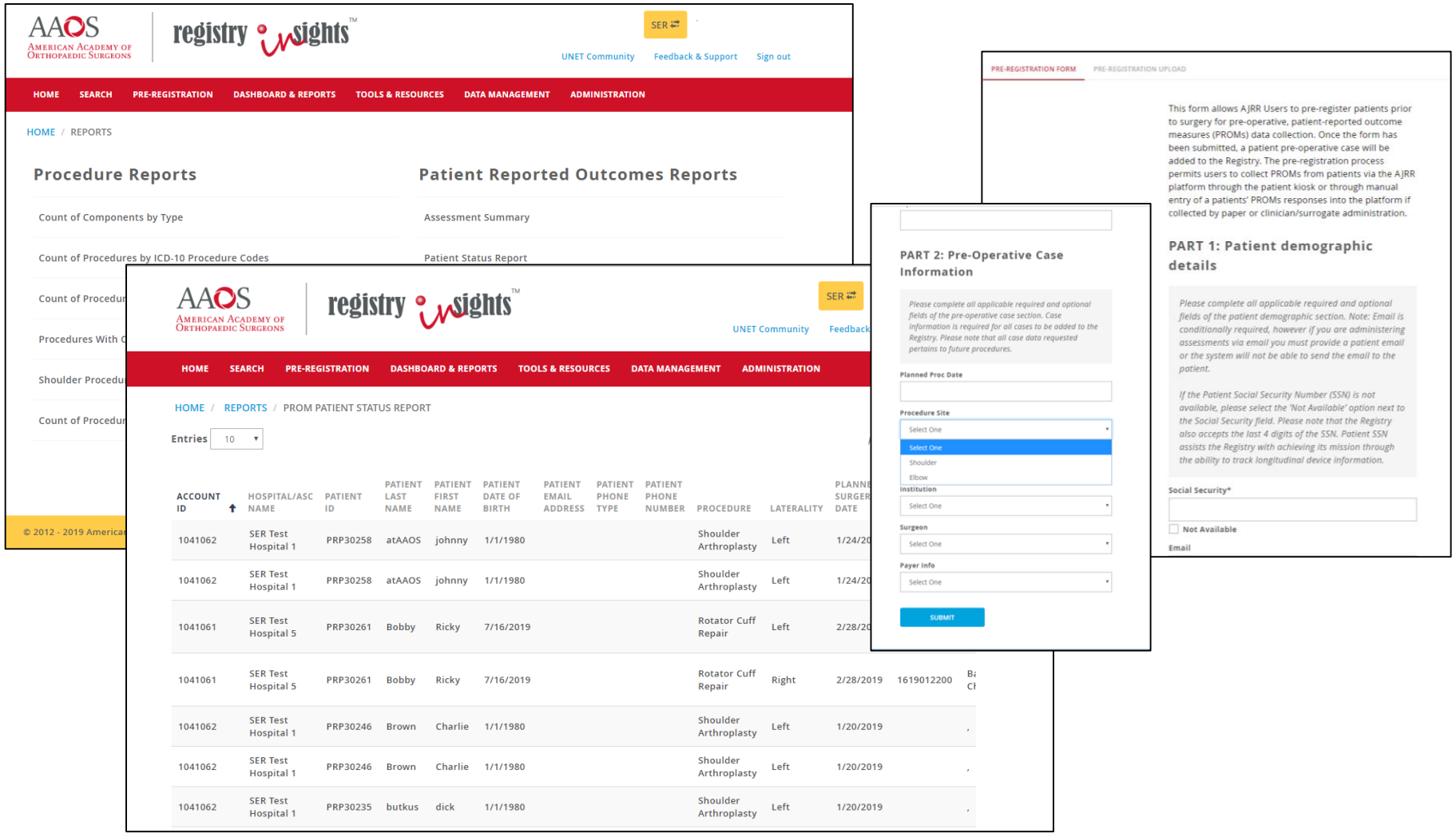
Registry Analytics Institute™

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



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

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Why Sites Participate

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

Commitment To Quality

Partnerships/Collaborations

- The Joint Commission
- DNV-GL
- ASCA
- OrthoForum

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

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

Participation Fee Structure

- $3,500 annual fee
- One-time $750 configuration fee
- Assessed at the site level, not per surgeon or per procedure
- Includes access to all Registry features:
  - RegistryInsights platform
  - RegistryInsights PRO Platform
  - Access to onboarding and ongoing support

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Questions?

RegistryEngagement@aaos.org

www.aaos.org/registries