

American Spine Registry



A partnership between

American Association of Neurological Surgeons

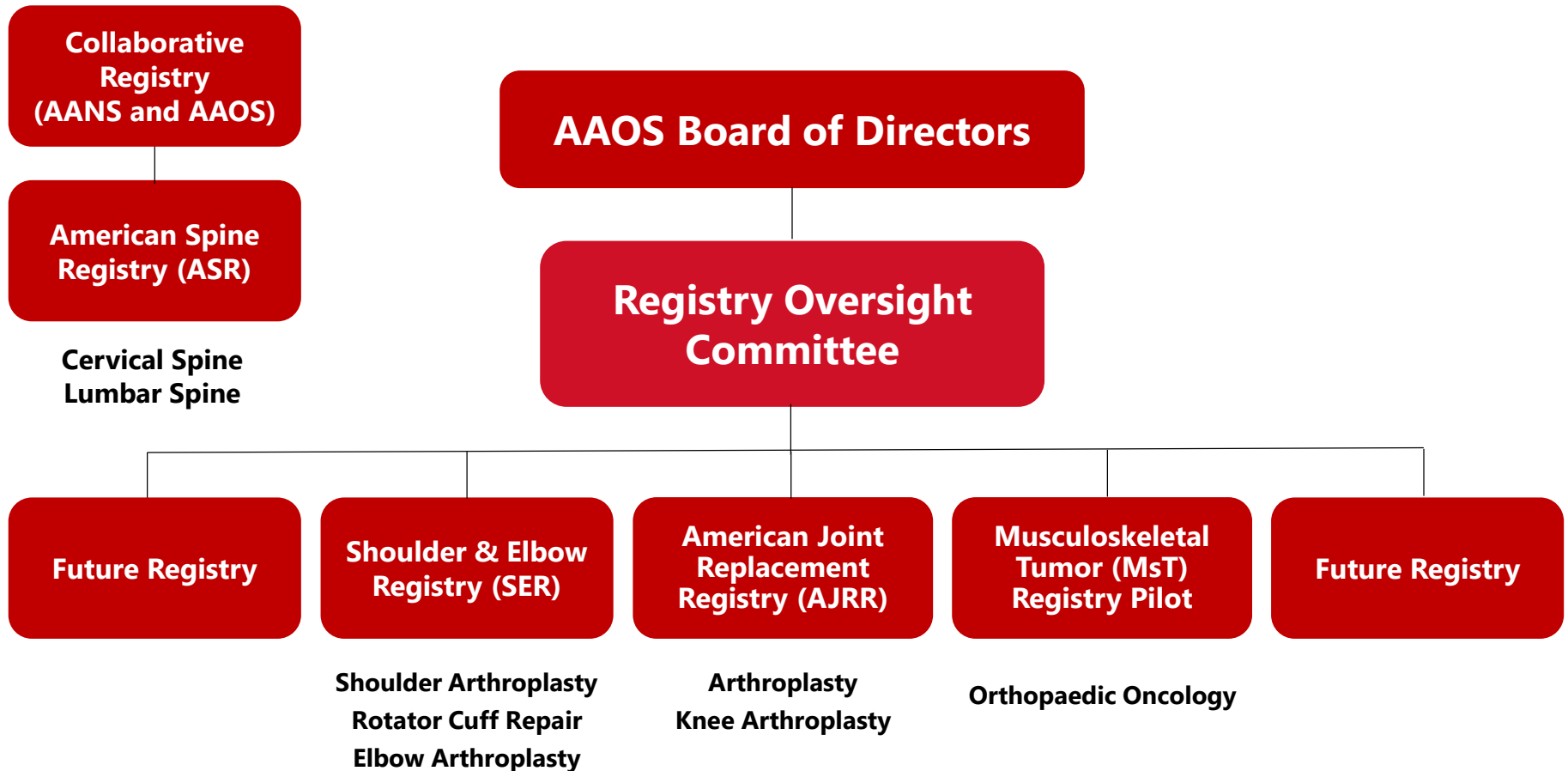
American Academy of Orthopaedic Surgeons

ASR Overview Webinar

ASR Staff

- Diane Ziegenhorn, Program Manager
- Phil Dwyer, Registry Engagement Manager
- Mariah Matesi, Senior Engagement Associate
- Frosiana Gjerazi, Engagement Associate
- Ryan Olsen, Registry Optimization Manager

AAOS Family of Registries



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ASR Overview

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)



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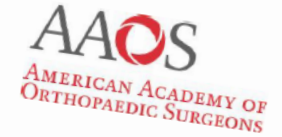
American Association of Neurological Surgeons

American Academy of Orthopaedic Surgeons



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The American Association of Neurological Surgeons and the American Academy of Orthopaedic Surgeons Join Forces to Create the American Spine Registry
Partnership unites practitioners with commitment to improving quality and delivery of patient care

ROSEMONT, Ill. (September 9, 2019)—The [American Association of Neurological Surgeons](#) (AANS) and the [American Academy of Orthopaedic Surgeons](#) (AAOS) today announced a new partnership, the American Spine Registry (ASR), which will be jointly owned and developed by both organizations. The ASR will transform the Quality Outcomes Database (QOD) Spine registry, currently the nation's largest spine registry, into a more far-reaching program that facilitates the participation of all North American spine surgeons in a shared, quality data-collection platform.

The ASR leverages the unique data science capabilities of the AANS with the operational expertise of the AAOS Registry Program. The ASR allows both organizations to enhance the scalability, sustainability, ease-of-use and relevance of national spine data collection efforts and facilitates intelligent data use by engaging multiple healthcare stakeholders in this joint initiative. The participating organizations expect this collaboration will lead to an enhanced ability to use the accumulated information to improve patient care, advance the science of spine surgery and address the challenges of an evolving, value-based care delivery system.

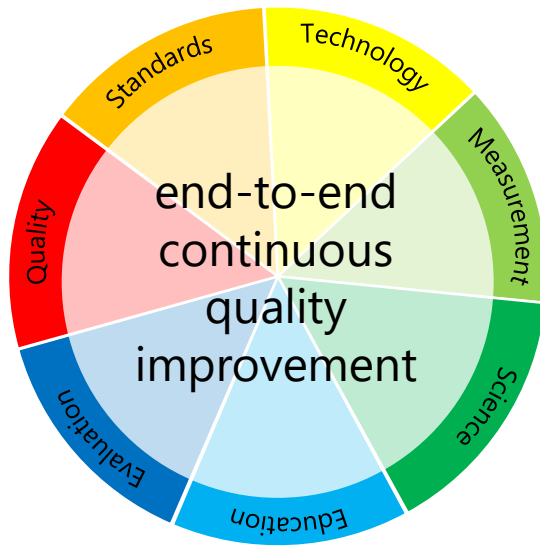
Collaborative Approach to Quality Spine Care

- ASR is a **win-win** for surgeons and stakeholders across spine
 - QoD sites will benefit with **decreased burden** and increased functionality
 - AAOS sites will be able to join a spine registry informed by QoD **historical expertise**
- Sites will benefit from data **re-use opportunities** that increase the value of participating
- Participation will be allowed at two levels (e.g. standard & vanguard) across **cervical and lumbar spine modules** to start
- Transitions and onboarding to occur in **Q1 2020** with notices and contracting beginning in Q4 2019
- ***ASR provides a pathway to more consistent high-quality spine care***



A Shared Quality Vision

Registries



- component of a larger quality vision for spine care
 - provide data to inform AANS & AAOS guidelines and test performance measures
 - provide feedback to providers to continuously improve their practice and healthcare outcomes
 - allow AANS & AAOS to define what quality means in a value-based system
 - reduce the reporting burdens on physicians
 - help inform gaps in knowledge or areas for further education
-



ASR Surgeon Leadership

ASR Executive Committee (EC)

- Anthony Asher, MD, AANS Co-Chair*
- Steven Glassman, MD, AAOS Co-Chair*
- Todd Albert, MD*
- Darrel Brodke, MD*
- Kevin Foley, MD*
- Jack Knightly, MD
- David Polly Jr., MD
- Chris Shaffrey, MD

*EC provides leadership across the development and implementation of ASR, oversees committees formed, and ensures surgeon representation from AANS and AAOS



ASR Surgeon Leadership

Data Operations Committee (DOC)

- Mo Bydon, MD, AANS Co-Chair
- Clint Devin, MD, AAOS Co-Chair
- Erica Bisson, MD
- Leah Carreon, MD
- Elizabeth Norheim, MD
- Paul Park, MD
- Kris Radcliff, MD
- John Ratliff, MD

*DOC oversees the development of the data specification and data dictionary, monitors data quality and provides strategic oversight on data element updates

Data Use Committee (DUC)

- Praveen Mummaneni, MD, AANS Co-Chair
- Doug Burton, MD, AAOS Co-Chair
- Dom Coric, MD
- Eric Potts, MD
- Frank Phillips, MD
- Sheeraz Qureshi, MD
- Raj Sethi, MD
- Mike Wang, MD

*DUC oversees the data access policies, reviews submitted hypotheses, informs the platform dashboards and reports, and provides strategic oversight on data dissemination

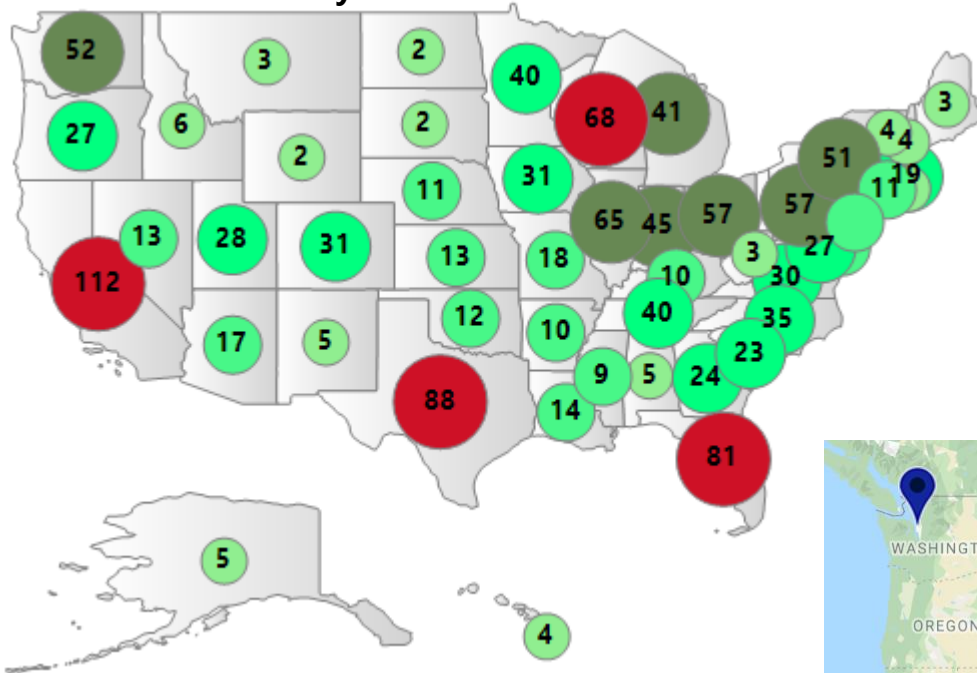
Additional ASR Surgeon Champion(s)

- Jacob Buchowski, MD
- *Key Opinion Leader Taskforce – to include members from across sites*



Building a National Presence

AAOS Sites by State



AAOS Registries have over 1,400 participating sites contracted and 11,000+ registered surgeons across all 50 states with over 1.8 million procedures.

QOD sites are largely unique from AAOS sites and combined allow for broader adoption across the US spine surgery market.

QOD Sites by State

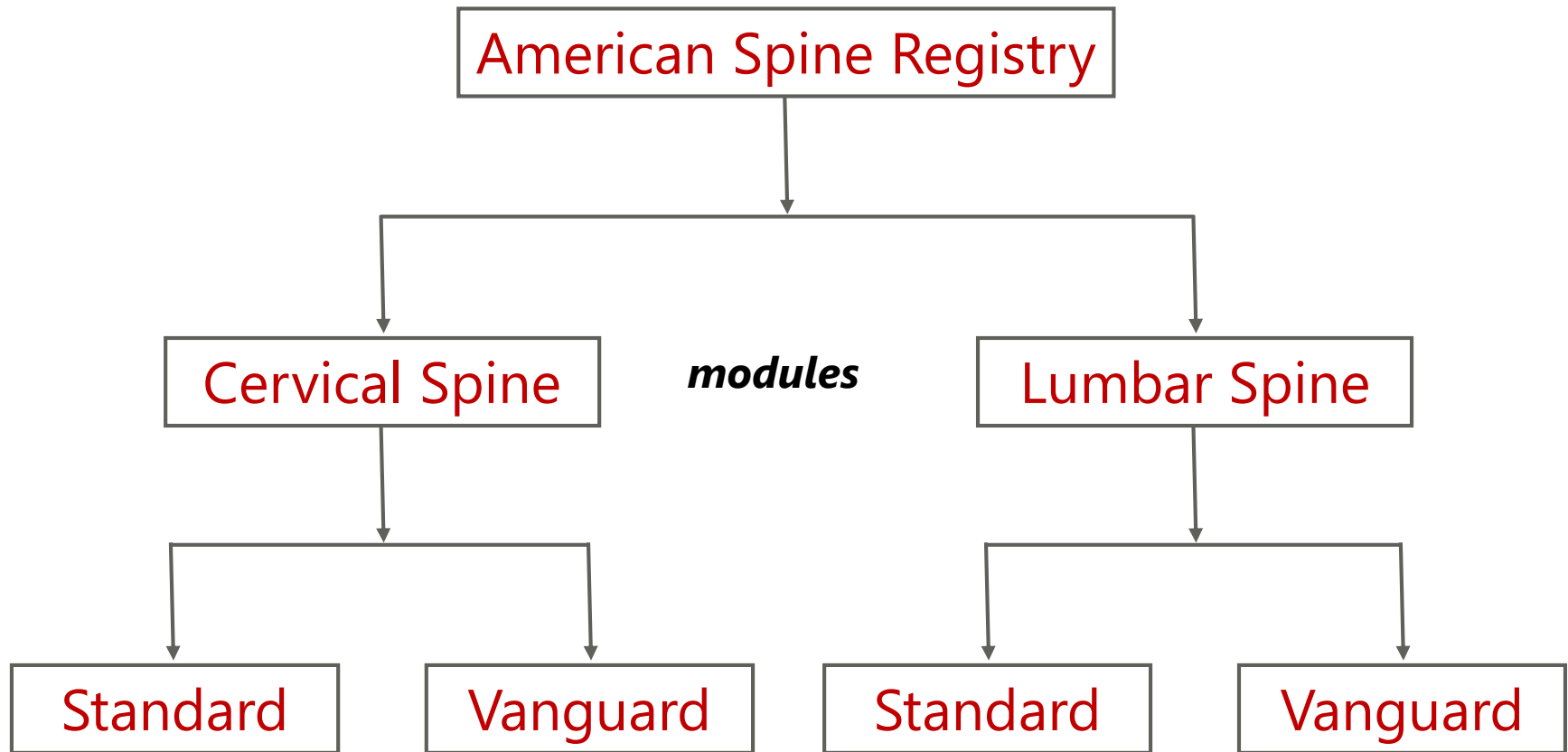


ASR



An Alliance for Quality Outcomes

ASR Initial Module Framework



ASR Data Element Overview

Two Modules Available: Cervical & Lumbar

Procedure

Patient

- Name (Last, First)
- Date of Birth
- Social Security Number
- Diagnosis (ICD-9/10)*
- Gender
- Race/Ethnicity

Site of Service

- Name and Address (TIN/NPI)

Surgeon

- Name (NPI)

Procedure

- Type (ICD-9/10, CPT)*
- Date of Surgery
- Spinal Approach
- Implants and Grafts

**Vanguard sites utilize a smartform for additional procedural & diagnosis detail*

Post-Operative / Comorbidities

- Comorbidities (ICD-9/10, CPT)
- Height + Weight/Body Mass Index
- Length of Stay
- American Society of Anesthesiologists Score
- 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 Global **or** VR-12

Additional Options Accepted

- 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)*



Variations in Data Specifications Between ASR and QOD

These elements will be captured within the EMR or smartform. This reduces the data burden overall, though some Vanguard elements will require manual entry:

- Patient, Surgeon and Site Demographics
- Inclusion Diagnoses and Procedure Codes via ICD-10
- Patient comorbidities
- Surgical Approach, Supplemental Technique
- Procedure Specific Information (captured on smartform in OR)
- Estimated Blood Loss (cc)
- Payer Status
- Workers Comp, Liability/Disability Claims
- Patient morbidity (30 day; death date)
- Readmission within 90 days post op
- Readmission Status, comorbidities
- Second surgical procedures would be logged based on day/time stamps and specifics logged through smartform

Patient-reported Outcome Measures (PROMs)

Activity Participation, Level of Activity, Ambulation, Pain will be captured via PROMs.

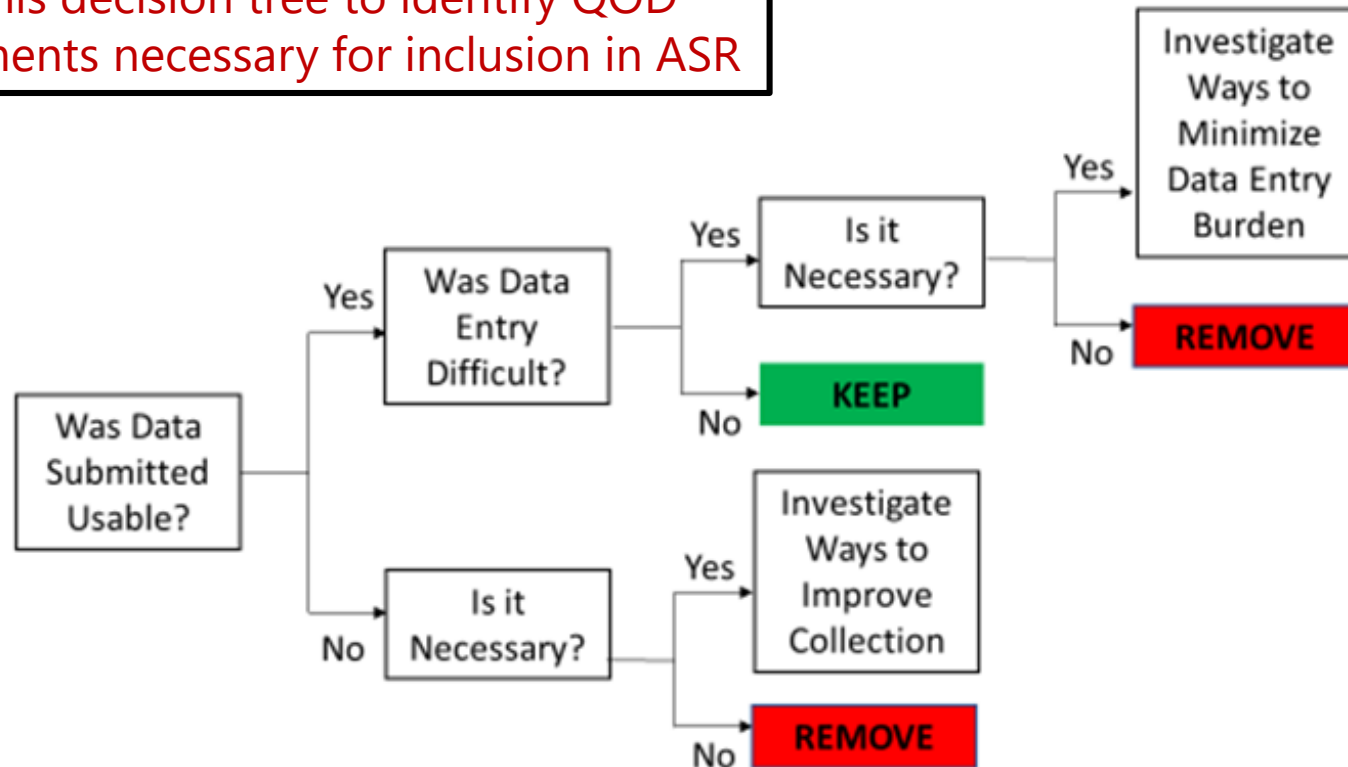
Data elements the DOC identified as being particularly difficult to extract from EMR or not necessary for inclusion in ASR:

- Surgery Information - scheduled date of surgery
- QCDR Participation
- Second Phone Number
- Surgery was cancelled
- Surgery was rescheduled
- Date rescheduled
- Documentation for smoking cessation
- Duration of symptoms
- Anti-platelet
- Pain Medication
- Level of Education
- Received Physical Therapy following surgery



Data Element Considerations

The Data Operations Committee used this decision tree to identify QOD elements necessary for inclusion in ASR





Decreasing Data Burden

- AAOS has partnered with over 45 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

AAOS
 AMERICAN ACADEMY OF
 ORTHOPAEDIC SURGEONS

Registry Program
 Improving Orthopaedic Care Through Data



ASR



IRB Information

- ASR maintains a centralized IRB through the Western IRB (WIRB) to cover all participants
 - ASR is a quality improvement registry which is exempt from IRB review under federal rule
 - We **also** created and maintained a centralized IRB with Western IRB (WIRB) to support sites, as some sites will still require IRB approval based on local IRB participation or practice guidelines
 - ASR IRB approval includes a waiver of patient consent
 - Majority of sites do not need to take any action; some may choose to file a copy with their local IRB
 - ASR staff are here to assist with any local IRB questions or needs

Why Do Sites Participate?

- Compare your practice patterns to **national performance** benchmarks
- Access to on-demand practice and surgeon specific **quality reports and dashboards** which also earn ABOS Maintenance of Certification part II credit
- Facilitate tracking and monitoring of **longitudinal** patient outcomes and survivorship
- Allow for participation in site, practice-specific, **payer-incentivized performance improvement** programs such as Blue Distinction, Aetna Institutes of Quality and other Centers of Excellence Designations
- Qualify for **national distinction programs** such as the Joint Commission Advanced Certification or the Accreditation Association Ambulatory Health Care
- Use for reporting **to quality improvement programs** such as MIPS Quality Payment Program, MIPS Promotion Interoperability & BPCI-A spine episodes
- Access to **surveillance alerts** for poorly performing implants
- Improve the **value of care** delivered to patients

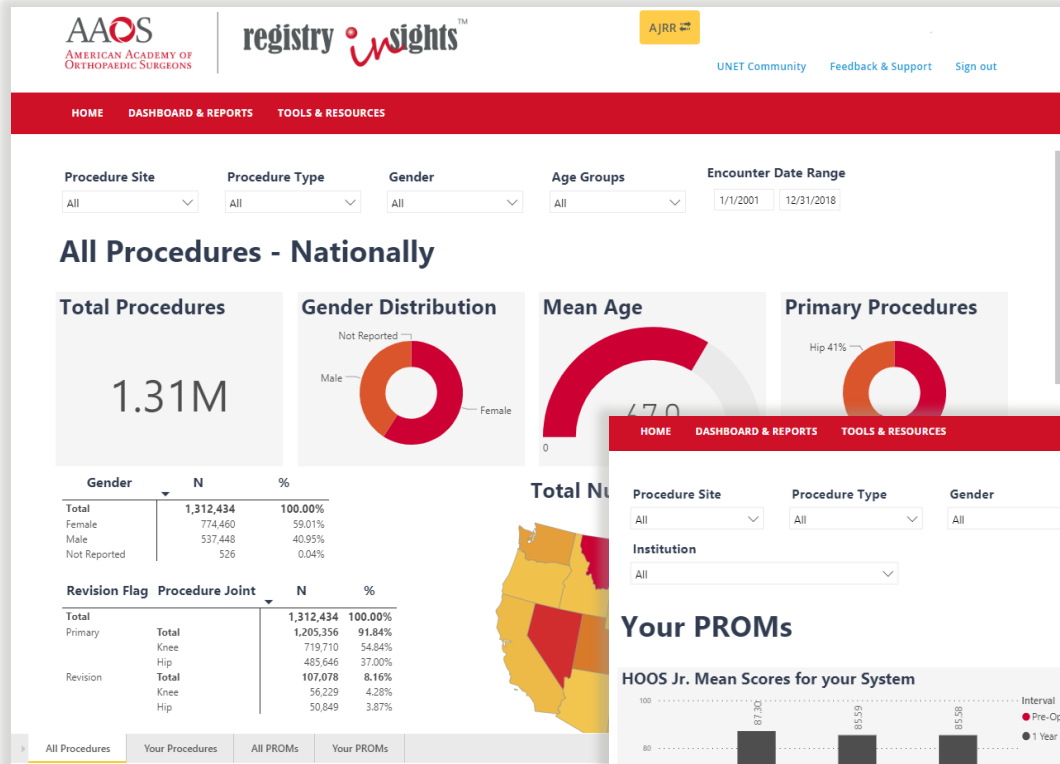


RegistryInsights®

- For surgeons by surgeons
- Registry science expertise with a focus on quality improvement
- Centralized IRB
- Professional staff:
 - Engagement
 - Support
 - Optimization
 - Data Management
 - Analytics
 - Policy/Advocacy
 - Strategic Partnerships

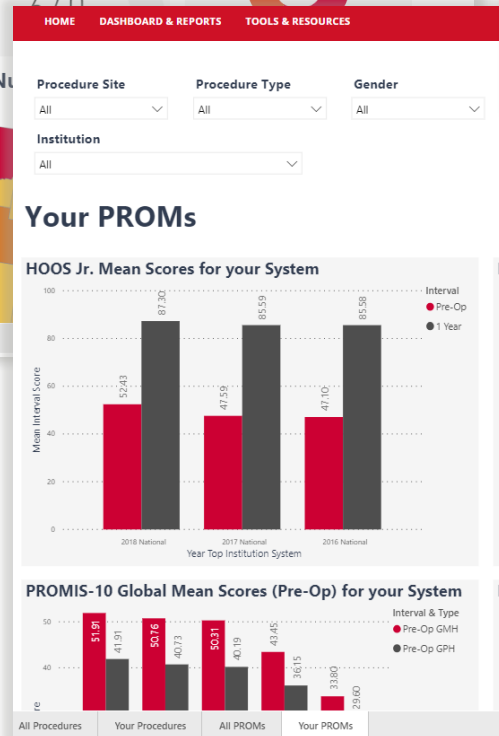


Site & Surgeon Feedback



Site admins & Surgeons have accounts where they are able to:

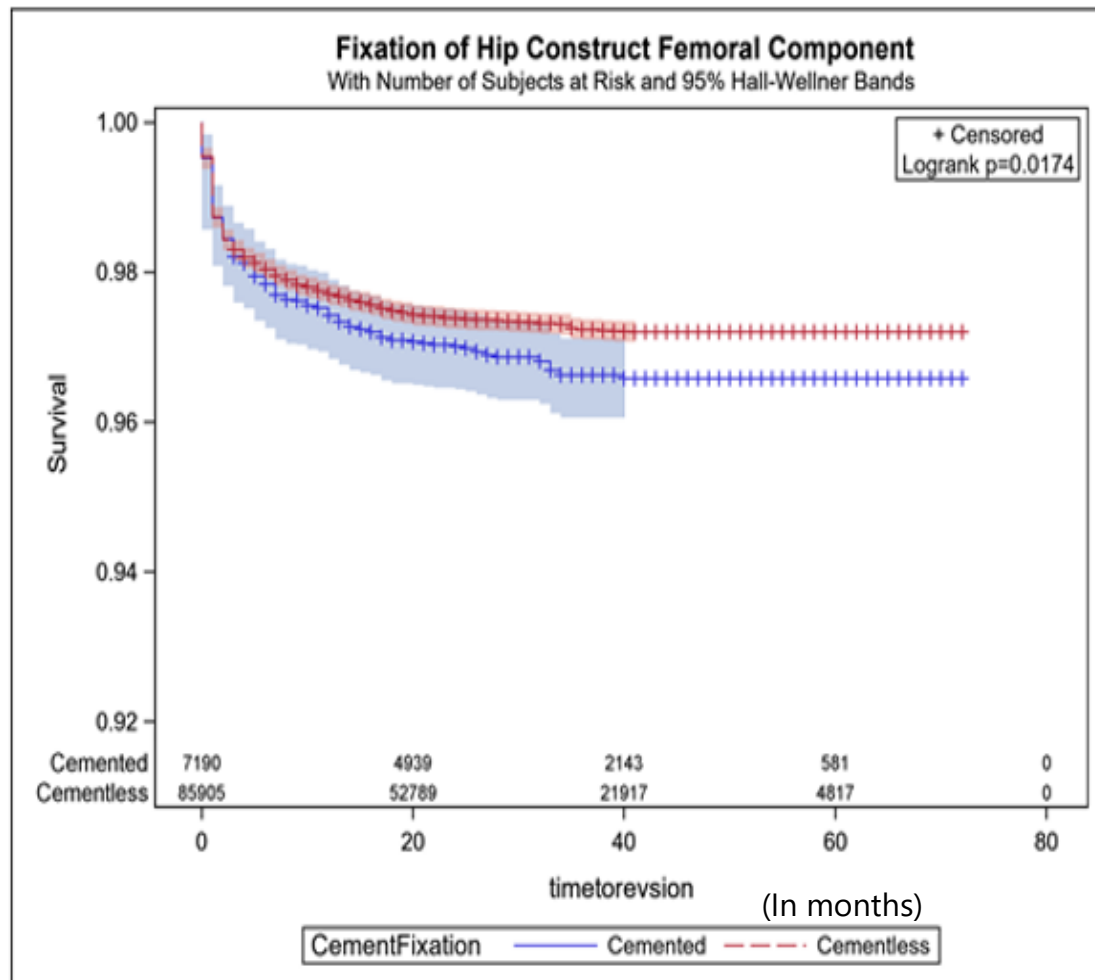
- see their procedural, post-operative and PROM data
- compare themselves to national benchmarks
- request custom reports
- opt to submit data for quality initiatives (e.g. MOC, QPP)



ASR



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

Pilot projects to assess feasibility of using additional data sources, including private payers



PROM Management

AAOS AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS | registry insights™

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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

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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	SURGEON NPI	SU
1041062	SER Test Hospital 1	PRP30258	atAAOS	johnny	1/1/1980				Shoulder				
1041062	SER Test Hospital 1	PRP30258	atAAOS	johnny	1/1/1980								
1041061	SER Test Hospital 5	PRP30261	Bobby	Ricky	7/16/2019								
1041061	SER Test Hospital 5	PRP30261	Bobby	Ricky	7/16/2019								
1041062	SER Test Hospital 1	PRP30246	Brown	Charlie	1/1/1980								
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		

PRE-REGISTRATION FORM | PRE-REGISTRATION UPLOAD

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

PROM submission can occur via existing site systems/technology, via manual upload, or through the ASR PROM solution



5 Steps of Getting Started

Step 1: Identify Registry Implementation Leadership

- Select surgeon or staff champion to facilitate process
- Empower work with surgeon committees
- Communicate plan and progress

Step 2: Execute the Appropriate Agreements

- Complete legal review, sign Master Registry Agreement
- Don't forget subsequent registry addendums
- Submit annual registry participation fee

Step 3: Enable Data Submission Within 60 Days

- Receive Data Specifications, Data Dictionary
- Master technical requirements with Support Specialist
- Complete file test
- Submit on monthly basis

Step 4: Log into RegistryInsights®

- Personalized and private onboarding call through webinars and 1:1 instruction
- Analyze dashboards, reports, custom reports, PROs, and national benchmarks
- Join the Registry User Group (Unet)

Step 5: Access Data and Evidence-Based Decision Support

- Reuse data for requirements in accreditation, certification, and value-based reimbursement
- View your submitted and validated data in RegistryInsights® and request a custom report by contacting Analytics



Contracting Options

- 1) Proceed under QOD contract by signing the consent from Irene
- 2) Execute a new agreement with ASR including a BAA, participation agreement
- 3) If your site is in another AAOS registry, sign an addendum to your current agreement to add ASR
- 4) Start with 1 then pursue 2 or 3 in parallel to ensure no gap in participation

Contracting

- Single institution, Annual fee **\$5,000**
- **\$750** 1x configuration fee
- Systems can qualify for:
 - a multi-site discount
 - auto renewing contract
- Includes
 - ✓ Unlimited access to RegistryInsights® dashboards and reports
 - ✓ PRO Platform – can electronically administer surveys
 - ✓ National reporting and benchmarks to individual surgeons
 - ✓ Data/File Upload tools to securely submit and monitor files that have been uploaded
 - ✓ Ongoing support
 - ✓ Access to data to promote quality and qualify for certifications

ASR Teams

- ASR Engagement Team:
Engagement@AmericanSpineRegistry.org
 - Opportunities for site participation
 - Contracting and pricing
 - Onboarding
 - RegistryInsights® Demonstration
- ASR Analytics Team:
Analytics@AmericanSpineRegistry.org
 - Custom reports
 - Data insight and benchmarking
- ASR Support Team:
Support@AmericanSpineRegistry.org
 - Account access to RegistryInsights®
 - Technical support and issues
 - Authorized vendor program
- General Staff Inbox:
Info@AmericanSpineRegistry.org
 - Educational resources
 - All other topics or questions
- Kristina Rosinia, Director, Registries and Data Science: Rosinia@AmericanSpineRegistry.org
 - ASR Program Development
 - ASR Committees and Surgeon Leadership
 - Opportunities for partnerships with ASR
- Diane Ziegenhorn, Program Manager, Registries: Ziegenhorn@AmericanSpineRegistry.org
 - Site and coordinator general queries
 - Transition logistics from QOD Spine to ASR
 - Patient Reported Outcomes (PROs)
 - Data specifications



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Questions & Answers

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Thank You