ASR Staff

• Diane Ziegenhorn, Program Manager
• Phil Dwyer, Registry Engagement Manager
• Mariah Matesi, Senior Engagement Associate
• Kristine Sizemore, Engagement Associate
• Ryan Olsen, Registry Optimization Manager
AAOS Family of Registries

AAOS Board of Directors

Registry Oversight Committee (ROC)

Collaborative Registries

Collaborative Registry with AANS & AAOS American Spine Registry (ASR)
- Cervical Degenerative Spine
- Lumbar Degenerative Spine
  Accepts data from 2016 - present

Shoulder & Elbow Registry (SER)
- Shoulder Arthroplasty
- Rotator Cuff Repair
- Elbow Arthroplasty
  Accepts data from 2016 - present

American Joint Replacement Registry (AJRR)
- Hip Arthroplasty
- Knee Arthroplasty
  Accepts data from 2012 - present

Musculoskeletal Tumor Registry (MsTR)
- Orthopaedic Oncology
  Accepts data from 2016 - present

AAOS Registries

American Academy of Orthopaedic Surgeons
Registry Program
Improving Orthopaedic Care Through Data
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:
  o **Allowed charges** for spine procedures performed by **ortho/neurosurgeons** in 1991: $211 million; in 2018: $882 million.
  o **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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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

“If you can’t measure it, you can’t improve it.” ~ Drucker
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
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 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.
ASR Initial Module Framework

American Spine Registry

Cervical Spine
- Standard
- Vanguard

Lumbar Spine
- Standard
- Vanguard
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

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-29/PROMIS-CAT
• PROMIS Emotional Distress – Depression
• PROMIS Emotional Distress – Anxiety
• PROMIS Pain Interference
• EQ-5D

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

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

For Questions Contact: Info@AmericanSpineRegistry.org
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 operative form 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 operative forms

**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

For Questions Contact: Info@AmericanSpineRegistry.org
The Data Operations Committee used this decision tree to identify data 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
IRB Information

• ASR maintains a centralized IRB through the Western IRB (WIRB) to cover all participants
  o ASR is a quality improvement registry which is exempt from IRB review under federal rule
  o 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
  o ASR IRB approval includes a waiver of patient consent
  o Majority of sites do not need to take any action; some may choose to file a copy with their local IRB
  o 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
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)
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 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

- 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™
ASR Teams

• ASR Engagement Team: Engagement@AmericanSpineRegistry.org
  o Opportunities for site participation
  o Contracting and pricing
  o Onboarding
  o RegistryInsights® Demonstration
• ASR Analytics Team: Analytics@AmericanSpineRegistry.org
  o Custom reports
  o Data insight and benchmarking
• ASR Support Team: Support@AmericanSpineRegistry.org
  o Account access to RegistryInsights®
  o Technical support and issues
  o Authorized vendor program
• General Staff Inbox: Info@AmericanSpineRegistry.org
  o Educational resources
  o All other topics or questions

• Kristina Rosinia, Director, Registries and Data Science: Rosinia@AmericanSpineRegistry.org
  o ASR Program Development
  o ASR Committees and Surgeon Leadership
  o Opportunities for partnerships with ASR
• Diane Ziegenhorn, Program Manager, Registries: Ziegenhorn@AmericanSpineRegistry.org
  o Site and coordinator general queries
  o Transition logistics from QOD Spine to ASR
  o Patient Reported Outcomes (PROs)
  o Data specifications
Questions & Answers
Thank You