

# Getting Started with the Shoulder & Elbow Registry

[www.aaos.org/registries/ser](http://www.aaos.org/registries/ser)

# Speaker Introductions

Amanda Bagus, MS, ATC

- Registry Program Manager

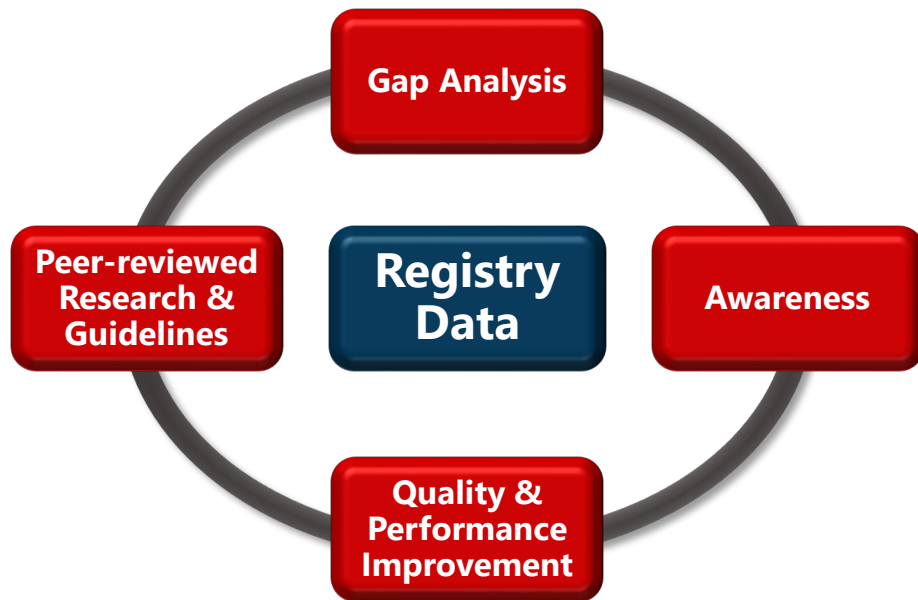
Kristine Sizemore, MPH, RRT

- Registry Engagement Associate

# Webinar Agenda

- AAOOS Registry Program Introduction
- Overview of the SER
- RegistryInsights® Dashboards
- Accessing the SHARP Model
- Getting started with SER
- Q&A

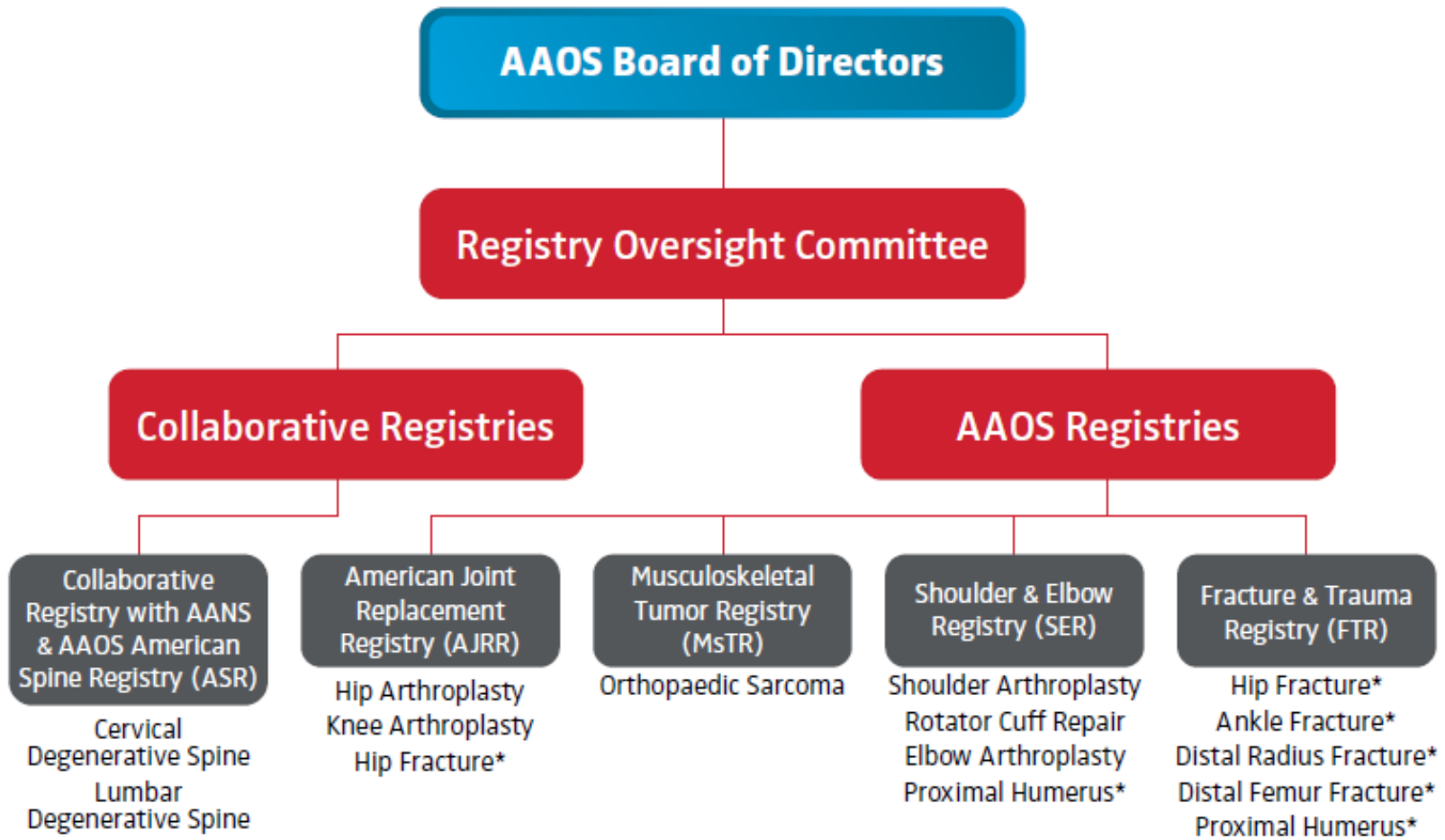
# At the Core of Academy Strategy



## 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***

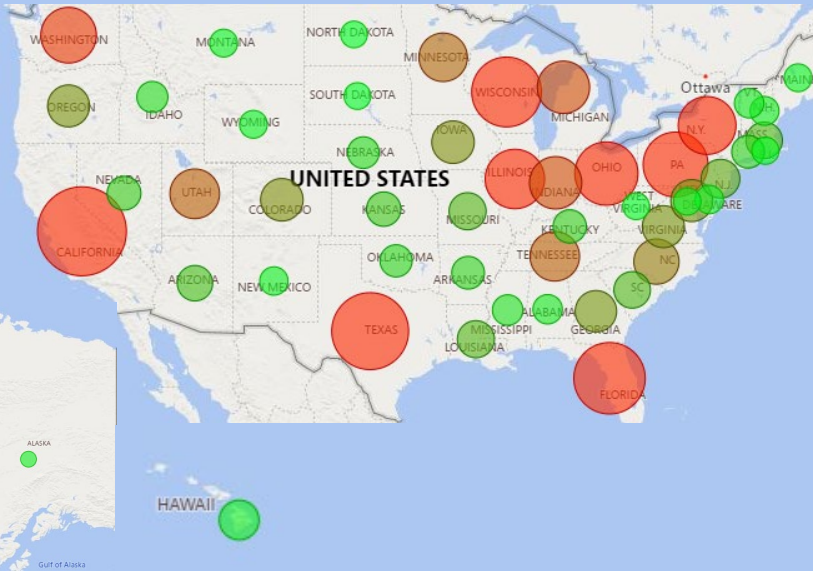
# AAOS Family of Registries



\*Modules In development

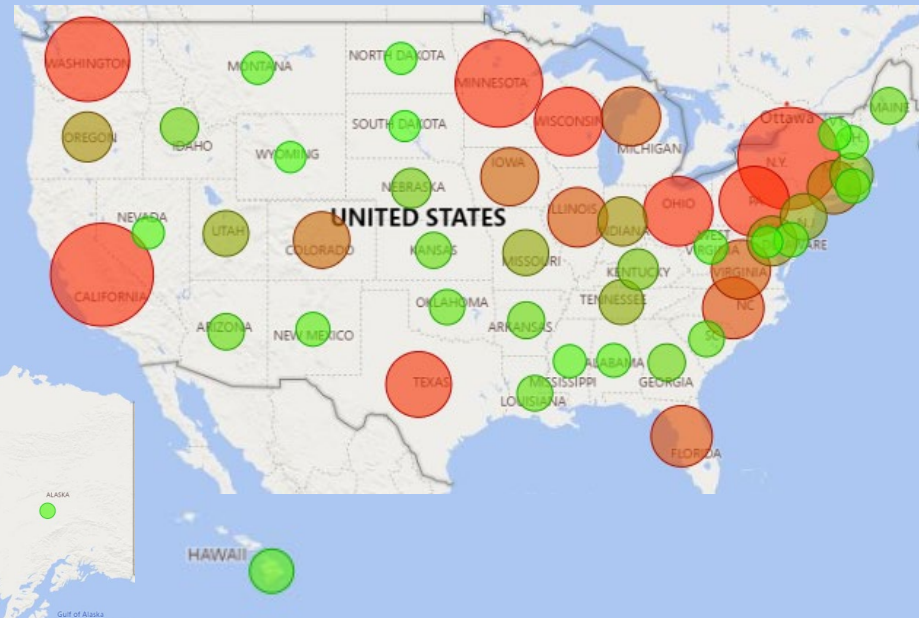
# Participation Across the Registries

## Sites by State



Over 1,600 participating sites contracted and 12,500 registered surgeons across all 50 states.

## Procedures by State



Data representing over 2,300,000 procedures capturing approximately 40% of all US TJA volume annually.

# 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

# 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
  - NPES dataset incorporated for NPI validation
- Access to custom reports that compare their site to the national Annual Report analyses, show migration trends, etc.



# 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.

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- **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
- The Joint Commission Advanced Certification in Spine Surgery (ACSS)

# About SER

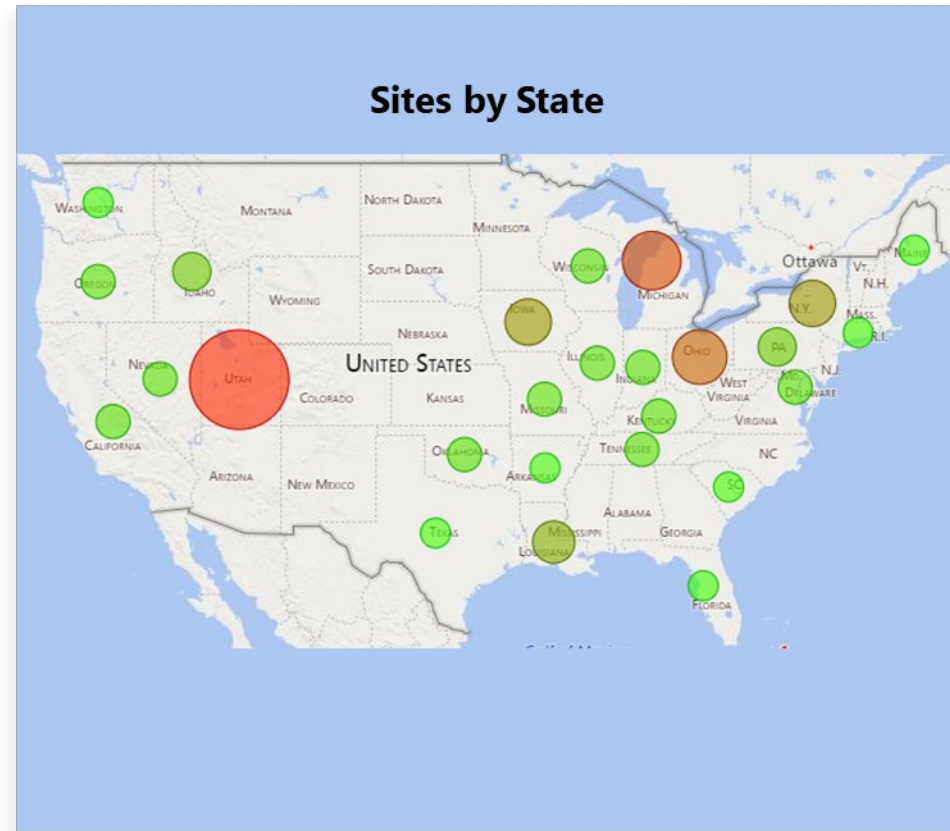
- Working in collaboration with the specialty societies, the Academy created this Registry to collect shoulder and elbow procedural data across the United States.
- National data allows for establishing survivorship curves, tracking revisions, and improving the quality of patient care.
- Individual data can be accessed and used for performance improvement and quality initiatives on RegistryInsights® for site and surgeon users.

# SER Steering Committee

- **Gerald R. Williams Jr., MD, Chair**  
The Rothman Institute
- **Oke A. Anakwenze, MD, MBA**  
Duke University
- **Mark E. Baratz, MD**  
American Society for Surgery of the Hand  
(**ASSH**) Representative  
Orthopaedic Specialists-UPMC
- **Stephen F. Brockmeier, MD**  
American Orthopaedic Society for Sports  
Medicine (**AOSSM**) Representative  
University of Virginia
- **Grant E. Garrigues, MD**  
American Shoulder and Elbow Surgeons  
(**ASES**) Representative  
Midwest Orthopaedics at Rush
- **John E. Kuhn, MD**  
Vanderbilt University Medical Center
- **Ronald A. Navarro, MD**  
Kaiser Permanente South Bay
- **Carolyn M. Hettrich, MD, MPH**  
Brigham and Women's Hospital
- **Joaquin Sanchez-Sotelo, MD**  
Mayo Clinic
- **Richard Seiden, Esq.**  
Public Advisory Board (PAB)  
Representative
- **Patrick St. Pierre, MD**  
Arthroscopy Association of North America  
(**AANA**) Representative  
Desert Orthopedic Center  
Eisenhower Health
- **Samuel A. Taylor, MD**  
Hospital for Special Surgery
- **Stephen C. Weber, MD**  
The Johns Hopkins School of Medicine

# SER Progress

- 130 contracted sites
- Over 14,500 procedures submitted across the US
- Representing over 13,000 unique patient cases



# 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

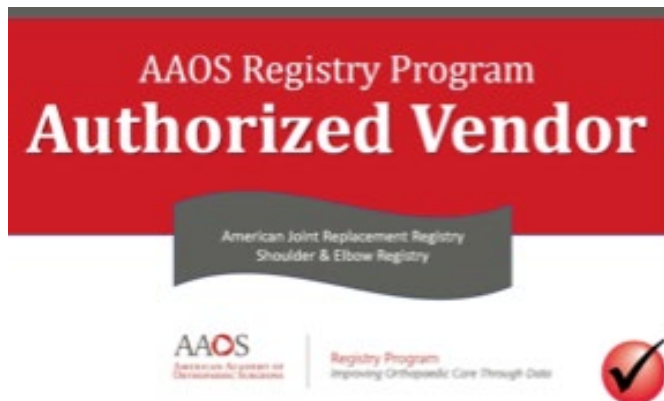
### Three Modules Available

- Shoulder Arthroplasty
- Elbow Arthroplasty
- Rotator Cuff Repair

# 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



# Three Ways to Access Data



RegistryInsights®  
Dashboards

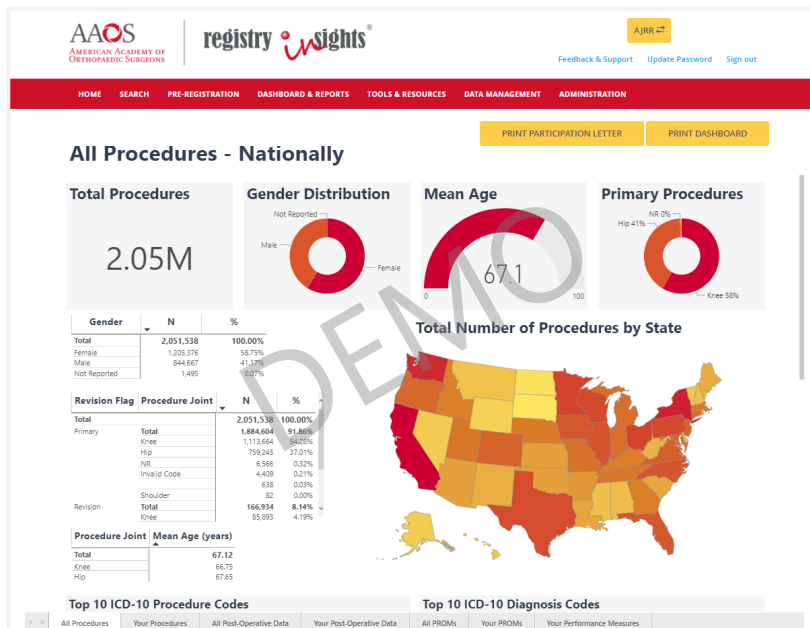


Custom  
Reports



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

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UNET Community Feedback & Support

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	SURGEON NPI	SU
1041062	SER Test Hospital 1	PRP30258	atAAOS	johnny	1/1/1980								
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				Rotator Cuff Repair	Right	2/28/2019	1619012200	MI CI
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		

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PROM REGISTRATION FORM PROM 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.

**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

Procedure

Indication

Surgeon

Paper Info

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

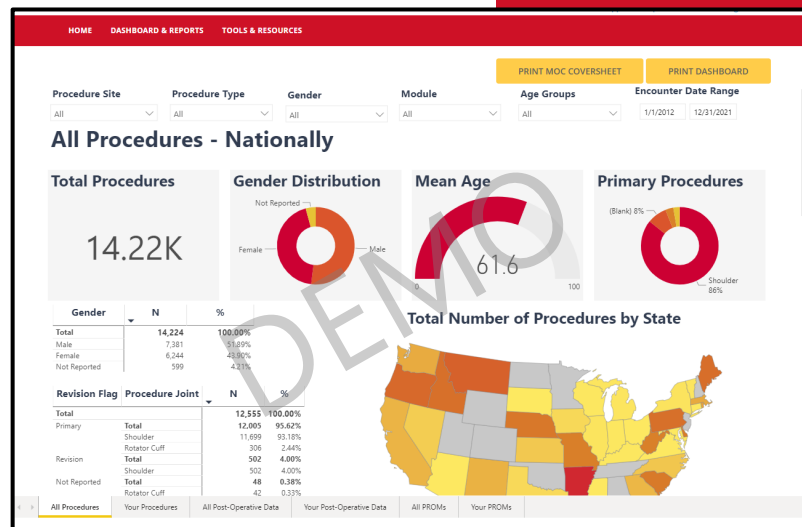
Email

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

# Surgeon Dashboards

## Authorized Surgeon Users

- View their procedural, post-operative and PROM data
- National benchmarks for comparison measures
- Print participation letter for ABOS MOC credits
- Access the Shoulder Arthroplasty Predictive (SHARP) Model



**Shoulder Arthroplasty Predictive Model**

Please complete the form to see two year predicted American Shoulder and Elbow Surgeons (ASES) Score

Age at Time of Surgery (Years):

Pre-Operative ASES Score:

Patient Reported Disability:

Disability  No Disability

Alcohol Use:

Current User  Never Used

COPD Status:

COPD  No COPD

**Two Year Predicted ASES Result:** 0

# Shoulder Arthroplasty Predictive Model (SHARP)

## Input Variables

- Surgery age in years
- Pre-op ASES score
- Disability **status**
- COPD status
- Alcohol use
- Anatomic or reverse arthroplasty
- Primary or revision arthroplasty
- Created to help surgeons predict post-operative shoulder arthroplasty outcomes based on individual patient health
- Guide preoperative patient conversations and set expectations around surgical outcomes
- Available exclusively to SER registry participants

## Output

- 2-year predicted ASES Score

# Accessing the SHARP Calculator

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Feedback & Support | Update Password

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

HOME PROM HOME INDUSTRY HOME

- Institution Dashboard
- Reports
- Industry Extract Report
- SHARP Calculator**

View a new statement for data submitters about COVID-19 data in the Announcement. We are now accepting COVID-19 data. Click the COVID-19 link in the Announcement.

Stats

Registry Total Procedures

13.46 K

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Feedback & Support | Update Password | Sign Out

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

## Shoulder Arthroplasty Predictive Model

Please complete the form to see two year predicted American Shoulder and Elbow Surgeons (ASES) Score

Age at Time of Surgery (Years)

Pre-Operative ASES Score

Patient Reported Disability

Alcohol Use

COPD Status

Anatomic or Reverse Arthroplasty

and Elbow Surgeons (ASES) Score

Age at Time of Surgery (Years)

Pre-Operative ASES Score

Patient Reported Disability

Alcohol Use

COPD Status

Anatomic or Reverse Arthroplasty

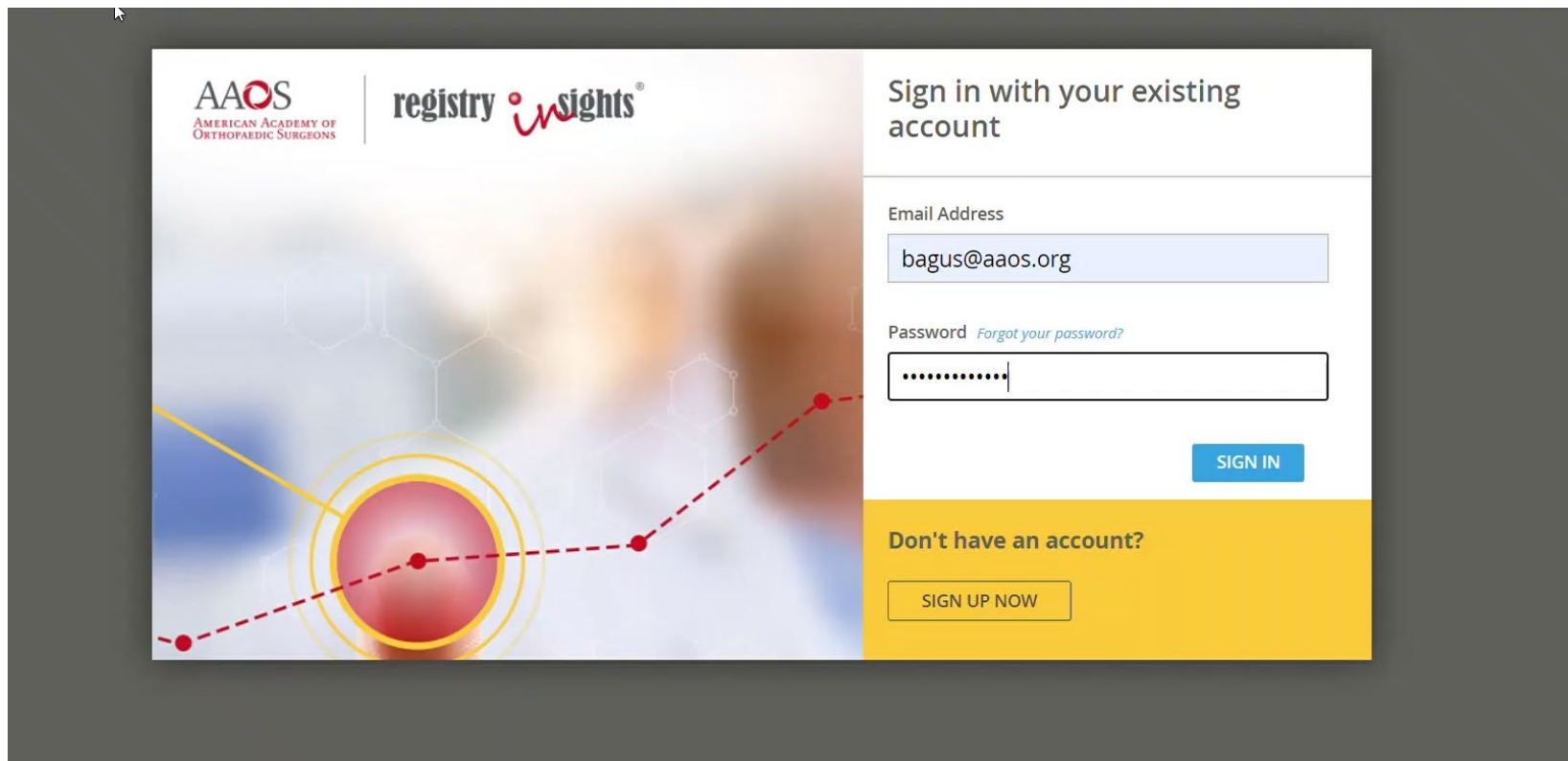
Primary or Revision Arthroplasty

SEE TWO YEAR PREDICTED ASES SCORE

**Two Year Predicted ASES Result**

91.7

# Accessing the SHARP Calculator



AAOS  
AMERICAN ACADEMY OF  
ORTHOPAEDIC SURGEONS

registry insights®

Sign in with your existing account

Email Address

bagus@aaos.org

Password [Forgot your password?](#)

.....

SIGN IN

Don't have an account?

SIGN UP NOW

*\*This video was created in a demo environment and does not contain real patient information*

# Accessing the SHARP Calculator

The screenshot displays the AAOS Registry Insights dashboard. At the top left is the AAOS logo (American Academy of Orthopaedic Surgeons) and the Registry Insights logo. On the top right, there is a user profile for 'Welcome Amanda' with a 'SER' icon, and links for 'Feedback & Support', 'Update Password', and 'Sign out'. A red navigation bar contains the following menu items: HOME, SEARCH, PRE-REGISTRATION, DASHBOARD & REPORTS, TOOLS & RESOURCES, DATA MANAGEMENT, and ADMINISTRATION. Below this, a secondary navigation bar includes HOME, PROM HOME, INDUSTRY HOME, and MY TEST DATA. A central announcement box contains three lines of text: 'Please utilize the new Pre-Registration specifications listed within Tools and Resources for all Pre-Registration Bulk File Uploads.', 'View a new statement for data submitters about COVID-19 data in the Announcements section at the bottom of the page.', and 'We are now accepting COVID-19 data. Click the COVID-19 link in the Announcements section at the bottom of this page to learn more.'

## Stats

**Registry Total Procedures**

14.84 K

**Your Breakdown**

- Elbow (0.06 %)
- Invalid Code (3.06 %)
- NR (0.2 %)
- Shoulder (52.53 %)
- Rotator Cuff (44.15 %)

**Your Total Procedures**

**Actual Cases**

*\*This video was created in a demo environment and does not contain real patient information*

# Accessing the SHARP Calculator

The screenshot shows the AAOS registry insights website. The header includes the AAOS logo (American Academy of Orthopaedic Surgeons) and the registry insights logo. A user is logged in as Amanda, with a 'SER' icon and 'Welcome Amanda' text. Navigation links include 'Feedback & Support', 'Update Password', and 'Sign out'. A red navigation bar contains links for 'HOME', 'SEARCH', 'PRE-REGISTRATION', 'DASHBOARD & REPORTS', 'TOOLS & RESOURCES', 'DATA MANAGEMENT', and 'ADMINISTRATION'. The main content area features the title 'Shoulder Arthroplasty Predictive Model' and the instruction: 'Please complete the form to see two year predicted American Shoulder and Elbow Surgeons (ASES) Score'. The form includes three input fields: 'Age at Time of Surgery (Years)', 'Pre-Operative ASES Score', and 'Patient Reported Disability'. The 'Patient Reported Disability' section has two radio button options: 'Disability' and 'No Disability'. To the right of the form, the text 'Two Year Predicted ASES Result' is displayed above a large red semi-circle containing the number '0'.

*\*This video was created in a demo environment and does not contain real patient information*



# 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 & Centers of Excellence



Qualify for **national distinction programs** such as the Joint Commission Advanced Certification & 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



# 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



# Questions?

[RegistryInfo@aaos.org](mailto:RegistryInfo@aaos.org)

[www.aaos.org/registries/ser](http://www.aaos.org/registries/ser)

# Contact the AAOS Registry Program

**General:** [RegistryInfo@aaos.org](mailto:RegistryInfo@aaos.org)

**Technical Support:** [RegistrySupport@aaos.org](mailto:RegistrySupport@aaos.org)

**Contracts, Invoicing, & Onboarding:** [RegistryEngagement@aaos.org](mailto:RegistryEngagement@aaos.org)

**Custom Analytics:** [RegistryAnalytics@aaos.org](mailto:RegistryAnalytics@aaos.org)

**Registry Analytics Institute:** [RegistryAnalyticsInstitute@aaos.org](mailto:RegistryAnalyticsInstitute@aaos.org)

**Phone:** (847) 292-0530

**Business Hours:** Monday through Friday, 8 a.m. to 4 p.m. Central Time

# Upcoming Webinars

- Opportunities with American Joint Replacement Registry
  - Speakers: Dr. Springer and Dr. Duwelius
  - Date/Time: Wednesday, 7/14, at 7:15 p.m. – 8:15 p.m. Central
- Shoulder & Elbow Registry: Introduction and 2019 Annual Report Highlights
  - Speakers: Dr. Kuhn and Dr. Navarro
  - Date/Time: Wednesday, 7/21, at 7:15 p.m. – 8:15 p.m. Central

# Webinar Recordings

- Recordings and slide decks from past webinars can be found on [this page](#) of the AAOS website.
- If you would like to view a recording of a webinar held before October 2020, please visit [learn.aaos.org](http://learn.aaos.org).



# Thank You!

[RegistryInfo@aaos.org](mailto:RegistryInfo@aaos.org)

[www.aaos.org/registries/ser](http://www.aaos.org/registries/ser)