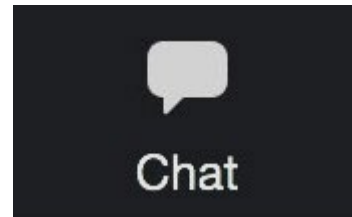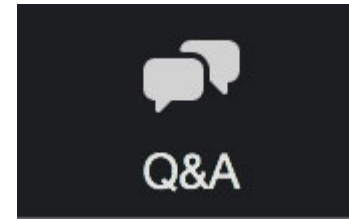# Thank you for joining us today!

The webinar will begin at:
1 PM ET, 12 PM CT, 11 AM MT, 10 AM PT

We look forward to your participation!

Main Controls

Use the Q&A button to submit questions to Faculty

Use the Chat button to request assistance from AAOS Staff

You can also contact staff via email at webinars@aaos.org.

Download the handouts

Log in at learn.aaos.org

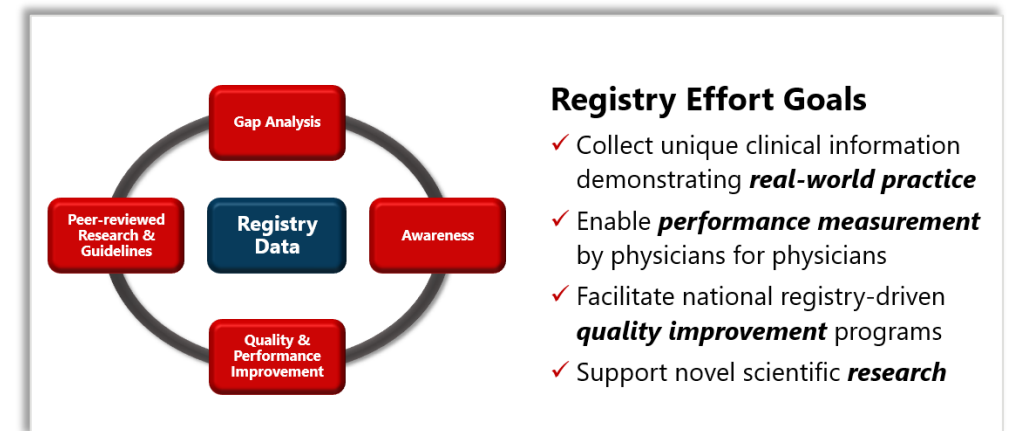# Program Evaluation

After the event, go back to learn.aaos.org

Don't forget to tell us how we did!

American Spine Registry Resources for TJC Advanced Certification in Spine Surgery

June 7, 2023

AAOS
AMERICAN ACADEMY OF
ORTHOPAEDIC SURGEONS

Registry Program
Improving Orthopaedic Care Through Data

6/6/2023   5

Agenda

- American Spine Registry (ASR) Data

  Element & Submission Overview

- TJC Advanced Certification in Spine Surgery

  (ACSS) Performance Measures

- Viewing ACSS Performance Measure Data

  RegistryInsights®

- Available Tools and Resources for TJC Sites

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***

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Registry Program
Improving Orthopaedic Care Through Data

6/6/2023   6

AAOS Registry Program | Overview

AAOS Board of Directors

Registry Oversight Committee (ROC)

Collaborative Registries

AAOS Registries

American Spine Registry (ASR)

AANS & AAOS Collaboration

Cervical Degenerative Spine

Lumbar Degenerative Spine

American Joint Replacement Registry (AJRR)

Hip Arthroplasty

Knee Arthroplasty

Ankle Arthroplasty*

Accepts data 2012 - present

Shoulder & Elbow Registry (SER)

Shoulder Arthroplasty

Rotator Cuff Repair

Elbow Arthroplasty

Fracture & Trauma Registry (FTR)

Hip Fracture

Ankle Fracture

Distal Radius Fracture

Distal Femur Fracture

Proximal Humerus

Musculoskeletal Tumor Registry (MsTR)

Orthopaedic Sarcoma

Metastatic Bone Disease*

Spine Tumor*

*Modules in development
Note: Each registry module accepts data from 2016 to present unless otherwise indicated

Participation Across the Registries

Sites by State

Over 1,400 participating sites contracted and 14,000 registered surgeons across all 50 states.
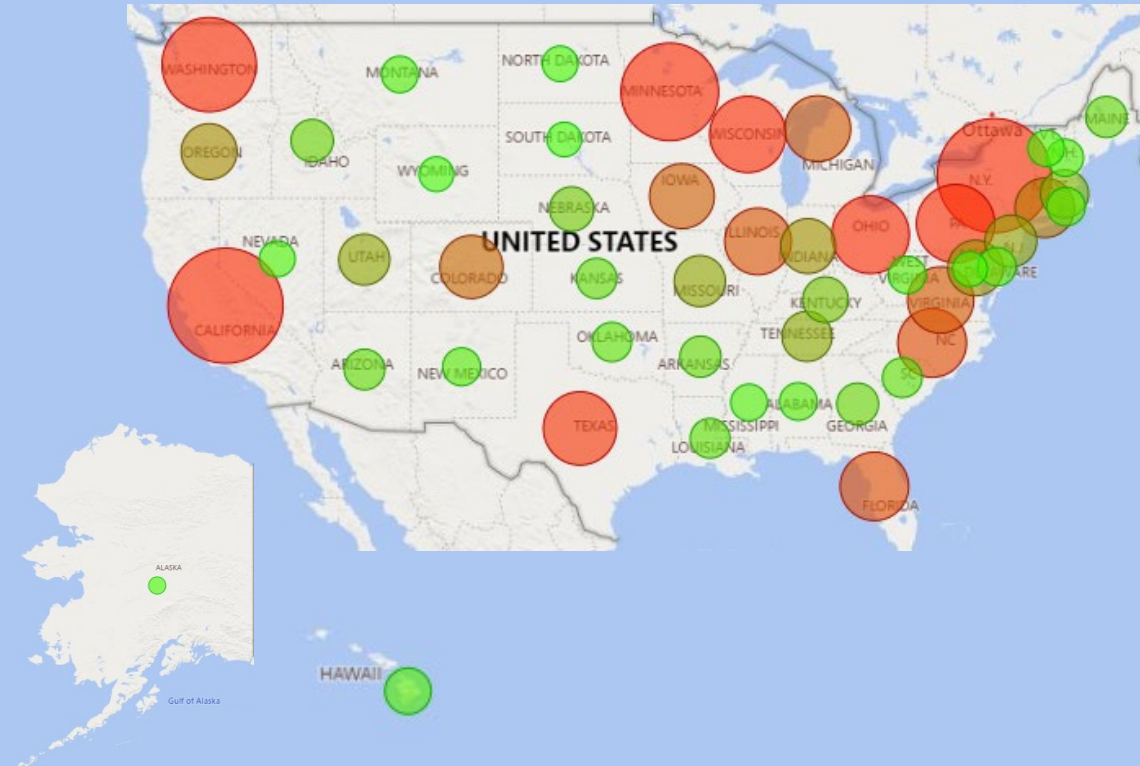
Procedures by State
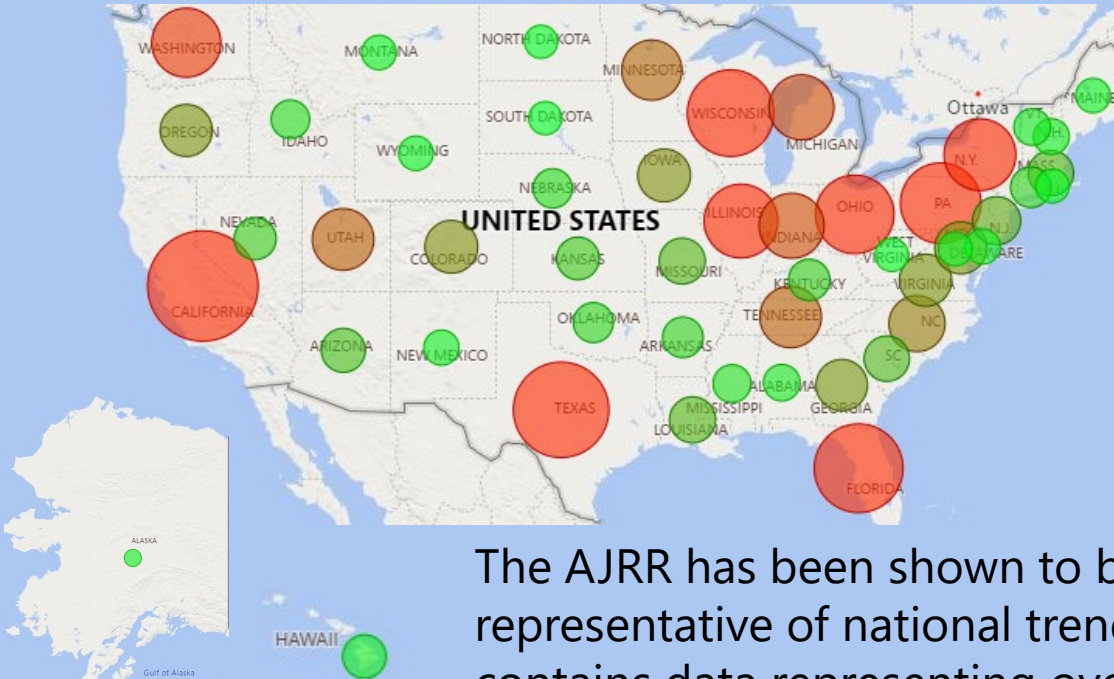
The AJRR has been shown to be representative of national trends and contains data representing over 3.2M procedures.

ASR includes data representing over 190,000 procedures and over 160,000 patients with over 250 participating sites and over 800 registered surgeons

Registry Data Collection | Core Data Elements

These *Core Data Elements* are collected across all AAOS and Collaborative Registries.

Procedure

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

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

Surgeon
- Name (NPI)

Procedure
- Type (ICD-10, CPT)
- Date of Surgery
- Implants (Manufacturer, Lot #)
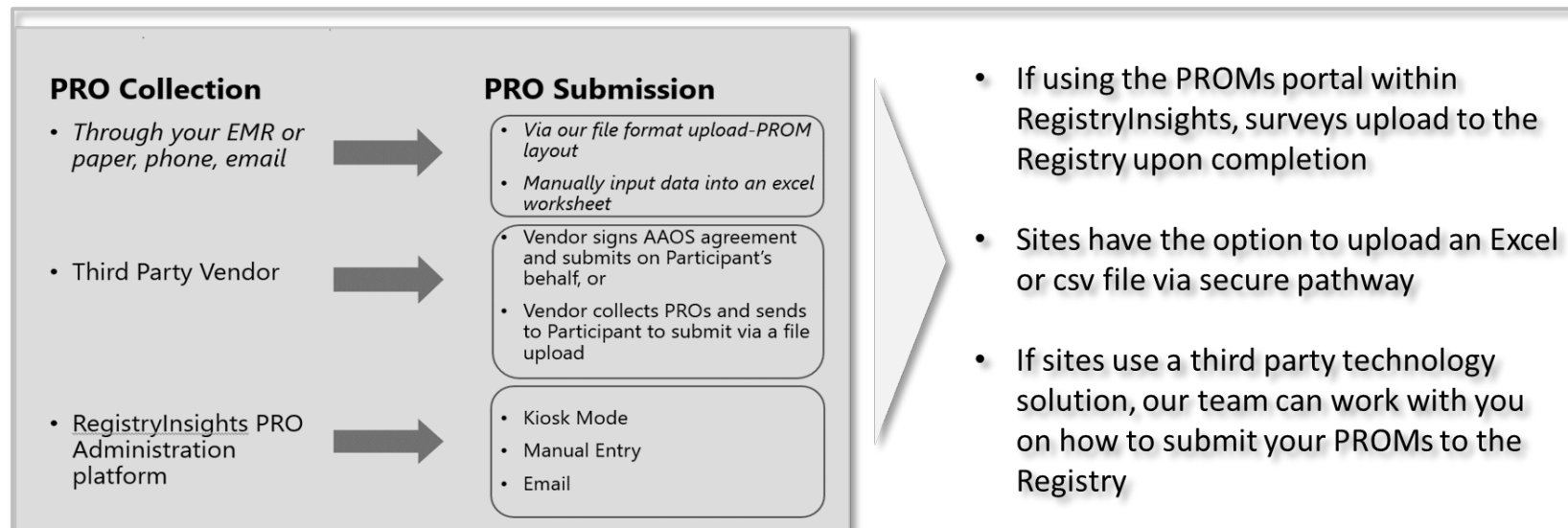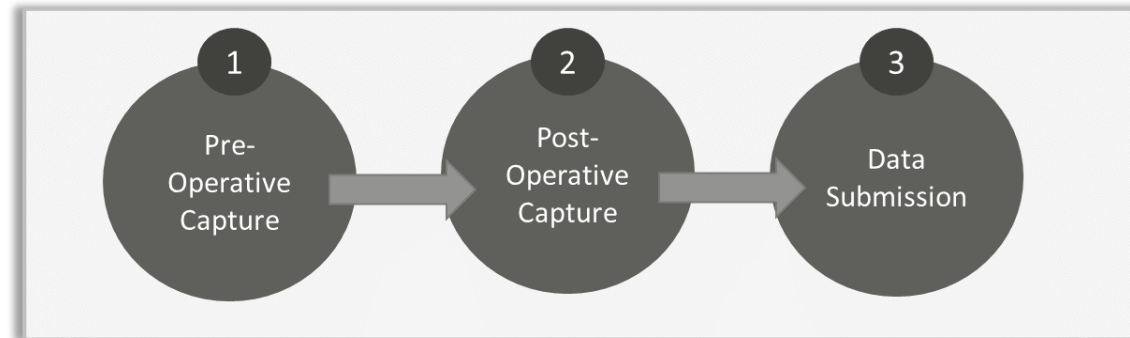- Anesthesia Type

Procedure, continued
- Length of Stay
- American Society of Anesthesiologists Score
- Charlson Comorbidity Index (CCI)

Comorbidities & Complications
- Comorbidities (ICD-10)
- COVID-19 as prior diagnosis
- Height + Weight/Body Mass Index
- Length of Stay
- American Society of Anesthesiologists Score
- Charlson Comorbidity Index (CCI)
- Operative and Post-operative Complications

PROMs

Registry participants may submit data to the registry or utilize the registry portal to collect patient reported outcomes. The portal supports multiple workflow options for collection (i.e. computer, tablet device, paper methods).
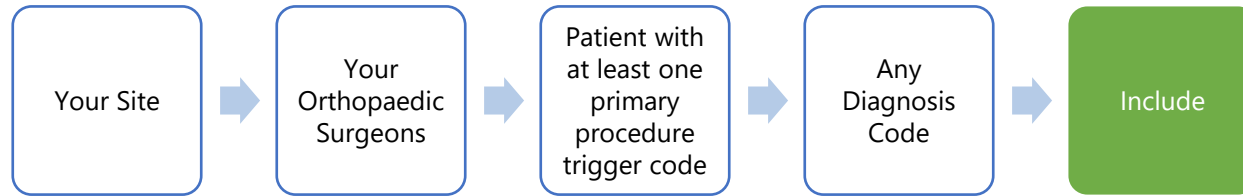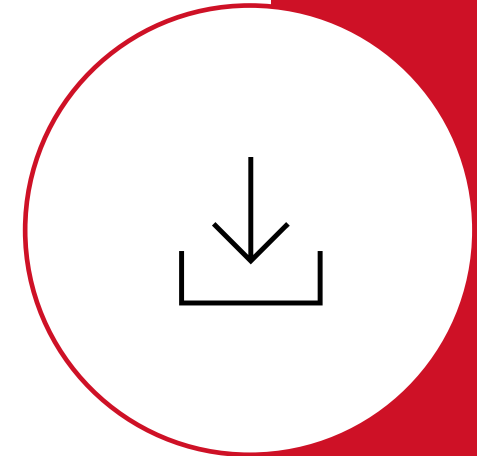

1 Pre-Operative Capture → **2** Post-Operative Capture → **3** Data Submission

PRO Collection

- *Through your EMR or paper, phone, email*

- Third Party Vendor

- RegistryInsights PRO Administration platform

PRO Submission

- *Via our file format upload-PROM layout*
- *Manually input data into an excel worksheet*

- Vendor signs AAOS agreement and submits on Participant's behalf, or
- Vendor collects PROs and sends to Participant to submit via a file upload

- Kiosk Mode
- Manual Entry
- Email

- If using the PROMs portal within RegistryInsights, surveys upload to the Registry upon completion

- Sites have the option to upload an Excel or csv file via secure pathway

- If sites use a third party technology solution, our team can work with you on how to submit your PROMs to the Registry

PROMs Intervals

Collection Interval	Definition
Baseline/Pre-operative*	From 90 days before procedure to the date of procedure
90 days/3 months*	From 30 days after procedure to 150 days after procedure
6 months	From 150 days after procedure to 210 days after procedure
12 months	From 270 days after procedure to 425 days after procedure
Yearly	Every year after procedure, +/- 60 days after procedure anniversary

*TJC PROMs Metric Intervals

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Data Submission

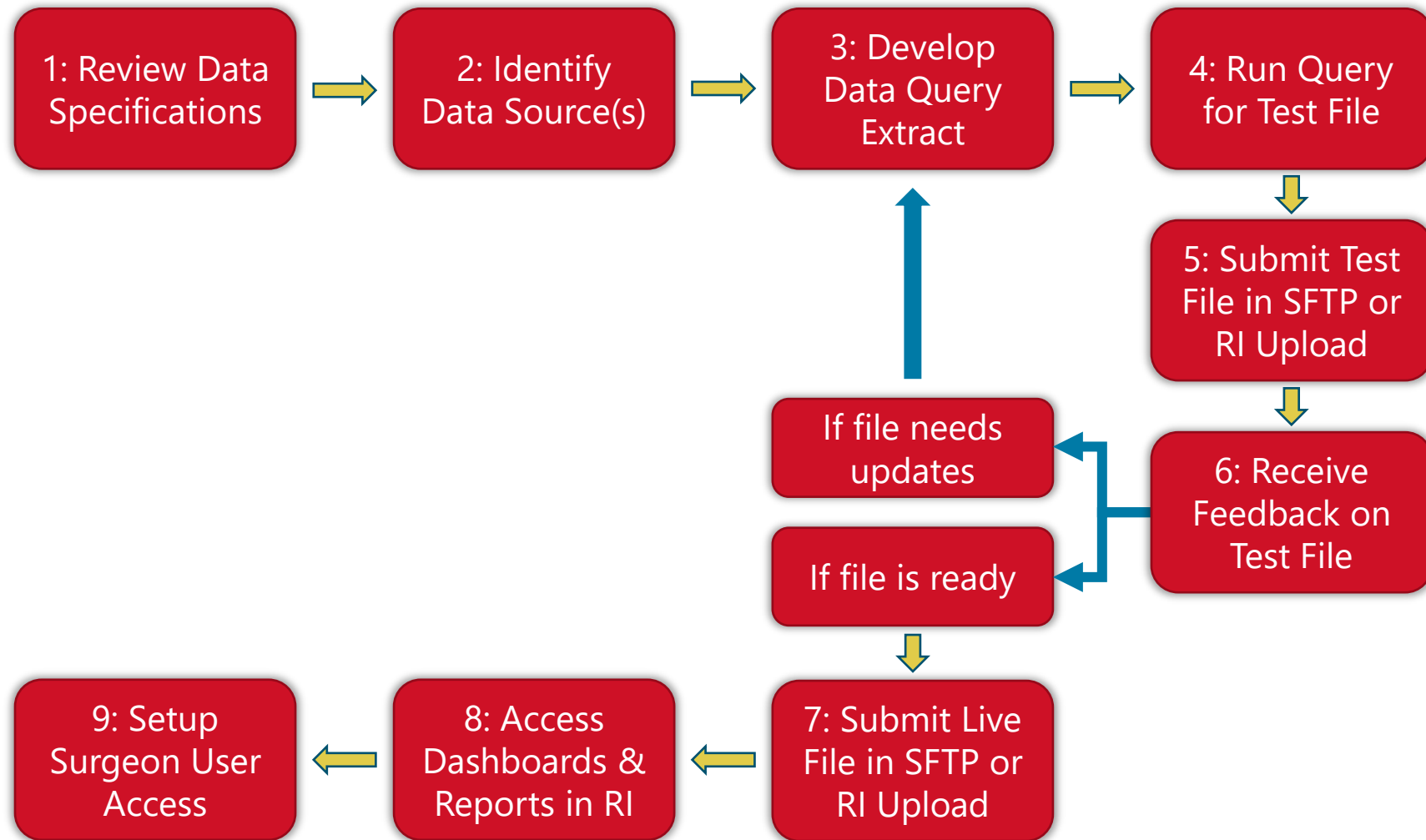Your Site → Your Orthopaedic Surgeons → Patient with at least one primary procedure trigger code → Any Diagnosis Code → Include

- Use Inclusion Criteria Guide to identify ASR procedures

  - Additionally accepted coding listed in ASR data specifications

  - Data fields defined further in the data dictionary, along with acceptable values, and data domain for each element (demographic, pre-op, procedural, component, etc.)

- Three ways to submit:

  - Automatic submission via SFTP

  - File drop via the RegistryInsights® platform (csv, xls)

  - Via a third-party vendor authorized to submit data to the registry on a site's behalf

Registry Data Submission Process

1: Review Data Specifications → 2: Identify Data Source(s) → 3: Develop Data Query Extract → 4: Run Query for Test File → 5: Submit Test File in SFTP or RI Upload → 6: Receive Feedback on Test File

If file needs updates

If file is ready

7: Submit Live File in SFTP or RI Upload → 8: Access Dashboards & Reports in RI → 9: Setup Surgeon User Access

*Recently submitted files can always be reviewed for rejections or flags in RegistryInsights® (RI)

**Data should be submitted *at least quarterly* with best practice being *at least monthly*

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Improving Orthopaedic Care Through Data

TJC Advanced Certification in Spine Surgery

- ACSS
  - A minimum of 200 cases
  - Participation in ASR
  - 3 components to certification:
    - Standards of clinical care delivery
    - Use of clinical practice guidelines
    - Performance measurement
      - 8 measures captured through data elements in 90-day post-op and PROMs submission

American **S**pine **R**egistry™

A partnership between
American Association of Neurological Surgeons
American Academy of Orthopaedic Surgeons

The Joint Commission

ACSS Measures

Measure Name	Description	Denominator	Numerator
Surgical Site Infection Rates	Patients with a pot-operative surgical site infection identified within 90 days after the primary procedure.	All primary cervical and lumbar degenerative spine cases submitted to ASR.	Spine cases with documented surgical site infection within 90 days of the primary procedure.
New Neurological Deficits	Patients with new neurological deficits present within 90 days after the primary procedure.	All primary cervical and lumbar degenerative spine cases submitted to ASR.	Spine cases with new unexpected neurologic deficit with focus motor strength that is a 3/5 or worse.
Unplanned Return Visit to the OR	Patients who had an unplanned return to the OR within 90 days of the primary procedure.	All primary cervical and lumbar degenerative spine cases submitted to ASR that are not multi-stage procedures.	Spine cases that are not multi-stage procedures, with unplanned return visits to the operating room.
Pre-operative and Post-operative Patient Reported Outcomes (PROs)	Proportion of patients submitted to ASR who completed the general health and spine specific functional status assessments: 90 days prior to surgery and 90 days post-operatively.		

ACSS Data Collection

Measure Name	Data Element Collection
Surgical Site Infection Rates	*Surgical site infection rates would be identified by ICD-10 coding in the ASR data specifications. For additional information on SSI per the criteria set forth by the CDC and the Surveillance for Surgical Site Infection (SSI) Event, please refer to this document: https://www.cdc.gov/nhsn/pdfs/pscmanual/9pscssicurrent.pdf*
New Neurological Deficits	*New Neurological deficits would be identified by ICD-10 coding (see ASR data specifications)*
Unplanned Return Visit to the OR	*Unplanned return visits to the OR would be identified by ICD-10 coding (see ASR data specifications)*
Pre-operative and Post-operative Patient Reported Outcomes (PROs)	*Sites would submit one general health and one spine specific functional status assessments currently accepted by ASR.* *ASR accepts the following assessments: PROMIS-10, VR-12, ODI, NDI, PROMIS Physical Function, Numeric Rating Scale, PROMIS-CAT, PROMIS-29, PROMIS Pain Interference, PROMIS Emotional Distress Depression, PROMIS Emotional Distress Anxiety, EQ-5D*

ACSS Data Collection | Specifications

Advanced Certification in Spine Surgery (ACSS)			
Measure Name	**Description**	**Denominator**	**Numerator**
Surgical Site Infection Rates	Patients with a post-operative surgical site infection identified within 90 days after the primary procedure.	All primary cervical and lumbar degenerative spine cases submitted to ASR.	Spine cases with documented surgical site infection within 90 days of the primary procedure.
New Neurological Deficits	Patients with new neurological deficits present within 90 days after the primary procedure.	All primary cervical and lumbar degenerative spine cases submitted to ASR.	Spine cases with new unexpected neurologic deficit with focus motor strength that is a 3/5 or worse.
Unplanned Return Visit to the OR	Patients who had an unplanned return to the OR within 90 days of the primary procedure.	All primary cervical and lumbar degenerative spine cases submitted to ASR that are not multi-stage procedures.	Spine cases that are not multi-stage procedures, with unplanned return visits to the operating room.
Pre-operative and Post-operative Patient Reported Outcomes (PROs)	Proportion of patients submitted to ASR who completed the general health and spine specific functional status assessments: 90 days prior to surgery and 90 days post-operatively		

Tabs: Inclusion Overview | Primary CPT Trigger Codes | Secondary PCS Codes | Supplemental Codes | Degenerative Diagnosis | **ACSS Measures** | ACSS Coding

ASR 2021 Data Specifications include designated tabs for the ACSS Measures and Coding to guide data collection and submission.

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ACSS Data Collection | Coding

	Advanced Certification in Spine Surgery (ACSS)		
Measure: Surgical Site Infection Rates	Surgical site infection rates would be identified by ICD-10 coding, including use of T81.49XA. For additional information on SSI per the criteria set forth by the CDC and the Surveillance for Surgical Site Infection (SSI) Event, please refer to this document: https://www.cdc.gov/nhsn/pdfs/pscmanual/9pscssicurrent.pdf	
A40.8	Other streptococcal sepsis	
A41.01	Sepsis due to Methicillin susceptible Staphylococcus aureus	
A41.02	Sepsis due to Methicillin resistant Staphylococcus aureus	
E83.2	Disorders of zinc metabolism	
L08.89	Other specified local infections of the skin and subcutaneous tissue	
L08.9	Local infection of the skin and subcutaneous tissue, unspecified	
M00.00	Staphylococcal arthritis, unspecified joint	
M00.10	Pneumococcal arthritis, unspecified joint	
M00.20	Other streptococcal arthritis, unspecified joint	
M00.80	Arthritis due to other bacteria, unspecified joint	
M00.9	Pyogenic arthritis, unspecified	
M00.08	Staphylococcal arthritis, vertebrae	
M00.18	Pneumococcal arthritis, vertebrae	
M00.28	Other streptococcal arthritis, vertebrae	
M00.88	Arthritis due to other bacteria, vertebrae	
M00.9	Pyogenic arthritis, unspecified	
M00.08	Staphylococcal arthritis, vertebrae	
M00.18	Pneumococcal arthritis, vertebrae	
M00.28	Other streptococcal arthritis, vertebrae	
M00.88	Arthritis due to other bacteria, vertebrae	
M00.9	Pyogenic arthritis, unspecified	
M00.09	Staphylococcal polyarthritis	
M00.19	Pneumococcal polyarthritis	
M00.29	Other streptococcal polyarthritis	

Tabs: Inclusion Overview | Primary CPT Trigger Codes | Secondary PCS Codes | Supplemental Codes | Degenerative Diagnosis | ACSS Measures | **ACSS Coding**

- ACSS Measures are collected via ICD-10 coding.

- Coding lists for each measure are available on the ACSS Coding tab in the 2021 ASR Data Specifications.

- Codes would be associated with a case, if applicable, and uploaded to ASR

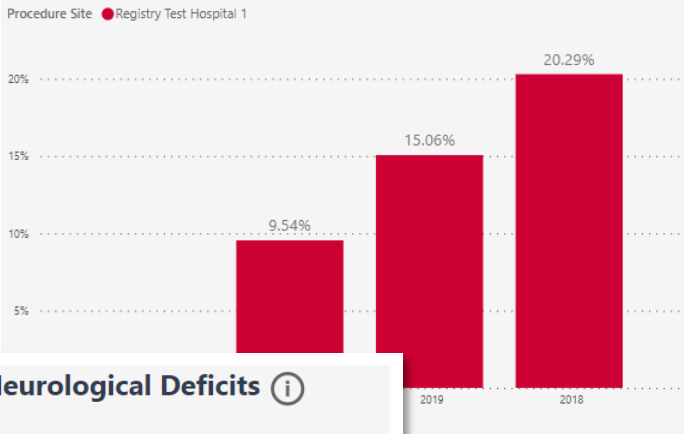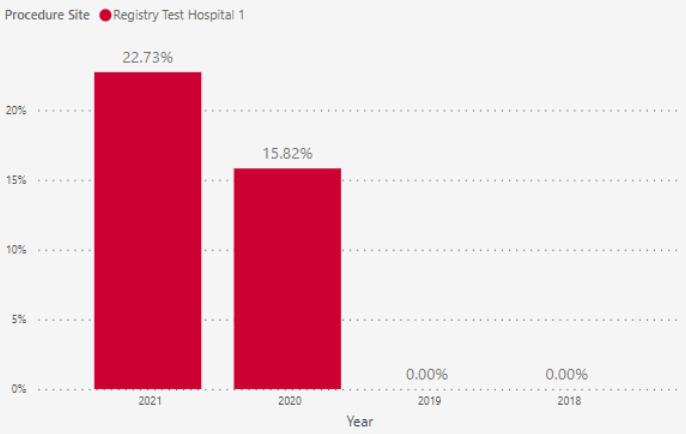# RegistryInsights® Dashboard Metrics

RegistryInsights Dashboard Metrics

Track Performance Rates in Measures Dashboard
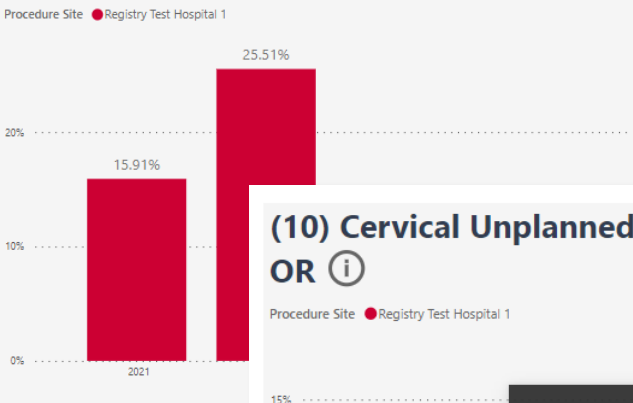

(6) Cervical Surgical Site Infection Rates ⓘ

Procedure Site ● Registry Test Hospital 1

- 20.29% (2018)
- 15.06% (2019)
- 9.54%

(7) Lumbar Surgical Site Infection Rates ⓘ

Procedure Site ● Registry Test Hospital 1

- 22.73% (2021)
- 15.82% (2020)
- 0.00% (2019)
- 0.00% (2018)

(8) Cervical New Neurological Deficits ⓘ

Procedure Site ● Registry Test Hospital 1

- 44.93% (2018)
- 23.55% (2019)
- 14.50% (2020)
- 0.00% (2021)
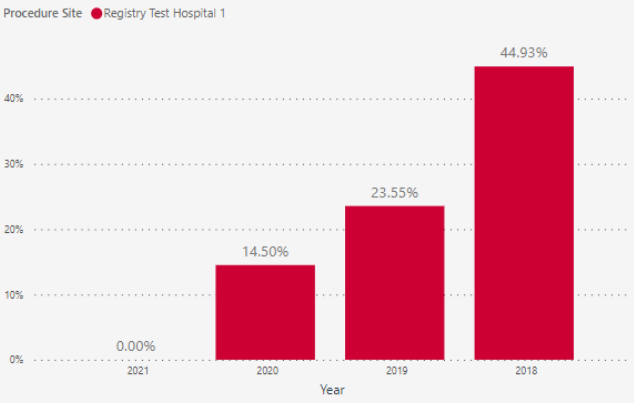
(9) Lumbar New Neurological Deficits ⓘ

Procedure Site ● Registry Test Hospital 1

- 25.51%
- 15.91% (2021)

(10) Cervical Unplanned Return Visit to the OR ⓘ

Procedure Site ● Registry Test Hospital 1

- 16.67% (2018)
- 0.00% (2021)
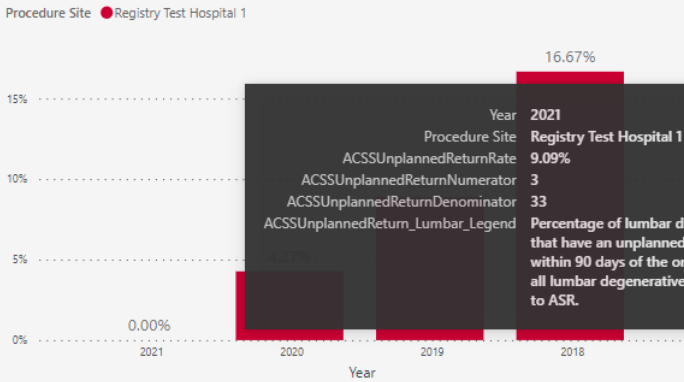
(11) Lumbar Unplanned Return Visit to the OR ⓘ

Procedure Site ● Registry Test Hospital 1

- 9.09% (2021)
- 2.42% (2020)
- 0.00% (2019)
- 0.00% (2018)
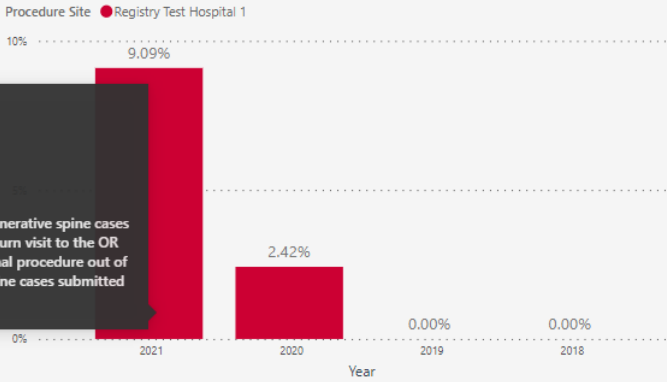
Year	2021
Procedure Site	Registry Test Hospital 1
ACSSUnplannedReturnRate	9.09%
ACSSUnplannedReturnNumerator	3
ACSSUnplannedReturnDenominator	33
ACSSUnplannedReturn_Lumbar_Legend	Percentage of lumbar degenerative spine cases that have an unplanned return visit to the OR within 90 days of the original procedure out of all lumbar degenerative spine cases submitted to ASR.

Dashboards | Performance Metrics

Post-Discharge Complications

Complication Rates by diagnosis

Linked Revisions & Readmissions by Complication Type

90-day SSI, Mortality, & Readmission

Patient-Reported Outcome Measures (PROMs)

Completion of 90-day pre- and post-op PROMs

Tracking linked pre-op, 90-day post-op, and 1-year post-op PROMs

New TJC Resources

American Spine Registry

A partnership between
American Association of Neurological Surgeons
American Academy of Orthopaedic Surgeons

American Spine Registry (ASR)

Achieving and Maintaining the Advanced Certification in Spine Surgery (ACSS) from The Joint Commission

Registry Participation Toolkit
Version 1.0; released May 2023

ABOUT THIS TOOLKIT

This toolkit provides details related to your registry participation for obtaining and maintaining your ACSS certification. This guide includes information related to measure definitions, details to aid in the data submission process to appropriately calculate measures in the registry to inform quality improvement at your site, and frequently asked questions to support ongoing data submission to the registry.

- TJC-Specific support line - **1-800-999-2939**
- Registry Participant Quick Reference Guide
  - Measure descriptions and data elements for calculations
  - Dashboard overview
- Registry Participation Toolkit
  - Measure & calculation details
  - Data submission guidance
  - Dashboard visual details
- ASR TJC Web Page
  - FAQs

Resources

Registry Participation Quick Reference Guide: The Joint Commission Advanced Certification in Spine Surgery

Version 1 · May 2023

Registry Participation Quick Reference Guide: The Joint Commission Advanced Certification in Spine Surgery

American Spine Registry Data Submission for The Joint Comission Advanced Certification in Spine Surgery

Refer to this guide to understand the American Spine Registry (ASR) data submission requirements, measure calculations, and dashboard data views for The Joint Commission Advanced Certification in Spine Surgery (ACSS) performance measures.

Registry Participation Quick Reference Guide

The Joint Commission ACSS Performance Measures

Measure	Description	Required Data Elements for Measure Calculation
Surgical Site Infection Rates **ACSS-01** Cervical **ACSS-05** Lumbar	Patients with a post-operative surgical site infection (SSI) identified within 90 days after the primary procedure	**Numerator:** Diagnosis coding (DX_1-DX_10) indicating SSI submitted as an inpatient readmission to ASR in the **post-op** file *For additional information on SSI per the criteria set forth by the CDC and the Surveillance for Surgical Site Infection (SSI) Event, please refer to this document: https://www.cdc.gov/nhsn/pdfs/pscmanual/9pscssicurrent.pdf* **Denominator:** All primary cervical or lumber degenerative spine cases, ProcedureDate, Procedure Codes (PX_1-PX_10), Diagnosis Codes (DX_1-DX_10)
New Neurological Deficits **ACSS-02** Cervical **ACSS-06** Lumbar	Patients with new neurological deficits present within 90 days after the primary procedure	**Numerator:** Diagnosis coding (DX_1-DX_10) indicating new unexpected neurologic deficit with focus motor strength that is a 3/5 or worse submitted as an inpatient readmission to ASR in the **post-op** file **Denominator:** All primary cervical or lumber degenerative spine cases, Procedure Codes (PX_1-PX_10), Diagnosis Codes (DX_1-DX_10), ProcedureDate
Unplanned Return Visit to the OR **ACSS-03** Cervical **ACSS-07** Lumbar	Patients who had an unplanned return to the OR within 90 days of the primary procedure	**Numerator:** Procedure coding (PX_1-PX_10) indicating unplanned return to OR submitted to ASR in the **post-op** file **Denominator:** All primary cervical or lumber degenerative spine cases, ProcedureDate, Procedure Codes (PX_1-PX_10), Diagnosis Codes (DX_1-DX_10) Exclusions: Multi-stage procedures
Pre- and Post-Operative Patient Report Outcomes **ACSS-04** Cervical **ACSS-08** Lumbar	Patients who completed the general health and spine-specific functional status assessments: within 90 days prior to surgery and 30-150 days (3 months) post-operatively	**Numerator:** ProcedureDate, PROMS_Date, General Health Assessment, Functional Status Assessment *ASR accepts the following assessments: General Health: PROMIS-10, VR-12, PROMIS Physical Function, PROMIS-CAT, PROMIS-29, PROMIS Pain Interference, PROMIS Emotional Distress Depression, PROMIS Emotional Distress Anxiety, EQ-5D; Spine Specific: ODI, NDI, Numeric Rating Scale for back/leg and neck/arm* **Denominator:** All primary cervical or lumber degenerative spine cases, Procedure Date, Procedure Codes (PX_1-PX_10), Diagnosis Codes (DX_1-DX_10)

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3.3 Viewing ACSS Performance Measure Rates

The 8 ACSS measures are displayed separately for cervical and lumbar cases. An encounter date filter at the top of the dashboard allows sites to set the procedure date range to view monthly data. Hovering over any column within a tile will display the measure numerator, denominator, and performance rate for the selected time frame.

National comparison data is not currently available in these performance measure tiles. As ACSS measure data submitted to the registry grows, we will seek to establish a national registry benchmark.

(6) Cervical Surgical Site Infection Rates

(7) Lumbar Surgical Site Infection Rates
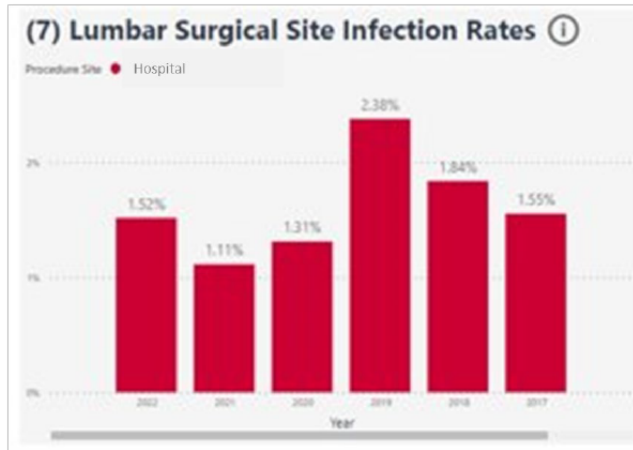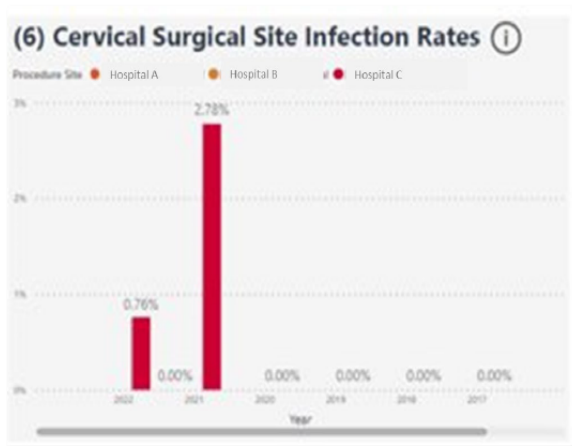
ACSS-01 and ACSS-05 display the performance rates for patients undergoing a primary cervical or lumbar degenerative procedure with a post-operative surgical site infection (SSI) identified within 90 days after the primary procedure. These measures are calculated from the readmission diagnosis data submitted in the ASR PostOp file and linked to a previously submitted ACSS procedure case. Note that the SSI metric is an inverse measure, with lower rates indicating improved performance. So, if your site did not have a 90-day readmission with an applicable diagnosis during a set month/year period, a 0% performance rate will display.

Resources

Post-operative Readmissions Matching & PROMs Matching

The next step is to link the readmissions or PROMs to the index procedure. The table below lists the fields that are used to match postoperative readmissions and PROMs data. If the data in these fields are not consistent in the record submitted, the PROMs case will not be linked to the index procedure.

Post-operative Readmissions Matching	
ASR	• Module • ProcedureDate

PROMs Matching	
ASR	• Module • ProcedureDate

Section 2: Extracting Data from EHR Systems

This section is intended to help guide staff running a query and building a report to extract data from an EHR. For successful data submission to the registry, extraction from your clinical systems is necessary for consistent data submission which is an essential step in achieving and maintaining the ACSS Certification. The steps below provide a general overview for developing data extracts from EHR systems.
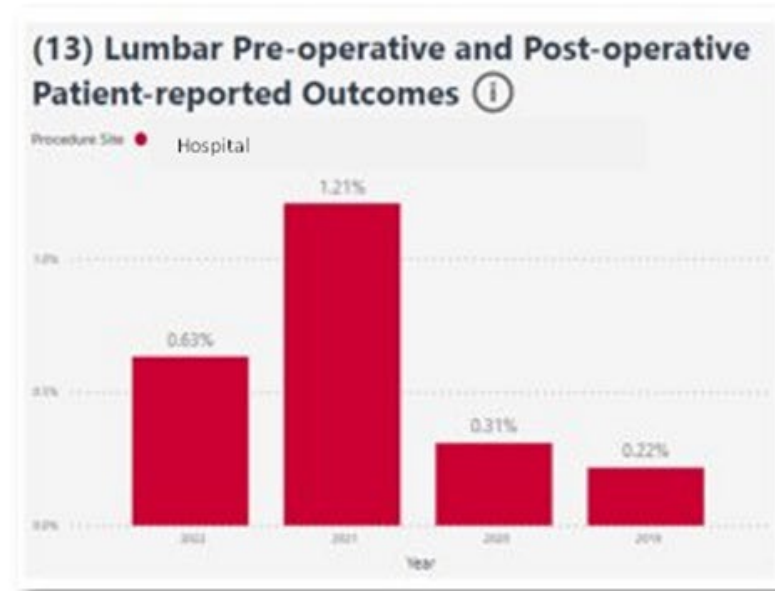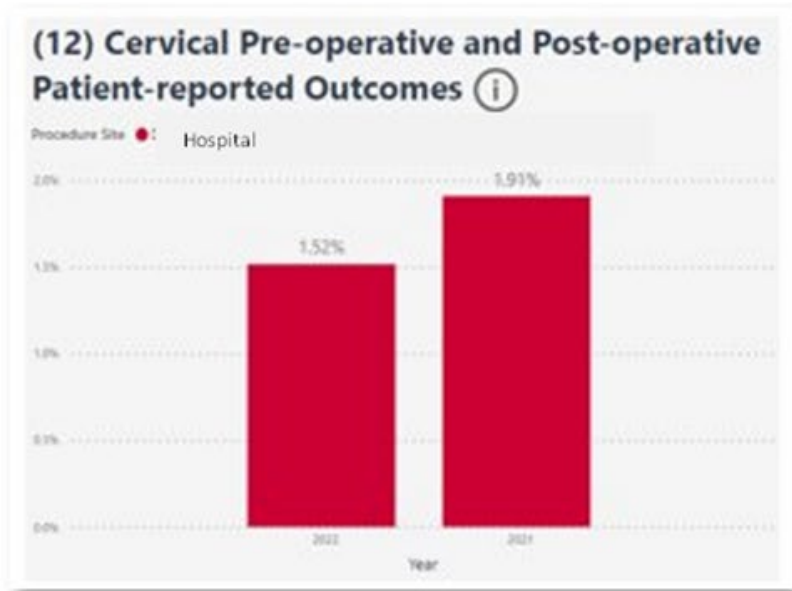
TJC Use Cases

Participant Concern:
PROMs competition rate is too low, or visuals are blank for ACSS-04 & ACSS-08

Reference:
- Toolkit sections 1.1 (measure table) and 1.4 (PROMs matching criteria)
- ACSS Quick Guide Measure Table for measure numerator data requirements

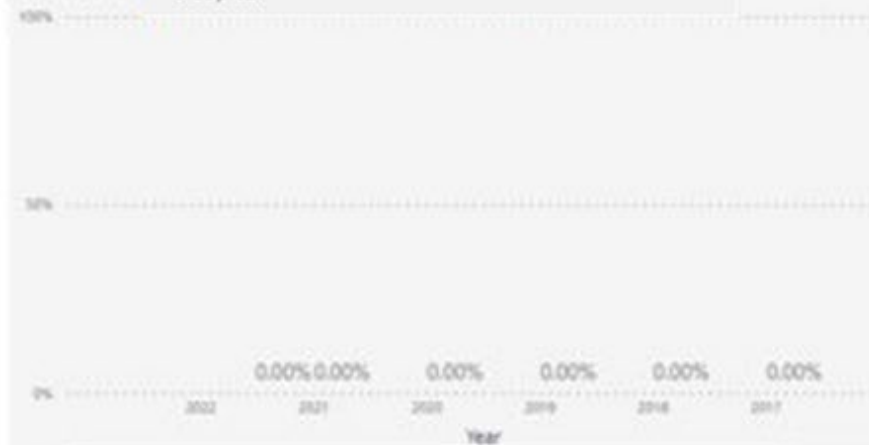# TJC Use Cases

Participant Concern:
Why are my performance measure tiles blank?

ACSS Reference:
- Toolkit sections 1.2 & 1.3 highlighting data used for measure inclusion
- Section 1.4 – matching criteria to display data
- Section 3.3 – performance measure visual descriptions highlight *inverse measures*
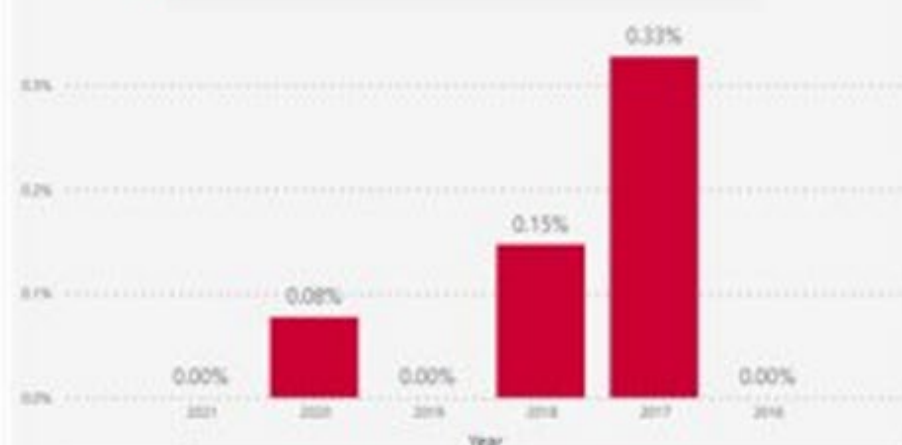- Step by step data validation in last question of FAQs

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TJC | AJRR Future State

Additional Projects for TJC Site Support

Exportable case-level reports for internal analysis

User group sessions