AAOS
American Academy of Orthopaedic Surgeons

AJRR American Joint Replacement Registry

PATIENT-FACING INTERIM REPORT

Based on the Sixth AJRR Annual Report on Hip and Knee Arthroplasty Data

The American Academy of Orthopaedic Surgeons: A Resource for All Things Orthopaedic

The American Academy of Orthopaedic Surgeons (AAOS) serves to improve patient care and provide resources for the public on orthopaedics. AAOS provides education, clinical tools, and professional support to orthopaedic surgeons and allied health care providers. It has grown into the world's largest medical association of musculoskeletal specialists, serving more than 39,000 members worldwide.

AAOS supports a Registry Program to improve patient outcomes through data collection. A registry is a database that compiles information to increase safety, improve patient outcomes, and promote best clinical practices. The AAOS Registry Program portfolio includes the American Joint Replacement Registry (AJRR), the Shoulder & Elbow Registry (SER), and the Musculoskeletal Tumor Registry (MsTR). This Registry portfolio serves as a means of collecting, analyzing, and sharing data on joint replacement surgeries and other musculoskeletal conditions. In addition, the AAOS has partnered with the American Association of Neurological Surgeons (AANS) to launch the American Spine Registry (ASR), their first collaborative registry.

AJRR is the largest Registry supported by the AAOS Registry Program and collects data on total hip and knee replacements completed in the United States.

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Foreword

The American Academy of Orthopaedic Surgeons (AAOS) releases an Annual Report summarizing the data submitted to the American Joint Replacement Registry (AJRR), a national Registry collecting data on hip and knee replacement procedures. The purpose of the Annual Report is to provide the orthopaedic community with valuable data-driven information, with the goal of improving clinical practice and patient outcomes. The *2019 Annual Report* was no exception, publishing data collected from 2012 through 2018 on 1,525,435 procedures from 1,302 institutions across the United States.

This *AJRR Patient-facing Interim Report* was created with the intent of highlighting the information from the *2019 Annual Report* that is most relevant for patients and the public. A team of surgeon leaders, the AAOS Public Advisory Board (a non-physician group of volunteers), and AAOS Registry Program staff prepared the following patient-centered resource. This team is hopeful that those outside the orthopaedics profession find this information useful as they learn more about hip and knee replacement procedures and how Registry data can help to inform decisions and improve patient care.

This publication will introduce you to general Registry data and highlight information about hip and knee replacements performed across the United States. While a Registry serves to collect data about procedures, analysis of that data can help surgeons choose individualized treatments and implantable devices that are best for their patients. In addition to providing a high-level summary of these procedures, the team has included a discussion about patient-reported outcome measures (PROMs), which are surveys used to capture outcomes, or the patient's pre- and post-operative health status, from a patient's perspective.

As you read this report, we hope you will gain an understanding of general trends in hip and knee procedures, as well as learn the benefits of Registry participation. We believe this resource will help you better understand how data can be used towards improving the quality of care and patient outcomes across the United States.

James A. Browne, MD, FAAOS
AJRR Reports Editor

About the AJRR

AJRR reunited with AAOS to become the cornerstone of the AAOS Registry Program in October 2017. For patients, surgeons, health care organizations, and payors, the Registry Program creates an opportunity for collaboration, communication, and use of data to improve patient care.

The mission of the AAOS Registry Program is to *"Improve orthopaedic care through the collection, analysis, and reporting of actionable data to effect better outcomes and quality."*

Moving Towards Improved Patient Outcomes

The AJRR is a centralized database where participating health care institutions and providers can collect, store, and access their orthopaedic data, including data related to surgical procedures and follow-up care. The AJRR database is a collaborative effort among leaders in the orthopaedic field, including AAOS, American Association of Hip and Knee Surgeons (AAHKS), The Hip Society, The Knee Society, patients, hospitals, outpatient surgical centers, commercial health plans, and medical device manufacturers. Beginning with the AJRR setting the standards, the Registry Program is now managed by AAOS as one of many stakeholders, in a multi-stakeholder participation model, which means that all parties across the full spectrum of orthopaedic care are represented in managing AAOS registries.

Why is a Registry Important?

Registries collect information on patient care, medical procedures, and patient outcomes. Physicians, health care facilities, and device manufacturers use this data to improve the quality of care provided to patients. This information may be used to better understand safety, reduce complications, and decrease costs. Data collection is also valuable for researchers, health care providers, and medical educators, and helps medical education and technology to improve the patient experience and overall outcomes.

What Kind of Information Does the Registry Collect?

AJRR collects and tracks information related to hip and knee replacement procedures. This data is submitted by sites participating in the Registry, including hospitals, private orthopaedic practices, and ambulatory surgery centers (ASCs). ASCs are outpatient health care facilities — an alternative to hospitals for patients undergoing surgical procedures, including joint replacements. The information in the Registry includes the following:

- Patient demographics, such as age, gender, and race
- Surgeon information
- Name and location of the facility where the procedure was performed
- Reason for the surgery
- Details on the procedure itself:
  - What was performed
  - Which limb was involved
  - Was this a primary procedure (first replacement surgery) or a revision (removing a previous implant, or artificial joint, and replacing it with a new one)
- Information on complications, if the patient experienced any during or after surgery
- Implant information: What type of artificial joint or implant was used

Protecting Patient Privacy

As providers and participating sites collect this data and submit it to the AJRR, the Registry Program must also have internal procedures to protect the confidentiality of this information. The Registry adheres to the same patient privacy standards as medical providers and hospitals. Federal and state laws require the security and protection of private health information. Any collected information is de-identified, meaning all personally identifiable information is removed, and the data is then aggregated, or combined and securely stored. Only the combined, de-identified data is available in the Registry.

How is the Registry Information Used?

Data within the Registry is used to evaluate patient outcomes, to look at trends, and to track performance. Surgeons rely on this data to review the procedures they have performed and to compare their data to national averages. Hospitals and ASCs collect data on the procedures performed within their facilities to better understand trends and patient outcomes. Using this information, participating sites and surgeons can identify opportunities and best practices to improve the quality of care they are able to provide to patients. In addition, medical device companies and implant manufacturers (the companies that make artificial joint components, called implants) rely on this data to evaluate how a device performs and how it may be improved for future patients.

While the Registry serves to help providers, hospitals, and ASCs, and manufacturers improve outcomes and patient care, it is also a resource for patients. Registry data can help patients better understand the procedure a physician may recommend as part of a plan of care.

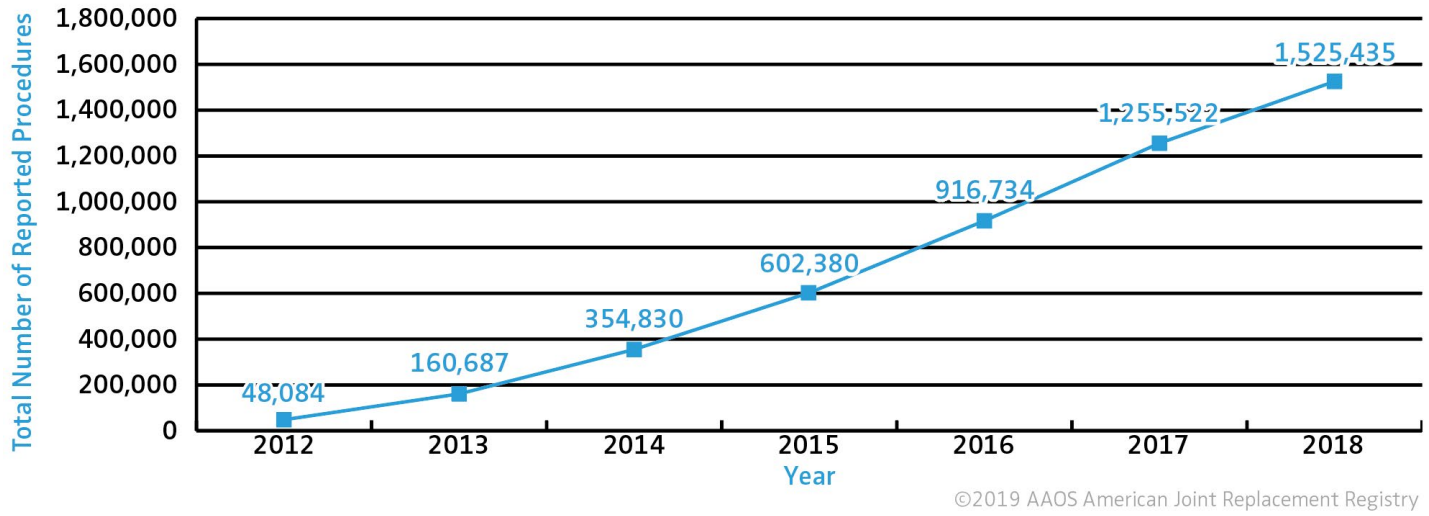
The American Academy of Orthopaedic Surgeons publishes a website dedicated to informing the public about orthopaedic procedures. There's a section devoted to registries. You can find more about this at https://orthoinfo.aaos.org/en/treatment/registry-resources-for-patients/

OrthoInfo

A Closer Look at Registry Data

Since launching in 2010, AJRR has experienced significant growth. More than 1.5 million hip and knee replacement procedures were submitted to AJRR between 2012 and 2018. This procedure count, which includes information submitted by hospitals and ASCs, has grown by over 28% in the last year, as shown in Figure 1.1. AJRR accepts historical data so, as new participants join, they will be able to submit data from as early as 2012. Procedure volumes from prior years are regularly updated with any newly submitted historical data. AJRR is considered the largest total hip and knee arthroplasty Registry in the world based on annual procedural count.

Figure 1.1: Total Number of Hip and Knee Replacement Procedures Reported by Year, 2012-2018

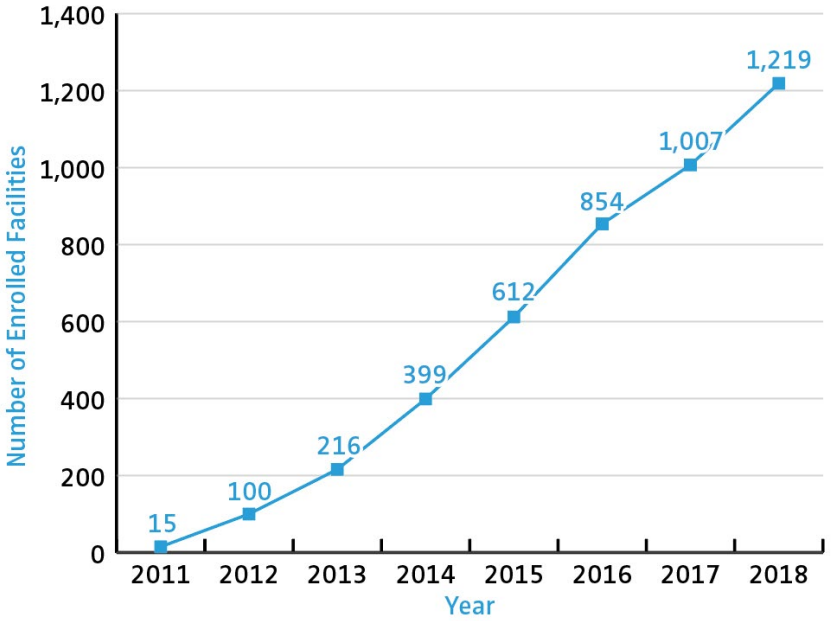


The N, or total number, indicates the total number of procedures (1,525,435) reported for the years 2012-2018.

The vision of the AAOS Registry Program is to *"Become the National Registry for orthopaedics through comprehensive data and technology resulting in optimal patient outcomes."*

As of June 30, 2020, sites participating in the Registry included 1,530 hospitals, ASCs, and private practice groups. Participating facilities are across all 50 states and the District of Columbia, as shown in Figure 1.2. In addition, these sites represent over 11,500 registered surgeons submitting over 2 million procedures to AJRR.

Figure 1.2: Number of Sites Reporting Data to the Registry by Year, 2011-2018*



*A facility is considered enrolled when an active contract with AJRR has been executed.

Figure 1.2 highlights the number of facilities enrolled in AJRR by year. The Registry continues to see an upward trend in site enrollment.

These participating sites submit data from all surgeons performing hip and knee replacement procedures at the facility. At the time of the *2019 Annual Report* publication, 4,206 surgeons from across the U.S. have submitted at least one procedure performed during 2018. Each year, AJRR has seen an increase in facility enrollment and surgeon participation.

Figure 1.3: Distribution of Hip and Knee Replacement Procedures

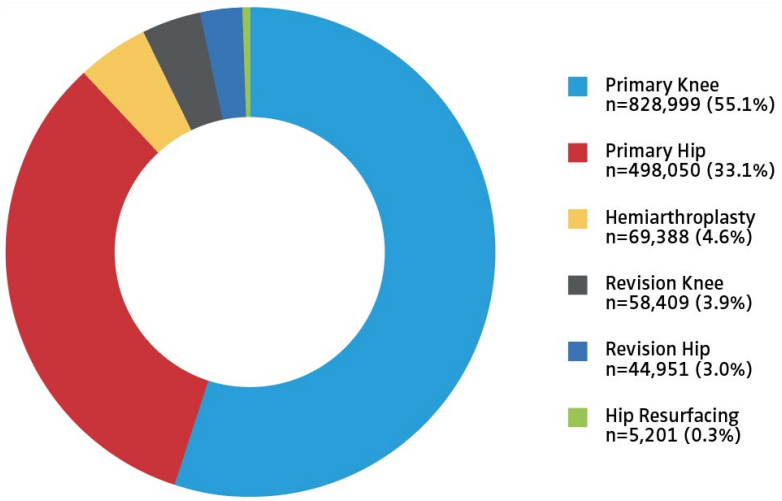


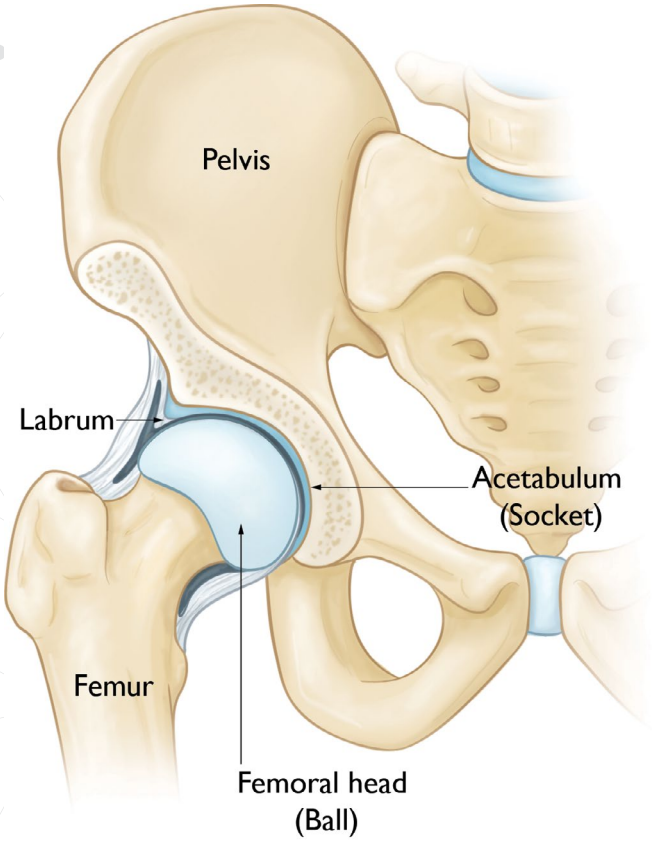
Figure 1.3 provides an overview of the different types of hip and knee procedures reported in the AJRR Annual Report. Primary procedures are the first joint replacement procedures, while revision procedures are performed if the primary procedure needs to be revised or re-done.

Hip Replacements

Overview

A hip joint is made up of the thigh bone (femur) and the pelvis. It is sometimes called a "ball-and-socket" joint. The rounded top of the femur (femoral head) sits inside a socket in the pelvis (acetabulum). Between these two bones is a material called cartilage, which cushions the joint for smooth movement in the hip. Arthritis occurs when the cartilage wears down. Hip arthritis can cause symptoms like pain and stiffness in the affected hip.

Hip arthroplasty, or hip replacement, is a surgical repair of a hip joint. Pieces of the bones are removed and replaced with metal, plastic, and/or ceramic. Hip arthroplasty can replace both the femoral head and the acetabulum (total hip arthroplasty or THA), replace just the femoral head (hemiarthroplasty), or resurface the femoral head and acetabulum (hip resurfacing).



Current Trends in Hip Arthroplasty

There are different types of hip replacements to fix arthritis or a hip fracture. The first replacement of a hip joint is called a "primary" surgery. If the same hip has a problem and needs another surgery, it is called a "revision" hip replacement. Figure 2.1 shows the types of hip procedures. Primary total hip arthroplasty is the most common and makes up about 80% of all hip procedures. Revision hip arthroplasty is less common and makes up about 7% of procedures.

Figure 2.1: All Hip Arthroplasty Procedures, 2012-2018

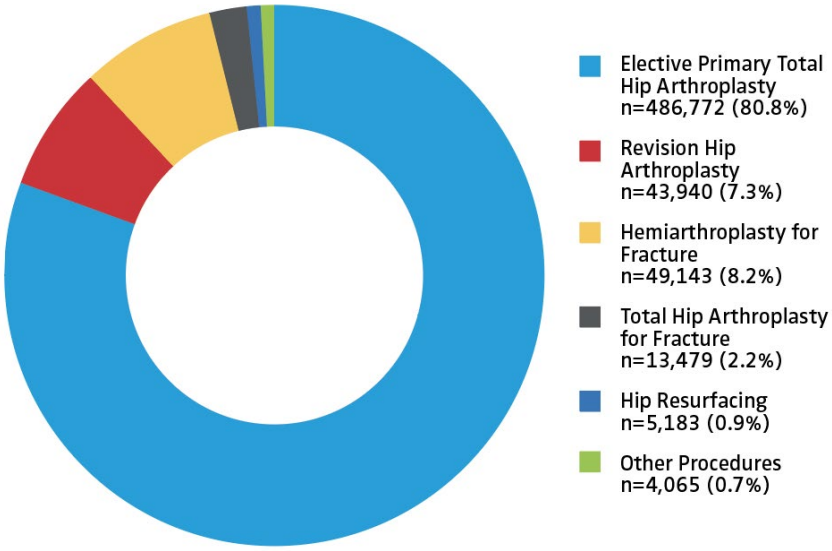


Figure 2.1 shows the percentage of hip replacement procedures performed based on procedure codes. Elective primary total hip replacements are most common.

Table 2.2 shows that the mean, or average, age for patients having a primary THA (total hip arthroplasty) was about 65-66 years old. Hemiarthroplasty is an option a surgeon may choose to fix a fracture in the hip joint. The average age for hemiarthroplasty was about 80 years old. Hip resurfacing makes up a small percentage (0.9%) of all hip arthroplasty procedures. It had a younger average age of about 53 years old.

Table 2.2: Average Age of Patients Undergoing Hip Arthroplasty Procedures

Procedures	Mean Age (Years)	Standard Deviation
Hemiarthroplasty for Fracture	80.8	11.1
Total Hip Arthroplasty for Fracture	72.4	12.4
Revision Hip Arthroplasty	67.3	12.9
Elective Primary Total Hip Arthroplasty	65.6	11.4
Hip Resurfacing	53.4	8.9

Table 2.2 provides the mean, or average, age of patients undergoing different types of hip arthroplasty procedures.

The sex distribution for primary total hip arthroplasty procedures depends on the age of the patient. Figure 2.3 shows that before age 60, more than half of patients undergoing a THA procedure are male. After age 60, patients are more likely to be female.

Figure 2.3: Elective Primary Total Hip Arthroplasty Procedures by Age Group and Sex, 2012-2018

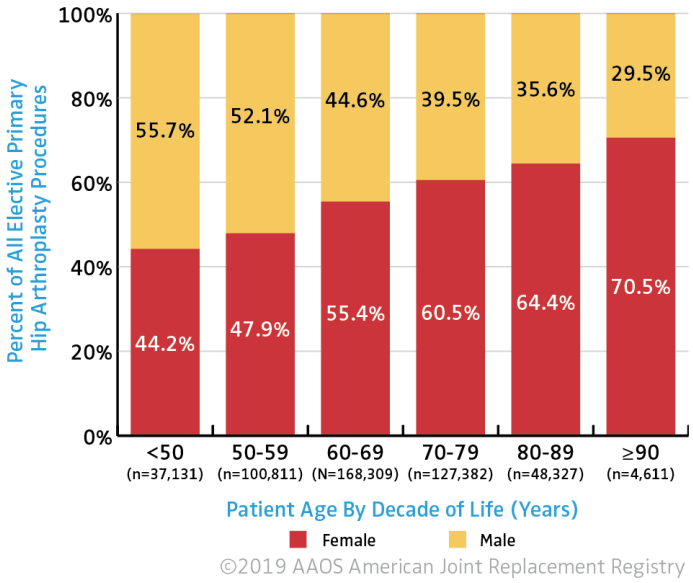


Figure 2.3 compares elective primary total hip arthroplasty procedures between men and women and is further categorized by patient age in years and decade of life.

The data shows that there was a decrease in the length of time that a patient stayed in the hospital after a primary total hip replacement. In 2012, the average length of stay was 2.6 days. This decreased to 1.9 days by 2018. This shows a decrease in the amount of time the patient spent in the hospital following a primary total hip replacement procedure. This data may be helpful for a patient to consider when planning for surgery.

A surgeon has many options to choose from when planning a hip surgery. These options include the size of the implants, the implant material, the range of movement, and whether to use cemented or cementless implants. The *2019 AJRR Annual Report* compares the options and provides surgeons with data that outlines longevity and patient outcomes.

Revision Hip Arthroplasty

Approximately 7% of hip arthroplasty procedures are for revision. There are different reasons why a hip replacement may require a revision or "re-do" surgery (see Figure 2.4). The most common reason is instability of the hip, which accounts for about 19% of revisions. Other reasons include loosening of the implants from the bone, infection, and fracture.

Figure 2.4: Hip Revisions and Diagnoses, 2012-2018

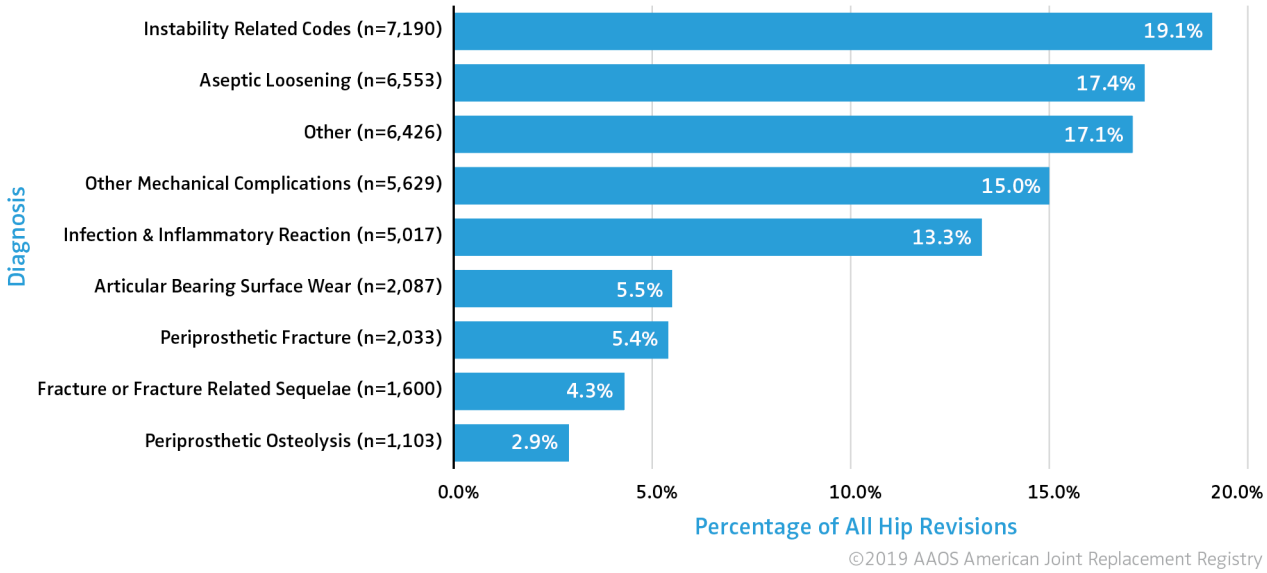


Figure 2.4 depicts the most common reasons for revision procedures for hips. These diagnoses are explained in Table 2.5.

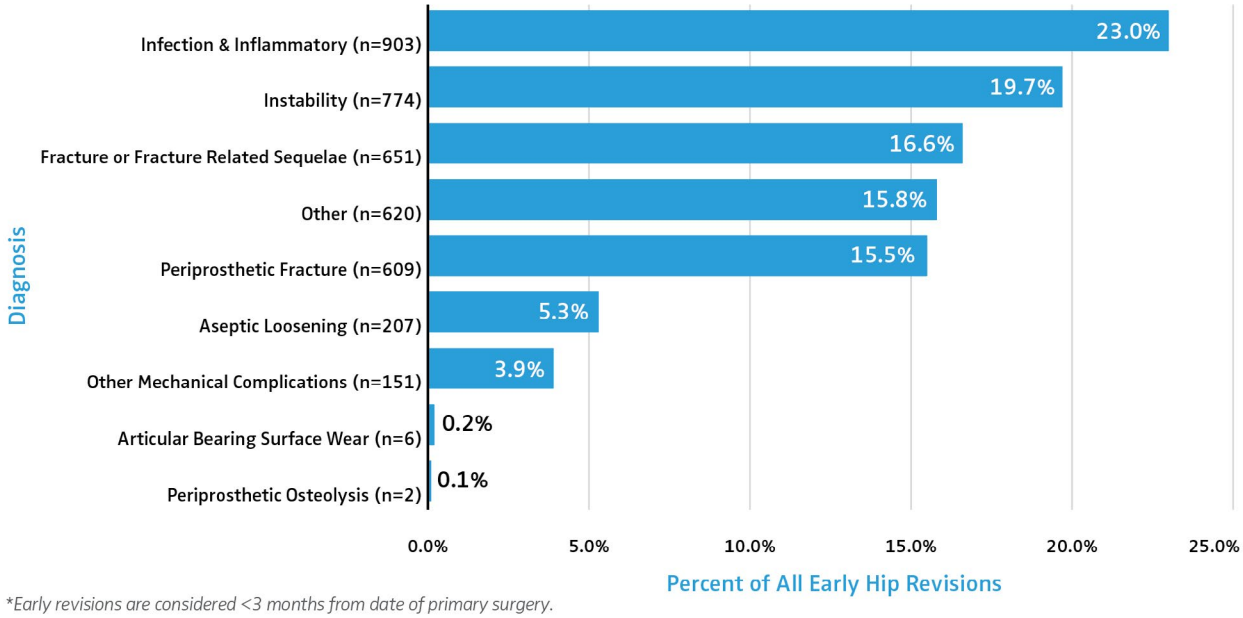
Table 2.5: Reasons for Revision: Understanding When and Why a Revision is Needed

Diagnosis or Reason for Early Revision	Description
Instability-Related Codes	Instability includes a portion of the prosthesis becoming loose or dislocation of the joint.
Aseptic Loosening	An abnormal or insufficient bond between the implant and the bone causing the implant to become loose.
All Other Codes	Any other issue involving an implant or impairment in joint function following arthroplasty that is not outlined below. It may also include comorbidities, or other diagnoses, the patient had prior to surgery.
Other Mechanical Complications	This includes issues related to the implant alignment, ability to load the surgical side and any movement-specific impairments involving the joint or surrounding soft tissue.
Infection and Inflammatory Reaction	Infection surrounding the implant may require revision to fully treat the infection and restore joint function. Physicians will work to differentiate between an infection and inflammation to identify the best plan of care for the patient.
Articular Bearing Surface Wear	Bearing surfaces are the two implant surfaces meeting together to form a joint. Excessive friction causes wear to these surfaces, and it may cause changes that alter alignment, create particle debris, reduce mobility, and eventually cause the implant to fail.
Periprosthetic Fracture	A fracture surrounding the implant.
Fracture or Fracture Related Sequelae	This includes fracture and any complications related to a fracture, including the quality of the bone.
Periprosthetic Osteolysis	When debris from an implant is present, it causes inflammation. The inflammation triggers a response where there is resorption or weakening of the bone matrix. Long term, this may cause aseptic loosening and it requires revision.

Approximately 7% of all hip arthroplasty procedures are revisions. Table 2.5 provides definitions for the diagnoses that are most commonly associated with revision procedures.

A hip replacement can fail within a few months following the primary surgery or years later. The risk of having a revision surgery is highest in the first three months, and most of these are related to infection or inflammation in the joint. On rare occasions, a revision may be needed due to a defect in the device itself. Some revisions are done many years later and the reason is often linked to the wearing down or loosening of the original implant. AJRR uses data to better understand other factors that may impact implants and overall wellness after surgery. For example, Registry data show that people who smoke are 1.5 times more likely to need a revision hip replacement when compared to non-smokers. Over time, data in the Registry will be able to "link" information about primary and revision hip replacements to better understand what happens to joint replacements over time and to learn more about how to help them last as long as possible.

Figure 2.6: All Early "Linked" Hip Revisions by Diagnosis Code, 2021-2018*



*Early revisions are considered <3 months from date of primary surgery.

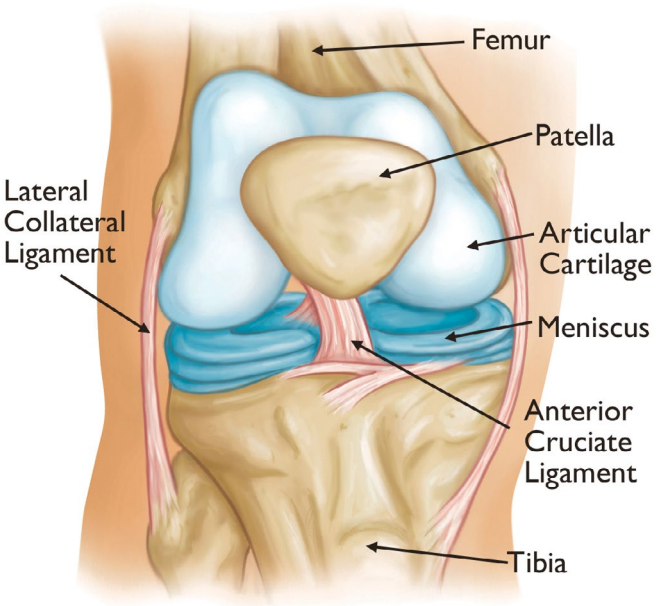
Figure 2.6 shows linked hip revision procedures based on diagnosis codes. Please refer to Table 2.5 for definitions of these diagnoses.

Knee Replacements

Overview

A knee joint is made up of the thigh bone (femur), the shin bone (tibia), and the kneecap (patella). Between these bones is a material called cartilage, which cushions the joint to allow smooth movement in the knee. Arthritis is a degenerative disease that occurs when the cartilage wears down. Knee arthritis can cause symptoms such as pain, swelling, and stiffness in the affected knee.

Knee arthroplasty, or knee replacement, is a surgical repair of an arthritic knee joint. Pieces of the bones are removed and replaced with metal and plastic. Knee arthroplasty may resurface the bottom of the femur and the top of the tibia. This is called a total knee arthroplasty (TKA). In some cases, the arthritis is in just one area of the knee joint. In these situations, a partial knee replacement might be an option. Partial knee replacement procedures include unilateral knee arthroplasty (UKA) and patellofemoral arthroplasty (PFA).



Current Trends in Knee Arthroplasty

The first replacement of a knee joint is called a "primary" surgery. If the same knee has a problem and needs another surgery, it is called a "revision" knee replacement. Primary TKAs are the most common knee arthroplasty procedure, accounting for about 55% of knee replacement procedures. UKAs made up about 2% and PFAs made up about 0.1% of all knee replacement procedures in 2018.

Table 3.1 shows that the mean, or average, age of patients having a total knee arthroplasty was 67 years old. Partial knee arthroplasty had an average age of about 64 years old, while the average age for revision knee arthroplasty was about 65 years old. Females were more likely to receive a total knee arthroplasty than males at all ages.

Table 3.1: Average Age of Patients Undergoing Knee Arthroplasty Procedures, 2012-2018

Procedures	Mean Age (years)	Standard Deviation
Total Knee Arthroplasty	67.0	9.6
Partial Knee Arthroplasty	64.2	10.9
Revision Knee Arthroplasty	65.6	11.3

Table 3.1 provides the average age of patients undergoing total, partial, or revision knee arthroplasty procedures.

The data shows that there was a decrease in the average length of time that a patient stayed in the hospital after surgery. In 2012, the average length of stay was 2.9 days following a primary TKA. This decreased to 2 days by 2018. The average length of stay after a partial knee replacement was about 1 day. This shows a decrease in the amount of time the patient spent in the hospital following a knee replacement procedure. This data may be helpful for patients to consider when planning for surgery.

A surgeon has many options to choose from when planning a knee surgery. These may include the style of implant articulation (movement), stabilizing mechanisms, whether to resurface the patella, and whether to use cemented or cementless implants. The *2019 Annual Report* compares the options and provides surgeons with data that outlines longevity and patient outcomes.

Revision Knee Arthroplasty

Approximately 4% of knee arthroplasty procedures are revisions. There are different reasons why a knee replacement may require a revision or "re-do" surgery (see Figure 3.2). The most common reason is mechanical loosening of the knee components. Infection, wear of the plastic, and fracture are a few other reasons for failure.

Figure 3.2: Knee Revisions and Diagnoses, 2012-2018

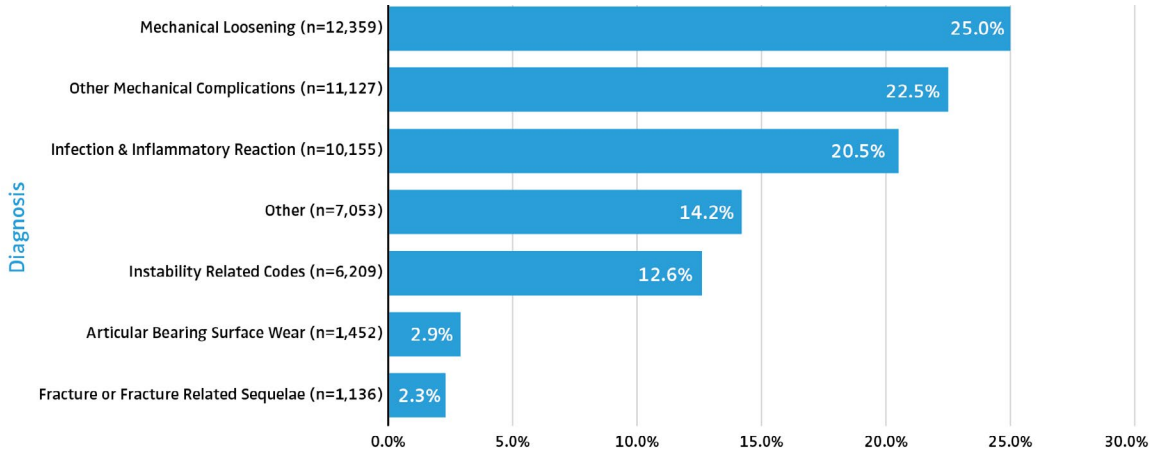


Figure 3.2 depicts the most common reasons for knee revision procedures. These diagnoses are explained in Table 3.3.

Table 3.3: Reasons for Revision: Understanding When and Why a Revision is Needed

Diagnosis or Reason for Early Revision	Description
Mechanical Loosening	Mechanical loosening may be related to the loading and activity level the patient places on the implant. It may also be related to the quality of the bone, the patient's health status, and any bone deformity preoperatively.
Other Mechanical Complications	This includes issues related to the implant alignment, ability to load the surgical side, and any movement-specific impairments involving the joint or surrounding soft tissue.
Infection and Inflammatory Reaction	Infection surrounding the implant may require revision to fully treat the infection and restore joint function. Physicians will work to differentiate between an infection and inflammation to identify the best plan of care for the patient.
Other Complications	Other complications may be related to any comorbidities, or other diagnoses, the patient had prior to surgery.
Instability-Related Codes	Instability includes a portion of the prosthesis becoming loose or dislocation of the joint.
Articular Bearing Surface Wear	Bearing surfaces are the two implant surfaces meeting together to form a joint. Excessive friction causes wear to these surfaces, and it may cause changes that alter alignment, create particle debris, reduce mobility, and eventually cause the implant to fail.
Fracture or Fracture Related Sequelae	This includes fracture and any complications related to a fracture, including the quality of the bone.

Table 3.3 provides definitions for the diagnoses that are most commonly associated with revision procedures.

A knee replacement can fail soon after the primary surgery or years later. Infection and inflammatory reaction are the most common reasons for a knee revision in the first three months (see Figure 3.4). The reason for failure can depend on how much time has passed since the primary knee replacement. Some patients may require a revision many years later for reasons related to wearing down or loosening of the original implant. As the Registry continues to collect data, it will be able to "link" information about primary and revision knee replacements to better understand what happens to joint replacements over time and how to help them last as long as possible.

Figure 3.4: All Early "Linked" Knee Revisions by Diagnosis Code, 2021-2018

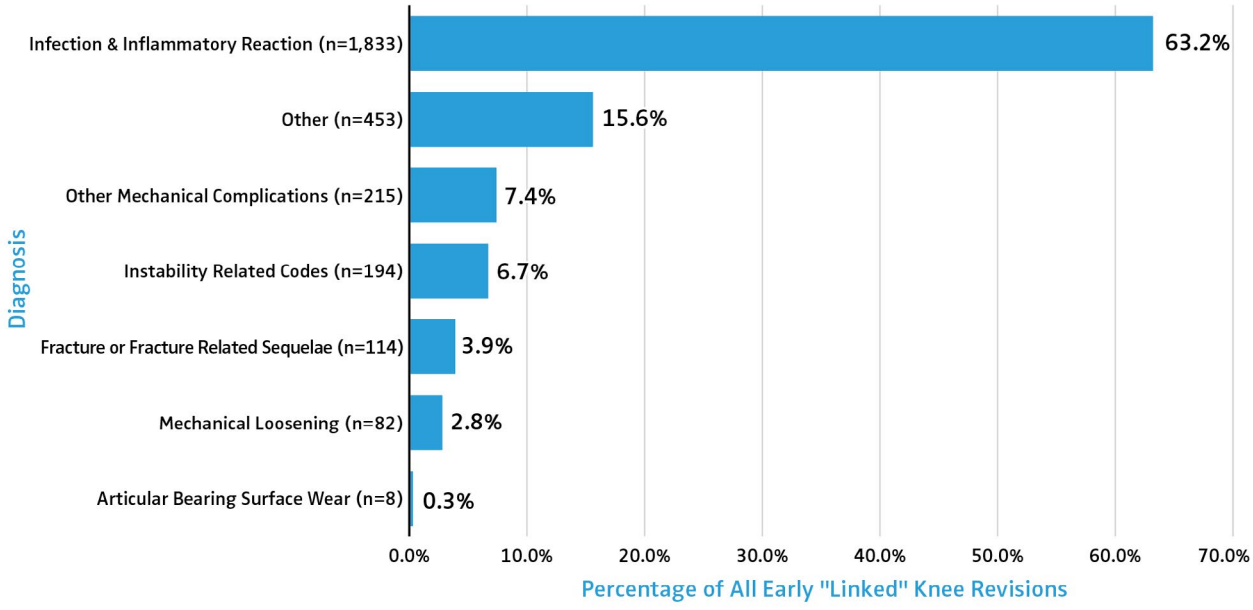
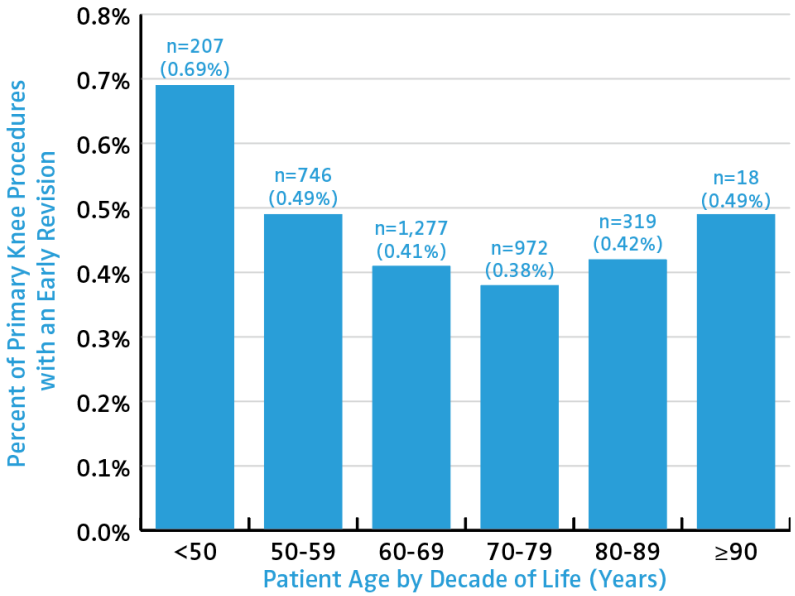


Figure 3.4 shows linked knee revision procedures based on diagnosis codes. Please refer to Table 3.3 for definitions of these diagnoses.

Age of the patient can also be a factor. Figure 3.5 shows patients less than 50 years old had the highest incidence of revision in the first three months following a total knee arthroplasty compared to patients aged 50 and older.

Figure 3.5: All Early Revisions as a Percentage of All Total Knee Arthroplasty Procedures by Age Group, 2012-2018*



*Unlinked revisions. An early revision is considered <3 months from the primary procedure.

Figure 3.5 Shows that when early revisions occur, patients are more likely to be under 50 years of age.

AJRR uses data to better understand other factors that may impact implants and overall wellness after surgery. For example, Registry data show that smokers are nearly 1.5 times more likely to need a revision hip replacement compared to with non-smokers. Over time, data in the Registry will be able to "link" information about primary and revision knee replacements to better understand what happens to joint replacements over time and to learn more about how to help them last as long as possible.

Patient-reported Outcome Measures (PROMs)

Most patients seeing a physician for joint pain have been asked to complete a questionnaire regarding how much pain or difficulty they have with daily activities, such as going up and down stairs, sitting, walking, or bending to pick up an object from the floor. These questionnaires might also ask how much the joint pain interferes with other aspects of life, such as work, social activities, mood, and well-being.

These questionnaires are patient-reported outcomes measures (also called PROs or PROMs). They are important tools to help health care providers understand a patient's health status from the patient's perspective, not modified or interpreted by a health care provider, so providers can help make good decisions regarding the plan of care. PRO data are often collected before joint replacement surgery and at three-month intervals (three-, six-, nine-months, and one-year postoperative) for the first year after surgery. In some cases, PRO data can be used to help identify people who may be more or less likely to benefit from joint replacement surgery, or who may be at risk of having poor outcomes.

The Registry began collecting PRO data in 2014. While there are many types of PRO surveys that focus on topics such as physical function, general health, or a specific body region, the four that are most often submitted to AJRR include:

1. Hip Disability and Osteoarthritis Outcome Score (HOOS, JR.)
2. Knee Injury and Osteoarthritis Outcome Score (KOOS, JR.)
3. Patient-reported Outcomes Measurement Information System (PROMIS-10 Global)
4. Veterans Rand 12-Item Health Survey (VR-12)

HOOS, JR. and KOOS, JR. are tools measuring joint-specific pain and physical function for hip and knee, respectively. Items are specific to pain and Activities of Daily Living (ADLs); a higher score represents better function. PROMIS-10 Global is a tool used to measure symptoms, functioning, and health care-related quality for a variety of chronic diseases or conditions. The VR-12 is the summary of a physical score and a mental score. It provides a contrast between a patient's physical and mental health status.

Higher scores on these surveys are better, meaning the person is less limited by their joint pain or has generally better mental, physical, and social functioning. PRO data reported to the AJRR show that average scores increase (improve) after joint replacement surgery, as shown in Figure 3.6 and Figure 3.7. For example, the HOOS, JR. is a measure that assesses how much a person's hip pain and stiffness affect his or her daily activities. The average HOOS, JR. scores one-year after hip replacement surgery are much higher (better) compared with the average scores before surgery. Similar improvements are also seen for knee replacement surgery. While individual outcomes can vary, a patient can compare their own preoperative scores to the average pre- and postoperative scores for joint replacement to better understand how much improvement they might expect.

Figure 3.6: Patient-reported Outcome Measure (PROM) Preoperative and 1-Year Postoperative Mean Scores after Hip Arthroplasty, 2012-2018

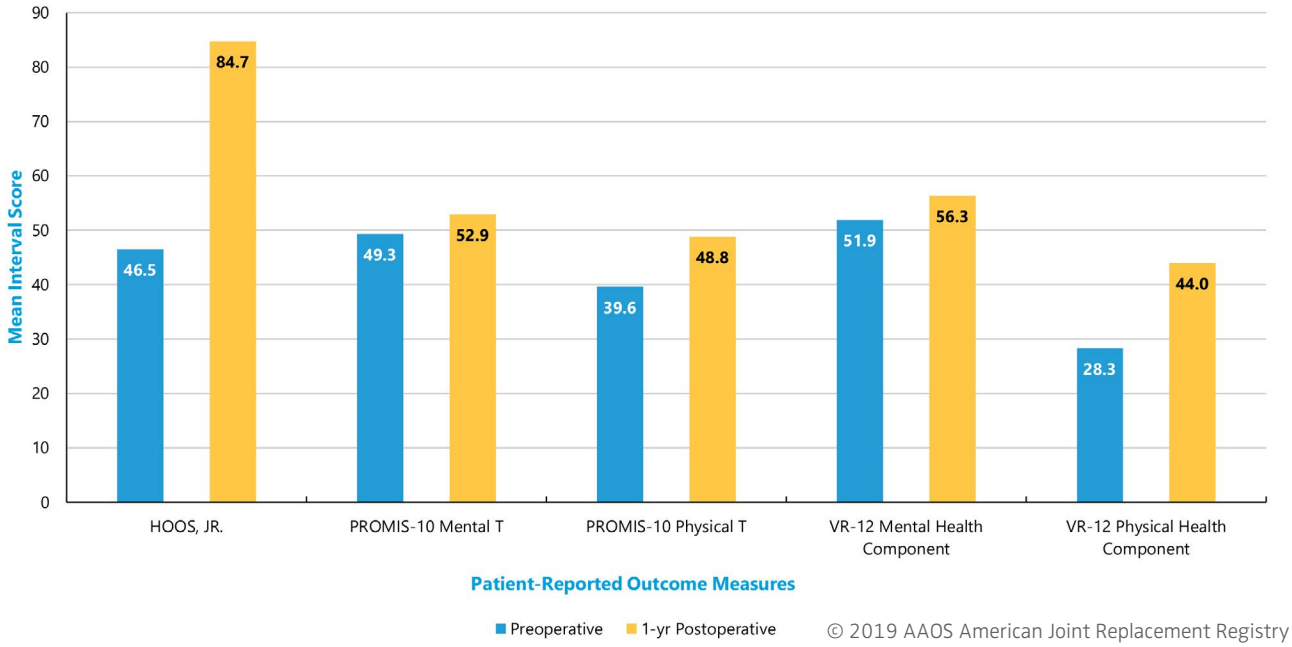
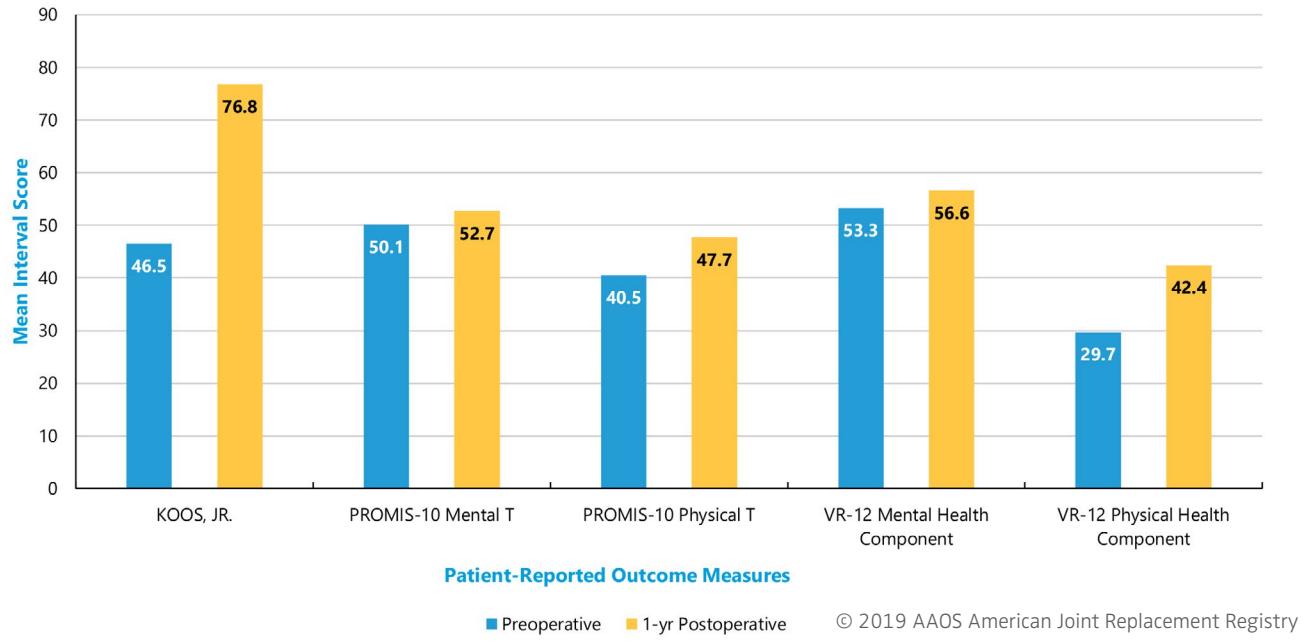


Figure 3.7: Patient-reported Outcome Measure (PROM) Preoperative and 1-Year Postoperative Mean Scores after Knee Arthroplasty, 2012-2018



Figures 3.6 and 3.7 show the preoperative and postoperative scores for patients undergoing hip and knee arthroplasty procedures, as reported to AJRR.

Understanding PROMs Data

PROMs data help health care providers, hospitals, health insurers, and researchers better understand how much joint replacement surgery improves patients' hip or knee symptoms, which in turn supports efforts to continually improve the quality of care. If a surgeon participating in the Registry asks their patients to complete surveys regarding their joint pain, each patient's response and experience, along with that of thousands of other patients, helps to improve the experience of future joint replacement patients.

Acknowledgments

Public Advisory Board

AAOS values the voice of the patient and supports the Public Advisory Board (PAB) within the AAOS Registry Program and alongside the AJRR Steering Committee. The PAB provides a public voice in data collection and reporting, helping to increase the quality of care, improve patient outcomes, and promote best practices across musculoskeletal care.

The mission of the PAB is to improve the value of the Registry Program by more effectively ensuring a public voice in a Registry's data collection, reporting, and utilization activities.

On behalf of AJRR and the Registry Program, AAOS wishes to thank the following members of the PAB for their contributions in creating this publication of the *Patient-facing Interim Report* and representing the public voice in the orthopaedic community:

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2. Franklin PD, Lewallen D, Bozic K, Hallstrom B, Jiranek W, Ayers DC. Implementation of patient-reported outcome measures in U.S. Total joint replacement registries: rationale, status, and plans. J Bone Joint Surg Am. 2014;96 Suppl 1:104-9. doi: 10.2106/JBJS.N.00328.

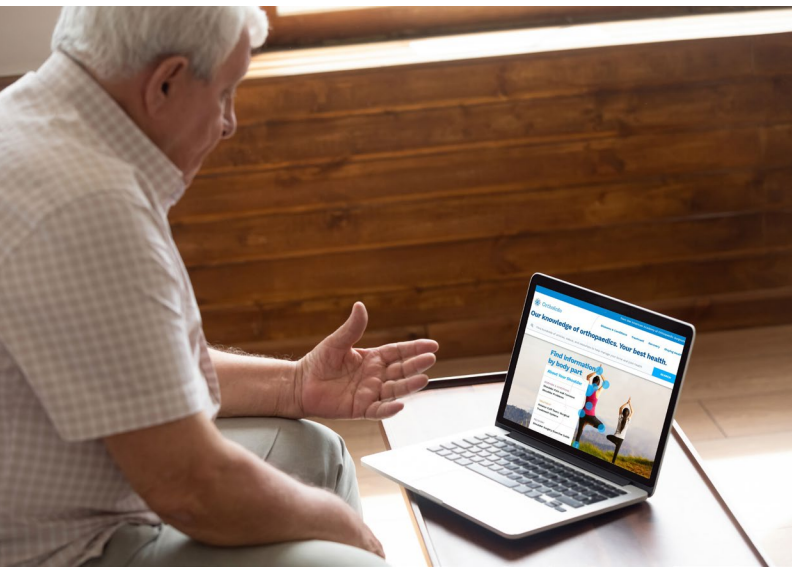
Resources

Learn more about the AAOS Registry Program and arthroplasty procedures by exploring these patient resources:
What is a Clinical Data Registry?

If you have questions regarding the AAOS Registry Program, your care, or your specific case, speak with your surgeon and clinical care team.

For additional information on hip and knee arthroplasty:

- American Academy of Orthopaedic Surgeons (AAOS) OrthoInfo
- American Association of Hip and Knee Surgeons
- National Institute of Arthritis and Musculoskeletal and Skin Diseases
- WebMD



Learn from other patients by reading about their experiences with joint replacement:

- Public Advisory Board is the Voice of the Patient
- In My Own Words: A Patient's Experience with PRO Survey Participation
- As a Joint Surgeon, I Was Told I Needed a TKA (Part 1)
- My Own Joint Replacement Was a Reality Check (Part 2)
- Guest Blog: My Knee Pain Began a Decade Ago While Playing Tennis
- Guest Blog: A Patient Perspective on Joint Replacement Surgery
- Guest Blog: Rick's Post-Surgery Lessons Learned

The American Academy of Orthopaedic Surgeons (AAOS) presents the information on this AJRR Patient-facing Interim Report as an educational service to the public and to our members. While the information in the AJRR Patient-facing Interim Report is about health care issues and orthopaedic surgery, it is not medical advice. People seeking specific orthopaedic advice or assistance should contact an orthopaedic surgeon through the AAOS's "Find an Orthopaedist" program on the AAOS.org website or from another source.

AAOS
American Academy of Orthopaedic Surgeons

AJRR American Joint Replacement Registry

At the time of publication, every effort was made to ensure the information contained in this report was accurate. This document is available for download at www.orthoinfo.aaos.org/en/treatment/registry-resources-for-patients/

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