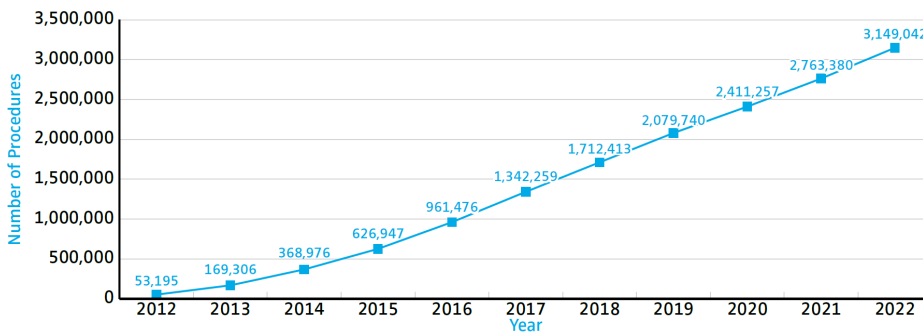


2023 AJRR Annual Report Preview

Overview

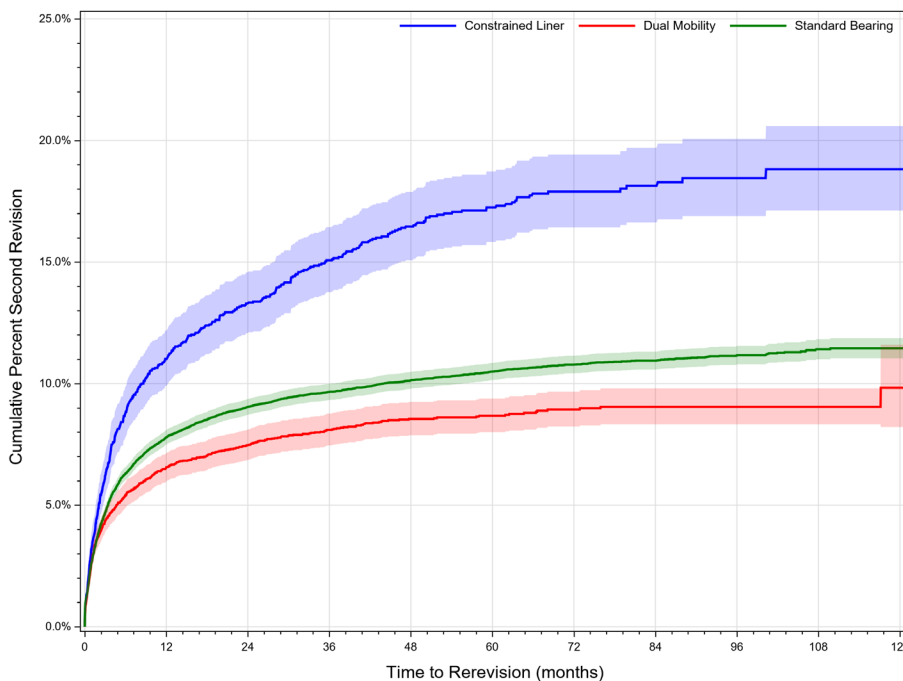
The 2023 American Joint Replacement Registry (AJRR) Annual Report is the 10th anniversary edition of the report now representing 3,149,042 primary and revision hip and knee arthroplasty procedures performed between 2012 and 2022. This is a 23% growth in procedural cases from the prior report.

Cumulative Procedure Volume, 2012-2022 (N=3,149,042)



Re-revision following revision total hip arthroplasty (THA) was investigated for the first time focused on dual mobility bearings compared to standard and constrained constructs. After adjusting for age, sex, and CCI, dual mobility bearings were found to have a significantly reduced cumulative percent re-revision compared to standard and constrained constructs in Medicare patients aged 65 and older.

Cumulative Percent Re-Revision after Revision Total Hip Arthroplasty for Dual Mobility and Standard Bearings in Medicare Patients 65 Years of Age and Older, 2012-2022



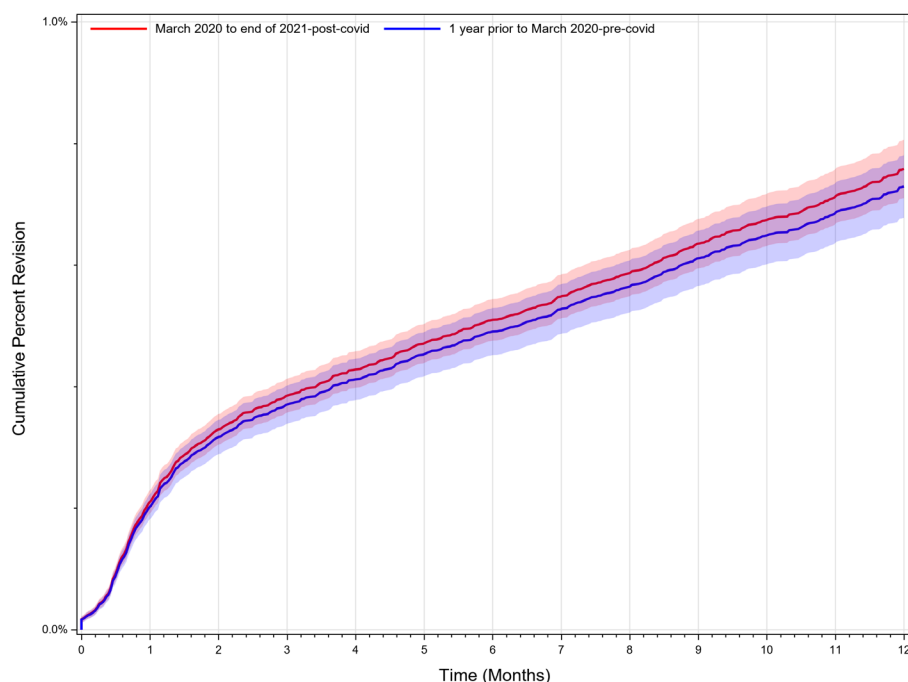
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For this year's Annual Report, survivorship following the impact of COVID-19 was also evaluated. Comparing the time-periods one year pre and post declaration of a national COVID-19 emergency (Mar 2020) showed no significant difference in cumulative percent one-year revision for primary elective THA and total knee arthroplasty (TKA) procedures in Medicare patients.

One-year Cumulative Percent Revision for Elective Primary TKA Performed One Year Pre and Post COVID-19 Emergency (March 2020) in Medicare Patients Age 65 Years and Older, 2019-2021



The ability to look at revision rates for particular implants is one of the great strengths of the AJRR. This year's Annual Report displays cumulative percent revision stratified by knee constructs through 10-year follow-up including stratification by bearing and fixation types. Cementless knee constructs were included for the first time in this year's report. The aggregate of each included cemented, hybrid, or cementless TKA device analyses was less than 2.2% cumulative percent revision at 10 years.

Unadjusted Cumulative Percent Revision of Cementless Knee Arthroplasty Construct Combinations for Primary Total Knee Arthroplasty in Patients ≥65 Years of Age with Primary Osteoarthritis, 2012-2022

Femoral Component	Tibial Component	N Total	N Revised	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Triathlon CR	Triathlon	36,559	436	0.78 (0.69, 0.88)	1.31 (1.19, 1.45)	1.55 (1.39, 1.72)	1.73 (1.53, 1.95)	1.73 (1.53, 1.95)
Triathlon PS	Triathlon	7,075	130	1.13 (0.90, 1.40)	1.96 (1.63, 2.34)	2.24 (1.86, 2.68)	2.50 (2.03, 3.05)	2.50 (2.03, 3.05)
Persona CR	Persona	2,296	36	1.02 (0.67, 1.51)	2.05 (1.38, 2.94)	3.09 (1.42, 5.85)	3.09 (1.42, 5.85)	—
Attune PS	Attune	1,033	8	0.61 (0.26, 1.28)	0.94 (0.44, 1.83)	—	—	—
Attune CR	Attune	699	12	1.46 (0.75, 2.59)	1.76 (0.91, 3.11)	2.87 (1.11, 6.06)	—	—
Natural-Knee II GS CR	Natural-Knee II	690	9	0.43 (0.12, 1.21)	1.08 (0.48, 2.13)	1.52 (0.74, 2.79)	1.52 (0.74, 2.79)	1.52 (0.74, 2.79)
Vanguard CR	Regenerex	523	7	0.76 (0.26, 1.85)	1.34 (0.60, 2.63)	1.34 (0.60, 2.63)	1.34 (0.60, 2.63)	1.34 (0.60, 2.63)
Sigma CR	MBT	505	4	0.40 (0.08, 1.35)	0.84 (0.28, 2.04)	0.84 (0.28, 2.04)	0.84 (0.28, 2.04)	0.84 (0.28, 2.04)
Overall	—	49,380	642	0.84 (0.76, 0.92)	1.43 (1.32, 1.55)	1.68 (1.54, 1.83)	1.86 (1.69, 2.05)	1.92 (1.71, 2.14)

Publications and Presentations

Many publications and presentations have been developed utilizing AJRR data and can be found on the AAOS website at www.aaos.org/registries/publications/papers-and-presentations.

Download a digital copy of the full 2023 AJRR Annual Report at www.aaos.org/AJRRAnnualreport.

For more Registry information, contact RegistryInfo@aaos.org