

Reimbursement for the Treatment of Periprosthetic Joint Infections of the Knee Declined Significantly Over the Past Twelve Years

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INTRODUCTION: Prior studies have reported an increasing number of total knee arthroplasties (TKA) performed and declining reimbursements over the past decade. However, many of these prior reports focus solely on Medicare data, or small cohorts of commercial data. Consequently, this study aimed to examine the evolving trends concerning both the volume of TKA periprosthetic joint infection (PJI) and the reimbursement provided by both public and private insurances over the past 12 years.

METHODS: All patients undergoing primary TKA between 2010 and 2021 were identified in a large insurance administrative claims database. Subsequently, all patients diagnosed with PJI of the knee were identified. Rates were broken down by year. To control for all costs associated with PJI diagnosis, reimbursement over the course of an entire calendar year was included. Final overall reimbursement data per patient was calculated over a 1-year period from index TKA and from the diagnosis of PJI. Consumer Price Index (CPI) was then used to control for inflation and normalize all data to 2021 dollars.

RESULTS: Overall, 2,649,013 primary TKAs were identified over the 12-year period, with 81,457 knee PJIs, for an overall infection rate of 3.1%. Rates of PJI over the twelve-year period have risen from 1.2% to 3.3%. On average, 220,751 TKAs were performed each year. Mean, per-patient, one-year reimbursement following TKA decreased from \$16,837 dollars in 2010 to \$5,763 in 2021. Mean, per-patient one-year reimbursement following the diagnosis of TKA PJI decreased from \$18,817 in 2010 to \$10,754 in 2021. These decreases in reimbursement for both TKA and TKA PJI represents a 66% and 43% decrease in reimbursement from 2010 to 2021, respectively.

DISCUSSION AND CONCLUSION:

Despite an increase in the total number of PJIs treated, the total reimbursements from insurance companies for these frequently complex and costly treatments have decreased significantly over the past 12 years. This finding holds significance as it suggests that physicians are performing an increasing number of these challenging procedures annually, while their reimbursement per procedure is declining. The decreased incentive to perform these complex cases may make it difficult for these patients to find the care they need. This situation raises the necessity for a reevaluation of billing and reimbursement rates for the treatment of PJI, or to consider alternate payment models for these episodes of complex care.

