Trends in Total Hip Arthroplasty in the United States: The Shift to a Younger Demographic

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Introduction: The trend of increasing incidence of THA, particularly among younger patients, must be better understood in order to guide consensus strategy and maximize resource efficiency. We address the relative contributions of population size versus rate of utilization to this trend, and assess its impact on primary payer and the revision burden.

Methods: This retrospective review uses hospital discharge data from the Nationwide Inpatient Sample (NIS), Healthcare Cost and Utilization Project (HCUP), 2000-09. All THA and revision THA (RTHA) were identified. Using standard statistical analyses, we report procedural rates, age, payer, length of stay (LOS), discharge disposition, and revision burden for each year, stratified by age.

Results: The total number of THA increased by 73% overall, by 123% for those 45-64, and by 54% for those 65-84. The rate/100K population of THA increased by 59% overall, by 73% for those 45-64, and by 36% for those 65-84. The number of RTHA increased by 27% overall; the rate increased by 3%. Medicare paid for 58.2% of all THAs in 2000, and 52.8% in 2009. Revision burden decreased from 17.72% to 13.69% overall, and from 15.2% to 11.6% for 45-64.

Conclusion: Annual incidences of THA in the US continue to increase through 2009. The shift from the 65-84 age group into the 45-64 age group was more dramatic compared to the previous decade. These trends are driven primarily by the disproportionate growth in the rate of utilization among younger patients, and secondarily by overall population growth. The shift to a younger demographic is reflected by a similar shift from Medicare to private insurers. The overall incidence of RTHA increased moderately, and rates of RTHA remained stable. Despite spanning the peak of the metal-on-metal era, the decade saw the overall revision burden decrease by 23%, and by 24% in the 45-64 age group.