

Paper #8

Joint Replacement Access in 2016: A supply side crisis

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Introduction: Demand for arthroplasty is expected to double in ten years. Coincident with this increased demand is a decreased interest in adult reconstruction by graduating residents. Additionally, the retirement of arthroplasty surgeons further threatens access.

This study determines the number of retiring arthroplasty surgeons and if the number of surgeons entering the supply chain will meet demand.

Materials and Methods: The AAOS database was queried concerning members designated hip or knee specialists or generalists with hip or knee focus. The ages of these physicians and average retirement age of an AAOS fellow were queried to calculate the workforce in 2016. Additionally, census data for graduating residents was used to calculate those entering the workforce. Census data was queried to determine the number of replacements performed annually by specialists and generalists. This data was used to create an economic supply and demand model for arthroplasty in 2016.

Results: Of 23,325 AAOS fellows, 1,612 are hip and knee specialists, while 5,973 are generalists with a hip or knee focus. Between 2008 and 2016, 400 hip and knee specialists and 1,584 generalists will enter the workforce, while 963 hip and knee specialists and 3,568 generalists with hip and knee focus will retire, leaving a workforce of 5,038 in 2016 (decrease 34%). Currently hip and knee specialists perform an average of 110 hips and 107 knees/yr while generalists perform 29 hips and 44 knees/yr. 2016 demand projections are 427,500 THA's and 1,046,000 TKA's. In 2016, a workforce of 5,038 (3989 generalists and 1049 specialists) working at current rates will perform 231,071 hips and 287,759 knees - a shortfall of 196,429 THA's (decrease 46%) and 758,241 TKA's (decrease 72%).

Conclusion: This economic model predicts a supply side crisis that threatens patient access. Immediate steps to stimulate the supply side of this model must be taken.