

Regional variation in incidence of primary total hip arthroplasties and revisions in Denmark, 1996-2002

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Objective: We examined incidence rates (IR) of total hip arthroplasty (THA) in Denmark according to counties and type of hospitals, and investigated possible factors associated with any variations.

Methods: Through the Danish Hip Arthroplasty Registry, we identified all cases of primary THAs (n=37,144) and revisions (n=6,446) between 1996 and 2002. Unadjusted and age- and gender-standardized, hospital- and county-specific IRs were calculated. Using multivariate regression analysis, we examined possible factors associated with the variations.

Results: Over the study period, IRs of primary THAs for university and other hospitals increased by 10% and 40%, respectively. IRs of revisions increased for other hospitals by 33%, but decreased for university hospitals by 30%. Unadjusted IRs varied among counties, which remained despite age- and gender-standardization. IRs of primary THA were inversely associated with the counties' Gross Domestic Product. No association was found between IRs of THA and the number of orthopedic surgeons per 100,000 inhabitants, proportion of patients with primary arthrosis, preoperative Harris Hip Score, hospital costs, or population density.

Conclusions: Substantial regional differences in the IRs of THA procedures were found. Except for a negative association with the counties' Gross Domestic Product, we found no associations between IRs and a range of patient- and healthcare system-related factors.

Keywords: Denmark; Registry; Total Hip Arthroplasty; Revision; Regional variation; Incidence rate

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