COST BURDEN OF SECOND FRACTURE IN PATIENTS WITH COMMERCIAL INSURANCE

The direct medical costs of rheumatoid arthritis: evidence from United States national survey data

OBJECTIVES: Estimate total incremental costs from second fracture for patients with closed hip, vertebral, and non-hip non-vertebral (NHNV) fractures in the commercially insured US population. METHODS: Patients with closed hip, vertebral, and NHNV fracture were identified in 2002–2008 MarketScan® Commercial Database. All patients were 50–64 years old at incident fracture and had data 12-month pre- and post-period from incident fracture. Cases experienced a subsequent fracture during the 12-month post-period from index date as the first subsequent fracture, controls had no subsequent fractures during the post-period; their index dates were randomly assigned based on the distribution of index dates of cases. All patients had 12-month post-period from index date and total costs were examined during the 12-month. Multivariate regressions controlled for demographic and clinical characteristics between cases and controls. Annual costs were projected to US commercially insured population in 2002–2008 based on projected number of patients with second fractures using weights derived from the Medical Expenditure Panel Survey. RESULTS: A total of 4752 hip, 10,080 vertebral, and 52,734 NHNV patients met the study criteria, with a mean age of 38 years and 63.7% women. Average annual costs per person were $71,272 for cases vs. $20,828 for controls, $67,772 vs. $20,029 and $41,635 vs. $11,212 for the hip, vertebral, and NHNV cohort, respectively. Regression-adjusted incremental costs were $47,351, $43,238, and $23,852 for hip, vertebral, and NHNV fracture patients, respectively. The annual incremental costs associated with second fracture were projected to be $166.4 million, $199.2 million, and $466.8 million among patients 50–64 years old with initial hip, vertebral, and NHNV fracture in the US commercially insured population. CONCLUSIONS: There was substantial economic burden associated with second fracture on the US health care system. Intervention for patients after their first fractures may help reduce the long-term economic and clinical burden associated with second fracture.

THE INDIRECT COSTS ASSOCIATED WITH ABSENTEEISM OF WORKING ADULTS WITH RHEUMATOID ARTHRITIS: EVIDENCE FROM UNITED STATES NATIONAL SURVEY DATA

OBJECTIVES: Estimate the total incremental costs from second fracture for patients with closed hip, vertebral, and non-hip non-vertebral (NHNV) fractures. METHODS: Cases of second fracture, subsequent fracture, after closed hip, vertebral, and NHNV fracture from 2002–2008 MarketScan® Medicare Supplemental Database. Patients had Medicare supplemental at incident fracture and 12-month pre-period and follow-up period from the incident fracture. Index date was the first subsequent fracture date for patients with subacute fractures during the 12-month (cases); index dates for patients without subsequent fractures during the 12-month follow-up (controls) were randomly assigned based on the distribution of index dates of cases. Total costs were examined during the 12-month follow-up period. A generalized linear model was built to analyze the overall incremental costs attributable to the second fracture was conducted to examine what proportion of the difference was due to different patient characteristics and what proportion was due to different model structures between cases and controls. RESULTS: A total of 40,772 hip, 15,279 vertebral, and 32,216 NHNV patients met the study criteria, with a mean age of 80.5 years. The rate of second fracture within 1 year of the initial fracture was 8.8%, 9.2%, and 8.2% for the three cohorts respectively. For the initial hip fracture cohort, annual costs were $34,143 vs. $15,256 for cases and controls; for vertebral, $35,773 vs. $16,523; for NHNV, $33,275 vs. $12,970. Adjusted incremental costs associated with second fractures were $18,645, $19,702, and $19,697 in these three cohorts respectively, and 89.94% of the incremental costs were due to the structural difference in estimated coefficients of the models for cases and controls. CONCLUSIONS: Relative to patients with a single fracture, the average cost of patients with subsequent fractures was 2–3 times higher. Effective management of first fractures may help reduce the long-term economic and clinical burden.

THE DIRECT MEDICAL COSTS OF RHEUMATOID ARTHRITIS: EVIDENCE FROM UNITED STATES NATIONAL SURVEY DATA

OBJECTIVES: To quantify individual and national estimates of the indirect costs of rheumatoid arthritis (RA), using national survey data. METHODS: This was a retrospective study using 1996–2006 data from the Medical Expenditure Panel Survey (MEPS). Individuals’ self-reported health conditions were mapped to the International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM) diagnostic codes. Individuals with an ICD-9-CM diagnostic code of 714.xx (rheumatoid arthritis and other inflammatory polyarthropathies) were categorized as having RA. A two-part model was specified to estimate the probability of time lost from work and annual number of workdays missed due to illness, conditional on missing at least 1 workday among employed individuals. The annual missed workdays were combined with MEPS. Employment status was calculated to estimate the incremental costs from second fracture for patients with RA are substantial not only to health care payers but also to patients. The results indicate that MSDs have a negative impact on productivity.

In conclusion, the findings from this study highlight the importance of addressing MSDs, particularly among working adults, to mitigate their economic and health-related implications. It underscores the need for strategies that incorporate both individual and public health interventions to prevent and manage MSDs effectively.