

International Journal of Population Data Science

Journal Website: www.ijpds.org



Swansea University
Prifysgol Abertawe

A six-year trend of the healthcare cost of arthritis in a population-based cohort of older women

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Objectives

To examine the trend of the healthcare cost of arthritis in a population-based cohort of older women and to estimate the mean adjusted incremental healthcare costs, and selected percentiles.

Approach

This is a healthcare cost study based on individual-level data. Data included health survey and linked administrative data, from 2003 to 2009, from the Australian Longitudinal Study on Women's Health. The Medicare Australia datasets include the Pharmaceutical Benefits Scheme (unit record data on claims for government-subsidized prescription medicines) and the Medicare Benefits Schedule (listing of health services subsidized by the Australian Government) datasets; they were the source for all healthcare utilization and cost data in this study. The main outcome measure was the incremental healthcare cost of arthritis (estimated from the Australian Government's cost perspective) expressed as dollars per person per year. All costs were expressed in 2012 Australian dollars. Regression models were used to estimate the adjusted incremental costs of arthritis. The mean adjusted incremental healthcare cost of arthritis was computed using GLMs with a logarithmic-link function and a gamma distribution for costs. The adjusted incremental costs at the 25th, 50th, 75th, 90th and 95th percentiles were computed using Quantile Regression. These percentiles were chosen because cost data are skewed to the right and it was expected that there would be smaller differences between the lower percentiles but bigger differences between upper adjacent percentiles.

Results

Data from 4287 women were included in the analysis. Adjusted incremental healthcare cost of arthritis did not increase significantly from 2003 to 2009. However, there were indications that costs at the lower percentiles decreased slightly over the study period while costs at higher (above 50th) percentiles increased. The estimated median cost was \$480 (95% CI: \$498 - \$759) per person per year in 2009. However, ten percent of women had more than 300% higher cost than the average person with arthritis.

Conclusion

Healthcare cost of arthritis represents a substantial burden. However, considering only overall cost does not provide a detailed picture of expenditure. Our results suggest that higher cost patients had different experiences in arthritis cost over time, compared to patients with lower costs, although overall cost has not increased over time. As healthcare spending is concentrated in the high-cost patients, characterising these patients and formulating initiatives that target them could have a considerable impact on improving care and lowering health expenditure due to arthritis.

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