

Taking Account...

BEA paper estimates net value of health spending

Health economists have advised federal statistical agencies to produce health spending statistics that can account for improvements to the quality of delivered health care. Given that such information can be highly useful for policymakers and stakeholders, surprisingly few studies have tried to estimate the net value of health spending in this manner.

To fill this void, Bureau of Economic Analysis (BEA) economists Tina Highfill and Elizabeth Bernstein conducted research that estimated the net value of health care spending for thirty chronic diseases in the U.S., finding that net value grew substantially for several diseases between 1990 and 2010.

Net value refers to the difference between the monetized change in patient health outcomes and the change in treatment spending.

Their study, available on the BEA Web site, relied on the use of disability adjusted life years (DALYs), a newly available time series from the Institute of Health Metrics and Evaluation, as a tool to measure the changes in health outcomes.

The time series was developed by IHME in partnership with organizations such as the World Health Organization (WHO), Harvard University, University of Tokyo, and Imperial College London as part of the 2010 Global Burden of Disease study.

It is the first consistent time series of its kind for the United States.

Highfill and Bernstein's analysis focused on 30 chronic conditions that could be accurately matched to the health care expenditure data. Chronic diseases affect almost half of the U.S. population and account for approximately 75 percent of health care spending.

The authors determined the net value of spending for each disease by assigning a monetary value to changes in health outcomes and relating it to the increase (or decrease) in the cost of treating the disease. The authors then employed a technique previously used to measure the value of spending from the treatment of diabetes to determine the value of spending for these 30 diseases.

Health care expenditure data from nationally representative surveys were used to determine spending for the treatment of diseases. Patient-level spending for the treatment of individual diseases was calculated in accord with methods used in previous research.

Between 1990 and 2010, the overall gains in health outcomes for the population more than offset the increase in the average cost of treatment, suggesting a positive net value for medical spending.

For several diseases, the study found that the net value of treatment has grown significantly, consistent with medical technol-

ogy improving over time and leading to better health outcomes at a lower cost per patient.

Overall, 20 of the 30 chronic diseases studied experienced an increase in health outcomes over the period, with 8 of those 20 showing a decrease in per patient spending.

The results are generally consistent with previous estimates of the value of spending on disease treatments, which usually involved onerous data collection methods to study only a single disease.

For many diseases, the DALYs data, when combined with health care expenditure data, may indeed be a cost-effective way to determine net value for health care spending. Specifically, the DALYs account for both mortality and morbidity, including mental well-being; include entire populations; and represent a comparable time series across different countries.

To the authors' knowledge, these DALYs are the only time series currently available that allow analysis of health outcomes across multiple diseases for the United States.

Future research is needed, however, to further validate the DALYs data as a useful tool for measuring patient health outcomes and value of spending.

Highfill and Bernstein's findings suggest the data may be appropriate for diseases in which medical treatments are the principal drivers of health outcomes.