

Using Disability Adjusted Life Years to Value the Treatment of Thirty Chronic Conditions in the U.S. from 1987-2010¹

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ABSTRACT

Health care spending in the U.S. grew 2 trillion dollars from 1987 to 2010, a 400% increase, but our understanding of the value of that increase in spending is limited. In this paper we determine the net value of spending at the disease level by assigning a monetary value to changes in health outcomes and relating it to the costs of treating the disease. Changes in health outcomes in the U.S. are measured using newly-available time series of Disability Adjusted Life Years (DALYs) from the Institute for Health Metrics and Evaluation. Spending on treatments are determined using health care expenditure data from nationally representative surveys. We examine the data for thirty chronic diseases for the period 1987 – 2010. For several diseases, we find the net value of treatment has grown substantially, consistent with medical technology improving over time and leading to better health outcomes at a lower cost per patient. Overall, twenty of the 30 chronic diseases studied experienced an increase in health outcomes over the period studied, with 8 of those 20 showing a decrease in per-patient spending. Our estimates of net value are simple to apply and results are generally consistent with previous estimates of the value of spending on disease treatments, which usually involve onerous data collection methods to study only a single disease. However, challenges remain in applying these DALYs data to accurately measure the changing value of health care spending. We highlight some of these issues in this paper.

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