Life Expectancy Is Better Than Age as a General Predictor of Health Care Expenditures

Increasing longevity, coupled with declining fertility rates, will substantially increase the number of U.S. octogenarians. Given the link between age and health care costs, some researchers have predicted that, as a result, health care costs will rise sharply.

A RAND Health team used the 1992–1999 Medicare Current Beneficiary Survey to investigate whether age directly affects health care costs, or whether life expectancy would produce more accurate estimates of future expenditures. The analysts also examined whether including information about health status affected the predictive power of age or life expectancy. The study came to the following conclusions:

- Life expectancy is a better predictor of health care expenditures than age. Expenditure estimates based on life expectancy match actual expenditures more closely than age-based estimates (see the top figure).
- Neither age nor life expectancy has strong predictive power if health status is included in the model.
- Expenditure projections based on life expectancy are lower than age-based projections (see the bottom figure). The gap between estimates increases as life expectancy increases (life expectancy at birth is projected to increase from 77.5 in 2008 to 79.7 in 2040 and to 82.0 in 2080). For example, in 2040, age-based projections of total expenditures are 9 percent higher than projections based on life expectancy; in 2080, age-based estimates are 22 percent higher.

If people are living longer because medical technology, high-quality health care, healthy individual behaviors, and decreased environmental hazards (among other factors) improve health, then future Medicare beneficiaries will be healthier than current beneficiaries and projections based on age will overestimate future health care expenditures. If technology is keeping people alive longer, but in poor health, then projections based on life expectancy will underestimate future health care expenditures. The study found evidence supporting the former.
This PDF document was made available from www.rand.org as a public service of the RAND Corporation.

This product is part of the RAND Corporation research brief series. RAND research briefs present policy-oriented summaries of individual published, peer-reviewed documents or of a body of published work.

The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world.

Support RAND

Browse Books & Publications
Make a charitable contribution

For More Information

Visit RAND at www.rand.org
Explore RAND Health
View document details

Limited Electronic Distribution Rights

This document and trademark(s) contained herein are protected by law as indicated in a notice appearing later in this work. This electronic representation of RAND intellectual property is provided for non-commercial use only. Unauthorized posting of RAND PDFs to a non-RAND Web site is prohibited. RAND PDFs are protected under copyright law. Permission is required from RAND to reproduce, or reuse in another form, any of our research documents for commercial use. For information on reprint and linking permissions, please see RAND Permissions.