

**Financial Well-Being in Late Life:
Understanding the Impact of Adverse Health Shocks and Spousal Deaths**

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The risk of substantial late-life health expenditures is often cited as a primary rationale for maintaining a stock of precautionary savings in retirement. The realization of such risks is also a potential contributor to low levels of wealth for some elderly households. This paper uses data on the over-65 population drawn from 10 waves of the *Health and Retirement Study* (HRS) spanning the 1996-2014 period to explore the role of health expenditure shocks in contributing to the draw-down of retirement wealth. Our strategy is to document the association between wave-to-wave changes in net worth and health conditions that are newly diagnosed between waves. The health conditions we consider include stroke, cancer, and lung disease; we also investigate health-related events such as a hospital stay, a nursing home stay, or – for married individuals – the loss of a spouse. Our net worth measure includes home equity and the net value of other real estate, business assets, and financial assets. IRA, 401(k) and Keogh balances, when available, are included in financial assets. We use household rather than individual balance sheet measures because it is often difficult to assign ownership of housing or jointly held financial assets to individuals within a couple.

We begin by computing the probability of various health-related shocks at the household level. In this analysis, we consider a married HRS respondent to have “experienced a stroke” if she or her husband had a stroke between two waves of the HRS. The most common health shock is a new diagnosis of arthritis. On average, every two years, 14.7 percent of the HRS respondents who did not previously report a diagnosis of arthritis indicate that they or their spouse have been diagnosed with this condition. Arthritis is followed by hypertension (13.8 percent), cancer (4.9 percent), diabetes (4.3 percent), stroke (3.8 percent), psychiatric problems (3.3 percent), lung disease (3.0 percent), and heart attack (2.8 percent). The probability that a married individual over age 65 will report the death of a spouse averages 4.5 percent every two years; the chance of any hospital admission is 43.1 percent and of any nursing home stay is 8.9 percent.

We also compute the probability that a 65-year-old who has never had a particular medical condition will experience that condition in his or her remaining lifetime. This calculation focuses on the individual and ignores diagnoses affecting the spouses of married respondents. We estimate the lifetime probability of being diagnosed with arthritis to be 54.8 percent for a 65-year-old, arthritis-free woman and 46 percent for a man. For stroke, 24.1 percent for a woman and 21.3 percent for a man. For lung disease, 17.5 and 17.8 percent,

respectively. Because our calculations omit respondents who had already been diagnosed with these conditions by age 65, they understate the fraction of the over-65 population that will experience these conditions.

We find mixed associations between new health diagnoses, health events, and the inter-wave change in net worth. For six of the eight conditions we consider, we cannot reject the null hypothesis that net worth is unaffected by a new diagnosis. These results may be due to the modest cost of treating some conditions, such as arthritis and hypertension, or to the near-universality of Medicare, or to the presence of other health insurance coverage for many respondents, or to our focus on the costs within the first two years of diagnosis, which may substantially understate the cost of chronic conditions.

For two conditions, stroke and lung disease, we find substantial declines in net worth following the diagnosis: just over \$25,000 for a stroke and \$29,000 for lung disease. These estimates are based on a specification that accounts for heterogeneity across individuals in the level of net worth, “fixed effects,” but assumes similar trends in the changes in wealth for those who do, and do not, experience new health conditions. When we instead assume that there are persistent individual differences in wealth changes, the drop in net worth associated with these two conditions rises to over \$48,000 (stroke) and \$41,000 (lung disease). For a hospital or nursing home stay and the loss of a spouse, the correlation with changes in net worth is also sensitive to our econometric specification. With fixed effects for wealth levels, a hospitalization is associated with a \$7,600 drop in net worth. A nursing home stay corresponds to a \$15,000 drop and the loss of a spouse to \$24,000. With person-specific trends in net worth, however, we can no longer reject the null hypothesis that any of these events is associated with a change in net worth.

We next calculate the expected reduction in wealth that a 65-year-old individual would face over his or her remaining life years for each potential health shock. This calculation involves the probability that the individual will survive to each advanced age, the probability that a new shock will be experienced at each age, and the discounted decline in net worth associated with each shock. Using our estimates of the cost of shocks from the fixed effects specification, we estimate the expected “wealth cost” of a stroke for a married (single) man at age 65 to be \$8,414 (\$7,611). For women, the analogous values are \$5,741 (married) and \$3,621 (single), representing both a lower likelihood of stroke and a smaller wealth decline conditional on a

stroke. We estimate that the expected cost of a hospital stay, in terms of reduced net worth, is about \$15,000 for single individuals at age 65 and more than \$33,000 for married men and women. Adding up the expected costs of the five shocks for which we find substantial declines in net worth – stroke, lung disease, hospital stay, nursing home stay, and death of a spouse – we estimate the average “wealth cost” of the health shocks we consider to be about 9 percent of household net worth at age 65 for married individuals and for single men, but higher – about 22 percent of net worth – for single women at 65, largely because of the lower wealth level of this group.