



The Impact of Growing Health and Mortality Inequalities on Lifetime Social Security Payouts

*Péter Hudomiet, Michael D. Hurd, and Susann Rohwedder**

Three population trends related to health and life expectancy have potentially important implications for future Social Security payouts. First, life expectancy has been increasing for many years. Should life expectancy continue to increase, then so will Social Security payouts. Second, some health outcomes that may curtail longevity have recently worsened in the United States. These could result in reduced life expectancy and lower Social Security payouts. Third, health differentials between those of high- and low-socioeconomic status (SES) have increased. This could result in higher overall Social Security payouts as those with high SES tend to live longer.

This study used microsimulations to investigate

the implications of trends in health and mortality inequalities for Social Security payouts. The simulations are based on data from the Health and Retirement Study (HRS) for persons born between 1934 and 1959.

The analysis covered six birth cohorts of four or five years each, and assessed trends by Social Security wealth quintile. For simplicity, we assessed only individual Social Security retirement benefits, and not disability, spousal, or widow benefits. Health indicators examined in this study were

- ◆ individuals' subjective expectations of living to at least 75 (P75);
- ◆ class 2 obesity, defined as having a body mass index above 35;

* **Péter Hudomiet** is an associate economist at the RAND Corporation. **Michael Hurd** is principal senior researcher and director of the RAND Center for the Study of Aging. **Susann Rohwedder** is a senior economist at RAND, associate director of the RAND Center for the Study of Aging, and an affiliate faculty member of the Pardee RAND Graduate School. This research brief is based on working paper [WP 2020-412](#), UM20-04.

- ◆ number of functional limitations in activities of daily living (ADLs, including bathing, dressing, eating, getting out of bed, and walking).

Comparing successive birth cohorts, we found P75 at ages 54 to 60 decreased slightly for men and women in the top Social Security wealth quintile but greatly for those in the bottom one. Obesity at the same ages increased with little difference by quintile for men, but notable difference by quintile for women. ADL limitations decreased for those in the top quintile, but increased for those in the bottom quintile. Altogether, HRS data show declining health and increasing health inequalities, with the increase in inequalities being greater among women.

For mortality forecasts, we fit a survival model to individual-level data using demographic, health, SES, and birth cohort predictors. The resulting model predicts that life expectancy from age 55 will continue to increase but with differences by quintile. For those in the top quintile, life expectancy by cohort will increase by about three years. For those in the bottom quintile, it will remain the same or decrease.

This will translate into similar changes in years collecting Social Security benefits. We used actual or estimated claiming dates for each respondent, coupled with simulated mortality dates, to estimate the number of years of collecting Social Security benefits. For those in the top quintile, years collecting Social Security will increase seven years for men and six years for women. For those in the bottom quintile, there is little predicted change by cohort in years collecting Social Security. As a result, inequalities in years collecting benefits will increase.

The increase in the number of years collecting Social Security coupled with the longer careers and higher earnings of those in the top quintile means that average lifetime Social Security benefits will increase. Among those in the top quintile, lifetime Social Security benefits for the youngest cohort relative to the oldest cohort will increase 37% for men and 74% for women. For those in the bottom quintile, they will increase less than 20%.

We assessed how our predictions would vary given different assumptions about mortality, using the following alternative scenarios:

- ◆ fixed mortality rates;
- ◆ linear improvements in life expectancy for all, regardless of wealth;
- ◆ Social Security wealth-specific linear improvements in life expectancy;
- ◆ a plateauing trend in life expectancy, where improvements diminish.

Our predictions for changes in lifetime Social Security benefits largely matched those of our preferred model with two exceptions. First, lifetime benefits among women would increase even if mortality rates were to remain unchanged. This is due to stronger labor force attachment among younger female cohorts. Second, the model assuming Social Security wealth-specific trends in mortality showed an enormous increase in lifetime benefits for women in the top quintile. This may be a result of the lack of precision in this alternative model, which lacks health and related predictors for younger cohorts (predictors that we included in our preferred model).

Model variations affected lifetime average benefits for all recipients. We calculated the

average Social Security wealth for all persons across quintiles to see how the average position of Social Security may change. Besides our baseline model and the four scenarios noted above, we considered a scenario where mortality and the mean level of Social Security within groups by quintile and gender remains constant.

As expected, the model with no change in mortality or individual Social Security wealth showed virtually no change in Social Security wealth. If mortality alone remains constant, then average lifetime payments will increase 11%. This is mainly due to women's increasing work. Adding a general decrease in mortality to our model resulted in a 26% increase in lifetime payments. The model with SES-specific trends in mortality, but without health predictors, produced a 38% increase in lifetime benefits. Our preferred model, including both SES-specific trends in mortality and health predictors, showed a 28% increase in lifetime benefits. Finally, a model in which life

expectancy improvements reach a plateau and do not improve further predicted an average increase of 18% in lifetime benefits.

Overall, we found that assumptions about mortality greatly affect the likely course of Social Security benefits and, hence, the program's overall financial position. Our results further underscore the importance of tracking health and mortality differences by SES groups for forecasting Social Security payouts.

Future research could extend the analyses to account for disability, spousal, and widow benefits, which we did not include. Even though disability payments account for a small fraction of lifetime benefits for most recipients, it is possible that increasing health inequalities will contribute to an increase in disability inequalities and payments. Spousal and widow benefits may also change with increasing work by women and decreasing marriage rates. ❖

Michigan Retirement and Disability Research Center

Institute for Social Research
426 Thompson Street, Room 3026
Ann Arbor, MI 48104-2321

Phone: (734) 615-0422 **Fax:** (734) 615-2180

mrdrumich@umich.edu www.mrdrc.isr.umich.edu

Sponsor information: The research reported herein was performed pursuant to grant RDR18000002 from the U.S. Social Security Administration (SSA) through the Michigan Retirement and Disability Research Center

(MRDRC). The findings and conclusions expressed are solely those of the author(s) and do not represent the views of SSA, any agency of the federal government, or the MRDRC.

Regents of the University of Michigan:

Jordan B. Acker, Huntington Woods; Michael J. Behm, Grand Blanc; Mark J. Bernstein, Ann Arbor; Paul W. Brown, Ann Arbor; Sarah Hubbard, Okemos; Denise Ilitch, Bingham Farms; Ron Weiser, Ann Arbor; Katherine E. White, Ann Arbor; Mark S. Schlissel, *ex officio*