Health Insurance and Mortality at Older Adulthood in the 21st Century

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We propose revisiting the relationship between health insurance coverage and mortality at the transition from mid-life to older ages during the years 2005 to 2021, a period that includes the Great Recession, the Medicaid expansions of the Affordable Care Act (ACA), and the COVID-19 pandemic. The analysis will focus in particular on the question of how health insurance coverage is related to income and whether it mitigates or contributes to racial-ethnic and income disparities in mortality. We will further analyze different causes of death. Our empirical strategy will utilize four sources of variation: 1) the discontinuous change in health insurance coverage at age 65 due to Medicare eligibility, 2) variation in the level of health insurance coverage among near-elderly individuals across geographies, 3) variation in the level of health insurance coverage among near-elderly individuals over time especially in response to the ACA, and 4) discontinuous changes in health care capacities and health insurance coverage during the COVID-19 pandemic.

We will measure mortality (overall and by cause of death) by age, sex, race-ethnicity, and county of residence from restricted vital statistics data that we have obtained from the National Center for Health Statistics. We will augment these data with county-level statistics on health insurance coverage by age, sex and race from the Small Area Health Insurance Estimates based on the American Community Survey from 2008-2021, the Annual Social and Economic Supplement to the Current Population Survey from 2005-2007. Our estimation strategy will build on Card, Dobkin and Maestas (2008, 2009), which utilized the discontinuous change in health insurance coverage at age 65 due to Medicare eligibility to obtain causal evidence on the relationship between health insurance and mortality that is not biased by selection into health insurance. Because we expect the discontinuity to be larger in areas with low levels of health insurance coverage prior to age 65, we plan to leverage variation in non-elderly health insurance coverage rates at the county level as well as county-level changes over time.

Our baseline empirical approach will divide all U.S. counties into percentiles of health insurance coverage at ages 50-64 and analyze (a) changes in health insurance coverage and (b) changes in mortality around the age 65 cut-off. This approach will provide us with health insurance mortality gradients that can be separately analyzed for different racial-ethnic groups and for individual causes of death. A crucial caveat of this baseline analysis is to control for changes in employment status occurring at age 65 due to retirement which could impact health independently of health insurance coverage.[1] To assess the importance of this factor, we will measure changes in employment rates around age 65, test how they differ across percentiles of pre-65 insurance coverage, and provide bounds of the potential bias induced by retirement.

[1] Fitzpatrick and Moore (2018) and Kuhn et al. (2020) find evidence that retirement leads to an increase in mortality for men, but no significant impacts for women.

Our analysis will then focus on four distinct periods: First, the years prior to the Great Recession and then prior to the ACA expansions (2005-2007, 2010-2013) will serve as our baseline sample during which we seek to measure the effect of obtaining health insurance at age 65 during times of economic expansion. Second, we will analyze the period of expansions in health insurance coverage due to the ACA implementation (2014-2019) which provides quasi-experimental variation in health insurance coverage before age 65. Third, we will study how the Great Recession (2008-2009) impacted health insurance mortality gradients, using pre-recession health insurance rates to divide areas into percentiles. Fourth, we will study how the relationship of health insurance coverage and mortality has changed during the Covid-19 pandemic. By examining these periods separately, we will be able to distinguish between mortality changes stemming from plausibly exogenous changes in health insurance (e.g. ACA) and mortality changes occurring as a result of changes in health insurance that are likely related to other factors that could impact mortality, such as recession-related job loss and the pandemic.

There is an extensive literature that has examined the role of health insurance in mortality. However, this literature has been mixed in its results: while several studies estimate a negative causal effect of health insurance on mortality (Card, Dobkin and Maestas 2009; Miller, Johnson and Wherry 2021), some of the literature fails to find strong evidence that health insurance improves health outcomes including mortality (Finkelstein and McKnight 2008; Finkelstein et al. 2012; Baicker et al. 2013; Courtemanche et al. 2022). In addition, disparities in mortality prior to and during the pandemic have been well-documented (Chetty et al. 2016, Schwandt et al. 2021, Andrasfay and Goldman 2021, Miller, Wherry, Mazumder 2021, Schwandt et al. 2022).

Our proposed research aims to contribute to this literature in several ways. First, the existing literature on health insurance and mortality generally does not allow for analysis of population-level effects, either due to data limitations or because the setting is limited to specific situations where health insurance assignment can be assumed to be random among observably similar individuals. By using population-level statistics, we are able to determine whether the effects that have been found for certain subsamples extend to the general population. In addition, the extent to which health insurance contributes to or exacerbates disparities in mortality is not well known. Our analysis aims to study this question by examining whether mortality disparities are larger or smaller when a larger share of the population has health insurance. Finally, by comparing the effect over different time periods, our study will inform how the relationship between health insurance and mortality differs during times of crises.

This project contributes to two themes that the NBER Center of Aging and Health Research is engaged in. First, turning 65 represents an important transition point where several factors, including attachment to employment and source of health insurance, are changing, making it a crucial time in understanding transitions to older ages. Second, our study aims to understand health and healthcare inequities by examining how the relationship between mortality and health insurance differs by race, ethnicity, and across counties with high and low levels of average incomes and non-elderly health insurance rates.

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