

COGNITIVE ABILITY AND RETIREE HEALTH CARE EXPENDITURE

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The rapidly increasing costs of medical care are straining retiree incomes, along with the public and private insurance programs that serve them. Medicare premium increases now outpace Social Security cost-of-living adjustments and represent a growing share of retiree budgets, yet Medicare benefits on average cover only half of total retiree health care spending. It thus seems likely that retirees will increasingly need to accumulate private resources and turn to private markets in order to secure both their health and their consumption. It is therefore important to understand better the difficulties that retirees face in their efforts to accumulate such resources and navigate such markets.

Motivated by prior research indicating that, 1.) Medicare beneficiaries with lower levels of cognitive ability have higher levels of Medicare spending, and 2.) older people, and especially those with lower cognitive abilities, have difficulty navigating markets for health care and insurance, we use panel data from the Health and Retirement Study (HRS) linked to Medicare administrative claims files to investigate whether and how cognitive abilities relate to the level and qualities of medical expenditure among U.S. retirees.

The HRS collects a rich set of information including health, wealth, education, and family structure from a nationally representative sample of older adults. Of particular interest for our analysis are the several measures of cognitive performance gathered by the HRS. In this paper, we use measures of a respondent's performance on three different tests or sets of questions: word recall, number subtractions, and a Telephone Interview for Cognitive Status (TICS). Panel data from 1998–2006 are linked to Medicare records detailing total health care spending and information about specific types of inpatient hospitalizations.

We use the linked HRS Medicare data to verify the negative correlation between contemporaneous measures of cognition and Medicare spending and to test several potential mechanisms underlying the observed relationship. Those with lower cognitive abilities may be in worse health and thus require more (and more expensive) care. An alternative, not mutually exclusive, set of mechanisms would attribute the contemporaneous relationship between cognitive function and health expenditure to the nature or quality of the care received by people with different cognitive abilities, but similar underlying health. We find that much, but not all, of the relationship between cognitive function and health expenditure can be explained by observable components of health, including chronic conditions, limitations in (instrumental) activities of daily living, and self-reported health.

We then use specific types of Medicare utilization to further understand the remaining modest correlation between spending and cognition. We estimate models accounting for whether patients are in the last two years of life (a particularly costly period) and examining within-person measures of change in cognitive ability, health status and health spending to demonstrate that much of the cross-sectional correlation between cognitive function and health expenditure is due to decline. We interpret this as consistent with the view that the conditional (on observed health)

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correlation between cognitive function and medical expenditure is attributable to unobserved health. We also examine whether cognition is related to the probability of experiencing either an elective or potentially preventable hospitalization to determine whether respondents of different levels of cognitive ability have different types of interactions with the health care system. These results indicate that differences in health care received do not contribute to the cross-sectional relationship between cognitive function and health care expenditure.

We view this paper as a first step along a path toward a better understanding of the mechanisms behind the cross-sectional correlation between cognitive abilities and medical expenditure. In future work, we anticipate gaining further confidence in the estimated relationships described here and investigating the role of different kinds of knowledge and cognitive ability in determining medical care choices. An important policy question is whether preventing cognitive decline amongst older adults would reduce Medicare spending by slowing or reducing physical and mental decline.

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