

# MEDICAID INSURANCE IN OLD AGE

MARIACRISTINA DE NARDI, ERIC FRENCH AND JOHN BAILEY JONES \*

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In the United States, a key public health insurance program for the elderly poor is Medicaid, a means-tested program that covers any medical expenses not picked up by other insurance programs. In this paper, we assess the insurance and redistributive properties of Medicaid for single retirees.

One force limiting the progressivity of Medicaid is that poor people tend to live shorter lives and die before incurring large medical expenses. In contrast, richer people are more likely to live long and face expensive medical conditions, such as nursing home stays, when very old. Another force reducing Medicaid redistribution is that while Medicaid was initially designed to protect and insure the lifetime poor, it was later expanded to insure richer people impoverished by high medical expenses. For example, extended stays in a nursing home are generally not covered by other public or private insurance, even though nursing home care costs \$60,000 to \$75,000 a year (in 2005). Medicaid ends up financing 70% of nursing home residents (Kaiser Foundation, 2010).

Using the Asset and Health Dynamics of the Oldest Old (AHEAD) dataset, we find that the average Medicaid reciprocity rate for retirees in the bottom quintile of the permanent income distribution is just under 70% and stays more or less constant throughout retirement. Medicaid reciprocity by higher-income retirees is significantly lower, but increases with age. Most notably, this increase tends to happen at more advanced ages for people in the highest permanent income quintiles, reflecting the fact that survivors with higher lifetime resources run out of savings (and thus qualify for Medicaid) later on in life.

To understand these patterns, we construct and estimate a life-cycle model of consumption and endogenous medical expenditure that accounts for Medicare, Supplemental Social Insurance (SSI) and Medicaid. Agents in the model face uncertainty about their health, lifespan, and medical needs (including nursing home stays). This uncertainty is partially offset by the insurance provided by the government and private institutions. Agents choose whether they want to apply for Medicaid if they are eligible, how much to save, and how to split their consumption between medical and non-medical goods.

We model two pathways to Medicaid. People with low amounts of assets and income qualify for Medicaid under the categorically needy pathway, regardless of their medical expenses. More affluent people qualify only if their medical expenses exceed their financial resources, a mechanism known as the medically needy pathway. Explicitly modeling these two pathways allows us to better match the way in which Medicaid use varies across the income distribution.

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\* *Mariacristina De Nardi* is a senior economist and research advisor in the research department at the Federal Reserve Bank of Chicago. *Eric French* is a senior economist at the Federal Reserve Bank of Chicago. *John Bailey Jones* is an associate professor in the Department of Economics at the State University of New York-Albany. This Research Brief is Based on MRRC Working Paper 278.

To appropriately evaluate redistribution, we allow for heterogeneity in wealth, permanent income, health, gender, life expectancy, and medical needs. We also require our model to fit well across the entire income distribution, rather than simply explain mean or median behavior. Our model closely matches the life-cycle profiles of assets, out-of-pocket medical spending, and Medicaid reciprocity rates for elderly singles in different cohorts and permanent income groups.

We use our estimated model to compute how Medicaid payments vary by age, gender, permanent income, and health status. We find that the current Medicaid system provides different kinds of insurance to households with different resources. Households in the lower permanent income quintiles are much more likely to receive Medicaid transfers, but the transfers that they receive are on average relatively small. Households in the higher permanent income quintiles are much less likely to receive any Medicaid payouts, but when they do, these payouts are very big and correspond to severe and expensive medical conditions. Therefore, Medicaid is an effective insurance device for the poorest, but also offers valuable insurance to the rich by insuring them against catastrophic medical conditions.

Our model allows us to calculate not only the cross-sectional distribution of Medicaid payments, but also the distribution of the total payments that retirees receive over their remaining lives. Initial results for age 74 show that even though the poorest individuals use Medicaid most frequently, on average the largest annual payments go to middle income individuals. Although richer people qualify for Medicaid only if their medical conditions deplete their financial resources, they live longer and are more likely to face expensive medical conditions. This dynamic leaves middle income people, who lack the financial resources to thoroughly self-insure, as the ones receiving the largest payments. People at the top of the income distribution have the highest lifetime medical expenses, but qualify for Medicaid much less frequently. People at the bottom of the income distribution, on the other hand, qualify for Medicaid at very high rates, but because they tend to die at younger ages, they tend to have less expensive conditions.

Once one takes into account that the rich live longer, Medicaid is even less redistributive: in terms of *total* present discounted value, the richest people receive almost as much as the poorest ones, and middle income people still benefit the most.

We also compute the value of Medicaid insurance in old age. Although there is a large literature on the health effects of public insurance programs, and a smaller literature on the private markets that public insurance displaces, little is known about the insurance properties of public insurance. Once one accounts for risk, Medicaid is less redistributive further still. Using our model to calculate the effects of a reduction in Medicaid generosity, we calculate the value that elderly individuals place on Medicaid insurance. These calculations suggest that although all individuals value Medicaid well in excess of the payments they expect to receive, it is the rich, who have the most to lose, who value Medicaid most highly.

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University of Michigan Retirement Research Center  
Institute for Social Research 426 Thompson Street Room 3026  
Ann Arbor, MI 48104-2321 Phone: (734) 615-0422 Fax: (734) 615-2180  
mrrcumich@umich.edu www.mrrc.isr.umich.edu

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