

## THE EFFECTS OF MEDICAID AND MEDICARE REFORMS ON THE ELDERLY'S SAVINGS AND MEDICAL EXPENDITURES<sup>1</sup>

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

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Many poorer Americans receive health insurance through Medicaid, a public program run jointly by the federal and state governments. An important group of Medicaid beneficiaries is the elderly and the disabled, including those with long-term care needs. Because the need to pay for health care at very old ages is potentially a significant savings motive, the insurance provided by Medicaid may also have significant effects on saving.

In this paper, we study a model in which retired single people optimally choose consumption, medical spending and saving, while facing uncertainty about their health, lifespan, and medical needs. In our framework, people are hit by medical needs shocks, such as cancer, diabetes, a heart attack, or a broken bone. The shocks affect the marginal utility people receive from consuming medical goods and services, and they adjust their medical spending accordingly. This uncertainty is partially offset by insurance provided by private institutions and government programs such as Medicaid and Medicare. We first consider how well our model matches important features of the data, and we analyze the degree of insurance provided by current programs. We then study some policy reforms, meant to capture recent changes in Medicaid and Medicare, analyzing the effects of these reforms on out-of-pocket and total medical expenditures, and savings.

Much of the literature studying similar questions has used models in which medical expenditures are exogenous and individuals can respond to medical expense shocks only by adjusting their saving. While several recent papers allow medical expenditures to be a choice variable, our analysis extends the previous literature in several ways. We estimate the parameters of our model rather than calibrating them to previous studies, which might have features which are inconsistent with the model at hand. We require our model to fit the data on assets and medical spending across the entire income distribution, rather than simply explain mean or median behavior. A particularly novel feature is that we model social insurance as providing a utility floor, rather than a fixed expenditure floor. This allows means tested transfers to vary with medical needs in a way consistent with consumer choice. Due to the complexity of our framework, we focus on the post-retirement part of the life-cycle and adopt a partial equilibrium approach.

We use the Assets and Health Dynamics of the Oldest Old data and a two-step strategy to estimate the model. In the first step we estimate or calibrate those parameters that can be cleanly identified outside our model. For example, we estimate mortality rates from raw demographic data. In the second step, we estimate the rest of the model's parameters with the Method of Simulated Moments, taking as given the parameters that were estimated in the first step. In particular, we find the parameter values that minimize the difference (as measured by a GMM criterion function) between the asset and out-of-pocket medical expense profiles generated by the model and their data counterparts.

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*\*Mariacristina De Nardi is a senior economist and economic advisor at the Federal Reserve Bank of Chicago. Eric French is an economist at the Federal Reserve Bank of Chicago. John Bailey Jones is an associate professor in economics at SUNY Albany. This Research Brief is based on MRRC Working Paper WP 2010-236.*

We find that the model matches the life-cycle profiles of assets and out-of-pocket medical spending for elderly singles in different cohorts and permanent income groups. It also generates an elasticity of total medical expenditures to copay changes that is close to the one estimated in the data.

We find that the current Medicaid system provides different kinds of insurance to households with different permanent income levels. 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 pay-outs, but when they do, these pay-outs are often very big and correspond to severe and expensive medical conditions. Therefore, Medicaid is an effective insurance device for the poorest, but also offers very valuable insurance to the rich by insuring them against catastrophic medical conditions.

For this reason, making Medicaid more generous reduces the elderly's savings at all permanent income levels, including the highest. As a fraction of assets, the reform decreases the saving of the poor more than the saving of the rich, which is consistent with the redistributive nature of this program. It also increases total medical expenditures, especially for lower-income households, but it decreases the out-of-pocket costs actually paid by households.

We also study the effects of increasing the generosity of Medicare by reducing the copays that elderly people incur when consuming medical goods and services. As in the previous experiment, households become more fully insured by the government as a result of this reform and thus decrease their savings. This reform, however, benefits higher permanent income people more than poorer ones, because the poor were already well insured by Medicaid. Total medical expenditures rise at all ages, not only when very old, and rise proportionally more for younger people. As in the Medicaid reform, out-of-pocket medical expenditures decline.

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<sup>1</sup>Adapted from a summary provided for the April 16, 2010, meeting of the NBER's Economics of Household Savings Group (<http://www.nber.org/confer/2010/HFs10/summary.html>).

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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  
MRRC@ISR.UMICH.EDU WWW.MRRC.ISR.UMICH.EDU

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