

- The Growth in the Social Security Disability Insurance Rolls
- Differential Mortality, Uncertain Medical Expenditures, and the Savings Decisions of the Elderly
- Using Genetic Markers to Measure the Effect of Health on Education

ALSO: Short Abstracts of Recent NBER Working Papers — see page 4

NBER NATIONAL BUREAU OF ECONOMIC RESEARCH

BULLETIN ON AGING AND HEALTH

The Growth in the Social Security Disability Insurance Rolls

The share of the U.S. population receiving Social Security Disability Insurance (DI) benefits has risen rapidly over the past two decades, from 2.2 percent of adults age 25 to 64 in 1985 to 4.1 percent in 2005. While the share of adults on DI in the U.S. today is still lower than that in most other developed countries, the recent growth of the DI program nonetheless poses significant risks to the finances of the Social Security system. Over the past two decades, the share of total Social Security spending accounted for by DI has risen from 10 percent to 17 percent. In 2005, cash payments to DI beneficiaries topped \$85 Billion. DI recipients are also eligible for Medicare two years after the onset of their disability, further boosting the cost of the program.

In “**The Growth in the Social Security Disability Rolls: A Fiscal Crisis Unfolding**” (NBER Working Paper 12436), researchers **David Autor** and **Mark Duggan** explore both the causes and consequences of the recent growth in the DI program. They also examine the success of the DI screening process in distinguishing meritorious claims and consider potential reforms to the DI program.

Since its introduction in 1956, the DI program has insured workers against the risk of being unable to work due to disability. To be insured for DI, a person must have worked at least five of the last ten years; currently, more than 80 percent of non-elderly adults in the U.S. meet this criterion. To be awarded DI benefits, individuals must have a medically determinable physical or mental impairment that is expected to result in death or last for at least a year and that prevents them from engaging in “substantial gainful activity.” DI applicants go through a medical screening process and may appeal if

their initial claim is denied; many applicants do appeal and a significant share of decisions are overturned during the appeals process.

The authors first take up the question of why the disability rolls have grown. The most important factor is the liberalization of the DI screening process that occurred due to a 1984 law. This law directed the Social Security Administration to place more weight on applicants’ reported pain and discomfort, relax its screening of mental illness, consider applicants with multiple non-severe ailments, and give more credence to medical evidence provided by the applicant’s doctor.

These changes had the effect of both increasing the number of new DI awards and shifting their composition towards claimants with low-mortality disorders. For example, the share of awards for a primary impairment of mental illness rose from 16 percent in 1983 to 25 percent in 2003, while the share for a primary impairment of musculoskeletal disorders (primarily back pain) rose from 13 percent in 1983 to 26 percent in 2003.

A second factor is the rising value of DI benefits relative to potential labor market earnings. As the authors explain, this increase is not due to any legislative intent. Rather, the interaction of increasing income inequality and the DI benefit formula means that low-income workers now have a larger share of their pre-disability income replaced at the 90 percent rate and less at the 32 or 15 percent rate. Similarly, there has been a substantial rise in the real value of Medicare received by DI beneficiaries. The authors estimate that the DI replacement rate (including the value of Medicare) for a low-income older male worker rose from 68 percent in 1984 to 86 percent in 2004.

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The NBER Bulletin on Aging and Health summarizes selected Working Papers recently produced as part of the Bureau’s program of research in aging and health economics. The Bulletin is intended to make preliminary research results available to economists and others for informational purposes and to stimulate discussion of Working Papers before their final publication. The Bulletin is produced by David Wise, Area Director of Health and Aging Programs, and Courtney Coile, Bulletin Editor. To subscribe to the Bulletin, please send a message to: abb@nber.org.

By contrast, the authors estimate that the aging of the U.S. population has made only a modest contribution to the growth of the DI program, accounting for 6 percent of the increase. Changes in the health of the population are also deemed to have had a small effect at most.

Next, the authors ask what share of disability recipients are undeserving of their benefit awards (“cheating”). This is a difficult task, as there are no systematic, objective data on the work capacity of DI recipients. Previous studies have established that the labor force participation rate of DI applicants would be 30 to 40 percentage points higher in the absence of the DI program and that this figure has been stable over the years. While this might suggest that today’s DI applicants are no more likely to be work-capable than past applicants, the authors’ evidence suggests otherwise. In previous research, they find that the responsiveness of DI applicants to adverse labor market shocks

rose sharply between 1984 and 1998, leading them to conclude that “a growing fraction of discouraged and displaced workers are seeking DI benefits.”

Turning to assess the DI screening process, the authors’ view is that the process is effectively broken. They note that despite repeated efforts by the Social Security Administration to improve the efficiency, accuracy, and consistency of the process, it has evolved into an adversarial process relying heavily on appeals and adjudication. In recent years, nearly forty percent of total DI awards were granted during the appeals process, up from 20 percent in the late 1970s. In one recent year, the Social Security Administration was forced to pay nearly a half a billion dollars to claimants’ attorneys.

The authors also argue that because the definition of disability adopted in 1984 is quite broad, the DI program often functions in practice as an insurance program for unemployable workers. For example, when 130,000 DI beneficiaries whose primary impairment was drug or alcohol addiction were removed from the DI rolls in 1996, two-thirds of the terminated claimants managed to re-qualify for DI under a

different impairment.

Looking ahead, the authors project that the DI program will continue to grow until its rolls include almost 7 percent of the non-elderly adult population, a 70 percent increase over today’s enrollment rate. This increase would obviously strain the finances of Social Security and Medicare—the 1.8 percent payroll tax that now covers the DI program would be inadequate, leaving fewer funds available to pay other Social Security benefits, and DI recipients would claim an even bigger share of total Medicare expenditures than the 15 percent they do today.

The authors conclude by considering possible reforms to the DI program. Past experience suggests that efforts to remove people from the DI rolls are not productive, as denied recipients often find their way back on to the program and the public backlash to these removals can aggravate the situation. Tightening the screening process holds more promise, though it seems likely that more deserving applicants would also be denied benefits as a result. Two reforms with more potential are to allow the Social Security Administration to commis-

sion independent medical evaluations during the initial screening process and to be represented by an attorney at Administrative Law Judge hearings. The authors suggest that these reforms would be likely to raise the rejection rate for non-deserving claims while lowering it for deserving claims.

Two more radical options are to make it easier for individuals to obtain health insurance, so that DI is not serving as the insurer of last resort for work-capable people, and to introduce a graduated scale of DI payments, so that those with more severe impairments receive larger benefits. These changes are not without drawbacks, however—the first would cost money and the second might induce more relatively healthy people to apply for DI.

As the authors note, there are no easy fixes for the DI programs. However, “the cost of postponing reforms to DI may eventually come to appear even more daunting than the cost of facing them promptly.”

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Differential Mortality, Uncertain Medical Expenditures, and the Savings Decisions of the Elderly

Household savings decisions are of great interest to policy makers, as they affect not only the household’s well-being but also asset markets and the rate of economic growth. One of the most widely-used models of savings behavior, the life cycle model, predicts that people will accumulate assets during their working years and spend them during retirement. Yet the data indicate that many elderly keep large amounts of assets until very late in life.

One theory that has been advanced to explain this discrepancy is that elderly households retain their assets in order to protect against the risk of medical expenditures at older ages. Yet earlier studies that have used this theory to forecast household savings decisions predict a much more rapid decumulation of assets after age 70 than that observed in the data.

In “**Differential Mortality, Uncertain Medical Expenses, and the Savings of Elderly Singles**” (NBER Working Paper 12554), **Mariacristina De Nardi, Eric French,** and **John Bailey Jones** revisit the sav-

ings decisions of the elderly. The new angle the authors bring to the topic is to recognize that people have different life expectancies and face different risks of incurring large out-of-pocket medical expenditures based on their gender, age, income, and health status. By incorporating this heterogeneity into their model of savings decisions, the authors aim to more closely match the actual savings behavior of the elderly.

The authors use the Assets and Health Dynamics of the Oldest Old (AHEAD) dataset for their analysis. They focus on elderly singles in order to sidestep the added complications that arise when modeling the behavior of couples.

The authors’ first task is to estimate the uncertainty in mortality and out-of-pocket medical expenditures as a function of gender, health, permanent income, and age. They have several notable findings. First, out-of-pocket medical expenditures rise very rapidly with age. For example, average spending for a woman in poor health rises from \$1,200 at age 70 to \$19,000 at age 100. Second, the

share of income spent on health care rises with income, indicating that health care is a luxury good for the oldest old. For instance, a 95-year-old woman in poor health would incur \$2,700 in medical spending if she were at the 20th percentile of the income distribution, vs. \$16,000 if she were at the 80th percentile. Finally, life expectancy varies greatly for older individuals—while a 70-year-old man with poor health and low income can expect to live only 6 more years, a 70-year-old woman with poor health and high income can expect to live 17 more years.

Next, the authors construct a rich model of savings behavior that accounts for this heterogeneity in mortality and out-of-pocket medical expenditures. They then use their model to predict the savings of elderly individuals and compare this to people’s actual savings. They find that their model fits the data much better than previous studies—in particular, they predict a slow rate of asset decumulation after age 70, as observed in the data.

There are several key findings from their model simulations. First, differences in aver-

age out-of-pocket medical spending across income groups are very important in explaining asset decumulation decisions. However, differences within income group (that is, within one's income group, the risk of having high vs. low expenditures) are much less important. Second, the longer life expectancies of high-income elderly are important in explaining their higher level of savings. Finally, the existence of programs such as Medicaid and Supplemental Security Income, which guarantee older indi-

viduals a certain level of consumption in retirement, depress savings for older individuals of all income levels. For example, the authors estimate that in the absence of these programs, assets for a person in the highest permanent income quintile would rise by about fifty percent, from \$150,000 to \$220,000.

In sum, the authors find that out-of-pocket medical expenditures are higher and more volatile than previously estimated, rise rapidly with age, and are a luxury good for the oldest

old. Heterogeneity in medical expenditures and life expectancy play a significant role in explaining the savings behavior of the elderly. The authors conclude that any analysis of the effect of a policy change on the savings behavior of the elderly should be based on a model that incorporates the effect of the government-provided consumption floor and allows medical spending to vary by age and income.

Using Genetic Markers to Measure the Effect of Health on Education

Researchers have been keenly interested in the links between socioeconomic status and health going back at least to the famous Whitehall I study of British civil servants, which found that low-grade employees had a mortality rate three times that of their high-grade counterparts. Yet determining the exact nature of the relationship between education and health is notoriously difficult, since it is likely both that health affects educational outcomes and that education affects health outcomes. For example, while numerous studies report that students who are obese or depressed perform poorly relative to their classmates, it is far from certain that this represents a causal effect of health on education, as the causality could run from education to health or the correlation could be driven by a third factor.

In **"The Impact of Poor Health on Education: New Evidence Using Genetic Markers,"** (NBER Working Paper 12304), **Weili Ding, Steven Lehrer, J. Niels Rosenquist,** and **Janet Audrain-McGovern** introduce a novel approach to study this question.

Following the recent decoding of the human genome, a sequence of approximately three billion chemical "letters" that make up human DNA, there is a growing body of neuroscientific evidence identifying genetic markers that have strong associations with specific diseases and health behaviors. The authors use these genetic markers to predict children's health, then use the predicted health measures to estimate the effect of health on education. Because genetic markers are determined at conception, before the child is exposed to any other influences, the use of predicted health measures based solely on these markers allows the authors to identify a causal effect of health on education.

The data for the analysis comes from the Georgetown Adolescent Tobacco Research (GATOR) study, a unique longitudinal data set

of Virginia high school students that combines data from questionnaires with genetic information. The sample size is about one thousand students.

The authors' first task is to show that there is a strong relationship between genetic markers and the health behaviors and outcomes they wish to predict. They focus on four genes identified as relevant by the scientific literature. For example, one gene (CYP2B6) is related to liver enzymes that break down toxins such as nicotine, while another (DRD2) is believed to determine the number of receptors for dopamine, a key chemical linked to the brain's reward system. Each individual inherits a single copy of each gene from each parent, so the individual may have two copies of the same gene or two different genes for each marker.

When the authors compare the health of students with different genetic markers, they find striking differences. For example, individuals with the rare TT form of the CYP gene are approximately 8.5 percentage points more likely to be diagnosed with inattention and hyperactivity than those with other forms of the CYP gene, while individuals with the common A2A2 form of the DRD2 gene are substantially less likely to be depressed or obese than those with other combinations. Overall, the four genetic markers have strong and significant associations with health behaviors and outcomes.

Next, the authors turn to estimating the effect of their predicted health measures on educational outcomes. For girls, depression and obesity have very substantial effects—each lowers a student's grade point average by 0.8 points (on a 4-point scale). The effect of attention deficit hyperactivity disorder for girls is near zero, though this masks a negative effect of inattention that is offset by a positive effect of hyperactivity. Interestingly, the results for boys are smaller and statistically insignificant. More research is

needed to understand these gender differences.

As the authors test the validity of their model, two other important findings emerge. The first is the importance of treating smoking as an active choice made by the student, as the authors find that either ignoring smoking or treating it as exogenous leads to estimated effects of health on education that are implausibly large and sometimes wrong-signed. The second is the importance of accounting for the coexistence of health outcomes and behaviors, as the authors find that the estimated effect of one health condition such as depression on education is generally overstated when other conditions such as obesity are omitted from the model.

The authors caution that their estimates reflect the total effect of genes on educational outcomes and might include dynastic effects. Specifically, they are unable to "disentangle the impact of the health condition as explained by genes from that of the response from the environment to the health conditions as explained by genes," such as how parents, teachers, and peers respond to a student's health status. They note that this limitation is shared by other strategies that treat genetics as part of a black box and conclude that substantially richer data would be needed to separately identify these different impacts.

In conclusion, the authors note that "recent years have witnessed an explosion of findings on the causes and correlates of health outcomes and behaviors in neurobiology, which could offer a promising source of predetermined exogenous variations to help identify the impact of health on a set of outcomes of great interest to economists," such as labor market activity, marriage, and educational attainment. Further, the use of data on genetic markers could also permit empirical "researchers to investigate whether nurture inputs or family characteristics can offset the impact of genetic predispositions."

NBER Profile: *Christopher Ruhm*

Christopher Ruhm is a Research Associate at the NBER. He is affiliated with the NBER's programs on Children, Health Care, and Health Economics.

Ruhm is the Jefferson-Pilot Excellence Professor of Economics at the Joseph M. Bryan School of Business and Economics at the University of North Carolina Greensboro, where he has taught since 1991.

Ruhm is an associate editor of the *European Economic Review*, the *International Journal of Information Security and Privacy*, and the *Southern Economic Journal*. He is a member of the board of trustees of the Southern Economic Association and has served as a special review committee member for the National Institutes on Aging, Drug Abuse, and Alcohol Abuse and Alcoholism. He has been awarded research grants from numerous organizations, including the National Science Foundation, the

Russell Sage Foundation, and the National Institute of Child Health and Human Development. In 1996–97, he served as a Senior Staff Economist at the Council of Economic Advisors.

He received a B.A. from the University of California, Davis and a Ph.D. in Economics from the University of California, Berkeley.

Dr. Ruhm's research focuses on the production of health, policies affecting families and children, and job change and retirement. Some of his recent work has explored how macroeconomic conditions affect health and how preschool education affects school readiness.

He lives in Greensboro, North Carolina with his wife Mayanna Williams, an artist, and his two sons aged 11 and 14. In his spare time he enjoys being outdoors running, listening to music, driving his children to and from swim meets, and attempting to learn to play the piano.



Abstracts of Selected Recent NBER Working Papers

WP12291

John Cawley, Richard V. Burkhauser
Beyond BMI: The Value of More Accurate Measures of Fatness and Obesity in Social Science Research

Virtually all social science research related to obesity uses body mass index (BMI), usually calculated using self-reported values of weight and height, or clinical weight classifications based on BMI. Yet there is wide agreement in the medical literature that such measures are seriously flawed because they do not distinguish fat from fat-free mass such as muscle and bone. Here we evaluate more accurate

measures of fatness (total body fat, percent body fat, and waist circumference) that have greater theoretical support in the medical literature. We provide conversion formulas based on NHANES data so that researchers can calculate the estimated values of these more accurate measures of fatness using the self-reported weight and height available in many social science datasets. To demonstrate the benefits of these alternative measures of fatness, we show that using them significantly impacts who is classified as obese. For example, when the more accurate measures of fatness are used, the gap in obesity between white and

African American men increases substantially, with white men significantly more likely to be obese. In addition, the gap in obesity between African American and white women is cut in half (with African American women still significantly more likely to be obese). As an example of the value of fatness in predicting social science outcomes, we show that while BMI is positively correlated with the probability of employment disability in the PSID, when body mass is divided into its components, fatness is positively correlated with disability while fat-free mass (such as muscle) is negatively correlated with disability.

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WP 12300

Sara Markowitz, John Tauras **Even for Teenagers, Money Does Not** **Grow on Trees; Teenage Substance Abuse** **and Budget Constraints**

This paper is about the spending choices of youth, with a particular focus on how the demand for cigarettes, alcohol and marijuana are influenced by changes in the prices of other products. Youth tend to have small incomes and limited wants, with the result that many students spend the bulk of their income on only a few items. Fast food, clothing and entertainment make up the majority of products purchased by teenagers. The hypothesis to be tested in this project is that changes in the prices of the other goods commonly bought by teenagers will affect budget allocations and thereby affect the demand for substances. We estimate own and cross price effects using the prices of cigarettes, alcohol, marijuana and other consumer products including gasoline, clothing, entertainment, and fast food. Income effects are also estimated and show that teens with higher incomes and allowances are more likely to use substances. The policy implications of the results are discussed.

WP 12335

Jose J. Escarce, Arvind K. Jain, Jeannette Rogowski **Hospital Competition, Managed Care,** **and Mortality after Hospitalization for** **Medical Conditions: Evidence from Three** **States**

This study assessed the effect of hospital competition and HMO penetration on mortality after hospitalization for six medical conditions in California, New York, and Wisconsin. We used linked hospital discharge and vital statistics data to study adults hospitalized for myocardial infarction, hip fracture, stroke, gastrointestinal hemorrhage, congestive heart failure, or diabetes. We estimated logistic regression models with death within 30 days of admission as the dependent variable and hospital competition, HMO penetration, and hospital and patient characteristics as explanatory variables. Higher hospital competition was associated with lower mortality in California and New York, but not Wisconsin. In addition, higher HMO penetration was associated with lower mortality in California, but higher mortality in New York. In the context of the study states' history with managed care, these findings suggest that hospitals in highly competitive markets compete on quality even in the absence of mature managed care mar-

kets. The findings also underscore the need to consider geographic effects in studies of market structure and hospital quality.

WP 12352

David M. Cutler, Adriana Lleras-Muney. **Education and Health: Evaluating Theo-** **ries and Evidence**

There is a large and persistent association between education and health. In this paper, we review what is known about this link. We first document the facts about the relationship between education and health. The education "gradient" is found for both health behaviors and health status, though the former does not fully explain the latter. The effect of education increases with increasing years of education, with no evidence of a sheepskin effect. Nor are there differences between blacks and whites, or men and women. Gradients in behavior are biggest at young ages, and decline after age 50 or 60. We then consider differing reasons why education might be related to health. The obvious economic explanations — education is related to income or occupational choice — explain only a part of the education effect. We suggest that increasing levels of education lead to different thinking and decision-making patterns. The monetary value of the return to education in terms of health is perhaps half of the return to education on earnings, so policies that impact educational attainment could have a large effect on population health.

WP 12361

David C. Grabowski, Jonathan Gruber, **Joseph J. Angelelli.** **Nursing Home Qual-** **ity as Public Good**

There has been much debate among economists about whether nursing home quality is a public good across Medicaid and private-pay patients within a common facility. However, there has been only limited empirical work addressing this issue. Using a unique individual level panel of residents of nursing homes from seven states, we exploit both within-facility and within-patient variation in payer source and quality to examine this issue. We also test the robustness of these results across states with different Medicaid and private-pay rate differentials. Across our various identification strategies, the results generally support the idea that quality is a public good within nursing homes. That is, within a common nursing home, there is very little evidence to suggest that Medicaid-funded residents receive consistently lower

quality care relative to their private-paying counterparts.

WP 12386

Jeffrey R. Brown, Courtney C. Coile, **Scott J. Weisbenner** **The Effect of Inheritance Receipt on** **Retirement**

This paper uses the receipt of an inheritance to measure the effect of wealth shocks on retirement. Using the Health and Retirement Study (HRS), we first document that inheritance receipt is common among older workers — one in five households receives an inheritance over an eight-year period, with a median value of about \$30,000. We find that inheritance receipt is associated with a significant increase in the probability of retirement. In particular, we find that receiving an inheritance increases the probability of retiring earlier than expected by 4.4 percentage points, or 12 percent relative to the baseline retirement rate, over an eight-year period. Importantly, this effect is stronger when the inheritance is unexpected and thus more likely to represent an exogenous shock to wealth.

WP 12392

Wolfram J. Horneff, Raimond Maurer, **Olivia S. Mitchell, Ivica Dus** **Optimizing the Retirement Portfolio:** **Asset Allocation, Annuitization, and Risk** **Aversion**

Retirees must draw down their accumulated assets in an orderly fashion so as not to exhaust their funds too soon. We derive the optimal retirement portfolio from a menu that includes payout annuities as well as an investment allocation and a withdrawal strategy, assuming risk aversion, stochastic capital markets, and uncertain lifetimes. The resulting portfolio allocation, when fixed as of retirement, is then compared to phased withdrawal strategies such as a "self-annuitization" plan or the 401(k) "default" pattern encouraged under US tax law. Surprisingly, the fixed percentage approach proves appealing for retirees across a wide range of risk preferences, supporting financial planning advisors who often recommend this rule. We then permit the retiree to switch to an annuity later, which gives her the chance to invest in the capital market and "bet on death." As risk aversion rises, annuities first crowd out bonds in retiree portfolios; at higher risk aversion still, annuities replace equities in the portfolio. Making annuitization compulsory can also lead to substantial utility losses for less risk-averse investors.

WP12429

Alan Monheit, Jessica Primoff Vistnes
Health Insurance Enrollment Decisions: Preferences for Coverage, Worker Sorting, and Insurance Take Up

The weak response by the uninsured to policy initiatives encouraging voluntary enrollment in health insurance has raised concerns regarding the extent to which the uninsured value health insurance. To address this issue, we use data from the 2001 Medical Expenditure Panel Survey to examine the association between health insurance preferences and coverage status. We also consider the role of such preferences in decisions to seek out and enroll in employment-based coverage. We find that adults with weak or uncertain preferences for health insurance are more likely than persons with strong preferences to be uninsured and less likely to acquire coverage. Our econometric work indicates that workers with weak or uncertain preferences are less likely to obtain job offers with insurance, reinforcing prior evidence that workers sort among jobs according to preferences for coverage. We also find that workers with weak or uncertain preferences are less likely to enroll in offered coverage and we estimate the subsidy necessary to compensate such workers for the utility loss were they to enroll. Our results suggest a dual approach to expanding coverage that includes both subsidies and educational efforts to inform targeted groups among the uninsured about the value of health insurance.

WP 12478

Janet Currie, W. Bentley McLeod
First Do No Harm? Tort Reform and Birth Outcomes

We examine the impact of tort reforms using U.S. birth records for 1989–2001. We make four contributions: First, we develop a model that analyzes the incentives created by specific tort reforms. Second, we assemble new data on tort reform. Third, we examine a range of outcomes. Finally, we allow for differential effects by demographic/risk group. We find that reforms of the “deep pockets rule” reduce complications of labor and C-sections, while caps on noneconomic damages increase them. Our results demonstrate there are important interactions between incentives created by tort law and other incentives facing physicians.

WP 12511

Daniel Polsky, Jalpa A. Doshi, Jose Escarce, Willard Manning, Susan M. Padlock, Liyi Cen, Jeanette Rogowski
The Health Effects of Medicare for the Near-Elderly Uninsured

We study how the trajectory of health for the near-elderly uninsured changes upon enrolling into Medicare at the age of 65. We find that Medicare increases the probability of the previously uninsured having excellent or very good health, decreases their probability of being in good health, and has no discernable effects at lower health levels. Surprisingly, we found Medicare had a similar effect on health for the previously insured. This suggests that Medicare helps the relatively healthy 65 year olds, but does little for those who are already in declining health once they reach the age of 65. The improvement in health between the uninsured and insured were not statistically different from each other. The stability of insurance coverage afforded by Medicare may

be the source of the health benefit suggesting that universal coverage at other ages may have similar health effects.

WP12536

Jeffrey R. Brown, Norma Coe, Amy Finkelstein
Medicaid Crowd-Out of Private Long-Term Care Insurance Demand: Evidence from the HRS

This paper provides empirical evidence of Medicaid crowd out of demand for private long-term care insurance. Using data on the near- and young-elderly in the Health and Retirement Survey, our central estimate suggests that a \$10,000 decrease in the level of assets an individual can keep while qualifying for Medicaid would increase private long-term care insurance coverage by 1.1 percentage points. These estimates imply that if every state in the country moved from their current Medicaid asset eligibility requirements to the most stringent Medicaid eligibility requirements allowed by federal law — a change that would decrease average household assets protected by Medicaid by about \$25,000 — demand for private long-term care insurance would rise by 2.7 percentage points. While this represents a 30 percent increase in insurance coverage relative to the baseline ownership rate of 9.1 percent, it also indicates that the vast majority of households would still find it unattractive to purchase private insurance. We discuss reasons why, even with extremely stringent eligibility requirements, Medicaid may still exert a large crowd-out effect on demand for private insurance.

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