

June 2011, NUMBER 11-8

CENTER for
RETIREMENT
RESEARCH
at BOSTON COLLEGE

DOES MEDICARE PART D PROTECT THE ELDERLY FROM FINANCIAL RISK?

BY GARY V. ENGELHARDT AND JONATHAN GRUBER*

Introduction

The Medicare Modernization Act of 2003 added the Part D prescription drug benefit to the Medicare program. This addition, which became effective in 2006, increased Medicare program costs by more than 10 percent in order to provide, for the first time, prescription drug coverage to enrollees. Part D has since enrolled a sizeable share of elders and now pays for a large percentage of their prescriptions. Despite the program's size and importance, however, little is known about its effectiveness. One way to measure its success is to determine to what extent it provides financial security to elders. If Part D covers prescription drug spending that was putting older Americans at financial risk, it may result in large social gains. If it simply substitutes for – or “crowds out” – existing insurance arrangements, the social gains may be much smaller. Beyond a crowd-out analysis, a full evaluation of Part D also needs to consider other social benefits and costs, such as the potential health benefits and the efficiency costs of subsidizing drug coverage. The study summarized in this *brief* evalu-

ates Part D's impact using the 2002-5 and 2007 waves of the *Medical Expenditure Panel Survey* (MEPS) before and right after the program's implementation.

The *brief* is organized as follows. The first section presents background on Part D. The second section describes the MEPS data. The third section presents the results of Part D's effect on prescription drug coverage and expenditures and offers a tentative assessment of the program's overall social impact. The final section concludes that Part D has resulted in substantial crowd out of both coverage and expenditures and, as of 2007, has produced only modest benefits.

Medicare Part D Program

Medicare, which provides universal health insurance coverage to people over age 65 and to those on the federal Disability Insurance program, was established in 1965. The original program covered most medical needs for the elderly and disabled, but excluded

* Gary Engelhardt is a professor of economics at Syracuse University. Jonathan Gruber is a professor of economics at MIT. Both authors are research associates of the Center for Retirement Research at Boston College. This *brief* was adapted from a longer paper (Engelhardt and Gruber, 2011 forthcoming). The research reported herein was supported by the CRR pursuant to a grant from the U.S. Social Security Administration funded as part of the Retirement Research Consortium. Gruber also acknowledges financial support from the National Institute on Aging. The opinions and conclusions are solely those of the authors and should not be construed as representing the opinions or policy of the Social Security Administration, any agency of the federal government, the CRR, MIT, NBER, or Syracuse University. The authors are grateful to John Graves for excellent research assistance.

prescription drug coverage. However, in the 1990s, the advancement of prescription drug treatments for common illnesses among the elderly drew attention to this coverage gap. In 2003, the Bush Administration and Congress agreed on a far-reaching prescription drug benefit package at a projected cost to the federal government of \$40 billion per year for its first 10 years.¹

The resulting benefit – known as Medicare Part D – is delivered by private insurers under contract with the government. Beneficiaries can choose from three types of insurance: 1) stand-alone plans, called Medicare Prescription Drug Plans, that just offer prescription drug benefits; 2) Medicare Advantage plans, which provide all Medicare benefits (including prescription drugs); or 3) the beneficiaries' current employer/union plan (for those offered such coverage), as long as coverage is at least as generous as the standard Part D plan.²

The small literature that has emerged on the Medicare Part D program has primarily investigated two issues. The first is the determinants and efficacy of decisions to enroll in the program and which plan to choose. The second evaluates the impacts of the plan on prescription drug utilization. Few studies address the issue of how Part D has affected financial security.³

The Data

This study uses the 2002-5 and 2007 waves of the MEPS, which is comprised of a nationally representative set of respondents drawn from the *National Health Interview Survey* (NHIS). The MEPS is a two-year overlapping panel focused on health insurance coverage, health care utilization, and expenditure, and is used to construct data for the National Health Accounts.

For each calendar year of the survey, the sample is a combination of individuals in their first year of the panel and individuals in their final year of the panel. Interviews are conducted three times per year. The analysis summarized in this *brief* uses variables measured as of the end of each calendar year (i.e., from the last interview of the year). It excludes 2006 because that was a transition year between private coverage and public coverage for many.⁴

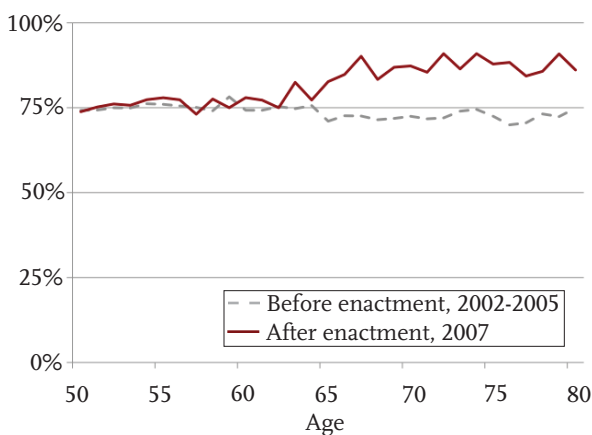
Impact of Part D on Coverage and Expenditures

The analysis addresses three separate questions. First, did Part D help reduce financial risk by increasing prescription drug coverage among the elderly? Second, did Part D increase total spending on prescription drugs and help ease the spending burden on individuals? Third, considering both benefits and costs, what is the initial net social impact of Medicare Part D?

Coverage

The first step is to examine trends in prescription drug insurance coverage for older Americans. Figure 1, which compares coverage before and after Part D enactment, shows the age profile of coverage from any source for 50-80 year-olds. Prior to Part D enactment, coverage rates from any source were constant at about 75 percent until age 65, before dropping by about 5 percentage points. After Part D, the age profile is similar through the early 60s before diverging sharply at age 65 as coverage rates jump to as high as 90 percent. This shift over only a one- to two-year period is remarkable.

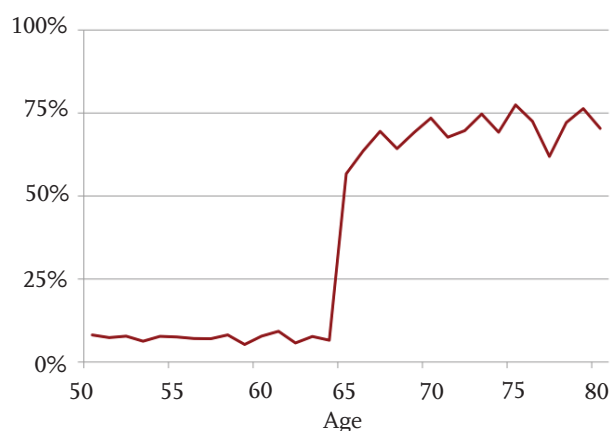
FIGURE 1. PRESCRIPTION DRUG COVERAGE RATES FROM ANY SOURCE BEFORE AND AFTER PART D ENACTMENT,* INDIVIDUALS AGES 50-80



* "Before" covers 2002-2005 and "after" covers 2007.
Source: Engelhardt and Gruber (2011 forthcoming).

Figure 2 shows how the source of coverage changes from private to public by age after Part D enactment.⁵ The public coverage rate in 2007 was less than 10 percent for individuals under age 65. Public coverage then jumps dramatically to 70 percent or more for those 65 and older. This age-related increase in public coverage is much larger than the total increase in insurance coverage (as shown in Figure 1, a gap between the before-and-after lines of roughly 15 percentage points), suggesting significant crowd out of existing coverage by the Part D expansion.

FIGURE 2. PERCENTAGE OF INDIVIDUALS AGES 50-80 WITH PUBLIC PRESCRIPTION DRUG COVERAGE AFTER PART D ENACTMENT, 2007



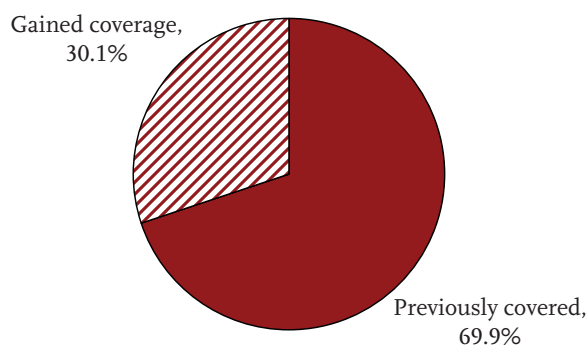
Source: Engelhardt and Gruber (2011 forthcoming).

To confirm that other factors that could affect drug coverage during this period are not responsible for the apparent crowd out, regression analysis is required. The analysis summarized here compares prescription drug coverage and utilization between the near-elderly (ages 60-64) and the elderly (age 65 and over). The results are similar across numerous specifications, including defining near elderly as ages 50-64, defining elderly as ages 65-70, and controlling for demographics, region, health status, and income.⁶

The estimates show a very large increase in prescription drug coverage from 2002-05 to 2007 for those individuals age 65 and over with only a moderate corresponding increase for 60-64-year-olds. Overall, Part D was associated with a 12.3-percentage-point rise in prescription drug coverage among the elderly. The corresponding calculation for public coverage shows a rise of 40.8 percentage points in public cover-

age for those individuals age 65 and over. Putting the two estimates together (12.3/40.8) implies very large crowd out of 70 percent, which means that the vast majority of those who signed up for Part D moved over from another source of coverage (see Figure 3).⁷

FIGURE 3. ESTIMATE OF THE CROWD-OUT EFFECT OF PUBLIC PRESCRIPTION DRUG COVERAGE OF THE ELDERLY, AGE 65 AND OVER



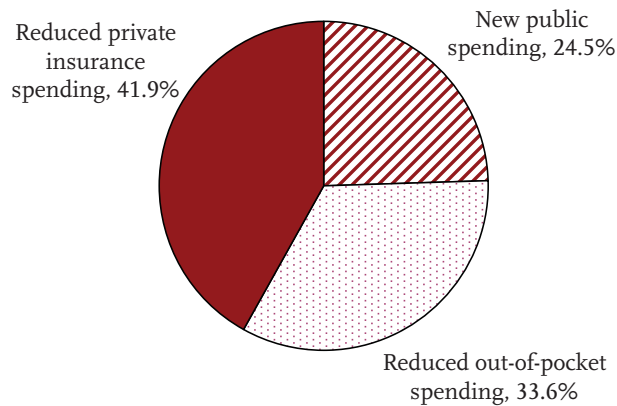
Source: Engelhardt and Gruber (2011 forthcoming).

Expenditures

The next step is to examine the impact of Part D on prescription drug spending, which is interesting for two reasons. First, it extends the crowd-out analysis to look more specifically at the *dollar reduction* in spending covered by private insurance relative to the *dollar increase* in public spending. Second, using the spending data allows for a direct assessment of the extent to which public insurance increased the financial protection of the elderly through reduced out-of-pocket costs.

The study again turns to regression analysis to estimate how changes in public prescription drug spending for the elderly influence changes in total drug spending. The resulting estimates indicate that Part D crowds out substantial spending by both private insurers and individuals (see Figure 4 on the next page). Private insurance spending falls by more than 42 cents for every dollar increase in public spending. Out-of-pocket spending by the elderly falls by about 34 cents per public dollar spent.⁸ Thus, the estimates suggest that each dollar of public expenditure raises

FIGURE 4. ESTIMATE OF THE CROWD-OUT EFFECT OF PUBLIC PRESCRIPTION DRUG SPENDING OF THE ELDERLY, AGE 65 AND OVER



Source: Engelhardt and Gruber (2011 forthcoming).

total expenditure by 25 cents, or that there is about 75 percent crowd out. This result is strikingly similar to the coverage crowd-out estimate above.

Despite the large crowd-out estimate, Part D may still provide valuable risk protection to the elderly. However, a closer examination of the data shows that – for the median participant – Part D is associated with a reduction in only \$180 in out-of-pocket spending. For those with very high out-of-pocket spending – the 90th percentile – the reduction is \$800. To put these numbers into context, the baseline value for out-of-pocket spending is \$2,500.

Overall Social Impact of Part D

While the regression results indicate a very high degree of crowd out for both participation and expenditures, a full evaluation of the program requires a broad assessment of its net social benefits. On the benefit side, as noted in the previous section, Part D could help beneficiaries by reducing the risk associated with prescription drug spending. It could also, perhaps, reduce spending needs on health care services other than prescription drugs. On the cost side, Part D – like any tax-funded program – involves a loss in economic efficiency from redirecting resources from the private market to a public activity. Another cost is the potential moral hazard associated with the program; as drugs become relatively cheaper for individuals, they could be less careful with how much they consume so that they end up spending more on drugs that may not offer compelling health benefits. While calculating the costs and benefits is difficult and requires many simplifying assumptions, this study's findings, which are detailed in the full paper, suggest that both the potential direct gains and the costs are relatively modest.⁹

Conclusion

This study finds that the introduction of Medicare Part D is associated with substantial crowd out of both prescription drug coverage and expenditures. An initial assessment of the broader social impact of the program suggests that both its benefits and costs are modest. However, a comprehensive evaluation of the program requires further research, including an analysis of whether Part D is associated with gains in health that would both improve individuals' quality of life and potentially lower health spending on non-prescription drug services.

Endnotes

1 Congressional Budget Office (2002).

2 In this case, the plan sponsor would receive a Retiree Drug Subsidy from the government.

3 Two studies that do address this issue are Lichtenberg and Sun (2007); and Levy and Weir (2009).

4 For a full discussion of the specific MEPS data used in this analysis, see Engelhardt and Gruber (2011 forthcoming).

5 “Public” means either through Medicare or Medicaid. The definition of public coverage and expenditure used in this study includes two important caveats. The first is how to classify prescription drug coverage through Medicare HMOs. Before the implementation of Part D in 2006, many, but not all, individuals who were enrolled in Medicare HMO plans received prescription drug coverage, which actually was a mix of private and public coverage. This study classifies Medicare HMOs as private in the pre-period and public in the post-period. The second is that the Medicare Modernization Act that created Part D gives subsidies to employers/unions to keep coverage under the Retiree Drug Subsidy program. Therefore, some government-funded insurance will be classified as “private” coverage under the definition used in this study.

6 See the full paper for details (Engelhardt and Gruber, 2011 forthcoming).

7 If coverage through a Medicare HMO prior to 2006 is treated as public coverage in the pre-period, then the estimate of the crowd-out effect drops to 70 percent.

8 The results also showed that there is little change in the odds that individuals fill a prescription. On the other hand, the number of prescriptions filled per enrollee went up astronomically, by four prescriptions per new enrollee, or 14 percent of the pre-period average for those over age 65.

9 These findings are subject to a number of caveats. On the one hand, these welfare calculations may overstate the gains from Part D if other consumption-smoothing mechanisms are available to the elderly, such as private income transfers, own savings, or uncompensated medical care. On the other hand, the gains from Part D may be understated because the calculations were based on an annual, rather than a lifetime, measure of expenditure risk. In particular, there is some evidence that lifetime medical spending risk is greater than annual risk, because out-of-pocket expenditures are highly persistent over time (see Feenberg and Skinner, 1994; and French and Jones, 2004). Finally, the welfare calculations were predicated on the assumption that individuals do not value any improvements in health associated with increased prescription drug spending. To the extent that Part D is associated with health gains and they are valued, the estimates will understate the true gains from Part D.

References

- Congressional Budget Office. 2002. *Issues in Designing a Prescription Drug Benefit for Medicare*. Washington, DC: U.S. Government Printing Office.
- Engelhardt, Gary V. and Jonathan Gruber. 2011 (forthcoming). "Medicare Part D and the Financial Protection of the Elderly." *American Economic Journal: Economic Policy*.
- Feenberg, Daniel and Jonathan Skinner. 1994. "The Risk and Duration of Catastrophic Health Expenditures." *Review of Economics and Statistics* 76: 663-647.
- French, Eric and John Bailey Jones. 2004. "On the Distribution and Dynamics of Health Care Costs." *Journal of Applied Econometrics* 19: 705-721.
- Levy, Helen and David Weir. 2009. "Take-up of Medicare Part D: Results from the Health and Retirement Study." Working Paper #14692. Cambridge, MA: National Bureau of Economic Research.
- Lichtenberg, Frank and Shawn Sun. 2007. "The Impact of Medicare Part D on Prescription Drug Use by the Elderly." *Health Affairs* 26: 1735-1744.
- Centers for Disease Control and Prevention. *National Health Interview Survey, Medical Expenditure Panel Survey, 2002-2005 and 2007*. Washington, DC: U.S. Department of Health and Human Services.

About the Center

The Center for Retirement Research at Boston College was established in 1998 through a grant from the Social Security Administration. The Center's mission is to produce first-class research and forge a strong link between the academic community and decision-makers in the public and private sectors around an issue of critical importance to the nation's future. To achieve this mission, the Center sponsors a wide variety of research projects, transmits new findings to a broad audience, trains new scholars, and broadens access to valuable data sources. Since its inception, the Center has established a reputation as an authoritative source of information on all major aspects of the retirement income debate.

Affiliated Institutions

The Brookings Institution
Massachusetts Institute of Technology
Syracuse University
Urban Institute

Contact Information

Center for Retirement Research
Boston College
Hovey House
140 Commonwealth Avenue
Chestnut Hill, MA 02467-3808
Phone: (617) 552-1762
Fax: (617) 552-0191
E-mail: crr@bc.edu
Website: <http://crr.bc.edu>