



findings brief

key findings

- Medicare beneficiaries reduced their drug spending in response to interruptions in prescription coverage prior to the implementation of the Part D benefit
- Interruptions in drug coverage were amplified, as a response to gaps in prescription drug coverage, for those suffering from chronic conditions
- Trends in spending and medication utilization by Medicare beneficiaries in this study illustrate how Part D beneficiaries potentially would decrease their medication utilization as a response to increasing gaps in their prescription coverage

Assessing the Impact of Coverage Gaps in the Medicare Part D Drug Benefit

Prescription drug coverage is vital for many Medicare beneficiaries, yet studies show that beneficiaries tend to decrease spending on prescription drugs when faced with coverage reductions. In some cases, as a result of coverage issues, nearly one-third of Medicare beneficiaries reduced their medication usage, foregoing prescription adherence, in order to save money.^{1,2} The passage of the Medicare Modernization Act in 2003 created comprehensive prescription drug coverage within the Medicare program, known as Medicare Part D. However, some aspects of the prescription drug benefit design raised concerns, particularly a potential gap in coverage referred to as the doughnut hole. The doughnut hole refers to a gap in prescription coverage in which beneficiaries pay the full out-of-pocket expenditures for their medications. This doughnut hole is problematic because as the coverage gap continues to widen, questions arise about whether beneficiaries will disrupt their medication treatment plans when faced with the full cost of their prescription drugs.³ Evidence demon-

strates that Medicare beneficiaries experiencing gaps in their prescription drug coverage tend to restrict their medication usage and spending when faced with the full cost of their medications.⁴

Assuming similar behavior patterns under the Medicare prescription drug benefit, some hypothesize that the doughnut hole may place a disproportionate burden on people with chronic conditions, with the expanding coverage gap exacerbating their ability to remain on a continuous drug treatment plan. Upon implementation in 2006, Part D beneficiaries reached the doughnut hole after \$2,250 in prescription expenditures, leaving them to incur \$3,600 in out-of-pocket expenses, at which point Part D coverage started again.⁵ In 2008 the doughnut hole is reached after \$2,510 in expenditures, leaving beneficiaries' responsibility for out-of-pocket expenditures of slightly more than \$3,200 before additional Medicare Part D coverage is triggered.⁶ By 2016 the gap is expected to exceed \$6,000⁷



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Prior to the implementation of Part D, there was much speculation about the likely impact of the coverage gap but no empirical evidence on which to estimate its impact on costs or utilization. In order to predict the potential effects of the doughnut hole, Bruce C. Stuart, Ph.D., of the University of Maryland, Baltimore and colleagues analyzed prior trends in prescription drug utilization for Medicare beneficiaries. Using Medicare Current Beneficiary Survey data on supplemental prescription coverage from 1998 to 2000, the researchers analyzed spending and utilization. They found that interruptions in coverage led to reduced drug spending, which was amplified for those with chronic conditions. Stuart speculated, “The presence of large coverage gaps in the Medicare Part D benefit could mean that many beneficiaries would face full retail prescription prices for extended periods during which they had less than full knowledge about the future.”

In order to better understand how Medicare beneficiaries and their prescribers might respond, Stuart and his colleagues focused their analyses on beneficiaries with higher expenditures, who would be more likely to experience longer coverage gaps than low-spending beneficiaries. They also examined trends for those with moderate to high drug expenditures who cycle in and out of coverage over the course of a year.⁸ The experiences of those in the study provide a clearer understanding of spending behavior and help predict the problems beneficiaries enrolled in Part D might face over time. This will especially hold true for those suffering from chronic illnesses, who spend above average amounts on prescriptions.

Methodology

The study used data from the 1998-2000 Medicare Current Beneficiary Survey (MCBS) which is conducted by the Centers for Medicare and Medicaid Services (CMS). The MCBS data is from a national, longitudinal survey that gathers information on Medicare beneficiaries' health and functional status, in addition to their supplemental prescription drug plans. These data allowed Stuart and his colleagues to gauge prescription drug usage and expenditures among Medicare beneficiaries and also

looked at the relationship between gaps in coverage and spending on prescription drugs. In order to track usage and spending, three years of data were analyzed. While the prescription plans included in these data differ from the Part D coverage, they demonstrate the benefit design gap in coverage and its implications. Drug therapy is often a vital component of treatment for those suffering from chronic conditions. Therefore, Stuart focused his analyses on those with diabetes, chronic lung disease, and mental illness, in order to help determine how coverage gaps will affect the chronically ill.

The researchers used a two step analytic strategy. They controlled for “selection on observables,” which are measures that indicate a range of variables such as Medicare Part A and B supplements, age, sex, race, marital status, socioeconomic status, education, location, health status, and mortality of the beneficiaries.⁹ The Diagnostic Cost Group/Hierarchical Coexisting Condition (DCG/HCC), a risk adjuster capturing the presence of medical conditions on Medicare claims data, was applied to the data. The researchers then used the Durbin-Wu-Hausman (DWH) test to test for “selection on nonobservables,” looking for factors that would predict prescription gaps and drug spending.¹⁰ By employing these tests, the researchers were able to control for selection bias.

Key Findings

The researchers found that a significant number of beneficiaries experienced gaps in their prescription coverage. In comparison to those beneficiaries with continuous coverage, those experiencing gaps tended to reduce or skip the medications they used in order to reduce their out-of-pocket spending. This finding held especially true for beneficiaries suffering from chronic conditions, who were more vulnerable to interruptions in their prescription treatment due to the coverage gap. For example, mentally ill beneficiaries, in comparison to their peers with continuous coverage, were more likely to not receive their medications, with the most significant effect on those receiving psychiatric medications.¹¹

The research team also developed a simulation model to predict how Part D coverage would affect people's drug spending. How people responded in the past is a good indicator of possible future trends in utilization and spending behavior. According to the simulation model, the greatest effects of the Part D doughnut hole would be felt by beneficiaries with mental illness followed by COPD and diabetes. Beneficiaries with these chronic conditions spend more out-of-pocket dollars on medicines, experience longer gaps in coverage, and have a greater sensitivity to interruptions in their prescription treatment programs compared to the average beneficiary.

Policy Implications

The out-of-pocket expenditures experienced as a result of the Part D doughnut hole coverage gap are increasing, with more beneficiaries becoming vulnerable to disruptions in prescription drug coverage. In 2008 the coverage gap will be \$3,216 per beneficiary; however, by the year 2016 the gap is expected to exceed \$6,000.¹² The ever widening coverage gap for prescription drugs has serious implications for both average and above-average spenders.

This study illustrates how beneficiaries faced with the full cost of their prescriptions reduce their overall utilization, a phenomenon that may become more common with increasing out-of-pocket expenses. Over time it appears that the coverage gap may negatively affect those suffering from chronic conditions by exacerbating the hurdles they already face. Beneficiaries suffering from diabetes, chronic lung disease, and mental illness are all likely to have higher out-of-pocket spending and reduced prescription use. The doughnut hole will leave many people suffering from chronic conditions exposed to coverage gaps and high costs for routine medications. These trends are likely generalizable beyond those chronic conditions studied to others, such as cardiovascular disease. Medicare beneficiaries' responses to gaps in prescription coverage will continue to emerge as an important issue as Baby Boomers become eligible for Medicare benefits, many of those who suffer from chronic conditions.

Conclusion

Stuart and colleagues' findings highlight the areas in which coverage gaps in prescription plans are the most harmful, mainly for those suffering from chronic conditions. As the population continues to age into the Medicare program and the doughnut hole expands, questions about gaps in prescription drug coverage will be pushed to the forefront of the coverage debate. Stuart's research has shown that, when faced with the full cost of their medications, people tend to reduce utilization in order to lower their overall costs. This practice can be detrimental, particularly to those suffering from chronic conditions for whom prescription drugs are a vital part of their treatment plan.

About the Author

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Endnotes

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- 2 Hsu, J. et al. "Unintended Consequences of Caps on Medicare Drug Benefits." *The New England Journal of Medicine*, 354:22 (June 2006): 2349-2359.
- 3 "The Medicare Prescription Drug Benefit," Medicare Fact Sheet, The Henry J. Kaiser Family Foundation, February 2008. Also see http://www.kff.org/medicare/upload/7044_08.pdf.
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