WHITE PAPER

MEDICARE PART D IMPROVES THE ECONOMIC WELL-BEING OF LOW INCOME SENIORS

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EXECUTIVE SUMMARY

The Medicare Part D program, which went into effect on January 1, 2006, was designed to increase the affordability of prescription medicines for elderly and disabled Medicare beneficiaries. While several studies have documented the positive impact Part D has had on the general Medicare population, little research has focused on how Part D has affected low income seniors. This study looks at the experience of a sample of Medicare beneficiaries, including seniors receiving the low income subsidy (LIS), who participated in three telephone interviews in 2005, 2006, and 2007. The findings show that prior to enrolling in a Medicare Part D plan, about one-third of beneficiaries receiving the LIS reported not having enough money to make ends meet at the end of the month. By 2007, enrollment in a Part D plan had reduced this percentage by half. Beneficiaries receiving the LIS who lacked prescription drug coverage prior to enrolling in a Part D plan also experienced a 55 percent reduction in their monthly out-of-pocket costs following enrollment. Previously uninsured Medicare beneficiaries not receiving the LIS experienced similar, but smaller, improvements in their economic well-being under Part D.

Overall, these data provide compelling evidence that Medicare beneficiaries enrolling in a Part D drug plan experienced significant economic improvements with regard to several measures of prescription drug costs, as well as in their general ability to make ends meet. These data also suggest that the improvements in economic well-being obtained during the first year of coverage were maintained throughout the second year, and in some cases, continued to improve. It appears that by improving their ability to afford needed medications, Part D contributed to a significant improvement in the overall economic situation of low income seniors.

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INTRODUCTION

The Medicare Prescription Drug, Improvement, and Modernization Act (MMA) established a new prescription drug benefit (Medicare Part D) for Medicare beneficiaries beginning January 1, 2006.

Prior to the establishment of Medicare Part D, roughly 11 million beneficiaries had no or limited prescription drug coverage.[1] The new program was intended to make it easier for Medicare beneficiaries without comprehensive drug coverage to pay for their prescription medicines,[2] and increased the share of Medicare beneficiaries with prescription drug coverage from 59 percent to 89 percent.[3] Numerous studies have documented problems in access to medicines before Part D added prescription drug insurance to the existing insurance for physician and hospital expenditures, including high out-of-pocket costs and high rates of cost-related nonadherence to prescribed medicines. In 2005, among Medicare recipients who chose not to fill a prescription, 75 percent reported not doing so because it was not covered by insurance or would cost too much.[4] Many studies have evaluated the impact of Part D on lowering out-of-pocket prescription drug costs for the general Medicare population. Only three of the more than 20 studies, however, examined Part D's impact on seniors receiving the low income subsidy (LIS).[5,6,7] And all three of those studies were limited to the first full year of coverage.

This paper examines the economic well-being of previously uninsured Medicare beneficiaries, including those qualifying for the low income subsidy, before and after enrollment in the new drug program. Along with looking at changes in the affordability of medication, this research also specifically explores the overall impact of Part D on the economic well-being of low income seniors. We follow the same cohort of beneficiaries from 2005 through the first two full years of experience with the prescription drug program in 2006 and 2007. This research presents some of the first data capturing 2007 experiences while allowing an examination of change at the individual level for a nationally representative sample of community-living beneficiaries.

METHODS

This analysis focuses on a panel of 628 Medicare beneficiaries who participated in a 35-minute telephone interview in 2005, 2006, and 2007.[8] Respondents were categorized into three groups according to their coverage history across the three survey periods:

LIS Previously Uninsured—No drug coverage in 2005; enrolled in a Part D plan and **receiving** the low income subsidy in 2006 and 2007,

Non-LIS Previously Uninsured—No drug coverage in 2005; enrolled in a Part D plan and **not receiving** the low income subsidy in 2006 and 2007,

Previously Insured—Drug coverage in 2005, 2006, and 2007.

Previously insured beneficiaries who had prescription drug coverage in 2005, 2006, and 2007 received drug coverage through a Medicare Advantage plan in 2005 and continued with

prescription coverage under Part D in both 2006 and 2007. Respondents were determined to have received the LIS if they were enrolled in a Part D plan in 2006 and 2007, reported income at 150 percent or less of the Federal poverty level and met at least two of the four criteria for receiving a subsidy based on reported monthly premium, deductible, generic copayments, and brand copayments.[9]

The survey included questions about type of current prescription drug coverage, use of prescription medications, income, monthly out-of-pocket (OOP) prescription medication spending, general economic well-being, difficulty paying for prescription medications, and chronic health conditions. The chronic health conditions specifically asked about included depression, respiratory conditions (COPD, asthma and emphysema), osteoporosis, diabetes, arthritis, high cholesterol, and high blood pressure. The same survey instrument was used in 2005, 2006, and 2007.

RESULTS

Previously uninsured beneficiaries receiving the LIS were in worse health than other beneficiaries in the sample. Those receiving the LIS were almost twice as likely to report being in fair or poor health as were the other groups, and reported more activity of daily living limitations (ADLS) in 2005 (Table 1).

Table 1: Demographic and Health Characteristics

	LIS Previously Uninsured	Non-LIS Previously Uninsured	Previously Insured
Demographics			
Number of beneficiaries	74	371	183
Mean age in 2005 (std. dev.)	69.3 (10.0)	72.2 (8.1)	72.8 (7.2)
Percent female	81.1%	63.9%	74.9%
Health Status in 2005			
Excellent/ Very good	29.7%	51.6%	52.8%
Good	31.1%	29.1%	27.5%
Fair/Poor	39.2%	19.3%	19.8%
Mean ADLs in 2005 (std. dev.)	1.0 (1.5)	0.5 (1.0)	0.7 (1.2)
Mean number of conditions in 2005 (std. dev.)*	2.7 (1.8)	2.3 (1.6)	2.6 (1.8)
Mean number of medications in 2005 (std. dev.)**	4.7 (3.4)	3.9 (3.2)	4.5 (3.3)

*Beneficiaries were asked if their doctor told them or if they were currently being treated for any of the following conditions: arthritis (other than rheumatoid), respiratory condition, skin or other cancer, congestive heart failure, depression, diabetes, high blood pressure, high cholesterol, stroke, Parkinson's disease, osteoporosis or other.

**Beneficiaries were asked how many medications they were currently taking.

Measures of economic well-being in 2005, 2006, and 2007 are shown for each of the three drug coverage groups in Table 2. On all three measures of economic well-being, the LIS previously uninsured, non-LIS previously uninsured and previously insured showed improvements following enrollment in a Part D prescription drug plan.

Table 2: Economic Well-being in 2005 Through 2007

	LIS Previously Uninsured	Non-LIS Previously Uninsured	Previously Insured
Difficulty paying prescription bills			
2005	29.7%	21.3%	20.2%
2006	14.9%+	11.3%++	12.6%
2007	9.5%	10.0%	12.6%
Not making ends meet			
2005	32.9%	12.6%	13.3%
2006	18.9%+	9.6%	15.2%
2007	16.2%	8.2%	14.8%
Average monthly out-of-pocket costs			
2005	$67	$129	$108
2006	$34++	$75++	$61
2007	$30	$69	$65

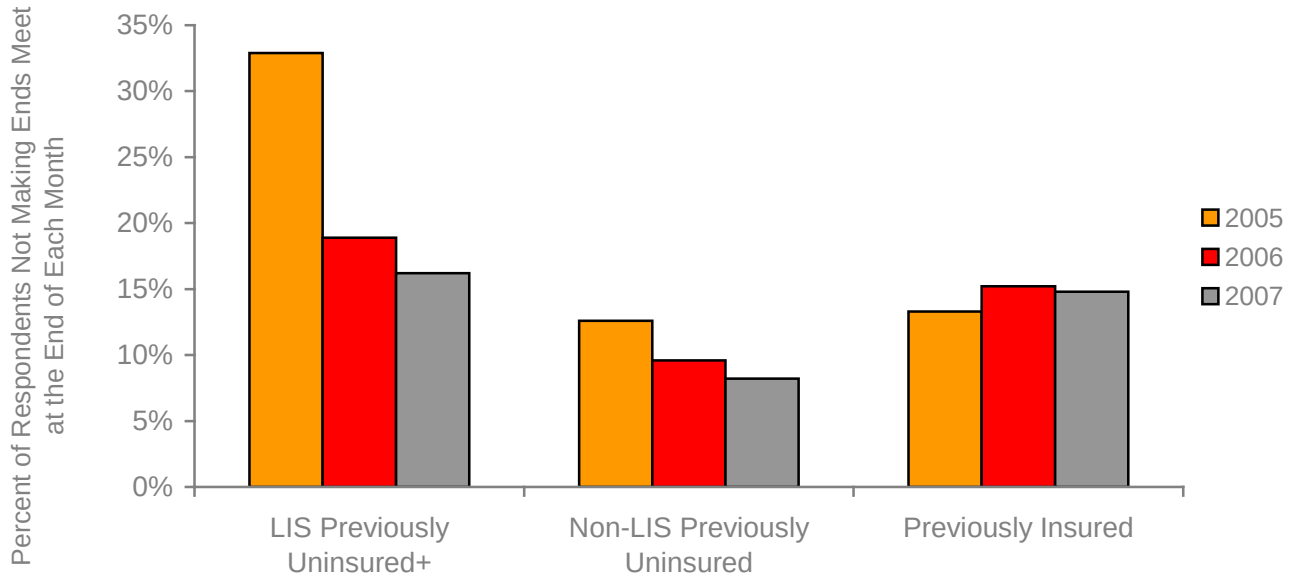
\+ Change is statistically significant from prior year at p <0.0167.

++ Change is statistically significant from prior year at p <0.001.

The increased affordability of prescription medications for the previously uninsured is most clearly seen in the large decline in the share of beneficiaries having difficulty paying for prescription medications after enrolling in a Part D plan, especially for those receiving the LIS. The share of beneficiaries reporting difficulty paying for prescriptions dropped by two-thirds from 2005 to 2007 among the LIS (29.7 percent to 9.5 percent) and declined by half for the non-LIS previously uninsured (21.3 percent to 10 percent).

Gaining comprehensive prescription drug coverage resulted in other improvements in economic well-being as well. Prior to Part D, just about one-third of beneficiaries receiving the LIS reported not having enough money to make ends meet at the end of each month. By 2007, this percent was cut in half to 16.2 percent. Previously uninsured beneficiaries who did not receive the LIS also noted a small, although not statistically significant, improvement each year. (Figure 1)

Figure 1: Share of Beneficiaries Not Able to Make Ends Meet Declined After Enrolling in a Medicare Part D Plan

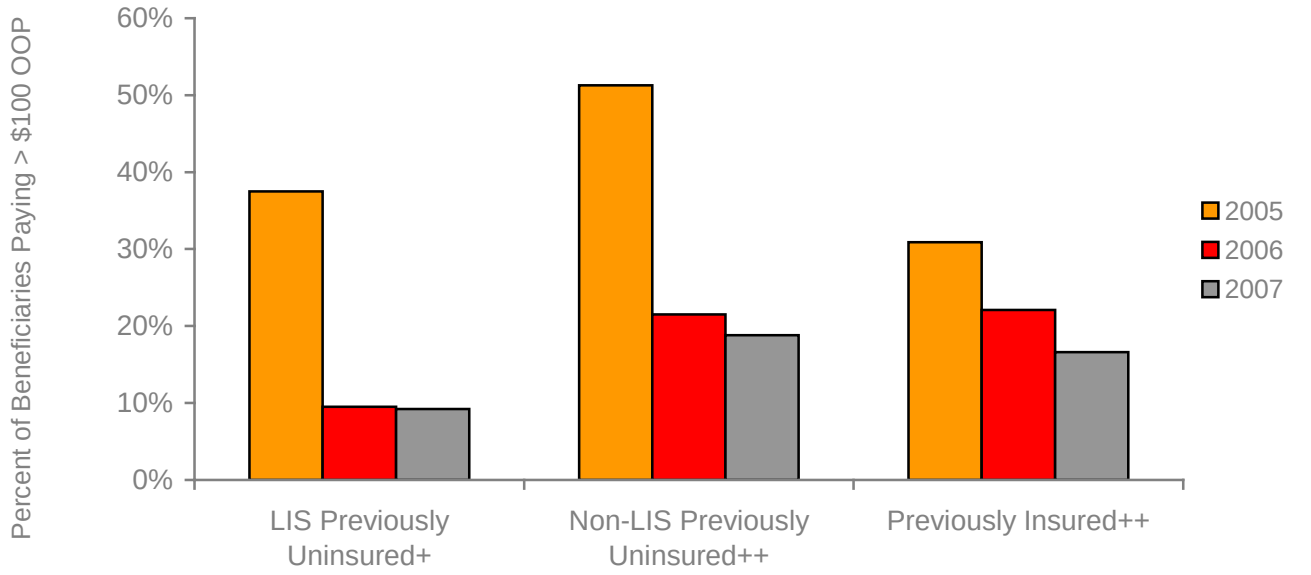


+ Decrease is statistically significant at p<0.0167 between 2005 and 2006.

These improvements in economic well-being are driven by the large decreases in monthly out–of-pocket costs, which are shown at the bottom of Table 2. By 2007, previously uninsured beneficiaries receiving the LIS experienced a significant 55 percent reduction in out-of-pocket costs, followed by a significant decrease of 47 percent among the previously uninsured not receiving the LIS. The previously insured also experienced a decline in monthly out-of-pocket costs, but the change was not statistically significant.

The share of beneficiaries with monthly out-of-pocket costs greater than $100 also declined significantly each year (Figure 2). In 2005, approximately 38 percent of previously uninsured beneficiaries receiving the LIS and 51 percent of the previously uninsured not receiving the LIS had monthly out-of-pocket costs in excess of $100. Following Part D enrollment, these percents declined to less than 10 percent for those receiving the LIS and less than 20 percent for those not receiving the subsidy in 2006 and 2007. While the previously insured also showed a sizable decrease, the change did not achieve statistical significance.

Figure 2: Share of Respondents with Monthly Out-of-Pocket Expenditures Greater Than $100 by Insurance Coverage



[+] Decrease is statistically significant at p<0.0167 between 2005 and 2006.
[++] Decrease is statistically significant at p<0.0001 between 2005 and 2006 and between 2006 and 2007.

DISCUSSION AND POLICY IMPLICATIONS

These data provide a fresh longitudinal look at the experiences of Medicare beneficiaries before and after the implementation of the Part D prescription drug program. While previous research has reported on the prescription coverage, use and spending of a longitudinal panel of Medicare beneficiaries from 2003 to 2006[10], this study follows the same beneficiaries from 2005 through the first two full years of program experience and examines changes in economic well-being from 2005 through 2007. Not only are these some of the first data to capture 2007 experiences, but the study also allows an examination of change at the individual level for beneficiaries who are largely representative of the general Medicare community-living population.

Overall, these data provide evidence that Medicare beneficiaries enrolling in a Part D drug plan, and especially those receiving the LIS, experienced significant economic improvements, both with regard to prescription drug costs, as well as in their general ability to make ends meet. While these improvements were greatest for those receiving the low income subsidy, other beneficiaries who were previously uninsured and those who had prior coverage under a Medicare Advantage plan also experienced improvements on all measures of economic well-being. In addition to the improvements made in just the first two years of the program, beneficiaries not receiving the LIS are likely to experience additional gains in economic well-being as the Part D coverage gap is filled.

These data also suggest that the improvements in economic well-being obtained during the first year of coverage were maintained throughout the second year, and in some cases, continued to improve. While the improvements in out-of-pocket expenses were anticipated under the new program, these data further suggest that the program benefits extended to the general economic well being of the lowest income seniors. The share of beneficiaries receiving the LIS reporting that they could not make ends meet declined by 17 percentage points through 2007.

LIMITATIONS

Although this study did include Medicare beneficiaries under age 65 who are disabled, we were not able to include those of any age who are institutionalized. Therefore, these results are generalizable only to the non-institutionalized Medicare population. In addition, those aged 75 and over in our study appear to be somewhat healthier than Medicare Current Beneficiary Survey (MCBS) participants of the same ages. This difference is likely due to the use of telephone survey in our study which requires that the participant be capable of listening and responding to questions over the phone, whereas the MCBS is conducted in person. As a result, our study may underestimate the use of prescription medications among those age 75 and over. The overall comparability in demographics and health status between our sample and the 2002 and 2003 MCBS samples, however, supports the generalizability of this study population to the national population of non-institutionalized Medicare beneficiaries. Lastly, we were not able to take assets into account when determining eligibility for the low income subsidy. However, in addition to the income cut-off, we required that the reported deductible, premium, and copayments be consistent with the LIS program criteria.

CONCLUSION

Prescription medications are a critical component of modern healthcare. These data show that Part D significantly eased the economic burden of previously uninsured and low-income seniors both in general and specifically with regard to their ability to afford their medications.

FOR MORE INFORMATION

For more information about this white paper, please e-mail the authors at healthcare.pharma@thomsonreuters.com.

APPENDIX A: DETAILED DESCRIPTION OF METHODS

STUDY SAMPLE AND SURVEY

A 35-minute telephone interview was conducted between September and November in 2005, 2006, and 2007. Approximately 24,000 Medicare beneficiaries over age 65 or under 65 and disabled, who had previously participated in a nationally representative survey and had given permission to be contacted for future surveys, made up the sampling frame for this study. Respondents were initially selected using random-digit dialing of both listed and unlisted residential telephone numbers. The initial survey was stratified by region to ensure representative geographical dispersion. The response rate to the initial survey in the fall of 2005 was 43.5 percent resulting in the original sample of 6,212. In the fall of 2006, 69 percent of the 2005 sample responded and 73 percent of the 2006 respondents completed the 2007 survey. Overall, 50 percent of the original sample completed all three surveys.[11]

The 2005, pre-Part D, characteristics of the sample were benchmarked to the respondents of the 2002 and 2003 Medicare Current Beneficiary Survey (MCBS).[12] Across drug coverage groups (no prescription coverage, Medicare Advantage, and Medicaid), our sample was comparable to the MCBS sample in terms of demographics (age, sex, income, marital status, poverty level), overall health status, functional limitations, prescription fills, number of medications taken, and out-of-pocket expenses. The older participants in our study, however, were healthier in terms of self-reported health status[13] and prevalence of certain chronic conditions.

STATISTICAL ANALYSES

The implementation of the Part D program provided a natural experiment, allowing each person to be used as his or her own control for assessing changes in economic well-being between 2005 and 2007. For the continuous outcomes, repeated measures analyses of variance (ANOVA) were conducted. First, an overall repeated measures ANOVA was conducted with year as the within-subjects repeated measures factor, coverage group as the between-subjects factor, and continuous outcome as the dependent variable. We found a significant interaction year-by-coverage effect. Consequently, three separate repeated measures analyses of variance were conducted to compare 2005, 2006, and 2007 means for each coverage group separately. For dichotomous outcomes, weighted least squares repeated measures Chi-Squares were conducted to compare the marginal proportions at 2005 against those of 2006 and 2006 against 2007. Given the multiple comparisons made across outcomes, time periods, and for the different prescription coverage groups, we use a Bonferroni-corrected critical p-value of 0.05/3 or 0.0167 as the criteria for statistical significance.

[1] Afendulis and Chernew, "State Level Impacts of Medicare Part D." *Am J Manag Care*, October 2011.
[2] Centers for Medicare & Medicaid Services. (2005). Medicare and You 2006. National Medicare Handbook (CMS Pub. No. 10050). Baltimore, MD: U.S. Department Of Health And Human Services.
[3] Afendulis et al, The Impact of Medicare Part D on Hospitalization Rates, *Health Services Research*, August 2011
[4] J. Kennedy et al, "Unfilled Prescriptions of Medicare Beneficiaries: Prevalence, Reasons, and Types of Medicines Prescribed," *J Manag Care Pharm* 14(6) (2008):553-60.
[5] P. Neuman et al., "Medicare Prescription Drug Benefit Progress Report: Findings From A 2006 National Survey of Seniors," Health Affairs 26 No. 5 (2007): w630-3643 (published online 21 August 2007; 10.1377/hltaff.26.5.w630); J. Madden et al., "Cost-related Medication Nonadherence and Spending on Basic Needs Following Implementation of Medicare Part D," *JAMA* 299(16) (2008):1922-1928.
[6] Joyce G, Goldman D, Vogt W, Sun E, Jena A. Medicare Part D After 2 years. *Am J Manag Care. 2009;15(8):536-544*
[7] Rupper R, Bair B, Sauer B, Nebeker J, Shinogle J. Samore M. Out-of-Pocket Pharmacy Expenditures for Veterans Under Medicare Part D *Med Care* 2007;45: S77–S80
[8] The 2,508 beneficiaries not included in the analyses consisted of 38 percent with consistent Employer coverage through 2007, 22 percent with Medicaid or other state prescription coverage in 2005, 12 percent with Medigap, 15 percent with inconsistent coverage through an employer or a Medicare Advantage plan and 12 percent who had no coverage in 2005 and either continued with no coverage through 2007 or had inconsistent coverage across 2006 and 2007.
[9] To be considered as receiving the LIS in 2006, we required that at least two of the four conditions were met in addition to meeting the income requirement: the reported deductible to be $0 or $50, the premium to be $0 if at 135 percent or less of the federal poverty level and less than $33 if income was between 135 percent and 150 percent of the federal poverty level, and that generic and brand copayments be between $0 and $5. We used similar criteria to evaluate whether these respondents were still receiving the LIS in 2007 and excluded 11 cases in which the respondent reported no longer meeting the income requirement or described cost-sharing features that were inconsistent with receipt of the LIS. An additional 18 respondents who met the LIS criteria for 2007, but not 2006, were also excluded from the analysis.
[10] D.G Safran et al, " Prescription Coverage, Use and Spending Before and After Part D Implementation: A National Longitudinal Panel Study," *J Gen Intern Med* 25(1) (2009):10–7.
[11] An analysis of the beneficiaries who were lost to follow-up by 2007 indicates that these individuals were in somewhat worse health (24.8 percent reported being in fair or poor health in 2005 relative to 17.8 percent of the sample analyzed in this paper), were more likely to be non-white (9.5 percent versus 5.9 percent of the final sample), and were more likely to have had a stroke (5.5 percent vs. 4.1 percent, respectively) or congestive heart failure (12.7 percent vs. 9.8 percent, respectively). The final sample was similar to the overall 2005 sample and the loss to follow-up cohort with regard to age, sex, average out of pocket expenses, percent with monthly out-of-pocket expenditures greater than $100 and the prevalence of most other chronic conditions.
[12] The 2002 and 2003 MCBS were the most recent survey data published at the time of our data collection and analysis.
[13] Among those age 75-84 and 85 plus, the percent reporting poor or fair health status in this study was 18 percent and 16 percent, respectively compared to 25 percent and 27 percent among the same age groups in the 2002 MCBS (see the Medicare ChartBook 2005 [Kaiser Family Foundation] Figure 1.3)