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How The New Medicare Drug Benefit Could Affect Vulnerable Populations:

Lower-income seniors and those with chronic illnesses could continue to have difficulty paying for their medications.

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Abstract

This study estimates how out-of-pocket drug costs could change for vulnerable populations (racial and ethnic minorities, the near-poor, and seniors with a greater burden of chronic conditions) who qualify for the standard Medicare drug benefit. Although the new benefit might be associated with modest-to-moderate declines in out-of-pocket spending for seniors who do not qualify for subsidies, the savings might not be shared equitably and therefore might not reduce financial barriers to medication use for these populations.

THE NEW MEDICARE PRESCRIPTION DRUG BENEFIT (Part D), scheduled to take effect 1 January 2006, is estimated to cost more than \$700 billion for the 2006–2015 period.¹ Despite the promise of expanded drug coverage, the standard benefit package will require substantial out-of-pocket drug spending for many beneficiaries, because of the deductible and the benefit structure (a gap in coverage known as the doughnut hole).²

Although the percentage of beneficiaries who might fall into the various coverage categories has been estimated elsewhere, there is little information about how the new drug benefit might affect vulnerable populations, including racial and ethnic minorities, the near-poor, and seniors who have a high burden of chronic illness.³ A recent study by the Henry J. Kaiser Family Foundation found that African Americans and Hispanics would save more out of pocket than whites would under the new benefit but that much of the extra savings would likely be the result of differences in the receipt of low-income subsidies.⁴ The Kaiser study did not report how various racial and ethnic groups would fare if they were eligible for the standard Medicare drug benefit, nor did it adjust for differences in the burden of chronic illness, which could be particularly important, because blacks and Hispanics have a higher burden of chronic illnesses than whites do.⁵

The purpose of this current study is to estimate total drug spending in 2006 for vulnerable populations who will be eligible for the standard Medicare benefit (that is, not eligible for subsidies) and to estimate how out-of-pocket spending might change for these groups under the new drug benefit. We focus on racial and ethnic minorities, the near-poor, and people with chronic illnesses, who often face barriers to medication use because of cost.⁶

Study Data And Methods

Data and sample

This analysis is based on data from the 1996–2000 Medical Expenditure Panel Survey Household Component (MEPS-HC), a nationally representative sample of the U.S. civilian, noninstitutionalized population conducted by the Agency for Healthcare Research and Quality (AHRQ).⁷ Multiple years of data were used to ensure an adequate sample of seniors. Household respondents to the survey provide information on the names of all outpatient medications used by each household member, the names and locations of the pharmacies where each was obtained, and permission to obtain records from these pharmacies. Pharmacies then provide data on total and out-of-pocket spending.⁸

We included people age sixty-five and older in this analysis. We excluded those whose annual incomes were less than 150 percent of the federal poverty level or who were eligible for Medicaid, because many of these people will receive subsidies for premium and cost-sharing assistance.⁹ In 2000, the sample of older Medicare beneficiaries with incomes of at least 150 percent of poverty, who were not eligible for Medicaid, represented 69.1 percent of the estimated 33,247,684 Medicare beneficiaries included in MEPS-HC.

Because seniors who now have an employer-sponsored health plan might not sign up for Part D and because blacks and Hispanics are less likely to have such coverage, we focus on out-of-pocket drug costs for the group of seniors without employer coverage; we also present findings for the larger population, including seniors with employer coverage, to serve as a comparison and to examine how out-of-pocket costs might change for these seniors if they were to sign up for Part D.¹⁰

Estimation of current and future drug spending

For consistency, all estimates are in 2006 dollars. To calculate annual drug costs in 2006, respondents' current total reported drug costs were escalated by an inflation factor to account for the yearly rise in drug spending (related to factors including the aging of the population; the growth of new patent-protected drugs used to replace existing, less costly medications; and new guidelines that promote more-aggressive treatment of many chronic conditions such as hypertension and hyperlipidemia).¹¹ The analysis reported in the text and exhibits uses a 12 percent inflation factor because this percentage is closest to what we observed in Centers for Medicare and Medicaid Services (CMS) data on drug spending increases for 2000–2006.¹² Computations and analyses were also done using 7 percent, 9 percent, and 15 percent inflation factors to examine the robustness of our findings.¹³

Total annual drug expenditure determines the category of cost sharing that people will face under the standard Part D benefit. Once the 2006 estimation was made, that value was inserted into the generally accepted formula for cost sharing for the standard benefit in 2006.¹⁴ Annual out-of-pocket drug costs before the new drug benefit takes effect were then compared with projected costs after it takes effect, using multivariate analyses (both in 2006 dollars).¹⁵

Data analyses

Data analyses examined two issues: (1) whether a person's race/ethnicity, income, and number of chronic health conditions are associated with projected total drug spending in 2006; and (2) how out-of-pocket drug spending compares before and after the drug benefit takes effect, using multivariate analyses.¹⁶

Study Results

Sample description

Our sample includes 5,996 seniors in all study years (un-weighted data). In 2000 this represented 22,973,595 people (weighted data): 89 percent white; 5.7 percent African American; 3.3 percent Hispanic; and 2.0 percent Asian or other. African Americans and Hispanics were more likely than whites to lack supplemental coverage (46.0 percent, 58.5 percent, and 32.0 percent, respectively; $p < .005$). They were also more likely to be in the lowest income group (26.7 percent, 28.9 percent, and 25.1 percent, respectively; $p < .005$). The number of chronic conditions was inversely associated with income.

Racial and ethnic minorities experienced a higher prevalence of the most common chronic conditions. For example, 41.1 percent of black seniors reported hypertension, compared with 30.0 percent of Hispanics and 28.8 percent of whites, and 23 percent of black and Hispanic seniors reported diabetes mellitus, compared with 12.8 percent of whites. Both of these chronic conditions were associated with high out-of-pocket drug costs (\$1,311 and \$1,828, respectively, in 2000).

Projected total drug costs

Although on average 9.2 percent of seniors will have more than \$5,100 in total drug costs in 2006, blacks, people with lower incomes, and people with more chronic health conditions are more likely to have this high level of spending than are whites and Hispanics, people with higher incomes, and people without chronic health conditions (Exhibit 1).¹⁷ Of people in our sample who have three or more chronic conditions, 34.9 percent will fall into the “doughnut hole,” and more than half will have more than \$2,250 a year in total drug costs.

Out-of-pocket drug costs

For seniors without employer-sponsored drug coverage (the most likely to enroll in Part D), projected out-of-pocket drug costs on average will decline \$478 under Part D (Exhibit 2). Seniors with more chronic conditions will experience greater absolute savings in out-of-pocket costs; blacks and Hispanics will save less than whites will in absolute dollars and as a percentage of current out-of-pocket costs (26.9 percent, 23.3 percent, and 34.3 percent, respectively). After adjustment for differences in sociodemographic characteristics, current health coverage, and chronic illness, we estimated that black and Hispanic seniors will experience savings in out-of-pocket drug costs that average \$237 less per year than savings for whites. Near-poor seniors (incomes below \$21,450) will have savings similar to those of seniors in the highest income category in the multivariate model, although their absolute out-of-pocket drug costs will still be higher.

In the larger group of seniors both with and without employer-sponsored insurance, the potential savings in out-of-pocket drug costs after Part D implementation (\$226 per year) is smaller than for the group without employer coverage (Exhibit 3). Similar findings are seen for near-poor seniors and those with more chronic conditions. However, those with employer coverage are projected to spend \$132 more out of pocket if they join the drug benefit.¹⁸ Hispanic seniors are projected to experience smaller absolute drug savings than whites are. The difference in drug savings for blacks compared with whites is not statistically significant.

Discussion

This estimate of out-of-pocket drug spending before and after the implementation of the new Medicare drug benefit in 2006 suggests that there will be modest-to-moderate overall savings for seniors who do not receive subsidies. However, these savings might not be shared equitably

and might not reduce financial barriers to medication use among vulnerable populations. Blacks and Hispanics would save less than whites, and low-income seniors who do not receive subsidies would still have relatively high drug costs compared with their incomes. Also, the increase in out-of-pocket drug costs for seniors who currently have employer-sponsored coverage has implications for who might join the Part D benefit.

Chronic illness

Blacks and Hispanics had significantly lower savings compared with whites among seniors who do not now have employer coverage. This is of concern, considering, for example, the high prevalence of hypertension and diabetes in these communities—diseases for which medication adherence is critical and costly.¹⁹ The standard drug benefit might not equitably benefit Hispanics and blacks and might ultimately result in greater disparities in health status.

Chronically ill seniors might save more out of pocket initially for drugs under the new benefit. However, the danger in having 35 percent of seniors with three or more chronic conditions fall into the doughnut hole is that these very people will have to pay 100 percent of the cost when a new drug is added and thus might be reluctant to add a new medication.²⁰ These findings confirm that the benefits structure is not designed to optimize coverage for chronically ill seniors.²¹

Low-income seniors

Our analysis includes only those with incomes of at least 150 percent of poverty and who are not eligible for Medicaid. Most seniors (69 percent in the MEPS sample) will not be eligible for low-income subsidies and will receive the standard benefit. The new drug benefit will have more generous support for low-income seniors, and they might benefit more.²² Although we excluded people who would be eligible for subsidies, we did examine the near-poor, who would not qualify for these subsidies. Although these lower-income seniors would save money by signing up for the drug benefit, they still would have large out-of-pocket drug costs considering their incomes and might therefore continue to have difficulty paying for their medications.

Drug regimen compliance

Several studies have shown that as out-of-pocket drug costs rise, adherence to medication regimens falls; in some cases, this might be associated with adverse medical events.²³ Although full coverage for medications could foster unnecessary use, gaps in coverage could cause Medicare beneficiaries to restrict the use of necessary medications.²⁴ Because people will have to pay 100 percent of any additional drug costs under Medicare Part D when they reach the doughnut hole, concerns about adherence are particularly relevant.²⁵

Unique focus of this study

Our work extends prior estimates of the impact of the Medicare drug benefit by focusing on its effect on vulnerable populations.²⁶ We also focused on the majority of seniors who will not be eligible for subsidies. By specifically examining seniors who do not have employer coverage, we have provided an estimate of the benefit's effect for seniors who are most likely to enroll and explore the possibility that many with employer coverage might enroll.

Limitations

Our study has some important limitations. The Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003, which authorized the new drug benefit, is a tremendously complex piece of legislation. For those who enroll in the new Part D, the benefit will be delivered through private health care organizations under contract with the government, and their choice of formularies will obviously affect drug prices and who enters those plans. We

cannot differentiate between people with traditional Medicare, who lack drug coverage, and those with a Medicare health maintenance organization (HMO), who typically have drug coverage. A recent estimate suggests that 4.5 million seniors have benefited from state pharmacy assistance programs (SPAPs), which provide supplemental drug coverage for lower-income seniors who do not qualify for Medicaid in several states.²⁷ For those who qualify, SPAPs provide coverage for some nonformulary drugs. It is unclear how SPAPs will choose to wrap around coverage provided by Part D plans, but the programs could provide an important source of supplemental coverage in the future. Finally, our estimate does not account for growth in the elderly population during 1996–2000 (the years of our data) and 2006.

The bottom line

While the MMA's drug benefit might produce modest declines in out-of-pocket drug spending for most seniors, the savings might not be equitably distributed. Hispanics and blacks who do not receive subsidies might save less than whites, after differences in income and prevalence of chronic illnesses are accounted for. The structure of the bill leaves many beneficiaries, especially those with a heavy burden of chronic disease, with little incentive to add new medicines because of their position in the doughnut hole. The bill also leaves others, such as the near-poor who do not qualify for subsidies, with overall out-of-pocket costs still higher than those of wealthier seniors. Clinicians, the public, and the government need to consider how this new drug benefit will affect vulnerable seniors and whether additional subsidies will be needed to improve their health.

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EXHIBIT 1

Distribution Of Projected Drug Spending Under The Standard Medicare Drug Benefit For Vulnerable Populations, By Annual Spending Amount, 2006

	Percent spending various amounts each year ^a			
	<\$250	\$251–\$2,250	\$2,251–\$5,100	>\$5,100
Total population	23.2%	46.6%	21.0%	9.2%
Race/ethnicity ^b				
Hispanic	27.5	45.0	20.4	7.1
African American	29.0	46.0	14.9	10.1
White	22.3	46.9	21.5	9.3
Household income ^c				
<\$21,450	22.6	46.4	21.2	9.8
\$21,451–\$34,289	20.4	46.3	22.5	10.8
\$34,290–\$55,285	24.0	46.4	20.7	8.9
>\$55,285	26.3	47.4	19.3	7.0
Chronic conditions ^b				
0	55.2	36.3	7.0	1.5
1	20.3	56.5	18.6	4.5
2	8.6	53.4	27.1	11.0
3 or more	3.3	38.6	34.9	23.1

SOURCE: Authors' analysis of data from the Medical Expenditure Panel Survey, 1996–2000.

NOTES: Weighted percentages. N = 5,996, representing 22,973,595 individuals. Rows might not add to 100 percent because of rounding. Data for Asians and other groups are not presented because of small sample sizes.

^aUsing 12 percent inflation factor, including those with employer-sponsored coverage.

^b $p \leq .005$ for trend.

^c $p \leq .05$ for trend.

EXHIBIT 2**Mean Annual Out-Of-Pocket Drug Costs Before And After The Standard MMA Medicare Drug Benefit, For Seniors Without Employer-Sponsored Coverage**

	Annual out-of-pocket drug costs			
	Pre- MMA	Post- MMA	Absolute difference	Adjusted difference ^a (95% CI)
Total	\$1,427	\$ 949	\$478	
Race/ethnicity				
Hispanic	1,075	825	250 ^b	-\$237 (-396, -78)
African American	1,195	874	321 ^b	-237 (-422, -52)
White	1,461	960	501	Reference
Household income				
<\$21,450	1,482	957	525	53 (-134, 241)
\$21,451-\$34,289	1,490	1,030	460	11 (-164, 187)
\$34,290-\$55,285	1,419	943	476	35 (-156, 226)
>\$55,285	1,250	825	425	Reference
Insurance coverage				
No supplemental coverage	1,345	884	461	Reference
Self-purchased	1,540	1,041	499	-20 (-130, 89)
Chronic conditions				
0	531	337	194	Reference
1	1,153	751	402 ^b	193 (110, 277)
2	1,627	1,188	439 ^b	257 (154, 360)
3 or more	2,710	1,742	968 ^b	769 (562, 977)

SOURCE: Authors' analysis of data from the Medical Expenditure Panel Survey, 1996–2000.

NOTES: Data for Asians and other groups are not presented because of small sample sizes. CI is confidence interval.

^a Adjusted difference represents savings with the Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003, after adjusting for other variables in the model. Savings are compared with the reference group. A positive number therefore represents more savings, and a negative number represents smaller savings, than the reference group.

^b $p < .05$ for absolute difference compared with reference group.

EXHIBIT 3**Mean Annual Out-Of-Pocket Drug Costs Before And After The Implementation Of The MMA Standard Medicare Drug Benefit**

	Annual out-of-pocket drug costs			
	Pre- MMA	Post- MMA	Absolute difference	Adjusted difference ^a (95% CI)
Total	\$1,192	\$ 966	\$226	
Race/ethnicity				
Hispanic	1,018	843	175	-142 (-265, -19)
African American	1,050	872	178	-106 (-238, 27)
White	1,212	979	233	Reference
Household income				
<\$21,450	1,375	1,008	367 ^b	72 (-52, 197)
\$21,451–\$34,289	1,259	1,051	208	8 (-99, 115)
\$34,290–\$55,285	1,122	951	171	-14 (-127, 100)
>\$55,285	976	825	151	Reference
Insurance coverage				
No supplemental coverage	1,345	884	461	Reference
Employer sponsored	857	989	-132 ^b	-576 (-664, -489)
Self-purchased	1,540	1,041	499	20 (-89, 128)
Chronic conditions				
0	445	347	98	Reference
1	959	764	195 ^b	84 (21, 147)
2	1,403	1,173	230 ^b	135 (59, 210)
3 or more	2,191	1,774	417 ^b	332 (197, 468)

SOURCE: Authors' analysis of data from the Medical Expenditure Panel Survey, 1996–2000.

NOTES: Data for Asians and other groups are not presented because of small sample sizes. CI is confidence interval.

^a Adjusted difference represents savings with the Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003 after adjusting for other variables in the model. Savings are compared with the reference group, and a positive number therefore represents more savings, and a negative number represents smaller savings, than the reference group.

^b $p < .05$ for absolute difference compared with reference group.