

PRESCRIPTION DRUG COSTS FOR MEDICARE BENEFICIARIES: COVERAGE AND HEALTH STATUS MATTER

Bruce Stuart, Dennis Shea, and Becky Briesacher

How many Medicare beneficiaries lack prescription drug coverage? Does the absence of coverage adversely affect access to needed outpatient drug therapy? These two questions lie at the heart of the current debate over whether Congress should add outpatient drug coverage to the Medicare program.

A recent National Economic Council report argues that only one-quarter of beneficiaries have any “meaningful” prescription coverage and that the number is declining each year.¹ Others claim, however, that two-thirds of beneficiaries have some form of drug benefit and that coverage rates are rising.² Which is right? In fact, both figures are somewhat misleading. This issue brief examines the reason behind the discrepancy and demonstrates that the methods used to count individuals with drug coverage have important policy implications, particularly where the health status of Medicare beneficiaries is concerned.

The analysis uses the latest available data from the 1996 Medicare Current Beneficiary Survey (MCBS), which provides a nationally representative picture of Medicare beneficiaries’ insurance coverage and spending patterns for all health services, including outpatient prescriptions.³ To fully characterize beneficiaries’ drug coverage for the entire year, the analysis is limited to noninstitutionalized beneficiaries who were enrolled in Medicare throughout 1996.⁴ We then classified these individuals according to several alternative measures of prescription coverage:

- Covered through all of 1996⁵
- Covered for part but not all of the year⁶
- Never covered during the year
- Covered or not covered in December 1996⁷

These distinctions in the definition of coverage would not matter if most Medicare beneficiaries had stable sources of drug benefits. They are important, however, if beneficiaries move in and out of health plans or if benefit coverage changes during the year. In such cases, the resulting gaps in access to prescription medicine can be substantial.

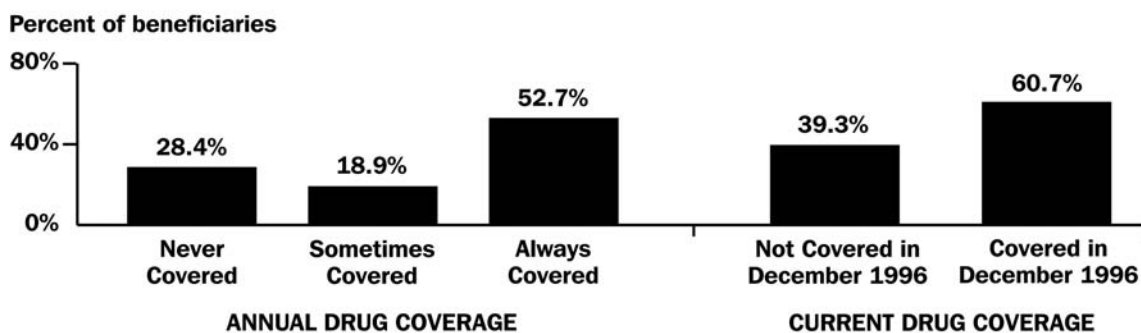
HOW MANY MEDICARE BENEFICIARIES HAVE PRESCRIPTION DRUG COVERAGE?

According to MCBS data, slightly more than half of all noninstitutionalized Medicare beneficiaries (52.7%) had prescription benefits throughout 1996 (Figure 1). More than a quarter (28.4%) had no coverage. The rest—nearly 19 percent of beneficiaries, or more than 6 million people—were covered for only part of the year (some of these individuals had indeterminate periods of coverage).⁸ For those with part-year benefits for whom duration of coverage could be ascertained, the mean period of coverage was 6.6 months.

The Medicare population with prescription coverage is a dynamic one. In January 1996, for example, 58.9 percent of beneficiaries had coverage. That rate increased to a high of 61.4 percent in June before gradually declining to 60.7 percent in December. In all, nearly half of the entire beneficiary population (47.3%) had some period without drug coverage in 1996.

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Figure 1
Prescription Drug Coverage of Medicare Beneficiaries in 1996,
by Definition of Coverage*



* Noninstitutionalized beneficiaries enrolled in Medicare throughout 1996.
 Source: Bruce Stuart et al., calculated from the 1996 Medicare Current Beneficiary Survey.

Sources of Coverage

Nine of every 10 Medicare beneficiaries have some type of insurance plan to supplement their basic Medicare coverage. The particular plan in which beneficiaries are enrolled is important in determining whether they have drug coverage and whether that coverage is continuous throughout the year.

Not surprisingly, beneficiaries enrolled in both Medicare and Medicaid in 1996 had the most consistent drug coverage. While all state Medicaid programs include a drug benefit, some beneficiaries (7.2%) were enrolled for only part of the year (Table 1). Among Medicare beneficiaries with an employer-sponsored health plan as their primary source of supplemental insurance,

more than three-quarters (77.2%) reported year-round prescription coverage, compared with less than a quarter (24.9%) of those who had a Medigap supplemental policy. Individuals with Medigap policies comprised more than half of all beneficiaries lacking prescription coverage at any time during the year—an indication that relatively few beneficiaries purchase Medigap plans H, I, and J, all of which provide a drug benefit.

Although the general perception is that Medicare HMOs provide drug benefits as a matter of course, in reality only two-thirds of those whose primary source of coverage in December 1996 was a Medicare HMO had continuous prescription benefits throughout the year. Few December HMO enrollees (5.7%) were without drug benefits

Table 1
Prescription Drug Coverage of Medicare Beneficiaries in 1996,
by Primary Source of Supplemental Insurance and Definition of Coverage*

Type of Insurance**	Number of Beneficiaries (millions)	ANNUAL DRUG COVERAGE			CURRENT DRUG COVERAGE	
		Never Covered	Sometimes Covered	Always Covered	Not Covered in December 1996	Covered in December 1996
All beneficiaries	33.8	28.4%	18.9%	52.7%	39.3%	60.7%
Medicare only	3.7	69.9	30.1	0.0	100.0	0.0
Supplemental plans						
Employer-sponsored	11.1	10.2	12.6	77.2	16.4	83.6
Individual Medigap	9.9	52.2	22.9	24.9	65.5	34.5
Medicaid	2.3	0.0	7.2	92.8	0.0	100.0
Medicaid QMB/SLMB	1.7	26.2	5.7	68.1	31.2	68.8
Medicare HMO	4.2	5.7	27.0	67.3	16.8	83.2
Other	0.9	3.6	29.1	67.3	9.9	90.1

* Noninstitutionalized beneficiaries enrolled in Medicare throughout 1996.
 ** Defined as primary source of coverage in December 1996.
 Source: Bruce Stuart et al., calculated from the 1996 Medicare Current Beneficiary Survey.

in 1996. However, a surprisingly large proportion—27 percent—experienced at least some time without drug coverage, in most cases attributable to a period when they were not enrolled in a plan.

INSURANCE, PRESCRIPTION USE, AND DRUG COSTS

Previous studies have demonstrated that beneficiaries who have drug coverage through a Medicare supplement use more prescription medications than those without coverage.⁹ According to MCBS data, the average noninstitutionalized Medicare beneficiary filled an average of 20.4 prescriptions during 1996 (Table 2). Beneficiaries without a drug benefit had 16.7 prescriptions filled, while those who were always covered during the year had 22.4 prescriptions filled, or a third more. Individuals covered for only part of the year fell in between: those with coverage in December 1996—the most recent month available from MCBS—filled 21.8 prescriptions for the year.

Not only is continuous coverage associated with higher use of prescription drugs, but Medicare beneficiaries with full-year benefits also use drugs with higher unit costs.¹⁰ The variation in what the different coverage groups spend is striking: beneficiaries who were never covered during the year bought medicines averaging \$29 per prescription filled, versus nearly \$40 for

those who were always covered. In percentage terms, this variation (39%) is even greater than the difference in average number of prescriptions filled per year by the two groups of beneficiaries.

The combined effect of higher prescription volume and higher-priced medications means that Medicare beneficiaries with continuous drug coverage incur much greater costs on average than their counterparts who have not had continuous coverage. Prescription drug expenditures for the noninstitutionalized Medicare population as a whole averaged \$688 per beneficiary in 1996.¹¹ As expected, beneficiaries who had no prescription coverage during the year incurred the least cost (\$468 per capita), while those covered the entire year had the greatest (\$828 per capita).

The pattern is reversed for out-of-pocket drug spending. Beneficiaries covered the entire year paid for approximately 26 percent (\$219) of their total drug costs out-of-pocket, while those covered in December 1996 contributed about 29 percent (\$231) out-of-pocket. Those with some period of coverage during the year paid an average of 57 percent (\$358) from their own resources. Out-of-pocket drug payments made by beneficiaries who did not have coverage in December 1996 averaged \$446—comparable to the “never insured” group—or nearly 84 percent of their total drug spending.

Continued on page 4

**Table 2
Utilization and Expenditures for Prescription Drugs by Medicare Beneficiaries in 1996, by Definition of Coverage***

Prescription Use and Expense	All Beneficiaries	ANNUAL DRUG COVERAGE			CURRENT DRUG COVERAGE	
		Never Covered	Sometimes Covered	Always Covered	Not Covered in December 1996	Covered in December 1996
Mean number of prescriptions filled per year	20.4	16.7	20.7	22.4	18.4	21.8
Mean cost per prescription filled	\$35.41	\$28.65	\$32.19	\$39.84	\$29.78	\$38.86
Annual prescription drug spending	\$688	\$468	\$626	\$828	\$533	\$788
Proportion of drug spending paid out-of-pocket	46%	100%	57.2%	26.4%	83.7%	29.3%
Annual prescription spending out-of-pocket	\$316	\$468	\$358	\$219	\$446	\$231

* Noninstitutionalized beneficiaries enrolled in Medicare throughout 1996.

Source: Bruce Stuart et al., calculated from the 1996 Medicare Current Beneficiary Survey.

IMPACT OF HEALTH STATUS

Since the purpose of health insurance is to help cover the costs of treating illness, one might expect to see a correlation between prescription drug coverage and the health of Medicare beneficiaries. Indeed, the study found that beneficiaries' self-reported health status was strongly associated with coverage—though not necessarily in the most expected way. While beneficiaries who rated their health as fair or poor were only slightly more likely than the general Medicare population to have drug coverage, those who reported having multiple chronic illnesses were much more likely.

About three-quarters of beneficiaries (74.4%) queried by the MCBS in 1996 characterized their health as “excellent,” “very good,” or “good,” with the remainder reporting their health to be “fair” or “poor” (Table 3). Little difference exists in patterns of prescription coverage between these two groups, though some variation was found in the source and duration of coverage. Medicare beneficiaries in fair or poor health, for example, were much more likely to have Medicaid and less likely to be covered through an employer-sponsored plan when compared with their healthier peers. Less-healthy beneficiaries were also somewhat more likely to report having intermittent coverage (20.7% vs. 18.3%), and fewer said

they never had prescription coverage (26.3% vs. 29.1%). The differences in both cases, however, were small.

The most telling association between prescription coverage and Medicare beneficiaries' health status relates to their burden of chronic illness. In computing prescription coverage rates for beneficiaries with 10 chronic conditions—including Alzheimer's disease, arthritis, cancer, lung disease, diabetes, and heart disease—a distinct pattern emerged: those with no chronic health problems were far more likely to report never having drug coverage (34.6%) than those who suffer from five or more chronic illnesses (23.1%). Beneficiaries with numerous chronic conditions were also much more likely to report having continuous drug coverage. Coverage rates varied little across the individual conditions studied, mainly because the average beneficiary suffers from more than one chronic illness.

Although the findings on beneficiaries with chronic ailments seem to belie the lack of relationship between general health status and drug coverage, the discrepancy may simply reflect the fact that people accommodate their perception of “good” health to their current burden of chronic illness. Whatever the explanation, the analysis suggests that, to some extent at least, need drives the demand for prescription coverage.

Table 3
Prescription Drug Coverage of Medicare Beneficiaries in 1996,
by Health Status and Definition of Coverage*

Measure of Health Status	Number of Beneficiaries (millions)	ANNUAL DRUG COVERAGE			CURRENT DRUG COVERAGE	
		Never Covered	Sometimes Covered	Always Covered	Not Covered in December 1996	Covered in December 1996
All beneficiaries	33.8	28.4%	18.9%	52.7%	39.3%	60.7%
Self-reported health						
Good to excellent	25.1	29.1	18.3	52.6	39.2	60.8
Fair to poor	8.7	26.3	20.7	53.1	39.9	60.1
Reported number of chronic conditions**						
None	3.3	34.6	20.1	45.3	44.6	55.4
One	6.7	30.7	17.8	51.5	40.7	59.3
Two	8.2	29.0	17.1	53.9	38.8	61.2
Three	7.4	26.0	19.8	54.1	37.6	62.4
Four	4.7	27.1	19.6	53.2	38.2	61.8
Five or more	3.4	23.1	21.4	55.5	38.1	61.9

* Noninstitutionalized beneficiaries enrolled in Medicare throughout 1996.

** Included Alzheimer's disease, arthritis, cancer, chronic lung disease, diabetes, heart disease, hypertension, mental disorder, osteoporosis, or stroke.

Source: Bruce Stuart et al., calculated from the 1996 Medicare Current Beneficiary Survey.

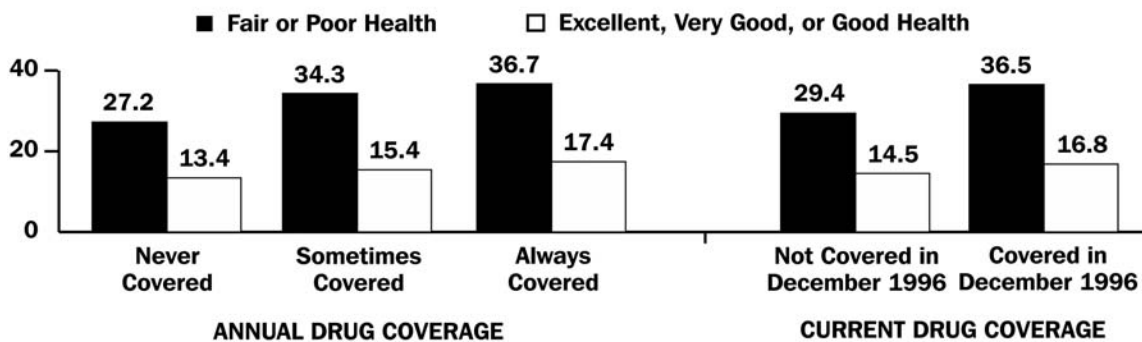
As one would expect, health status was a significant factor in beneficiaries' use of prescription drugs. Healthier beneficiaries use fewer than half as many prescriptions compared with those in fair or poor health (Figure 2). Even so, those claiming to be in good health reported significant drug use, ranging from 13.4 to 17.4 prescriptions per year, depending on insurance coverage. Insurance coverage appears to drive drug use irrespective of health status. Among beneficiaries in poor health, those who had no prescription coverage filled 35 percent fewer prescriptions than beneficiaries who were always covered; for beneficiaries in good health, the difference was 30 percent.

A similar dynamic is at play in the relationship between health status and drug cost. Among beneficiaries in good to excellent health, those who were never covered filled prescriptions with an average cost of nearly \$29; for those always covered, the average cost was about \$41—nearly 42 percent higher (Figure 3). Medicare beneficiaries reporting fair to poor health used somewhat cheaper medications, but the difference in average cost between the “never covered” and “always covered” groups was still almost 33 percent.

Rather than help explain variation in drug utilization and cost among beneficiaries

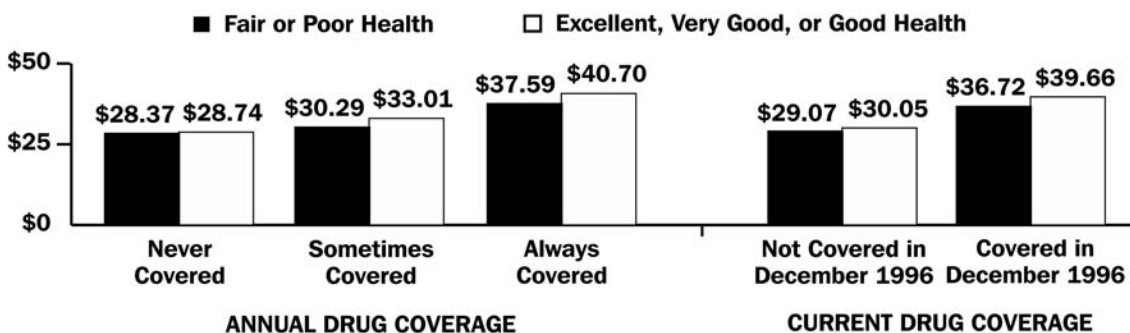
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Figure 2
Annual Number of Prescriptions Filled by Medicare Beneficiaries in 1996, by Health Status and Definition of Coverage*



* Noninstitutionalized beneficiaries enrolled in Medicare throughout 1996.
Source: Bruce Stuart et al., calculated from the 1996 Medicare Current Beneficiary Survey.

Figure 3
Average Cost per Prescription Filled by Medicare Beneficiaries in 1996, by Health Status and Definition of Coverage*



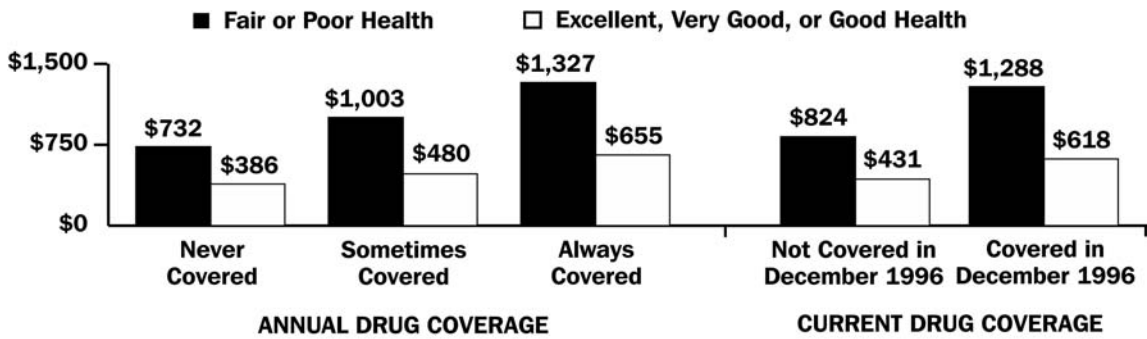
* Noninstitutionalized beneficiaries enrolled in Medicare throughout 1996.
Source: Bruce Stuart et al., calculated from the 1996 Medicare Current Beneficiary Survey.

with and without drug coverage, consideration of health status actually magnifies the difference. This startling relationship is apparent in the data on annual prescription expenditures. Once again, health status is the major contributor to reported differences in prescription expense. Insurance coverage, however, accounts for differences that are nearly as large. In fact, among beneficiaries in fair to poor health, those who had continuous prescription coverage in 1996 consumed \$1,327 worth of drugs, compared with only \$732 spent by those with no prescription coverage during the year—an 81 percent difference (Figure 4). Among beneficiaries in good to

excellent health, the difference in annual drug expenditures between those with and without full-year prescription coverage was about 70 percent.

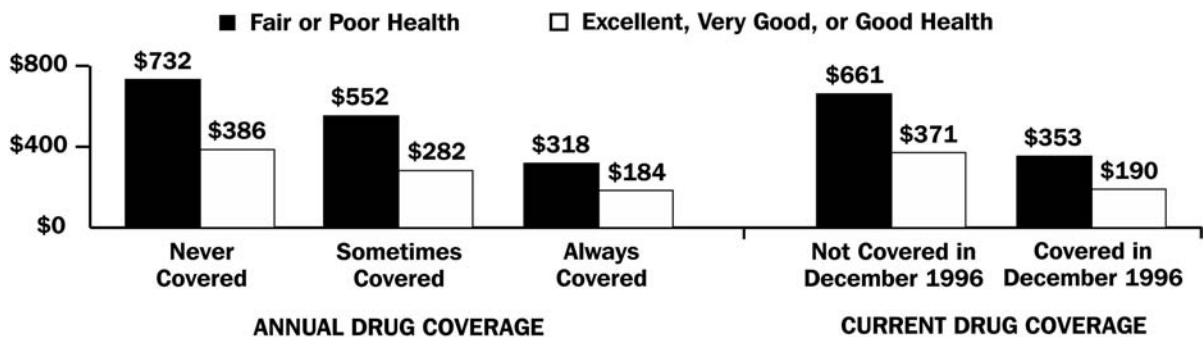
Analysis of out-of-pocket payments for prescription drugs produced few surprises. Medicare beneficiaries in fair to poor health with no drug coverage spent \$732 in 1996, more than double the \$386 spent by beneficiaries in good to excellent health (Figure 5). Out-of-pocket prescription drug payments decline as the continuity of drug coverage increases. Beneficiaries in good or poor health with part-year drug coverage spent,

Figure 4
Annual Prescription Drug Spending for Medicare Beneficiaries in 1996, by Health Status and Definition of Coverage*



* Noninstitutionalized beneficiaries enrolled in Medicare throughout 1996.
 Source: Bruce Stuart et al., calculated from the 1996 Medicare Current Beneficiary Survey.

Figure 5
Annual Out-of-Pocket Prescription Drug Spending by Medicare Beneficiaries in 1996, by Health Status and Definition of Coverage*



* Noninstitutionalized beneficiaries enrolled in Medicare throughout 1996.
 Source: Bruce Stuart et al., calculated from the 1996 Medicare Current Beneficiary Survey.

on average, 25 percent less out-of-pocket compared with similar individuals who had no coverage. Those who were always covered fared best: more than 75 percent of their total drug expenditures were paid for by insurance. Whether in good or poor health, Medicare beneficiaries with continuous drug coverage spent less than half as much annually on prescription medications as their counterparts without drug coverage.

CONCLUSIONS

Three major findings emerged from this study:

- Prescription coverage of Medicare beneficiaries is more fragile than previously reported. Slightly more than half of all beneficiaries enrolled for all of 1996 had drug benefits throughout the year, while the remainder had either no coverage or coverage for only part of the year. To the extent that individuals' demand for prescription drugs is conditioned by their current insurance coverage, it makes sense to characterize the Medicare population accordingly.
- Continuity of drug coverage makes a significant difference in Medicare beneficiaries' use of prescription medicine. Beneficiaries without drug benefits fill a third fewer prescriptions and spend 60 percent less on drug purchases compared with those covered all year. In terms of out-of-pocket spending, Medicare beneficiaries with continuous coverage spend half as much as those with part-year or no coverage. Beneficiaries with part-year coverage are a potentially highly vulnerable group. We do not know whether their periods without coverage were voluntary or forced, nor do we know whether lack of coverage was responsible for their use of prescription medications. The findings strongly suggest, however, that these individuals should not be simply lumped in with the "always insured" when comparisons are made between Medicare beneficiaries with and without prescription coverage.

- Health status affects drug coverage for beneficiaries primarily through the burden of chronic illness they bear. Although individuals reporting poorer health status were only slightly more likely to have prescription drug coverage than the Medicare population as a whole, those reporting five or more chronic conditions were nearly a quarter more likely to have continuous drug coverage than those reporting no chronic disease. Nonetheless, since only 56 percent of those with the greatest burden of chronic disease had full-year coverage, a significant proportion of this high-risk population still keenly feels the impact of not having coverage.

There is mounting evidence that Medicare beneficiaries are now finding it more difficult to obtain prescription drug coverage than in the past. Although beneficiaries enrolled in employer plans enjoy greater continuity of drug coverage than any other group, as employers cut back on retiree plans the availability of drug coverage is reduced as well. This downward trend in fact provides the basis for the National Economic Council's claim that "meaningful" prescription coverage for Medicare beneficiaries is declining.¹²

Compounding the problem is that more Medicare HMOs are dropping drug benefits, lowering payment caps, or imposing stiff premium surcharges for coverage.¹³ The small declines in drug coverage rates reported from June to December 1996 are intriguing in this regard. Although they may simply represent a cyclical pattern in plan renewals, these reductions may alternatively mark a turning point in beneficiary drug coverage. If the latter interpretation is correct, then the case for a Medicare drug benefit is stronger than previous research would support.

NOTES

¹ National Economic Council, Domestic Policy Council, *Disturbing Truths and Dangerous Trends: The Facts About Medicare Beneficiaries and Prescription Drugs*, July 22, 1999.

² Margaret Davis, John Poisal et al., “Prescription Drug Coverage, Utilization, and Spending Among Medicare Beneficiaries,” *Health Affairs* 18 (January/February 1999):231–243.

³ The 1996 Medicare Current Beneficiary Survey (MCBS) included 11,884 Medicare beneficiaries, of whom 10,546 resided in the community and 1,338 were in long-term care facilities. In addition to information on medical utilization and cost, the MCBS collects data on individual demographics, Medicare supplemental health insurance coverage, health status, and access to care. Respondents are also asked whether each named policy covered prescription drugs, but not whether the plans with prescription benefits offered them throughout the entire duration of coverage. For the present analysis, we assumed that they did.

⁴ This group constitutes 33.8 million people, or 89 percent of the 38.1 million Medicare beneficiaries enrolled in 1996. Excluded are Medicare beneficiaries in nursing homes and persons who first enrolled in Medicare or died during 1996. Limiting the study to full-year Medicare enrollees is necessary to properly distinguish beneficiaries with full-year and part-year drug coverage.

⁵ We counted individuals as “always covered” for prescription drugs if they met one or more of the following four conditions in each month of 1996: (1) they reported a private plan with prescription coverage; (2) they were enrolled in a Medicaid buy-in arrangement with Medicare; (3) they were enrolled in a state QMB/SLMB Medicaid plan and had evidence of a Medicaid drug claim in 1996; or (4) they were covered by a public plan other than Medicaid.

⁶ Beneficiaries with part-year drug benefits were defined as those meeting the criteria listed in note 3 for more than one month but fewer than 12. We also included those who reported no prescription coverage at any time in 1996 but had bill records of a third-party prescription payment.

⁷ This definition gives the level of drug coverage at a point in time, in this case December 1996. Since this rate can change over time, we computed it for each month and reported the findings for December—the most recent available monthly

date. We categorized beneficiaries as currently insured for prescription benefits if they met one or more of the four conditions listed in note 5 for the month in question.

⁸ Duration of coverage could not be determined for the 4.7 percent of beneficiaries who claimed to have no coverage but had evidence of third-party payments from prescription bill records. In reviewing their payment sources, we concluded that these individuals were covered only for relatively short periods during the year. For this reason, we included them in the part-year coverage category.

⁹ Davis et al., 1999; John Poisal, Lauren Murray, George Chulis, and Barbara Cooper, “Prescription Drug Coverage and Spending for Medicare Beneficiaries,” *Health Care Financing Review* 20 (1999, no. 3):15–28.

¹⁰ The MCBS computes drug costs at transaction prices. Prescriptions purchased by beneficiaries with third-party coverage are generally paid by pharmacy benefit management companies or public programs that receive retail price discounts. Individuals without coverage may receive a “senior discount” but do not have the large discounts available to third-party payors. For this reason, the costs shown in Figure 4 probably underestimate the actual difference in the value of drugs purchased.

¹¹ Our tabulations of prescription expenditures are approximately 2.5 percent below those reported in the 1996 MCBS for noninstitutionalized full-year enrollees. The MCBS considers provider discounts as contributing to total drug expenditures. We excluded them on the grounds that the true price faced by customers eligible for the discounts is the discounted price.

¹² National Economic Council, 1999.

¹³ See Marsha Gold et al., *Medicare Managed Care: Preliminary Analysis of Trends in Benefits and Premiums, 1997–1999*. Washington, D.C.: Mathematica Policy Research, June 1999; and Henry J. Kaiser Family Foundation, *Analysis of Benefits Offered by Medicare HMOs, 1999: Complexities and Complications*, August 1999.



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