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Trends In Prescribed Medicine Use And Spending By Older Americans, 1992-2001

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Highlights

- *From 1992 to 2001, the proportion of community-dwelling persons aged 65 and over who reported using prescribed medicines during the calendar year increased 6 percentage points—from 85.3 percent to 91.6 percent.*
- *For community-dwelling persons aged 65 and over who used prescribed medicine during the year:*
  - *The mean number of prescribed medicines (fills or refills) increased from 18.8 in 1992 to 27.8 in 2001.*
  - *Mean total expenses for prescribed medicines more than doubled—from $535 in 1992 to $1,410 in 2001.*
- *Among community-dwelling persons aged 65 and over who used prescribed medicine in 2001, on average, those in fair to poor health used more prescribed medicines than those in very good to excellent health, women used more than men, non-Hispanic black persons used more than non-Hispanic white persons, and those with an annual income of $10,000 or less used more prescribed medicines than those with an annual income greater than $50,000.*
- *In 2001, those community-dwelling persons aged 65 and over without drug insurance coverage, on average, had lower prescribed medicine use and lower total prescribed medicine expenses but higher out-of-pocket (OOP) spending for prescribed medicines than those with drug coverage.*

Overview

The importance of prescription drug use in medical practice in the United States has grown with the availability of new drugs to treat major diseases, including common chronic conditions such as heart disease, hypertension, and depression. As a result, prescription drug use and spending have increased. Spending on retail prescription drugs in the United States more than tripled from $15.0 billion in 1982 to $48.2 billion in 1992, then more than tripled again to $162.4 billion in 2002. In per capita terms, retail prescription drug spending increased from $64 in 1982 to $569 in 2002. As a proportion of national health expenditures, retail prescription drug spending more than doubled from 4.7 percent in 1982 to 10.5 percent in 2002.[1]

This report focuses on changes in prescription drug use and spending for persons aged 65 and over (hereafter referred to as older persons), who, compared with younger persons, are heavy users of prescription medicines. Medicare beneficiaries, most of whom are aged 65 and over, made up 14 percent of the community population in 2001 but accounted for 41 percent of prescription medicine expenses.[2] Prescribed medicine expenditures for Medicare beneficiaries aged 65 and over increased from $13.9 billion in 1992 to $35.6 billion in 2000.[3,4]

Monitoring increasing prescription drug use and spending among older Americans is important for three reasons. First, monitoring prescription drug use for subgroups of the older population is a way to identify disparities in drug use and possible underutilization. Second, there are concerns about the financial burden from increasing drug costs for older persons, particularly those with low incomes. Third, the rising cost of

continued

[1] Smith C. Retail prescription drug spending in the National Health Accounts. Health Aff (Millwood) 23:160–7. 2004.

[2] Agency for Healthcare Research and Quality (AHRQ), Center for Financing, Access, and Cost Trends (CFACT). August 2004 Email Message from M. Stagnitti of AHRQ/CFACT with estimates from the household component of the 2001 Medical Expenditure Panel Survey.

[3] Laschober M, Olin G. Health & health care of the Medicare population: Data from the 1992 Medicare Current Beneficiary Survey. Rockville, MD: Westat. 1996.

[4] Sharma R, Liu H. Health & health care of the Medicare population: Data from the 2000 Medicare Current Beneficiary Survey. Rockville, MD: Westat. 2004.

prescription drugs to third-party payers is an important consideration for both private and public health plans, including Medicare, which is scheduled to start a prescription drug benefit in 2006.

This report focuses on annual prescribed medicine use and spending for older Americans residing in the community. The calendar year is the reference period for the estimates of prescribed medicine use and spending. Nursing home residents were excluded from the analysis because they tend to be older and more disabled than community dwellers, and their access to pharmaceutical care may be influenced by different factors. The prescribed medicine use and spending estimates in this report were derived from information collected in the Medicare Current Beneficiary Survey, a survey of a nationally representative sample of Medicare beneficiaries. (For more information, see "About the data.")

How has prescribed medicine use by community-dwelling older Americans changed?

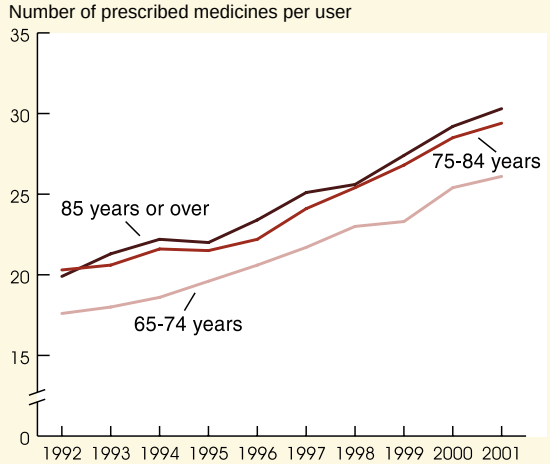
The percentage of community-dwelling older Americans using prescribed medicines increased between 1992 and 2001.

Among community-dwelling older persons in the United States, the percentage that reported use of one or more prescribed medicines during the year increased from 85.3 in 1992 to 91.6 in 2001. Both men and women experienced increases in the percentage using prescribed medicines. The estimates for women were 3.5–5.9 percentage points higher than for men. In addition, there were some differences among age groups. In each year from 1992 to 2001, the percentage reporting prescribed medicine use was lower for the 65–74 year age group compared with the 75–84 year age group. The percentages were similar for the 75–84 year age group and the 85 years and over age group.

The average number of prescribed medicines used by community-dwelling older Americans increased substantially over the period from 1992 to 2001.

Among community-dwelling older persons with at least one prescribed medicine used during the year, the mean number of prescribed medicines used in the year increased from 18.8 in 1992 to 27.8 in 2001. (The prescribed medicines count includes both original fills and refills of a prescription. The count does not provide information on the number

Figure 1. Mean annual number of prescribed medicines per user for community-dwelling Medicare beneficiaries with prescribed medicine use, by age group, 1992–2001



NOTE: The prescribed medicines count includes both original fills and refills of a prescription. The count does not provide information on the number of medications with distinct chemical entities.

Table 1. Annual number of prescribed medicines per user and annual prescribed medicine expenses per user —mean and selected percentiles—for community-dwelling Medicare beneficiaries aged 65 and over with prescribed medicine use, 1992 and 2001

Characteristic	Number of prescribed medicines per user		Total prescribed medicine expenses per user		OOP[1] prescribed medicine expenses per user	
	1992	2001	1992	2001	1992	2001
Mean	18.8	27.8	$535	$1,410	$312	$533
Median (50th percentile)	13	21	$350	$991	$166	$315
75th percentile	26	39	$735	$1,908	$418	$693
90th percentile	42	60	$1,236	$3,135	$787	$1,278
95th percentile	55	76	$1,662	$4,213	$1,093	$1,761

[1]OOP is out-of-pocket.
NOTES: The prescribed medicines count includes both original fills and refills of a prescription during the year. The count does not provide information on the number of medications with distinct chemical entities. Expense estimates are in nominal dollars.

of medications with distinct chemical entities.) All sex and age subgroups experienced increases. The increase was 8.5 prescribed medicines for those aged 65–74 years, 9.1 for those aged 75–84 years, and 10.4 for those aged 85 years and over (figure 1). The increase was 7.7 prescribed medicines for men aged 65 and over and 10 for women aged 65 and over.

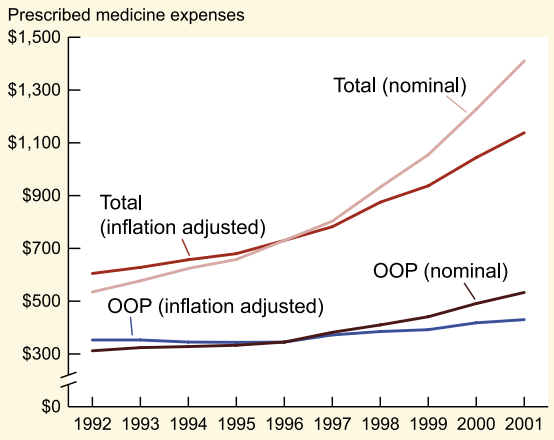
Although the mean is a useful summary measure, it does not show the skewed nature of prescribed medicine use among older persons. While one-half of the community-dwelling older persons with prescribed medicine use (referred to as prescribed medicine users) reported using 21 or fewer prescribed medicines during 2001, 25 percent reported 39 or more, 10 percent reported 60 or more, and 5 percent reported using 76 or more prescribed medicines. These figures represented substantial increases from 1992 (table 1).

How has prescribed medicine spending for community-dwelling older Americans changed?

Per capita spending on prescribed medicines for prescribed medicine users more than doubled between 1992 and 2001.

The increases in annual prescribed medicine use discussed above were reflected in increases in annual prescribed medicine spending. Mean annual spending per user was $1,410 in 2001 compared with $535 in 1992 (figure 2). This is a 164-percent nominal increase or an 88-percent increase after adjusting for drug price inflation. (The Centers for Medicare & Medicaid Services' price index for prescription drugs was used to

Figure 2. Mean annual total prescribed medicine expenses per user and mean annual out-of-pocket (OOP) prescribed medicine expenses per user, nominal and inflation-adjusted, for community-dwelling Medicare beneficiaries aged 65 and over with prescribed medicine use, 1992–2001



NOTE: The Centers for Medicare & Medicaid Services' price index for prescription drugs was used to adjust for drug price increases. It is difficult to measure drug price increases because the quality of the basket of drugs also has improved over time.

adjust for drug price increases. It is difficult to measure drug price increases because the quality of the basket of drugs also has improved over time.) Mean spending more than doubled in all three age groups (65–74, 75–84, and 85 and over) and for both sexes.

However, as with prescribed medicine use, the mean does not reveal the skewed distribution of prescribed medicine spending. In 2001, one-half of the community-dwelling older persons with prescribed medicine use had expenses of $991 or less for the year while one-quarter had expenses of $1,908 or more, 10 percent had $3,135 or more, and 5 percent had $4,213 or more. These dollar figures are more than double what they were in 1992 (table 1).

Thus, both prescribed medicine use and expenses of community-dwelling older Americans demonstrated substantial growth between 1992 and 2001. Although the increase in prescribed medicine consumption generally has not been viewed with concern, the rapid increase in spending is a concern, as it can put a financial burden on older persons. Thus, it is of interest to know how much of older persons' prescription drug costs are paid directly out of their own pockets and how such spending has changed over time.

Per capita out-of-pocket spending on prescribed medicines for prescribed medicine users increased about 70 percent between 1992 and 2001.

On average, community-dwelling older prescribed medicine users paid $312 out of pocket (OOP) for prescribed medicines in 1992 and $533 in 2001—a 71-percent nominal increase (22-percent increase after controlling for drug price inflation) (figure 2). Out-of-pocket spending, like total spending, on prescribed medicines is skewed. In 2001, one-half of the community-dwelling older persons with prescribed medicine use spent $315 or less OOP on prescribed medicines, while 25 percent spent $693 or more OOP, 10 percent spent $1,278 or more OOP, and 5 percent spent $1,761 or more OOP (table 1). The median for OOP spending in 2001 ($315) is almost 90 percent higher than it was in 1992 ($166), and the other three percentiles (75th, 90th, and 95th) are about 60 percent higher than they were in 1992. Despite these increases, for prescribed medicine users, OOP spending as a share of total prescribed medicine expenses declined between 1992 and 2001.

The next section examines differences in prescribed medicine use, expenses, and OOP spending for subgroups of the community-dwelling older population. It is important to examine these differences to see if there is evidence of underutilization of prescribed medicines or a heavy financial burden from OOP spending on prescribed medicines for vulnerable or disadvantaged groups.

What factors are related to differences in prescribed medicine use and spending?

Self-reported health status and chronic conditions

In 2001, community-dwelling older prescribed medicine users who reported fair to poor health, compared with those who reported very good to excellent health, on average, had 88 percent more prescribed medicines, 85 percent higher total prescribed medicine expenses, and 63 percent higher OOP spending on prescribed medicines. Those in fair or poor health, on average, used 38.9 prescribed medicines during the year compared with 20.7 for those in very good or excellent health (table 2). Those in fair or poor health, on average, had prescribed medicine expenses of $1,985, with $694 paid OOP, compared with those in very good or excellent health who had $1,070 in prescribed medicine expenses, with $427 paid OOP.

In 2001, community-dwelling older prescribed medicine users who reported none of 11 chronic conditions or chronic condition groups had much lower prescribed medicine use and expenses, on average, than those who reported three or more of these conditions. (The 11 chronic conditions or chronic condition groups are hardening of the arteries; hypertension; myocardial infarction; angina or coronary heart disease; other heart conditions; stroke; cancer; diabetes; arthritis; rheumatoid arthritis; and emphysema, asthma, or chronic obstructive pulmonary disease.) Those with none of the 11 chronic conditions had, on average, about 35–40 percent of the annual prescribed medicine use and expenses of those with three or more chronic conditions—12.8 versus 36.9 prescribed medicines, $655 versus $1,854 in prescribed medicine expenses, and $265 versus $668 in OOP spending on prescribed medicines (table 2).

Table 2. Mean annual number of prescribed medicines per user and mean annual prescribed medicine expenses per user, for community-dwelling Medicare beneficiaries aged 65 and over with prescribed medicine use, by self-reported health status and chronic conditions, 2001

Characteristic	Mean annual		
	Number of prescribed medicines per user	Total prescribed medicine expenses per user	OOP[1] prescribed medicine expenses per user
All	27.8	$1,410	$533
Self-reported health:			
Very good–excellent	20.7	$1,070	$427
Fair–poor	38.9	$1,985	$694
Chronic conditions:			
0	12.8	$655	$265
3 or more	36.9	$1,854	$668

[1]OOP is out-of-pocket.
NOTES: The prescribed medicines count includes both original fills and refills of a prescription during the year. The count does not provide information on the number of medications with distinct chemical entities. The 11 counted chronic conditions or condition groups are these: hardening of the arteries; hypertension; myocardial infarction; angina or coronary heart disease; other heart conditions; stroke; cancer; diabetes; arthritis; rheumatoid arthritis; and emphysema, asthma, or chronic obstructive pulmonary disease. For the prescribed medicine use and expense measures, the differences between the two categories for both health measures are all statistically significant.

Sex, age, and race/ethnicity

For community-dwelling older prescribed medicine users in 2001, on average, men had about 21 percent fewer prescribed medicines than women (24.8 versus 29.9), 12 percent lower prescribed medicine expenses ($1,319 versus $1,475), and 27 percent lower OOP spending on prescribed medicines ($460 versus $584) (table 3). By age, average prescribed medicine use, expenses, and OOP spending were modestly higher (14 percent, 7 percent, and 16 percent, respectively) for those community-dwelling prescribed medicine users in the 75 years and over age group compared with the 65–74 age group in 2001 (table 3). By race, the percentages of community-dwelling older persons with prescribed medicine use were similar for non-Hispanic white persons and black persons in 2001. However, among these users, non-Hispanic black persons had a modestly higher (13 percent) mean number of prescribed medicines than non-Hispanic white persons (31.2 versus 27.7) (table 3). But non-Hispanic black persons had about the same total prescribed medicine expenses and 22 percent lower OOP prescribed medicine spending than non-Hispanic white persons in 2001.

Among community-dwelling older persons with prescribed medicine use, some of the higher prescribed medicine use in 2001 by women, non-Hispanic black persons, and persons aged 75 and over, may be explained by a higher prevalence of chronic conditions. Among these prescribed medicine users in 2001, only 4.9 percent of those aged 75 and over had none of 11 chronic conditions compared with 10.9 percent for those aged 65–74. The percentages were 5.7 for non-Hispanic black persons compared with 8.1 for non-Hispanic white persons and 7.2 for women compared with 9.2 for men.

Table 3. Mean annual number of prescribed medicines per user and mean annual prescribed medicine expenses per user, for community-dwelling Medicare beneficiaries aged 65 and over with prescribed medicine use, by demographic characteristics, 2001

Characteristic	Mean annual: Number of prescibed medicines per user	Mean annual: Total prescribed medicine expenses per user	Mean annual: OOP[1] prescribed medicine expenses per user
Sex			
All	27.8	$1,410	$533
Men	24.8	$1,319	$460
Women	29.9	$1,475	$584
Age			
65–74 years	26.1	$1,363	$495
75 years and over	29.6	$1,461	$574
Race/ethnicity			
Non-Hispanic white	27.7	$1,445	$559
Non-Hispanic black	31.2	[2]$1,337	$458
Income			
$10,000 and under	32.7	$1,395	$415
$50,001 and over	22.9	[2]$1,401	$499

[1]OOP is out-of-pocket.
[2]The difference is not statistically significant.
NOTES: The prescribed medicines count includes both original fills and refills of a prescription during the year. The count does not provide information on the number of medications with distinct chemical entities. For the prescribed medicine use and expense measures, the differences between the two categories for these demographic characteristics are statistically significant except where noted in footnote #2.

Income

The percentage of community-dwelling older persons with prescribed medicine use in 2001 was slightly higher for those with an annual income between $30,001 and $50,000 compared with those with $10,000 or less in annual income. However, the percentages were similar for the $10,000 or less income group and the above $50,000 income group. For these community-dwelling older prescribed medicine users, the low income group ($10,000 or less) had, on average, almost 10 more prescribed medicines (32.7 versus 22.9) than the above $50,000 income group in 2001 (table 3). This may be explained partly by more chronic illnesses among those in the low income group compared with the above $50,000 income group (3.05 versus 2.31 conditions on average).

Despite the higher prescribed medicine use in 2001 for the low income group, there was no difference in average total prescribed medicine expenses for these two income groups (table 3). The above $50,000 income group, on average, did have 20 percent higher OOP prescribed medicine spending than the $10,000 or less income group ($499 versus $415) in 2001. However, $415 in OOP spending for those with $10,000 or less in annual income is probably more of a financial burden than $499 OOP for those with $50,000 or more in annual income.

Another factor affecting prescribed medicine purchases is whether the person has drug insurance coverage. Differences in prescribed medicine use and spending by drug coverage are explored next.

Drug insurance coverage

The percentage of community-dwelling older persons with prescription drug insurance coverage at any point during the year rose from 58.8 in 1992 to 79.5 in 2001. Persons counted as having drug coverage were those with third-party (private or public) payments for prescribed medicines; administrative records showing full Medicaid coverage in any month; administrative records showing participation in the Qualified Medicare Beneficiary (QMB) or Specified Low-Income Medicare Beneficiary (SLMB) Medicaid programs in any month combined with a Medicaid payment for prescribed medicines; or self-report of drug coverage for those with private supplemental insurance.

For those community-dwelling older persons with drug coverage, 94.1 percent reported prescribed medicine use in 2001, compared with only 81.9 percent for those without drug coverage. In addition, among prescribed medicine users, on average, those with drug coverage had 28.7 prescribed medicines in 2001 compared with 23.8 for those without drug coverage (table 4). The estimates for all community-dwelling older persons (not just those with prescribed medicine use) are 27.0 and 19.5 prescribed medicines, on average, for those with and without drug coverage, respectively.

For disadvantaged or vulnerable subgroups of community-dwelling older prescribed medicine users, there are increased differentials by drug coverage status. For those in fair to poor health, the difference is almost 8 prescribed medicines (40.3 versus 32.5)

for those with and without drug coverage in 2001 (table 4). For those with $10,000 or less in annual income, the difference is 10 prescribed medicines (34.6 versus 24.5) for those with and without drug coverage in 2001. These differences may be indicators of underutilization by those without drug coverage. Methods that control for potential confounders would be needed to test that hypothesis.

Table 4. Mean annual number of prescribed medicines per user and mean annual prescribed medicine expenses per user, for community-dwelling Medicare beneficiaries aged 65 and over with prescribed medicine use, by drug coverage, self-reported health status, and income, 2001

	Mean Annual					
	Number of prescribed medicines per user		*Total prescribed medicine expenses per user*		*OOP[1] prescribed medicine expenses per user*	
Characteristic	*With drug coverage*	*Without drug coverage*	*With drug coverage*	*Without drug coverage*	*With drug coverage*	*Without drug coverage*
All	28.7	23.8	$1,511	$959	$447	$915
Fair–poor health	40.3	32.5	$2,130	$1,318	$575	$1,241
Annual income $10,000 or less	34.6	24.5	$1,509	$906	$312	$855

[1]OOP is out-of-pocket

NOTES: The differences between the estimates for those with and without drug coverage are all statistically significant. For persons without drug coverage, the main reason for differences in the mean total and out-of-pocket (OOP) prescribed medicine expense estimates is the inclusion of uncollected liability (sometimes a discount given to the purchaser) in the total expense estimates but not the OOP expense estimates. If one were to assume all the uncollected liabilities were discounts and adjust total prescribed medicine expenses by subtracting these amounts, for community-dwelling older persons with prescribed medicine use the mean total prescribed medicine expenses would be $1,483 for those with drug coverage and $918 for those without it. These amounts are not significantly different from the amounts in the table.

The prescribed medicine expenses for community-dwelling older prescribed medicine users with drug coverage in 2001 were $1,511, on average, compared with $959 for those without drug coverage—a 58-percent difference (table 4). Differences ranging from 28 percent to 51 percent were seen from 1992 to 2000.

There are also substantial differences in annual OOP spending. Prescribed medicine users without drug coverage had 72 percent and 105 percent higher OOP prescribed medicine spending than those with drug coverage in 1992 and 2001, respectively. (These estimates exclude insurance premiums and, therefore, do not include additional premium costs paid by those with a drug benefit compared with those without a drug benefit.) In 2001, OOP prescribed medicine spending was $447 for those with drug coverage and $915 for those without it (table 4). This level of OOP spending may be a financial burden, particularly for low income persons. In 2001, for those with $10,000 or less in annual income and no drug coverage, annual OOP spending on prescribed medicines, on average, was $855.

These continuing differences by drug coverage status are not unanticipated. Several studies have shown an association between drug insurance coverage and higher prescribed medicine use or spending, overall [5–7] or for specific types of medications, [8–10] for older Americans. Equally important, and not well known, results are the tripling over 1992–2001 in the difference in mean total prescribed medicine expenses (in nominal dollars) for those community-dwelling older persons with drug coverage compared with those without drug coverage. The gaps in mean OOP prescribed medicine spending (nominal) for those with and without drug coverage also grew—almost

[5] Poisal JA, Chulis GS. Medicare beneficiaries and drug coverage. Health Aff (Millwood) 19:248–56. 2000.

[6] Poisal JA, Murray L. Growing differences between Medicare beneficiaries with and without drug coverage. Health Aff (Millwood) 20:74–85. 2001.

[7] Curtis LH, Law AW, Anstrom KJ, Schulman KA. The insurance effect on prescription drug expenditures among the elderly: Findings from the 1997 Medical Expenditure Panel Survey. Med Care 42:439–46. 2004.

[8] Blustein J. Drug coverage and drug purchases by Medicare beneficiaries with hypertension. Health Aff (Millwood) 19:219–30. 2000.

[9] Federman AD, Adams AS, Ross-Degnan D, et al. Supplemental insurance and use of effective cardiovascular drugs among elderly Medicare beneficiaries with coronary heart disease. JAMA 286: 1732–9. 2001.

[10] Doshi JA, Brandt N, Stuart B. The impact of drug coverage on COX-2 inhibitor use in Medicare. Health Affairs (Web exclusive) W–4:94–105. 2004. http://content.healthaffairs.org/cgi/content/full/hlthaff.w4.94v1/DC1. Nov 24, 2004.

tripled—between 1992 and 2001. In addition, for those persons with $10,000 or less in annual income and no drug coverage, mean OOP prescribed medicine spending (nominal) more than doubled between 1992 and 2001.

Summary

The estimates presented show substantial changes in prescribed medicine use and expenses for community-dwelling older persons in the United States. The proportion of this population with prescribed medicine use, the mean number of prescribed medicines per user, and the mean prescribed medicine expenses per user increased from 1992 to 2001. Factors contributing to these increases may include:

- An increase in chronic illness among community-dwelling older persons,
- Availability of new prescribed medicines to treat many chronic conditions,
- Decreases in the share of prescribed medicine expenses paid OOP by community-dwelling older persons, linked to increases in the share of this population with drug insurance coverage, and
- Increases in prescription drug prices.

Although the increases between 1992 and 2001 in prescribed medicine use and spending occurred in all examined subgroups of older Americans, sizeable differentials across groups may suggest unequal access to prescribed medicines, reflecting differences in income, drug insurance coverage, and other access factors.

Outside of major advances in nonpharmaceutical preventive medicine, it seems reasonable to assume that the use of prescribed medicines will grow among the older population in the United States. However, there is substantial uncertainty surrounding predictions of prescription drug use and spending by this population given the uncertainty surrounding two important factors:

(1) Future pharmaceutical advances in medical areas affecting older persons and

(2) The future extent and depth of drug insurance coverage among older Americans after implementation of the Medicare drug benefit in 2006.

As these changes take place, continued monitoring of prescribed medicine use and spending by older Americans is warranted.

About the data

The estimates of prescribed medicine use and spending in this report were derived from information collected in the Medicare Current Beneficiary Survey (MCBS). The MCBS is a survey of a nationally representative sample of Medicare beneficiaries that has been conducted by the Centers for Medicare & Medicaid Services (formerly the Health Care Financing Administration) since September 1991. In 2001, about 96 percent of the U.S. population aged 65 and over was enrolled in Medicare. The estimates in this report are based on information from community-dwelling MCBS respondents aged 65 and over. Persons under age 65 and persons who resided in nursing homes were excluded from the analysis.

Community-dwelling Medicare beneficiaries who participate in the MCBS are interviewed in their homes three times a year. The MCBS "Cost and Use" data file includes information—both from beneficiary reporting and from Medicare claims—on the use of health care services during the calendar year and related expenditures. The prescribed medicines information in the MCBS is self-reported because Medicare currently does not cover most outpatient drugs. At each interview, survey respondents are asked about any prescribed medicines they used since the last interview. They are asked to report any medicine they obtained by filling or refilling prescriptions or having a prescription phoned in to a pharmacy. To reduce recall error, respondents are asked to keep and bring to the interview their prescription bottles, packages, and receipts. In addition, the interviewers have a list of prescribed medicines previously reported by the respondent and ask if he/she used any of those medicines during the period of interest. Nevertheless, some underreporting of the number of prescribed medicines used and prescribed medicine expenditures is expected.[11]

For more information on the MCBS, see http://www.cms.hhs.gov/mcbs.

[11] Poisal JA. Reporting of drug expenditures in the MCBS. Health Care Financ Rev 25:23–36. 2003.

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