

C H A P T E R

1

**Beneficiaries' financial liability
and Medicare's effectiveness
in reducing personal spending**

Beneficiaries' financial liability and Medicare's effectiveness in reducing personal spending

The Medicare program reduces beneficiaries' out-of-pocket spending on medical care. It is by far the largest source of payment for beneficiaries' medical care services and a significant source of payment for beneficiaries with high medical care costs. However, Medicare cost sharing and the lack of coverage for some services cause some beneficiaries to have high out-of-pocket spending on medical care. The benefit structure for medical equipment and supplies and the lack of an annual limit on out-of-pocket spending are the most problematic factors in this issue. Furthermore, these policies lead some beneficiaries to face the difficult situation of persistently high personal spending.

In this chapter

- Medicare reduces beneficiary liability
 - Medicare cost sharing and uncovered services
 - Future research
-

Policymakers have been concerned about the impact on Medicare beneficiaries of high out-of-pocket spending for medical services. The primary motivations for creating the Medicare program were to reduce elderly Americans' exposure to financial hardships from health care spending and to improve their access to medical care (Long and Settle 1984). In this chapter, the Medicare Payment Advisory Commission (MedPAC) examines the problem of high out-of-pocket spending by beneficiaries and how effectively Medicare is reducing it.

As the largest source of payment for medical care—traditional Medicare pays about 62 percent of community-based beneficiaries' total spending on medical care—Medicare performs reasonably well in reducing personal (out-of-pocket) liability on medical care goods and services.¹ Most beneficiaries avoid spending extremely large percentages of their income on medical care: 68 percent of community-based beneficiaries spend less than 20 percent of their income on medical care and health insurance. Moreover, the program tends to pay a higher percentage of total spending on beneficiaries' use of medical care as their total spending increases.

However, cost-sharing provisions and uncovered services contribute to some beneficiaries' having high out-of-pocket costs for medical care and health insurance. For example, Medicare sets no annual limit on personal spending on services it covers, and there is no coverage for prescription medicines and long-term institutional care. For the beneficiaries who use the most medical care, medical equipment and supplies are often the largest source of personal spending, even though many are covered by Part B.

This chapter discusses in detail Medicare's payment for medical care services, how cost sharing and uncovered

services contribute to high personal spending on medical care and premiums by some beneficiaries, and how widespread persistently high personal

spending is among beneficiaries. It is intended to draw attention to these issues and identify areas where future research would be most beneficial.

Methods used for this analysis

We analyzed beneficiaries' financial liability in the context of two types of spending: total and personal. Total spending is the sum of the amounts paid by all sources of payment for all medical goods and services used by beneficiaries.

We divided total spending into six categories of payment sources: Medicare, out-of-pocket spending, supplemental insurance, managed care, Medicaid, and other. Medicare includes the total amount paid by traditional Medicare. Out of pocket is the portion of total spending that beneficiaries pay directly. It does not include payments beneficiaries made for Medicare Part A premiums; Medicare Part B premiums; managed care premiums; or premiums for private supplemental insurance. Supplemental insurance includes medical goods and services paid by private medigap or by other private health insurance. Managed care includes payments made by private and Medicare managed care plans. The vast majority of Medicare managed care plans are risk plans, but some are cost or health care prepayment plans. Private managed care plans generally serve a purpose similar to private supplemental insurance and often are obtained through former employers. Medicaid includes medical care payments made

by the Medicaid program. Other includes payments by the Veterans Administration; unspecified sources; other public sources, such as state-sponsored programs; and uncollected liabilities.

Personal spending is the sum of the out-of-pocket spending component of total spending and beneficiaries' spending on premiums for Medicare Part A and Part B, private supplemental insurance, and managed care coverage. Given this definition of personal spending, we recognize as a reasonable argument that the out-of-pocket component of total spending should be the same as the definition of personal spending. Under this reasoning, other adjustments would be necessary. The payments beneficiaries made for Part A and Part B premiums should be subtracted from payments made by Medicare, the Part A and Part B premiums paid by Medicaid should be moved from Medicare to Medicaid, the payments beneficiaries made for supplemental insurance premiums should be subtracted from the supplemental insurance category, the premiums beneficiaries paid for managed care should be subtracted from managed care, and the remaining payments made by Medicare managed care organizations should be moved to Medicare.^a

Continued on page 5

^a When we use these definitions of sources of payment, the percentage paid by Medicare of community-based beneficiaries' total spending decreases to 57 percent from the 62 percent reported earlier.

¹ Our estimate of 62 percent differs substantially from some other estimates of just over 50 percent (Office of Strategic Planning, HCFA 1998). The difference occurs because our percentage includes only the community-based beneficiaries who are defined as having spent no time in 1995 in long-term care institutions, such as nursing homes, but other analysts used beneficiaries in the community and beneficiaries in long-term care institutions. We chose to exclude institutionalized beneficiaries because they have extensive spending on institutional services, and Medicare is intended to cover only acute care services. However, the impact of institutional care expenses on institutionalized beneficiaries is so strong that we found it worthwhile to examine the institutionalized population separately.

Methods used for this analysis

Continued from page 4

However, when we discuss total spending, we intend to show the financial situation beneficiaries face when they receive care. For beneficiaries who have Part B and supplemental insurance coverage, the premiums already have been paid when they receive care, so the premiums do not affect their out-of-pocket burden at that point. However, we used the specified definition of personal spending (which includes premiums) because we want to show the burden beneficiaries have over time.

We used the Medicare Current Beneficiary Survey (MCBS) Cost and Use file for our analysis. The data are based on a continuous, multipurpose survey of a representative sample of the Medicare population. We looked at Medicare data from a single year (1995) and over several years (1992 through 1995). We used beneficiaries for whom MCBS has complete survey data for single-year analysis. We used a subset of the MCBS file to create a panel of beneficiaries for assessing the program over several years.

When we analyzed Medicare data for 1995, we divided the beneficiaries into two groups: those who were in the community throughout 1995 or until their death (community-based beneficiaries) and those who had spent any time in long-term care institutions (institutionalized beneficiaries).^b Excluding from the community-based population beneficiaries who spent only part of 1995 in long-term care institutions will cause personal spending for the community-based beneficiaries to be lower than if they are

included as part of the community, because they tend to be more costly than full-year community-based beneficiaries. However, we chose to include the part-year institutionalized as part of the institutionalized population and to analyze the institutionalized and community-based populations separately, because the institutionalized beneficiaries' personal spending is driven by institutional services that Medicare was not initially intended to cover.

To analyze Medicare data over several years, we used the annual MCBS Cost and Use files to create a panel that links information for beneficiaries who remained in the survey year to year. The sample includes information on beneficiary characteristics, Medicare eligibility, supplemental insurance coverage, and components of personal spending on medical care. Further, the sample includes beneficiaries who lived in the community and long-term care facilities, as well as beneficiaries who died during the period analyzed. The sample contains approximately 6,500 beneficiaries representative of those in the total MCBS Cost and Use files. We sorted this subset by level of personal spending and used it to assess the persistence of high personal spending.

Our analysis often uses mean values (averages) as descriptive statistics. All statistics have some degree of uncertainty in their precision, but in nearly all cases, we view the statistics we present as having high degrees of precision. However, in a few cases, the degree of precision has led us to view the statistics with some caution, and we have indicated these situations. ■

^b Long-term care institutions include nursing homes, retirement homes, mental health facilities, and other facilities. Skilled nursing facilities are not considered long-term care facilities. Some beneficiaries in mental health facilities actually are considered in the MCBS to be in the community. Whether such a beneficiary is in the community-based population or the institutionalized population depends on the length of time spent in the mental health facility.

Medicare reduces beneficiary liability

We found that Medicare reduces personal spending liability by providing:

- nearly universal coverage,
- the largest source of payment of medical care costs, and
- payments that are a larger percentage of total spending as total spending increases.

Medicare provides nearly universal coverage

Medicare reduces personal spending liability because it provides nearly universal coverage for the aged population. In 1997, 33.6 million elderly were covered under Medicare, representing nearly 98 percent of the population age 65 years or older (HCFA 1997, SSA 1997). The goal of this universal coverage is to reduce the financial burden of acute medical services on the elderly population.

Universal coverage is important for two reasons. First, it is difficult for the elderly to obtain private primary insurance coverage because they are a high-risk population that is less attractive to private insurers. In 1995, the aged accounted for 40 percent of all hospital stays and 49 percent of inpatient hospital days. Inpatient stays averaged nearly two days longer for the aged than for the nonaged population. The aged also averaged nearly twice the number of physician contacts (Administration on Aging 1998). This higher use makes the aged population less attractive to private insurance providers.

Second, even if this group were able to obtain private coverage, many would have difficulty affording it. Approximately 11 percent of the elderly population live in poverty, with another 6.4 percent having incomes between the poverty level and 125 percent of this

level.² Because the elderly are considered a higher-risk population, their private primary insurance premiums would tend to be prohibitively expensive to most low-income elderly beneficiaries.

Medicare is the largest source of payment

In addition to providing nearly universal coverage, Medicare was the largest source of payment for community-based beneficiaries in 1995. The 1995 MCBS indicates that traditional Medicare paid about 62 percent of the community-based population’s total spending on medical care (see Figure 1–1). Out-of-pocket spending was the second largest source of payment, accounting for about 15 percent of the total, but it should be noted that this percentage was reduced substantially by widespread supplemental coverage.³

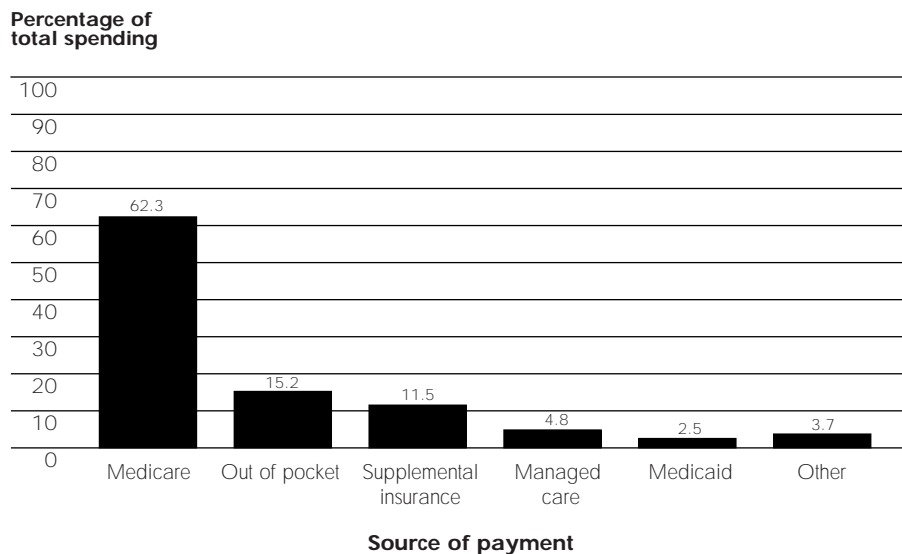
Medicare payments increase as beneficiaries’ total spending on medical care increases

Traditional Medicare not only was the largest source of payment for community-based beneficiaries in 1995, but it also provided more assistance as beneficiaries’ needs increased because it paid a growing fraction of total spending as this spending increased. The program paid 75.8 percent of total spending for beneficiaries in the top decile of total spending but only 11.6 percent for beneficiaries in the bottom decile (see Figure 1–2).

Traditional Medicare paid an increasing percentage as total spending increased because of the program’s cost-sharing structure in 1995. Under Part A, Medicare required a \$716 deductible per benefit period for the first 60 days of inpatient hospital care and no other cost sharing until the 61st day. Therefore, as the number of hospital days a beneficiary had in a benefit period grew (up to 60), so did the fraction of hospital costs paid for by

FIGURE 1-1

Percentage of total spending by source of payment, 1995



Note: “Other” includes payments by the Veterans Administration, unspecified source, other public sources such as state-sponsored programs, and uncollected liabilities. Analysis is based on community-based beneficiaries. Total spending is the sum of payments by all sources of payment for medical care goods and services.

Source: MedPAC analysis of the 1995 Medicare Current Beneficiary Survey, Cost and Use file.

Medicare’s benefit structure

Medicare’s Part A benefit covers hospital inpatient services. In 1999 (1995 values in parentheses when different), beneficiaries face an inpatient deductible of \$768 (\$716) for each benefit period, with a new benefit period starting when a beneficiary has been out of a hospital or skilled nursing facility for at least 60 days. After beneficiaries meet the deductible, Medicare pays 100 percent of hospital inpatient costs for up to 60 days. For the 61st through 90th days of an inpatient stay, Medicare requires daily coinsurance of \$192 (\$179). Beneficiaries hospitalized more than 90 days can use their 60 nonrenewable lifetime reserve days, which have daily coinsurance of \$384 (\$358).

Part A also covers home health and skilled nursing facility (SNF) services. Home health services and the first 20 SNF days

in a benefit period have no cost-sharing requirements, but daily coinsurance of \$96 (\$89.50) is required for days 21 through 100 in a SNF. Medicare does not cover more than 100 days in a benefit period for care in a skilled nursing facility.

Under Part B—which covers physicians’ services, laboratory services, durable medical equipment, hospital outpatient services, and other medical services—beneficiaries must pay a \$45.50 monthly premium (\$46.10), a \$100 annual deductible, and 20 percent coinsurance.

Medicare does not cover some products and services at all, most importantly prescription medicines (with some exceptions), services in long-term care institutions, and long-term home- and community-based care.

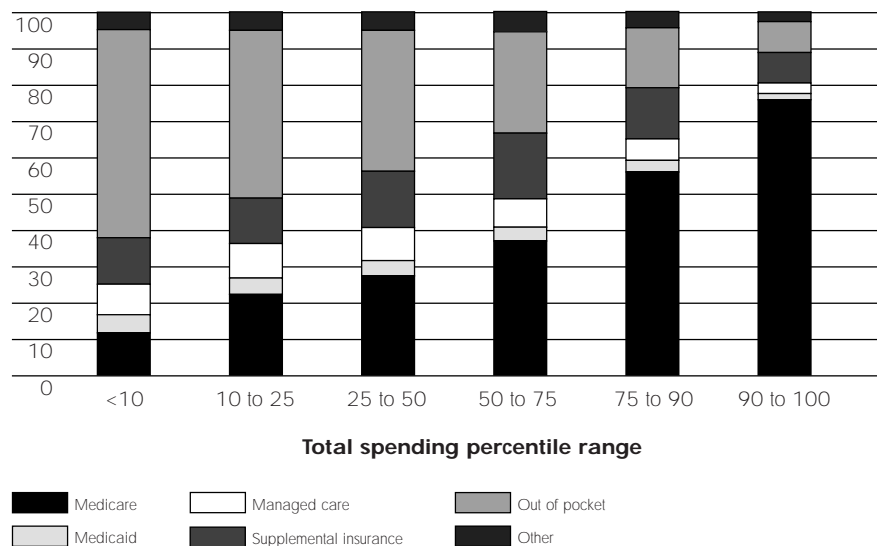
2 Overall, children are more likely to live in poverty than the elderly, particularly children living with a female head of household.

3 The Figure 1–1 percentage for managed care organizations is based mainly on payments made by Medicare managed care organizations as reported in the MCBS, which likely understates the actual percentage. Another way to estimate the payments made by managed care organizations is to use adjusted average per capita cost (AAPCC) payments the Medicare system made to managed care plans. This alternative method would raise the managed care percentage in Figure 1–1 to 7.6 percent.

FIGURE 1-2

Percentage of total spending by source of payment by total spending percentile range, 1995

Percentage of total spending



Note: "Other" includes payments by the Veterans Administration, unspecified sources, other public sources such as state-sponsored programs, and uncollected liabilities. Analysis is based on community-based beneficiaries. Total spending is the sum of payments by all sources of payment for medical care goods and services.

Source: MedPAC analysis of the 1995 Medicare Current Beneficiary Survey, Cost and Use file.

Medicare. Under Part B, beneficiaries paid a 20 percent coinsurance for most services after they paid the \$100 annual deductible for Part B covered services, so Medicare paid a higher fraction of Part B costs the more that beneficiaries' covered spending exceeded the deductible.

Medicare cost sharing and uncovered services

Despite the reduction in personal liability by Medicare, cost sharing and uncovered services appear to cause some beneficiaries to face high levels of personal spending and to spend substantial percentages of their income on medical care. In this section, we examine the cost sharing and uncovered services affecting personal spending, the extent of the problem of

persistent high personal spending, and the populations most affected. The most important cost-sharing policies and uncovered services are related to:

- the lack of an annual limit on personal spending,
- coverage for medical equipment and supplies used by beneficiaries, and
- the lack of coverage for prescription medicines.

The populations most affected are beneficiaries who:

- have high total spending.
- are in long-term care institutions.
- are age 85 or older.
- are female.

Medicare cost sharing and uncovered services contribute to high personal spending

The lack of an annual limit on personal spending seems to contribute to high personal spending by some community-based beneficiaries. In 1995, 5 percent of community-based beneficiaries spent more than \$4,675, and 1 percent spent more than \$8,805. The lack of an annual limit is even more a problem for community-based beneficiaries with only traditional Medicare coverage. Among those beneficiaries, 5 percent spent more than \$5,920, and 1 percent spent at least \$15,819. Traditional Medicare has many features of typical indemnity plans, such as fee-for-service coverage, deductibles, and coinsurance rates, but Medicare differs from most indemnity plans in that it does not have an annual limit on personal spending. If Medicare had an annual limit, very high personal spending would be less common.

The cost sharing and uncovered services also induce many beneficiaries to obtain private supplemental insurance, which results in a far-reaching increase in personal spending. Most community-based beneficiaries had some form of private supplemental insurance in 1995, and supplemental insurance premiums are, on average, the largest source of personal spending for community-based beneficiaries (a mean of \$575 in 1995), a finding consistent with other studies (AARP and Lewin 1997, Moon et al. 1996, PPRC 1997).

The coverage policies for medical equipment and supplies beneficiaries use also appear to contribute to high personal spending.⁴ Among community-based beneficiaries with high total spending, medical equipment and supplies—often covered under Part B—frequently

4 The medical equipment and supplies category includes eyeglasses, contact lenses, and hearing aids; orthopedic items such as canes, walkers, wheelchairs, and corrective shoes; diabetic supplies; oxygen supplies and equipment; kidney dialysis equipment; hospital beds; commodes; and disposable supplies such as disposable diapers and bandages.

account for the largest share of personal spending. Among community-based beneficiaries in the top decile of total medical care spending in 1995, mean personal spending on medical equipment and supplies was \$895 (we caution about the precision of this statistic), an amount much higher than the second largest source of personal spending in that group—supplemental insurance premiums (a mean of \$555) (see Figure 1–3).

Part B covers a large portion of equipment and supplies, so high personal spending for medical equipment and supplies likely results from cost sharing requirements under Part B: a \$100 deductible, 20 percent coinsurance, and no annual limit on personal spending on Part B covered goods and services. However, use of equipment and supplies that Medicare does not cover, such as eyeglasses, also appears to be a factor, as community-based beneficiaries in the highest decile of total spending had substantial total expenditures on uncovered medical equipment and supplies (a mean of \$1,082).

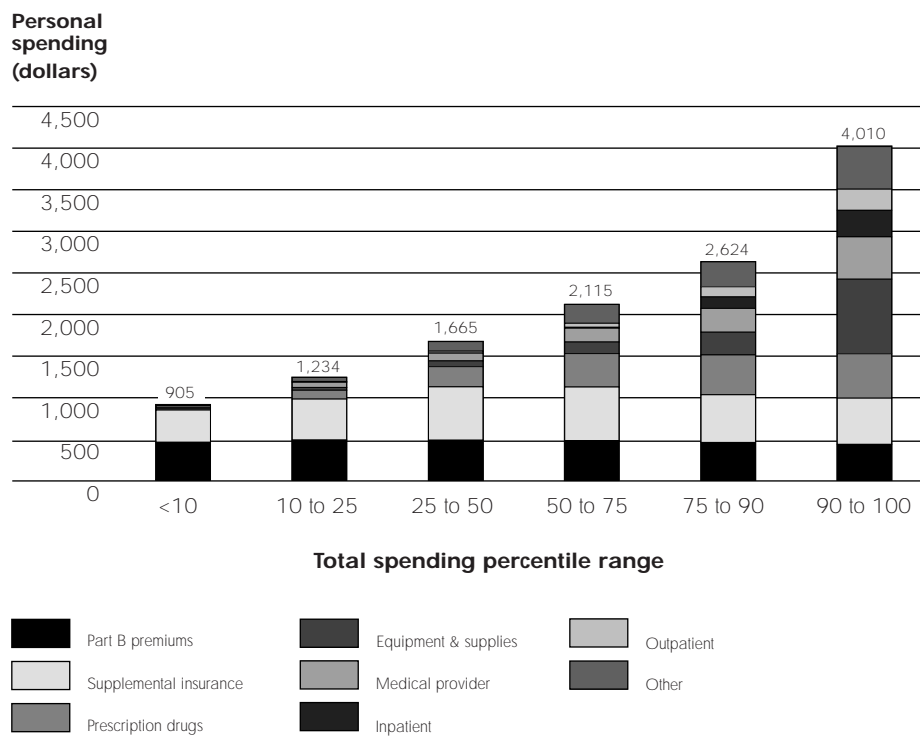
Prescription medicines and long-term institutional care

Medicare was designed to reduce beneficiaries' exposure to financial hardship from acute health care spending. It was not intended to cover certain other goods and services such as prescription medicines and long-term institutional care. However, despite its intended purpose, Medicare often receives a negative evaluation for not covering such spending. Therefore, MedPAC believes an analysis of personal spending on prescription medicines and institutional services is beneficial and enlightening.

Personal spending on prescription medicines is a topic of contentious debate. Despite the lack of Medicare coverage, the MCBS indicates that mean personal spending on prescription medicines was not high for community-

FIGURE 1-3

Mean personal spending by total spending percentile range, 1995



Note: The medical provider category includes spending on physicians and other practitioners, diagnostic laboratory and radiology services, and medical and surgical services. The equipment and supplies category includes durable medical equipment and nondurable supplies. Personal spending includes beneficiaries' out-of-pocket spending on medical care, Medicare premiums, managed care premiums, and private insurance premiums. Analysis is based on the community-based population.

Source: MedPAC analysis of the 1995 Medicare Current Beneficiary Survey, Cost and Use file.

based beneficiaries in 1995—it was about \$304 for the year. Mean personal spending also was not much higher for community-based beneficiaries with only Medicare coverage (\$344), but many members of this group may have forgone supplemental coverage because they were not high-level users of medical care.

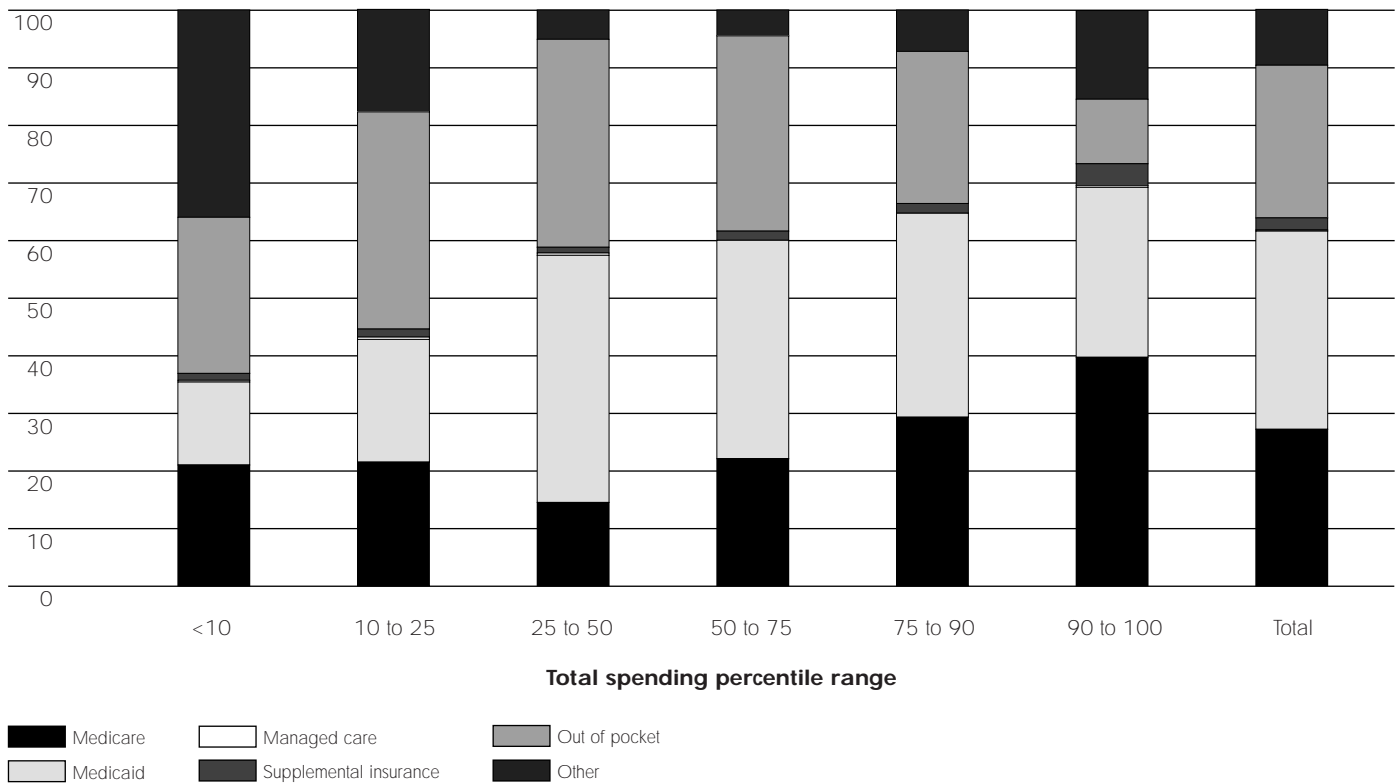
Although the MCBS indicates mean personal spending on prescription medicines was low in 1995, the effects of this uncovered service are far-reaching: Nearly 85 percent of community-based beneficiaries in 1995 paid some amount out of pocket for prescription medicines. Extreme values (the 99th percentile) of personal spending on prescription medicines also

were high—\$2,134. Furthermore, the MCBS data understate the effect of the lack of prescription medicine coverage because 65 percent of beneficiaries had (private or public) supplemental or managed care coverage that paid for part or all of the cost of prescription medicines (Davis et al. 1999), and the prescription medicine coverage increases premiums for the private coverage. Finally, the MCBS data on prescription drugs may further understate the situation because the data were collected from interviews with beneficiaries and could not be cross-referenced with Medicare claims data as was done with other categories, such as hospital inpatient services. It is likely that beneficiaries failed to inform survey

**FIGURE
1 - 4**

**Percentage of total spending by source of payment
by total spending percentile range, institutionalized population, 1995**

Percentage of
total spending



Note: "Other" includes payments by the Veterans Administration, unspecified sources, other public sources such as state-sponsored programs, and uncollected liabilities. Analysis is based on beneficiaries who spent time in institutions such as nursing homes, retirement homes, mental health facilities, and other long-term care facilities. Skilled nursing facilities are not considered long-term care. Total spending is the sum of payments by all sources of payment for medical care goods and services.

Source: MedPAC analysis of the 1995 Medicare Current Beneficiary Survey, Cost and Use file.

interviewers of all prescription medicines they purchased during the survey period.

Nevertheless, the low mean personal spending on prescription medicines contrasts sharply with much of the evidence in recent debate. We offer three caveats on this point, however. First, the debate may depend as much on the fact that most beneficiaries have personal spending on prescription medicines as on the magnitude of the personal spending. Second, the MCBS data are from 1995, and personal spending on prescription medicines may have increased since then

because of the introduction of costly new drugs and an increase in the use of drugs. In other words, the MCBS data may be too old to accurately represent out-of-pocket spending on prescription medicines in 1999. Finally, the current debate often depends on data that may not accurately represent spending by all Medicare beneficiaries. Nationally representative data are more reliable.

The lack of coverage for long-term institutional services has a different effect than the lack of coverage for prescription medicines. Although only a small fraction of the Medicare population uses

institutional services (7.7 percent in 1995), these uncovered services profoundly affect those who do. MCBS data indicate the lack of Medicare coverage for institutional care and the high cost of this care often result in high personal spending by beneficiaries who use institutional care, where personal spending is still defined as beneficiaries' out-of-pocket spending on all medical care services, including institutional care, and on Medicare and private supplemental insurance premiums. In 1995, mean personal spending by beneficiaries who used institutional care was \$10,675, with about 88 percent of

personal spending for these beneficiaries attributable to institutional services. This spending contrasts sharply with community-based beneficiaries, whose mean personal spending was \$2,015. Moreover, the difference between the highest-spending beneficiaries who use institutional care and the highest-spending community-based beneficiaries is even more pronounced. Among institutionalized beneficiaries in 1995, the people at the top decile of personal spending spent \$28,370, while the analogous community-based beneficiaries spent just \$3,607.

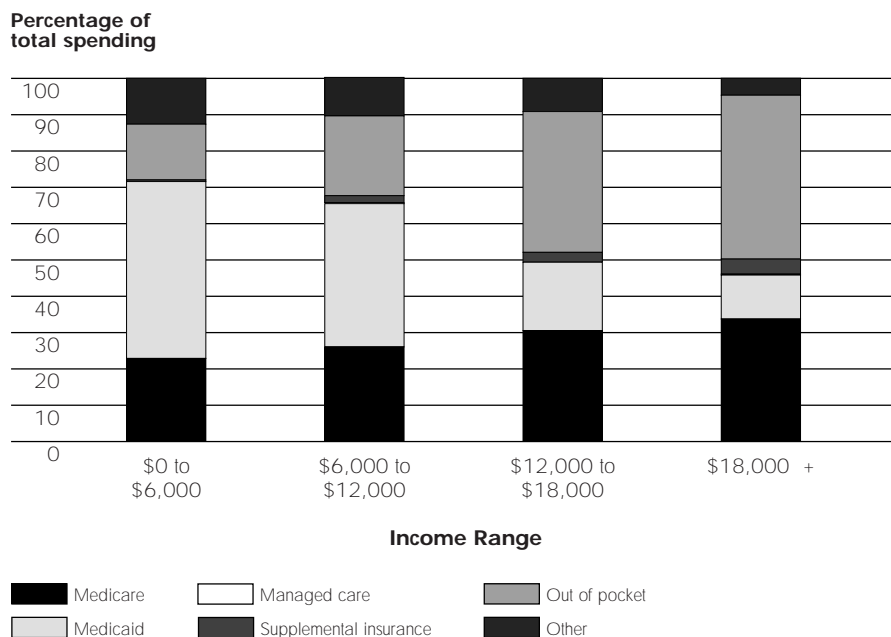
The lack of Medicare coverage for institutional services causes the institutionalized population to differ from the community-based population not only in terms of personal spending but also in the percentages of total spending by sources of payment. Medicare covers a relatively small share of total spending for institutionalized beneficiaries: 27.2 percent overall and 39.7 percent among institutionalized beneficiaries in the highest decile of total spending (see Figure 1-4). However, these beneficiaries' financial risk is not as high as the Medicare coverage percentages suggest because Medicaid helps alleviate the financial burden. In 1995, Medicaid was a substantial source of coverage for institutionalized beneficiaries—about 34.4 percent of total spending was paid by Medicaid (see Figure 1-4).⁵

Beneficiaries must meet income and asset requirements before they can receive benefits under Medicaid. Because many institutionalized beneficiaries do not meet eligibility requirements for the program, they must find other ways to pay for institutional services. Therefore, despite the high levels of Medicaid coverage, many Medicare beneficiaries using institutional services risk high personal liability.

By law, institutionalized residents are required to use their income from Social

FIGURE 1-5

Percentage of total spending by source of payment within income range, institutionalized population, 1995



Note: "Other" includes payments by the Veterans Administration, unspecified sources, other public sources such as state-sponsored programs, and uncollected liabilities. Analysis is based on beneficiaries who spent time in institutions such as nursing homes, retirement homes, mental health facilities, and other long-term care facilities. Skilled nursing facilities are not considered long-term care. Total spending is the sum of payments by all sources of payment for medical care goods and services.

Source: MedPAC analysis of the 1995 Medicare Current Beneficiary Survey, Cost and Use file.

Security and pensions to offset the cost of their institutional expenses, so those with higher incomes will tend to pay more out of pocket before becoming Medicaid eligible. Therefore, it is not surprising that Medicaid pays more for low-income beneficiaries while high-income beneficiaries pay more out of pocket. In 1995, Medicaid paid 48.7 percent of total spending for institutionalized beneficiaries who had incomes below \$6,000, but just 12.1 percent for institutionalized beneficiaries who had incomes of \$18,000 or more (see Figure 1-5). Conversely, the same low-income beneficiaries paid about 15.4 percent of their total medical care spending out of pocket, while the beneficiaries with incomes of \$18,000 or

more paid 45.1 percent (see Figure 1-5). As a final point, the beneficiaries with incomes of \$18,000 or more had a much lower percentage of their total spending paid by Medicare, 33.7 percent, relative to all community-based beneficiaries, despite the fact that Medicaid provides relatively little assistance for the \$18,000-and-over institutionalized beneficiaries.

Low-income beneficiaries are more likely to spend large percentages of income

Earlier, we showed that Medicare, in general, helps reduce beneficiaries' risk of financial hardship by reducing personal spending on medical care. This finding further relates to the fact that

5 By contrast, Medicaid paid only 2.5 percent of total spending for community-based beneficiaries.

most community-based beneficiaries avoid paying extremely large percentages of their incomes on medical care and premiums (personal spending). For those beneficiaries, the median percentage of income spent on medical care and premiums was 13 percent in 1995 (see Table 1–1), and 68 percent of community-based beneficiaries spent no more than 20 percent of income. The median value of 13 percent is consistent with the median amount found in previous research (14.4 percent in CRS 1998).

However, Medicare cost sharing and uncovered services contribute to some beneficiaries' spending large percentages of their incomes on medical care and premiums. Not surprisingly, among community-based beneficiaries, lower-income beneficiaries are under greater financial strain from the burden of medical care spending than higher-income beneficiaries. For example, the median percentages of income spent on medical care and premiums for poor, near poor,

**TABLE
1-2**

Percentage of income spent on medical care and premiums by income category, 1995

Income category	At median of distribution	At top decile of distribution
Poor	18	97
Near poor	21	47
Low income	18	39
Middle income	11	24
High income	6	14

Note: Analysis is based on the community-based population. The numerator is out-of-pocket spending on medical care, Medicare premiums, managed care premiums, and private insurance premiums. For married beneficiaries, the Medicare Current Beneficiary Survey (MCBS) reports joint income with their spouses. Therefore, in this table we divide by two the reported MCBS income for married beneficiaries. Poor beneficiaries are below the poverty line; near poor are from 100 to 125 percent of poverty; low income are from 125 to 200 percent of poverty; middle income are from 200 to 400 percent of poverty; and high income are 400 percent of poverty and higher.

Source: MedPAC analysis of the 1995 MCBS Cost and Use file.

and low-income community-based beneficiaries (18 percent, 21 percent, and 18 percent, respectively) are much higher than the percentages for middle- and high-income groups, 11 percent and 6 percent, respectively (see Table 1–2). Furthermore, extreme values differ profoundly by income category. Among poor beneficiaries, those who spent the highest fraction of their income on medical care and premiums (beneficiaries in the top decile for this statistic) spent 97 percent of income, while analogous beneficiaries in the high-income group spent only 14 percent of their income on medical care and premiums (see Table 1–2).⁶

The fact that some poor beneficiaries spend extremely high percentages of income on medical care and premiums may appear inconsistent with the fact that Medicaid pays all of the cost sharing and some uncovered services for qualified poor beneficiaries. However, in 1995, only 46 percent of the poor, community-based beneficiaries received assistance from Medicaid. Furthermore, for some of those beneficiaries, Medicaid paid just the Part B premium and Medicare cost sharing (qualified Medicare beneficiaries), and for still others,

Medicaid paid just the Part B premium (specified low-income Medicare beneficiaries).

Beneficiary spending over time

Another concern is that beneficiaries face higher personal spending as they age. During 1992–1995, personal spending rose with average spending increasing for the entire elderly cohort file from \$2,850 in 1992 to about \$3,150 in 1995 (in dollars not adjusted for inflation).

We can enhance our cross-sectional analysis of beneficiaries' personal spending by exploring the degree to which high personal spending persists from year to year. Persistence of high spending is important because one year of high personal spending may not present the hardship to beneficiaries that a pattern of persistently high personal spending would.

To evaluate the issue of persistence, we ask two questions. First, what happens to the beneficiaries' level of personal spending, given that they had high personal spending in the first period (1992) and second, among beneficiaries

**TABLE
1-1**

Distribution of the percentage of income spent on medical care and premiums, 1995

Distribution percentile	Share of income
10th	3%
25th	7
Median	13
75th	24
90th	40

Note: Analysis is based on the community-based population. The numerator is out-of-pocket spending on medical care, Medicare premiums, managed care premiums, and private insurance premiums. For married beneficiaries, the Medicare Current Beneficiary Survey (MCBS) reports joint income with their spouses. Therefore, in this table we divide by two the reported MCBS income for married beneficiaries.

Source: MedPAC analysis of the 1995 MCBS Cost and Use file.

⁶ It may seem impossible to spend 97 percent of income on medical care and premiums, but a likely explanation is that these beneficiaries used savings and other assets to pay for medical care.

with high personal spending in one year, what percentage of surviving beneficiaries are likely to have high personal spending in the following years?

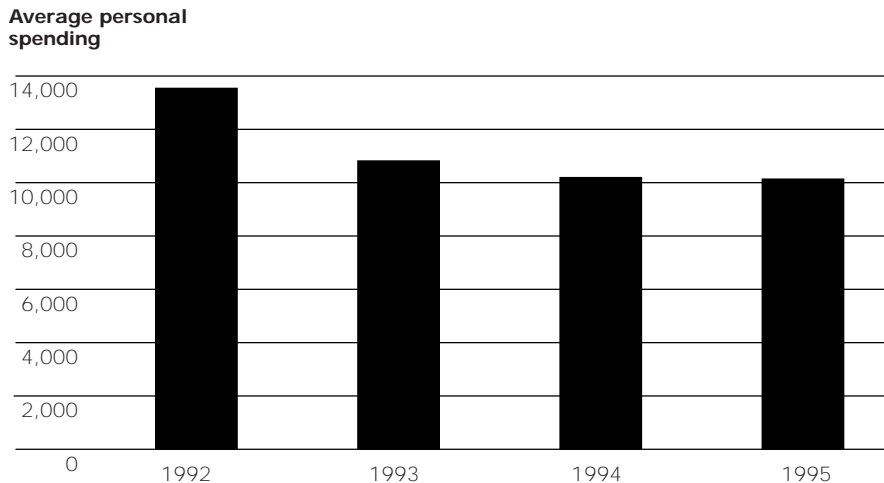
To answer the first question, we rank beneficiaries by their personal spending in 1992 and follow those individuals over time. This approach simultaneously captures two phenomena: the degree to which high personal spending in one year continues in subsequent years and the effects that aging and death have on spending over time. To determine the potential hardship of persistent high personal spending, we evaluate personal spending relative to a fixed threshold, 175 percent of the mean level of personal spending in 1992 for all beneficiaries in the cohort file. The mean level of personal spending in 1992 was \$2,850, so 175 percent of that level was \$4,987.

Beneficiaries spending 175 percent of the mean represented approximately the 90th percentile of personal spending. Over time, mean personal spending for the highest 10 percent remained well above 175 percent of the 1992 mean (See Figure 1–6). Many of the beneficiaries in this group died or entered skilled nursing facilities from 1992 through 1995. Therefore, the considerably higher persistent personal spending for the highest 10 percent of beneficiaries demonstrates the high personal spending associated with the final year of life and the high personal spending that precedes entering a skilled nursing facility.

Not surprisingly, these beneficiaries tended to be somewhat older than the general Medicare population and predominantly women. The highest personal spending of beneficiaries above the 90th percentile was attributable to beneficiaries age 85 or older with spending about 12 percent higher than others above the 90th percentile. Also note the pattern of high spending is somewhat dampened over the period because of an increase in the number of beneficiaries who qualified for Medicaid

FIGURE 1-6

Average personal spending for beneficiaries in the 90th percentile of spending



Source: MedPAC analysis of 1992 through 1995 Medicare Current Beneficiary Survey, Cost and Use file.

coverage. Overall, 27 percent of beneficiaries above the 90th percentile received Medicaid assistance in 1992, and this percentage increased to 46 percent by 1995.

To answer the second question, we evaluate persistence from a slightly different perspective. In this method, we eliminate from the cohort sample beneficiaries who died from 1992 through 1995. We rank beneficiaries by personal spending in each year (1992 through 1995) and determine the percentage who remain high spenders in subsequent years. This evaluation gives us the likelihood that beneficiaries will continue to have high personal spending in a subsequent year, given that they have high spending in the first year (1992). Furthermore, we can determine the percentage of beneficiaries who continue to have high personal spending over the entire period, relative to all surviving beneficiaries in this sample. To determine the potential hardship of persistent high spending, we evaluate personal spending relative to a fixed threshold. Each year, we define the threshold for high personal spending as two times the mean level of personal spending in

1992 for all beneficiaries in the sample. The mean level of personal spending in 1992 was \$1,616, so twice the mean level equals \$3,231. Two times the mean level of spending represents approximately the 90th percentile of personal spending.

In this case, we examined the proportion of surviving elderly beneficiaries who continued to have high personal spending above the threshold, \$3,231 (Figure 1–7). Of the beneficiaries above the 90th percentile in 1992, nearly 70 percent continued to have personal spending above the threshold one year later. By the fourth year, 56 percent continued to have personal spending above the threshold. Mean personal spending for the highest 10 percent of beneficiaries was about \$8,000 in each year, and though exceeding the threshold does not affect a large number of beneficiaries (in 1995, 56 percent of the top 10 percent), the persistence of high personal spending may represent a serious problem for these beneficiaries.

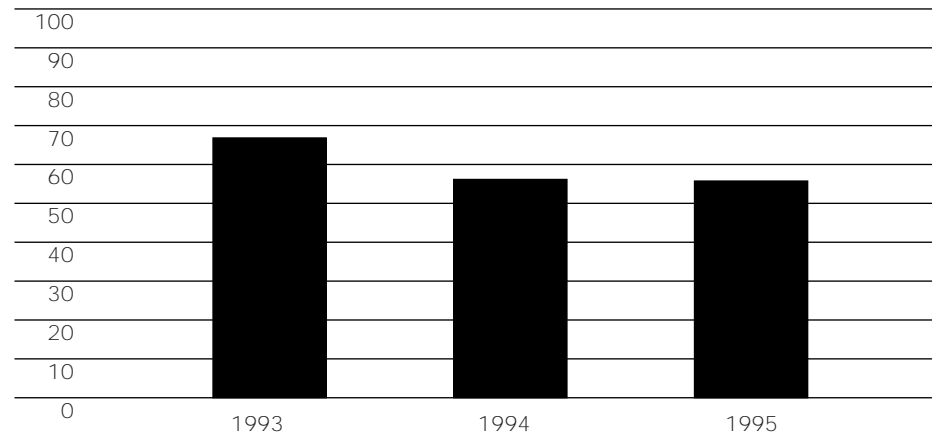
Future research

Medicare's cost sharing and uncovered services cause some beneficiaries to have high personal spending on medical care, particularly as they age. Our analysis indicates that older and female beneficiaries are at greater risk than their younger and male peers. This fact raises important policy concerns. First, as the Medicare population ages, surviving beneficiaries are more likely to be female. About 71 percent of beneficiaries 85 years of age or older are women. Second, female beneficiaries generally have lower incomes than male beneficiaries and are more likely to live in poverty. The percentage of women in the program is expected to grow as the overall Medicare population grows. We will continue to investigate the effects of Medicare's cost sharing and uncovered services on this and other vulnerable populations. ■

**FIGURE
1 - 7**

**Beneficiaries with continued high personal spending
in excess of 200 percent of the 1992 average**

**Percentage with persistent
high personal spending**



Source: MedPAC analysis of 1992 through 1995 Medicare Current Beneficiary Survey, Cost and Use file.

Beneficiary income

For our analysis, we used income data from the household survey component of the MCBS. Because household surveys generally tend to underestimate income sources—such as interest, dividends, rents, veterans’ payments, and unemployment and workers’ compensation—(Bureau of the Census 1997) we supplemented our analysis of beneficiaries’ income by considering additional data from the Social Security Administration. These additional data sources further our understanding by providing information about the composition of beneficiary income.

The elderly rely primarily on four sources of income: Social Security benefits (48 percent), dividends and interest income (19 percent), pensions and annuities (19 percent), and earnings from employment (10 percent) (see Figure 1–A). Approximately 67 percent of the elderly rely on Social Security for 50 percent or more of their total incomes. Of that group, 45 percent rely on

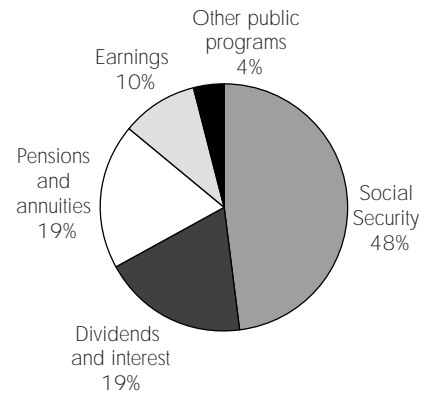
Social Security benefits for 75 percent or more of their total incomes (SSA 1997).

Social Security income is even more important to the elderly living in poverty. Approximately 82 percent of the poor elderly rely on Social Security benefits for 50 percent or more of their total incomes. Of this group, 71 percent rely on Social Security benefits for 75 percent or more of their total incomes.^a

Median incomes vary considerably between the general Medicare population and those living in poverty. Specifically, the Social Security Administration found that median income for the elderly population as a whole was \$11,673 in 1995, consistent with the median incomes reported in the MCBS. However, those beneficiaries living in poverty had median incomes of \$5,556. The differences in income between poor and nonpoor beneficiaries suggests a wide and skewed income distribution for beneficiaries. ■

FIGURE 1 - A

Composition of beneficiary income, 1995



Source: MedPAC analysis of Social Security Administration Annual Statistical Supplement, 1997.

^a Maximum annual Social Security benefits for individuals currently older than 65 is about \$12,000.

References

Administration on Aging, Department of Health and Human Services. Profile of older Americans. Washington (DC), HHS. 1998.

Bureau of the Census, Department of Commerce, Current Population Survey. The value of noncash benefits: 1979–1982, Technical paper No. 52. Washington (DC), Bureau of the Census. 1997.

Congressional Research Service. Medicare: Out-of-pocket health spending, No. 98-534 EPW. Washington (DC), CRS. June 8, 1998.

Davis M, Poisal J, Chulis G, et al. Prescription drug coverage, utilization, and spending among Medicare beneficiaries, Health Affairs. January/February 1999, Vol. 18, No. 1, p. 231–243.

Gross D, Alecxih L, Gibson MJ, et al. Out-of-pocket health spending by Medicare beneficiaries age 65 and older: 1997 projections, No. 9705. Washington (DC), AARP. December 1997.

Health Care Financing Administration. Medicare and Medicaid statistics, HCFA statistics: populations. Washington (DC), HCFA. 1997.

Long LH, Settle RF. Medicare and the disadvantaged elderly: objectives and outcomes, Milbank Memorial Fund Quarterly. 1984, Vol. 62, No. 4, p. 609–656.

Moon M, Kuntz C, Pounder L. Protecting low-income Medicare beneficiaries. New York (NY), The Commonwealth Fund. November 1996.

Office of Strategic Planning, Health Care Financing Administration. A profile of Medicare, Medicare Chartbook. 1998.

Physician Payment Review Commission. Monitoring the financial liability of Medicare beneficiaries, No. 97-2. Washington (DC), PPRC. 1997.

Social Security Administration. Annual statistical supplement. Washington (DC), SSA. 1997.