

Utilization of Medicare services by beneficiaries having partial Medicare coverage

by Nelda McCall

With the rapid increases in Medicare expenditures, policymakers are constantly reevaluating the use of and the need for services provided. One approach to better understand these issues is to identify major subgroups of the Medicare population for more detailed evaluation. A disaggregation of the data can pinpoint critical high expenditure areas for further study and may suggest potential cost containment strategies.

With funding from the Health Care Financing Administration (HCFA), a series of investigations were designed to study utilization of services by particular

types of Medicare beneficiaries. These include:

- *Those who are continuously enrolled in the program over time.*
- *Those who died.*
- *Those who recently joined Medicare.*
- *Those who have one part of Medicare without the other part.*

This article discusses findings concerning beneficiaries who have only partial Medicare coverage (such as those who are enrolled under one part of Medicare without the other part).

Introduction

The Medicare program has two parts. Medicare Part A, Hospital Insurance (HI), provides hospital, skilled nursing home, and home health agency services to eligible Medicare beneficiaries. Part A is largely financed by compulsory taxes on employers, employees, and the self-employed. Part A coverage is automatically provided at no charge to:

- Those who are 65 years of age and are Social Security retirement or railroad retirement beneficiaries.
- Disabled persons entitled to cash benefits under Social Security or railroad programs.
- Those who have end-stage renal disease.

Those not eligible for Part A may enroll by purchasing the coverage for a current premium of \$132 per month, if they are 65 years of age or over, are residents and citizens of the United States, or are alien permanent residents and have resided in this country for the 5 years immediately before enrollment. Groups that receive coverage on this premium basis, include those eligible for social security who did not or whose employees did not elect to be covered, such as government employees or sporadic workers (examples of sporadic workers are agricultural, and domestic workers, who did not contribute enough to be covered by social security); and women who never worked under covered employment, and are not eligible for dependent's benefits (*Medicare and Medicaid Guide*, 1982).

Part B, Supplementary Medical Insurance (SMI), covers physician and other outpatient services. It is a voluntary program for eligible individuals who elect to enroll. The program is financed by premium payments with matching contributions from funds appropriated by the Federal Government. An individual can enroll in

Part B without being entitled to Part A coverage, if he or she is 65 years of age or over, a U.S. resident and citizen, or an alien permanent resident who has resided in the United States for the 5 years immediately before enrollment (*Medicare and Medicaid Guide*, 1982). In addition, those who are eligible for Part A coverage because of disability or end-stage renal disease, may also enroll in Part B. The current Part B premium is \$13.50 per month. This premium may be paid by the individual or by a State Medicaid program under a "buy-in" arrangement with the Federal Government.

The two groups examined in this study are those having Part A coverage (HI) without Part B (SMI), and those having Part B coverage without Part A. The data base includes all such beneficiaries in the State of Colorado in 1978: 7,503 beneficiaries having Part A coverage without Part B and 3,251 beneficiaries having Part B without Part A. We compared this group's utilization to a 3 percent random sample of the Medicare population of Colorado in 1978 having both coverages. The random sample is composed of 6,279 people, from a population of about 209,000 beneficiaries, who had both Part A and Part B coverages.

National data from 1978 approximately indicate the same percentages of beneficiaries in these special groups as in the Colorado data, and thus suggest that examination of this state's data may be suggestive of patterns within the Nation as a whole. There were 27,164,222 beneficiaries in Part A and/or Part B of Medicare, 1,090,137 beneficiaries enrolled only in Part A, and 386,959 beneficiaries only in Part B (Health Care Financing Administration, 1981). Nationally, 4.2 percent of Medicare enrollees had Part A coverage without Part B (compared to 3.5 percent in Colorado), and 1.4 percent had Part B coverage without Part A (compared to 1.5 percent in Colorado).

In addition, Colorado's average Medicare reimbursement per beneficiary was close to national data in 1978, averaging \$907 per Colorado beneficiary compared to \$951 per U.S. beneficiary. Part B reimbursement was \$282 per Colorado beneficiary compared with \$279 per

This research was supported by Health Care Financing Administration Grant #95-P-97150/9-01.

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U.S. beneficiary (U.S. Department of Commerce, 1980). While it is clear that demand and supply conditions are somewhat different in Colorado than in the entire United States, on balance these differences are not substantial. Thus, relationships in Colorado, while not identical to the Nation as a whole, do add to the body of knowledge on how the Medicare system works.

Data were tabulated on some 100 utilization variables from the claims files of the carrier, and principal intermediary in Colorado, Blue Cross/Blue Shield of Colorado. These data include:

- Number of services.
- Number of relative value units (RVU's)¹.
- Number of allowed charges by major procedure type (medical, medical office, surgical, anesthesia, radiology, or laboratory) and place (office, hospital, or other).
- Number of and covered charges for outpatient hospital visits.
- Number of days and covered charges for Part A services by facility type (inpatient hospital, psychiatric hospital, skilled nursing facility, or home health agency [covered charges only]).

This information was combined with data on Medicare eligibility and demographic characteristics (age, sex, race, and zip code of residence) provided by HCFA, and information on dates of Medicaid eligibility from the Colorado Medical Assistance Program.

In the discussion that follows, we first examine the characteristics and utilization of those having Hospital Insurance without Supplementary Medical Insurance (Part A of Medicare without Part B), and then the characteristics and utilization of those having Supplementary Medical Insurance without Hospital Insurance (Part B of Medicare without Part A).

Hospital insurance without supplementary medical insurance

Because Medicare charges a monthly premium for Part B (SMD), some Medicare beneficiaries elect to participate only in Part A (HI). During the study period, the monthly premium was \$7.70 for the first 6 months of 1978, and \$8.20 for the last 6 months. However, because there was no information on income, health status, or other insurance coverage, the reason for the decision not to purchase Part B cannot be determined. These beneficiaries may be less risk-averse than the overall Medicare population, or they may choose not to purchase Part B because they are poorer, are less seriously ill, or have another source of insurance coverage. This section compares beneficiaries who have only Part A coverage with the random sample of Medicare beneficiaries who have both Part A and Part B.

¹Relative value units are measures of service intensity defined for each type of service (i.e., medical, surgical, anesthesia, laboratory and radiology). Relative values are not additive across these five types of services. Procedures in the Blue Cross/Blue Shield of Colorado data files are coded using the Colorado Relative Value Studies, an adaptation of the 1964 California Relative Value Studies.

Demographic characteristics

The demographic characteristics of beneficiaries with only Part A coverage and the random sample are given in Table 1. As indicated in Table 1, disabled beneficiaries make up a much larger proportion of those without Part B coverage, constituting approximately 25 percent of that population, compared with 10 percent in the random sample. For both the aged and disabled subgroups, the Part-A-only beneficiary group has more males, is younger, has more all other racial groups, and more beneficiaries living in urban areas than does the random sample. Almost none of the Part-A-only group was eligible for Medicaid, while over 10 percent of the beneficiaries in the random sample were eligible.

Utilization and cost

Utilization of services and Medicare covered charges for beneficiaries with only Part A coverage and the random sample are given in Table 2. A statistically significant difference between those with Part-A-only coverage and the random sample is marked. The utilization figures in Table 2 show that both the aged and disabled beneficiaries with only Part A coverage, use significantly fewer services than do the random sample of Medicare beneficiaries. Among the aged beneficiaries, those with only Part A use 56 percent as many hospital days and 33 percent as many skilled nursing facility (SNF) days as those in the random sample, although they use more psychiatric hospital days. The pattern of less use is even more noticeable among the disabled: Part-A-only beneficiaries use less than 25 percent as many inpatient days and psychiatric hospital days as the random sample. In addition, the group of Part-A-only beneficiaries have no SNF days under Medicare; beneficiaries in the random sample use 0.02 days on the average.

A similar pattern emerged for covered charges: beneficiaries with only Part A have significantly smaller covered charges. For the aged, Part-A-only beneficiaries have:

- Less than 60 percent of the random sample's inpatient hospital covered charges.
- Less than 35 percent of the random sample's SNF covered charges.
- Less than 30 percent of the random sample's home health agency covered charges.

The pattern is even more striking for the disabled, where the Part-A-only beneficiaries have less than 25 percent of the covered charges by the random sample for inpatient hospital and psychiatric hospital care; less than 10 percent of the covered charges for home health agency services; and have no SNF utilization compared to an average of \$1.37 of SNF use by the random sample beneficiaries.

Table 1
Percent of beneficiaries having Part A without Part B coverage compared with a random sample of beneficiaries, by demographic characteristics and basis of eligibility

Characteristic	Total ¹		Aged		Disabled	
	A without B (N=7,503)	Random (N=6,279)	A without B (N=5,579)	Random (N=5,641)	A without B (N=1,913)	Random (N=631)
Sex						
Male	56.7	41.2	50.6	39.2	74.7	59.1
Female	43.3	58.8	49.4	60.8	25.3	40.9
Age						
Under 45 years	5.7	2.5	0	0	22.0	23.8
45-64 years	18.0	5.4	0	0	70.5	53.1
65-69 years	28.1	24.6	35.3	24.9	7.3	22.2
70-74 years	22.1	25.1	29.6	27.9	0.2	1.0
75-79 years	11.9	18.2	16.0	20.3	0	0
80-84 years	7.9	13.5	10.7	15.1	0	0
85 years or over	6.3	10.7	8.4	11.9	0	0
Race						
White	92.9	96.4	93.4	96.7	91.4	93.5
All other	7.1	3.6	6.6	3.3	8.6	3.8
Urbanization of residence						
County in large SMSA ²	53.8	47.2	52.9	46.7	56.1	52.3
County in a small SMSA ² or adjacent	29.7	31.0	30.4	31.2	27.7	29.3
Rural or semirural county	16.5	21.7	16.7	22.1	16.2	18.4
Medicaid						
None	99.6	87.3	99.7	88.1	99.5	80.5
Some during the year	0.1	1.9	0.1	1.5	0.2	4.8
Entire year coverage	0.3	10.8	0.2	10.4	0.3	14.7

¹The total includes 11 beneficiaries in the A without B group and 7 beneficiaries in the random sample who qualified for Medicare because of end-stage renal disease (ESRD).

²Standard metropolitan statistical area.

Table 2
Mean utilization and cost of Part A services for beneficiaries having Part A without Part B coverage compared with a random sample of beneficiaries, by basis of eligibility

Utilization or cost measure	Total ¹		Aged		Disabled	
	A without B (N=7,503)	Random (N=6,279)	A without B (N=5,579)	Random (N=5,641)	A without B (N=1,913)	Random (N=631)
Days						
Inpatient hospital	21.52	3.17	21.70	3.01	20.96	4.48
Skilled nursing facility	20.02	0.08	20.03	0.09	0.00	0.02
Psychiatric hospital	0.09	0.10	0.08	0.06	20.10	0.46
Covered charges	² \$354.40	\$716.93	² \$392.70	\$668.13	² \$238.67	\$1,126.32
Inpatient hospital	² \$339.13	683.58	² \$376.33	639.43	² \$226.51	1,051.03
Skilled nursing facility	22.04	7.38	22.74	8.06	0.00	1.37
Psychiatric hospital	9.51	9.50	9.59	5.70	29.33	43.61
Home health agency	23.73	16.47	24.04	14.94	22.83	30.31

¹The total includes 11 beneficiaries in the A without B group and 7 beneficiaries in the random sample who qualified for Medicare because of end-stage renal disease (ESRD).

²Significantly different from the random sample, p<.05.

Supplementary medical insurance without hospital insurance

The population of Colorado Medicare beneficiaries having Part B without Part A, essentially consists of aged individuals, not automatically covered by Medicare, who could voluntarily enroll by purchasing both Part A and Part B of Medicare, but who have elected to purchase only Part B. This may be because the Part B insurance is a better buy than Part A, or because the Part B premium is a smaller dollar amount than Part A, or because they are "bought into" Part B of Medicare by their Medicaid program and cannot afford to purchase Part A themselves.

Part B coverage is a better buy than Part A because part of its cost is paid for by Federal revenue. In 1979, for example, only 28 percent of the Part B program cost was paid by beneficiaries through the premiums, while 72 percent was provided by Federal matching contributions, and interest on the Supplementary Medical Insurance Trust Fund. On the other hand, the premium cost for Part A for the voluntarily enrolled, is based on the total cost of hospital insurance for this group. In 1979, average Part A expenditures per Medicare beneficiary were about \$700, while the individual's monthly premiums totaled \$792 for the year—more than covering the disbursements from the program (*Social Security Administration*, 1980). This might help explain why many beneficiaries purchase Part B, but not Part A.

Another factor that might explain why individuals purchase Part B, but not part A, is that the dollar premium for Part B is significantly smaller—less than 15% of the premium amount for Part A. During the study period, the average monthly Part B premium was \$7.95 compared with an average monthly premium of \$58.50 for Part A.

Demographic characteristics

The demographic characteristics of beneficiaries with only Part B coverage and the random sample are shown in Table 3. Because there were only nine disabled beneficiaries with Part B coverage only, we examine here only those who are eligible because of age. Compared with the random sample, the group of Medicare beneficiaries having only Part B coverage, includes more females, and all races other than white, and is younger. More of them than of the random sample are also eligible for Medicaid; 50 percent of Part-B-only beneficiaries are covered the entire year by Medicaid, compared with 10 percent of the random sample. By urbanization, the Part-B-only beneficiaries do not differ much from the random sample; however, there is a slightly smaller percentage of the Part-B-only beneficiaries living in large standard metropolitan statistical area (SMSA's).

Utilization and cost

The service utilization of Part-B-only beneficiaries and the random sample, by type of service and by place of

Table 3
Percentage of aged beneficiaries having Part B without Part A coverage compared with a random sample of beneficiaries

Characteristic	B without A (N=3,251)	Random (N=5,641)
Total	100.0	100.0
Sex		
Male	27.0	39.2
Female	73.0	60.8
Age		
65-69 years	37.9	24.9
70-74 years	49.1	27.9
75-79 years	10.4	20.3
80-84 years	2.1	15.1
85 years or over	0.5	11.9
Race		
White	87.1	97.7
All other	12.9	3.3
Urbanization of residence		
County in large SMSA ¹	44.2	46.7
County in a small SMSA ¹ or adjacent	33.1	31.2
Rural or semirural county	22.7	22.1
Medicaid		
None	48.1	88.1
Some during year	2.0	1.5
Entire year coverage	49.9	10.4

¹Standard metropolitan statistical area.

service, is shown in Table 4. Table 4 shows:

- Mean number of services.
- Relative value units and allowed charges for medical, medical office, surgical, laboratory and anesthesia services.
- Mean number of services and allowed charges for office, hospital and other services.
- Allowed charges for Part B services billed through carriers.
- Mean covered charges and number of services for Part B services billed through intermediaries.
- Mean total Part B charges.²

The overall charges for Part B services (allowed charges billed by physicians and other suppliers plus outpatient covered charges billed by hospitals) for beneficiaries having Part B coverage without Part A are 18 percent higher than for the random sample (\$357 compared with \$302).² Allowed charges for services reimbursed through carriers are actually significantly lower for this group than for the random sample of Medicare beneficiaries (\$214 compared to \$252). However, covered charges for hospital outpatient visits are significantly higher (\$143 compared to \$50).

With respect to the services billed through carriers, the number of services and their relative value units are

²Part B services are billed both through Medicare carriers and Medicare intermediaries. Generally, they are billed through Medicare carriers when they are billed by physicians and through Medicare intermediaries when they have billed by hospitals. These latter bills are typically for services received in outpatient hospital departments. The term allowed charge is used to designate the Medicare carrier allowed charge for the service billed. Covered charges are amounts subject to reimbursement through Medicare intermediaries.

Table 4

Mean utilization and cost of Part B services for aged beneficiaries having Part B without Part A coverage, compared to a random sample of beneficiaries

Utilization or cost measure	B without A (N=3,251)	Random (N=5,641)
Total Part B charges	\$357.19	\$302.34
Part B services billed through carriers		
Number of services	13.10	13.89
By type:		
Medical	7.37	7.70
Medical office	2.99	3.00
Surgical	10.98	1.13
Laboratory	2.81	2.87
Radiology	0.42	0.44
Anesthesia	10.07	0.09
By place:		
Office	6.69	6.99
Hospital	13.20	4.26
Other	13.21	2.63
Relative value units (RVU's)		
Medical	38.47	40.11
Medical office	15.08	15.25
Surgical	19.93	13.08
Laboratory	3.52	3.48
Radiology	1.31	1.46
Anesthesia	10.85	1.14
Allowed charges	\$214.40	\$252.64
By type:		
Medical	\$ 92.69	\$ 97.98
Medical office	\$ 34.97	\$ 35.98
Surgical	\$ 61.58	\$ 86.24
Laboratory	\$ 14.68	\$ 15.23
Radiology	\$ 8.15	\$ 8.85
Anesthesia	\$ 8.37	\$ 10.91
By place:		
Office	\$ 73.44	\$ 81.98
Hospital	\$ 99.14	\$134.02
Other	\$ 41.82	\$ 36.64
Part B services billed through intermediaries		
Number of services	10.83	0.05
Covered charges	\$142.79	\$ 49.70

¹Significantly different from random sample, p<.05.

Table 5

The aged with Part B coverage without Part A coverage mean utilization and cost of Part B services for those eligible for Medicaid for the entire year, compared to those not eligible for the entire year

Utilization or cost measure	Medicaid (N=1,624)	Not Medicaid (N=1,627)
Total Part B charges	\$397.35	\$317.12
Part B services billed through carriers		
Number of services	115.06	11.14
By type:		
Medical	18.89	5.85
Medical office	13.34	2.64
Surgical	0.90	1.06
Laboratory	13.15	2.48
Radiology	0.39	0.44
Anesthesia	0.06	0.07
By place:		
Office	6.66	6.71
Hospital	13.92	2.48
Other	14.48	1.94
Relative value units (RVU's)		
Medical	146.53	30.42
Medical office	116.72	13.45
Surgical	10.23	9.64
Laboratory	3.73	3.32
Radiology	11.14	1.49
Anesthesia	0.84	0.86
Allowed charges	\$242.29	\$186.57
By type:		
Medical	\$109.51	\$ 75.89
Medical office	\$ 37.69	\$ 32.26
Surgical	\$ 66.40	\$ 56.76
Laboratory	\$ 17.27	\$ 12.11
Radiology	\$ 7.24	\$ 9.05
Anesthesia	\$ 8.38	\$ 8.37
By place:		
Office	\$ 70.40	\$ 76.46
Hospital	\$115.15	\$ 83.16
Other	\$ 56.74	\$ 26.94
Part B services billed through intermediaries		
Number of services	11.16	0.50
Covered charges	\$155.06	\$130.55

¹Significantly different from those without Medicaid, p<.05.

quite close for the two groups. However, those having only Part B coverage use significantly fewer surgical and anesthesia services, and less-intense surgical services than the random sample of Medicare beneficiaries. They also have significantly fewer visits in the hospital. However, they do show significantly greater use of outpatient hospital services. This may be explained, in part, because the Medicare program permits the billing of hospital ancillary services (such as, laboratory tests, x-rays) to Part B for inpatient beneficiaries who have exceeded or who do not have Part A benefits.

As data indicate means for this group is made up of at least three different types of individuals. These are:

- Those with Medicaid who are too poor to purchase Part A themselves.
- Those not eligible for Medicaid, who chose not to purchase Part A because they do not wish to pay the premium.

- Those who chose not to purchase Part A because they are already covered by private health insurance plan with comprehensive inpatient benefits. Unfortunately, the latter two groups could not be separated, but we could look at the group of beneficiaries eligible for Medicaid the full year, and compare them with all other beneficiaries.

Comparing the data for those with Medicaid coverage during the entire year with those without Medicaid the entire year (Table 5), we find significantly lower use for those without Medicaid coverage: 23 percent less Part B allowed charges (\$187 compared to \$242) and 16 percent less outpatient covered charges (\$131 compared to \$155). By type of service, Medicaid recipients use significantly more medical services and medical office services (in terms of all measures: number of services, relative value units, and allowed charges) than those not having Medicaid the entire year. Differences in surgical and anesthesia utilization or cost are not significant.

However Medicaid recipients have significantly greater allowed charges for laboratory services, and significantly less allowed charges for radiology services than those without Medicaid coverage.

Most of the difference between Medicaid and non-Medicaid eligibles is for services received outside of the office. The average number of office services and allowed charges is actually smaller, though not significantly different, than office services and charges for those without Medicaid. Number of hospital services are 63 percent for those with Medicaid (3.9 compared to 2.5), and hospital allowed charges 40 percent more for Medicaid eligibles (\$115 compared to \$83). Services in places other than office and hospital, i.e., emergency room, nursing home, home, etc., are also significantly higher for those with Medicaid. The average 4.5 services is significantly higher than the 1.9 for those without Medicaid and the average allowed charge of \$57 for services outside the hospital and office is significantly larger than the average \$27 for those not eligible for Medicaid.

We should again emphasize in examining these data for those having Part B coverage without Part A, that we have no information about beneficiaries' private insurance coverage. It is possible that some of these beneficiaries have considerable private insurance coverage. At least some are government employees or others covered by private health insurance plans that have comprehensive inpatient benefits.

Summary

This empirical investigation provides some interesting findings on Medicare beneficiaries having Hospital Insurance without Supplementary Medical Insurance (Part A coverage without Part B), and those having Supplementary Medical Insurance without Hospital Insurance (Part B coverage without Part A).

Those having Part A without Part B included 2½ times as many disabled beneficiaries as the overall Medicare population, for example, one of every four people having Part A coverage without Part B is disabled, compared to only 1 of every 10 people in the Medicare population. This may be because the disabled are poorer and less likely to purchase the coverage, or because they have other insurance coverage from their previous employment or a working spouse. For both the aged and the disabled, those having Part A coverage without Part B are more often male, younger, all other racial groups except white, and living in urban areas than those having both Part A and Part B coverage.

The utilization of beneficiaries with only Part A coverage was considerably lower, perhaps because of a more self-reliant nature or because they have less contact with physicians, who control hospitalization decisions. On average, aged Part-A-only beneficiaries had only about 60 percent of the total Part A covered charges, and 56 percent of the inpatient hospital days of the random sample of Medicare aged. For the disabled, the percentages are even smaller: disabled beneficiaries with Part-A-only have only 21 percent of the Part A covered charges, and 21 percent of the inpatient days of the random sample of Medicare disabled.

Those having Part B without Part A coverage are almost exclusively aged beneficiaries. They are more often female, younger, all other racial groups except white, eligible for Medicaid, and have a slightly smaller representation in large SMSA's. In general, beneficiaries are those who have the option to purchase both Part B and Part A, but they (or their State through the Medicaid program) have decided to purchase only Part B. On the average, the overall utilization rates for this group were significantly greater than those of the random sample, \$357 compared to \$302. Although they had significantly less use of surgical and hospital physician services, outpatient hospital charges were significantly higher for those with Part B without Part A as compared to the random sample.

When we attempted to disaggregate the data further and compare those in the Part B without Part A group, having Medicaid coverage with those not having Medicaid coverage, utilization and cost variables were generally significantly greater for those with Medicaid coverage, although not for nonmedical office based services. This suggests that beneficiaries having Part B without Part A coverage are likely a group made up of very different people. Some of these beneficiaries are poor enough to be eligible for Medicaid, and some of whom are rich enough to be covered under other health insurance programs which offer more comprehensive coverage than Part A.

This study was limited by lack of information on significant variables. These include: health insurance in addition to Medicare, income and assets, and health status. Without such data, any policy implications drawn would be subject to substantial question. This paper is viewed as a preliminary descriptive finding on which we hope further research can be based.

Acknowledgments

The author expresses appreciation to: Thomas Rice and two anonymous reviewers for their comments on earlier drafts of this paper; James Boismier for data processing and research support; Stanley Moore for programming; and Judith Davis and Gail Goldwater for administrative support.

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