

# Health Insurance Coverage Among Recently Entitled Disability Insurance Beneficiaries: Findings From the New Beneficiary Survey

by L. Scott Muller\*

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This article examines health insurance coverage among a group of newly entitled disability insurance beneficiaries. Although only 50 percent of the beneficiaries had been entitled to disability benefits long enough to be eligible for Medicare coverage, a full 86 percent of them had some type of health coverage. Excluding coverage by Medicare, nearly 75 percent of the sample had coverage under other plans. Fifty-three percent of the newly entitled beneficiaries had coverage from sources other than Medicaid or programs provided by the military (such as, the Civilian Health and Medical Program of the Uniform Services (CHAMPUS) or the Veterans' Administration). Medicaid coverage was available for 16 percent of these beneficiaries and CHAMPUS (military) covered less than 12 percent. Married individuals with employed spouses were most likely to have health insurance coverage, particularly from private sources. Single individuals were more than twice as likely to be covered by Medicaid. A demand model is used to examine factors that determine whether or not an individual is covered by a health care program other than Medicare, Medicaid, and CHAMPUS (presumably private sources of health insurance). The analysis indicates that coverage under one of the government plans reduces the likelihood that an individual would have coverage under "other" health insurance. In contrast, higher household income was associated with a greater likelihood that the beneficiary would be covered by "other" health insurance.

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\*Program Analysis Staff, Office of Policy, Social Security Administration (SSA). This study was completed when the author was with the Division of Disability Program Information and Studies, Office of Disability, SSA. The author would like to express appreciation to Barry V. Bye and other reviewers from the Office of Policy for their thoughtful comments on an earlier draft of this article.

When the Medicare program was established in 1965, health insurance coverage<sup>1</sup> was provided only for persons aged 65 or older who received Social Security or Railroad Retirement benefits or who were age 65 and met certain earnings test requirements. Concern that disabled individuals under age 65 who received Social Security Disability Insurance (DI) or Railroad Retirement disability benefits might lack adequate health insurance coverage resulted in Congress passing Public Law 92-603 in 1972. That law extended Medicare eligibility to DI and Railroad Retirement disability beneficiaries after they had been entitled to disability benefits for a period of 24 consecutive months.

In 1980, to facilitate access to health insurance coverage and to encourage work activity, major changes were made in the Medicare rules that apply to the disabled. The Social Security Disability Amendments of 1980 (Public Law 96-265) liberalized the Medicare waiting period so that eligibility could be established after 24 months of entitlement to disability benefits under the Social Security or Railroad Retirement program, regardless of whether or not the

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<sup>1</sup>For the purpose of this article, the term "health insurance coverage," refers to all health plans whether or not they are privately or publicly funded.

months were consecutive.<sup>2</sup> A second change under this law provided Medicare coverage for up to 36 months for disabled individuals whose disabling condition continued, but who were dropped from the DI rolls because they had successfully returned to work. This law also eliminated a second Medicare waiting period for disabled-worker beneficiaries reentitled to disability benefits within 5 years of leaving the program rolls (7 years for disabled widow(er)s and disabled adult children). There has been considerable Congressional interest in altering the Medicare waiting period, a change of particular interest because it is widely believed that the lack of health insurance coverage during the Medicare waiting period may hinder early intervention and medical treatment that might allow recovery and/or return to work. Similarly, it is thought that the waiting period may act as a disincentive for early work attempts as beneficiaries may fear that an early return to work could result in

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<sup>2</sup>The change in the Medicare waiting period from 24 consecutive months to 24 months that need not be consecutive basically provided that beneficiaries who leave the DI program rolls within the 24-month waiting period and become reentitled at a later date are not required to begin a new waiting period. They receive credit for months previously accrued.

not acquiring the Medicare coverage that would become available were it not for that work attempt. The latter concern is unwarranted because months of work in the trial work period<sup>3</sup> and the extended period of eligibility<sup>4</sup> count towards the Medicare waiting period. Beneficiaries who work are guaranteed Medicare coverage after 24 months of entitlement unless it is determined that they have medically recovered.

This article evaluates health insurance coverage among recently entitled DI beneficiaries and provides insight into the types of persons who have or, conversely, lack such coverage, the kinds of

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<sup>3</sup>Persons entitled to disabled-worker benefits are generally entitled to a 9-month trial work period during which monthly benefits continue despite work by the beneficiary (see footnote 4).

<sup>4</sup>The extended period of eligibility is the 36-month period immediately following the trial work period for beneficiaries who have not medically recovered. Monthly benefits are continued through the first month after the trial work period in which the beneficiary engaged in substantial gainful activity and the 2 following months and are then suspended if the beneficiary is engaging in substantial gainful activity. If substantial gainful activity is discontinued during the extended period of eligibility, monthly benefits may be resumed without a new application and disability determination.

coverage maintained, and the potential impact of altering the Medicare waiting period. The data provide the opportunity to examine the characteristics of beneficiaries who have not yet completed the Medicare waiting period, to examine those who have recently obtained Medicare coverage, and to make comparisons between the two groups.

## The Data

The analysis is based on data from the Social Security Administration's (SSA) 1982 New Beneficiary Survey (NBS).<sup>5</sup> That survey sampled a cohort of individuals who became entitled to Social Security benefits during the period from mid-1980 to mid-1981. The actual survey interviews were conducted during the period of October to December 1982. Consequently, the vast majority of beneficiaries had been currently entitled to benefits for a period that varied from just over 1 year to about 2-1/2 years at the time of the survey. Individuals in the sample were included in the interviewing unless they had died before the survey date or were institutionalized on that date. Because the study was limited to those individuals in DI beneficiary status on the survey date (persons who had been on the rolls for approximately 18 months and were nearing the end of the Medicare waiting period), it is not possible to know what sources of coverage were maintained during the earlier portions of the Medicare waiting period and what kinds of coverage were available to those individuals

who died during that period (the latter being a group that is likely to have relatively high medical costs).<sup>6</sup> Survey responses have been linked to SSA administrative records to provide additional information about items such as Social Security benefits and reported earnings.

The current analysis covers only those individuals who were entitled to benefits as disabled workers. Information was obtained about the three sources of health insurance coverage: Medicaid, CHAMPUS (Veterans' Administration (VA) or military), and "other."<sup>7</sup> Although the last category, "other," was not specific about the types of sources or coverage, it is presumed that this category consists of private insurance sources including employer-provided plans and individually purchased plans. The survey did not solicit information about Medicare coverage. That information was to be obtained from SSA's administrative records.

Although the survey responses were linked to administrative data sources to establish, among other things, Medicare eligibility, it was not possible to determine the precise date of Medicare entitlement for all beneficiaries in the sample. Medicare eligibility was consequently determined by using both administrative data on date of eligibility and a complex algorithm to determine Medicare eligibility based on administrative dates of

<sup>6</sup> A small number of beneficiaries left the DI program rolls after they were selected as participants in the survey and returned to the rolls before the survey date. These individuals meet the selection criteria for this study and are included in the analysis. Many of these individuals are in the group for which Medicare eligibility was not known.

<sup>7</sup> The actual questions about health insurance coverage appear on pages 16-17.

entitlement to benefits and other information. For 2.7 percent of the weighted sample (5,593 weighted cases or 132 unweighted cases) it was not possible to ascertain Medicare eligibility on the interview date. For most of the analysis, it was assumed that unknown Medicare eligibility meant no Medicare, which may result in a slight conservative bias to the results—that is, in actuality a slightly higher proportion of beneficiaries may have Medicare, and thus some health insurance coverage, than is shown here.

## The Sample

The sample includes all survey participants in benefit status as disabled-worker beneficiaries on the date of the interview. As previously mentioned, the NBS sample is drawn from all individuals entitled to Social Security benefits during the mid-1980 to mid-1981 period and excludes only those beneficiaries who had died before the survey date or those who were institutionalized on the interview date. Under these criteria, a number of the individuals included in the sample as disabled workers were no longer entitled to that type of Social Security benefit, either because their disability benefits had been terminated or because they had been converted to old-age (retirement) benefits when they attained age 65. These individuals have been eliminated from the sample. That exclusion reduced the number of unweighted cases from 5,197 to 4,821, and the weighted count from 223,570 to 207,301.

<sup>5</sup> Linda Drazga Maxfield, "The 1982 New Beneficiary Survey: An Introduction," *Social Security Bulletin*, November 1983, pages 3-11. See also, *The 1982 New Beneficiary Survey Users' Manual*, Office of Research, Statistics, and International Policy, Office of Policy, Social Security Administration, April 1986.

## Survey Results

### Medicare and Other Health Insurance

Table 1 shows the proportion of beneficiaries with some source of health insurance coverage (86 percent) on the date of the survey interview. Approximately 50 percent of the sample was covered by Medicare. Excluding Medicare coverage, nearly 75 percent of the beneficiaries had some other form of health insurance. The major source of health insurance coverage was "other" health plans (presumably private coverage), which covered 53 percent of the sample. Medicaid covered 16 percent and CHAMPUS or military health coverage was available to slightly less than 12 percent of the sample.

It is interesting to note that Medicare eligibility did not significantly<sup>8</sup> influence the overall proportion of beneficiaries who had some other coverage; however, those covered by Medicare were more likely to have Medicaid coverage and less likely to have "other" plans than those not yet eligible for Medicare. The fact that Medicare eligibility is determined by the time spent on the DI program rolls (that is, a 24-month waiting period is required), the trend of higher Medicaid eligibility and lower coverage by "other" health insurance may very well be associated with time elapsed since entitlement to disability benefits. This relationship is analyzed below.

In table 2, health insurance coverage is compared by sex,

<sup>8</sup>This test and subsequent significance tests were conducted using tables of generalized sampling errors (see table 1, pages 14-15).

**Table 1.—Number and percentage distribution of beneficiaries with health insurance coverage, by Medicare coverage status at time of interview**

Health insurance coverage	Total	Coverage		Medicare coverage not determined
		Medicare	Non-Medicare	
Total number.....	207,301	103,090	98,618	5,593
Total percent.....	100.0	100.0	100.0	100.0
Any coverage.....	86.3	100.0	73.0	<sup>1</sup> 68.4
Medicare only.....	27.6	28.1	27.0	31.6
Additional coverage.....	72.4	71.9	73.0	68.4
Medicaid/State.....	16.1	19.6	12.2	19.0
CHAMPUS/VA/military.....	11.6	11.5	11.9	9.3
Other medical coverage.....	52.9	50.3	55.9	46.2

<sup>1</sup> Assumes respondents not covered by Medicare.

marital status, and employment of the spouse. Employment of the spouse was considered a potential source for health insurance coverage because employer-provided health coverage is a major source of insurance. Due to the perceived importance of marital status and spouse's employment, most tables in this article contain these characteristics.

Employment status of the survey respondents was also considered a key variable in determining coverage, but was not included in this table because only 3.4 percent of the responding beneficiaries indicated that they were employed. As expected, variables such as sex, marital status, and employment of the spouse were unrelated to eligibility for Medicare coverage. Married individuals were significantly more likely to have some type of health insurance other than Medicare than were single persons, particularly if the spouse worked. This result appears to be attributable mainly to the characteristics of those covered by "other" health insurance because the pattern did not hold for either coverage by Medicaid or CHAMPUS.

Single individuals of both sexes were much more likely to receive

Medicaid than were married persons. Among the men, 26 percent of unmarried individuals qualified for Medicaid, compared with 10 percent of those who were married. For women the difference was even more dramatic: 31 percent of single women qualified for Medicaid, compared with fewer than 9 percent of married women. The CHAMPUS coverage was determined by one factor—sex. Nearly 16 percent of the men were covered under CHAMPUS, VA, or military coverage compared with only 2 percent of the women. This difference can be explained by the preponderance of men in military service.

Coverage by "other" sources of health insurance was dominant among married individuals, particularly those with employed spouses. More than 75 percent of married women with employed husbands had health insurance from these sources, compared with fewer than 43 percent of single women. The difference was even more striking among the men. Sixty-nine percent of married men whose spouses worked had "other" health insurance coverage, compared with 27 percent of single men. The Medicaid program did fill some of the health care gap for single individuals. Single individuals were

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more than twice as likely as married persons to be eligible for Medicaid.

The data in table 3 show a trend towards increased Medicaid eligibility and decreased coverage by "other" health insurance plans associated with the length of time since the most recent entitlement to DI benefits. With the exception of persons currently entitled less than 1 year (a group with too few survey respondents to be statistically valid), Medicaid coverage increases monotonically with time on the program rolls and coverage by "other" health insurance declines monotonically over time. One can only speculate as to the reasons for the higher rate of Medicaid coverage and lower rate of coverage by "other" plans. Certainly the presence of Medicare coverage reduces the need for other types of insurance coverage, particularly if large premiums are required to purchase (or maintain) the additional coverage. Further, the Medicare group has spent a longer period on the DI program rolls and may have lost coverage provided by their previous employer. The higher rate of Medicaid coverage may indicate a deterioration of the disabled individual's financial situation over time.

One in four beneficiaries in the Medicare waiting period did not have any health insurance coverage. Virtually all of these individuals were in their second year of entitlement to DI benefits and some may have been covered under some type of health plan during the first year of their entitlement. However, information about earlier coverage could not be obtained from the available data.

Table 4 presents health insurance coverage by type of employer at the beneficiaries' most recent job. Very little difference is found in the proportion with health insurance associated with the type of

employer, even among the "other" category that would include the employer-provided health insurance coverage. It may be that the categorization of type of employer is too general to allow comparison. The one significant result is that the self-employed and government/nonprofit groups are more likely to have coverage under CHAMPUS than are those employed by private companies.

The relationship between health insurance coverage and the beneficiary's age at the time of interview is shown in table 5. Persons aged 45 or older were more likely to have some type of health insurance coverage than those under age 45, with more than 87 percent of those in the older age groups having coverage, compared with about 80 percent of the younger groups. This difference is attributable to the higher rates of coverage by CHAMPUS and "other" health plans among older individuals. In fact, the proportion of persons with coverage under these plans increases with increasing age. Coverage by "other" plans increases from 28 percent of individuals in the youngest age group to more than 58 percent in the oldest age group. Coverage under CHAMPUS also increases with age, from less than 5 percent of those under age 35 to more than 13 percent of those aged 55 or older. Medicaid coverage predominates in the under age 35 group, where 36 percent are covered, while coverage among the other age groups was less than half that rate.

Table 6 shows the relationship between health insurance coverage and educational attainment. Although the rate of coverage appears to increase with higher levels of education (except under

Medicaid), most of the differences are not statistically significant.

The relationship between the employment status of the beneficiary on the survey date and health insurance coverages is explored in table 7. (Due to the small number of survey respondents who worked, the estimates contained in table 7 for that group should be viewed with caution.) Despite the fact that only a very small percentage (3.5 percent) of beneficiaries work, the table shows that beneficiaries who reported working are significantly more likely to be covered by "other" insurance than those who did not (61.3 percent and 52.6 percent, respectively). The difference in the proportion covered by "other" insurance is probably attributable to coverages earned under employer-based plans. Although the difference may appear modest, given that employer-based coverage is the predominant source of health insurance coverage, it is likely that many of the beneficiaries who work are employed in marginal or part-time jobs. No other differences in the table were statistically significant.

The data in table 8 reflect the influence of family income on health insurance coverage. Annual income is estimated from the quarterly income provided by the beneficiary for the quarter in which the interview was conducted. Coverage under Medicaid, which is a means-tested program, was inversely related to the level of family income, with the proportion of beneficiaries covered dropping from 39 percent of persons with family income of \$5,000 or less, to less than 5 percent of persons with family income in excess of \$20,000. Those Medicaid recipients in the higher income categories probably are in

**Table 2.—Number and percent of beneficiaries with health insurance coverage, by sex, marital status, and type of coverage <sup>1</sup>**

Sex and marital status	Total number	Percent with—		Non-Medicare coverage			
		Any coverage	Medicare coverage	Total	Medicaid	CHAMPUS	Other
Total .....	207,301	86.3	49.7	72.4	16.1	11.6	52.9
Men .....	145,444	86.2	49.9	72.1	14.3	15.7	51.7
Married .....	106,944	88.3	48.9	76.3	10.1	15.6	60.4
Employed spouse .....	43,076	90.8	48.0	81.0	8.4	13.8	69.2
Spouse not employed .....	63,868	86.7	49.5	73.2	11.3	16.9	54.5
Single .....	38,500	80.2	52.7	60.4	25.9	15.8	27.4
Women .....	61,857	86.7	49.3	72.9	20.2	2.1	55.6
Married .....	30,241	87.8	50.7	75.9	8.7	2.6	69.2
Employed spouse .....	15,980	89.3	50.3	80.3	5.7	2.1	75.6
Spouse not employed .....	14,261	86.2	51.1	71.1	12.0	3.2	62.1
Single .....	31,616	85.6	48.0	70.0	31.3	1.7	42.6

<sup>1</sup> For survey respondents whose Medicare coverage was unknown (2.7 percent of the sample; 5,593 weighted cases), it was conservatively assumed that they do not have such coverage.

**Table 3.—Number and percent of beneficiaries with health insurance coverage, by number of months since most recent entitlement, marital status, and type of coverage**

Months entitled	Total number	Percent with—		Non-Medicare coverage			
		Any coverage	Medicare coverage	Total	Medicaid	CHAMPUS	Other
Total .....	207,301	86.3	49.7	72.4	16.1	11.6	52.9
0-12 <sup>1</sup> .....	504	50.2	0	50.2	16.7	0	33.5
13-18 .....	27,075	75.4	3.1	75.2	12.5	10.5	58.4
19-24 .....	97,679	78.0	20.1	73.2	14.4	12.2	54.4
25 or more .....	82,043	100.0	100.0	70.5	19.2	11.4	49.3
<b>18 months or less</b>							
Married:							
Spouse employed .....	8,131	83.6	2.0	83.6	4.2	10.2	76.8
Spouse not employed .....	9,218	76.0	2.0	76.0	9.0	12.0	60.4
Not married .....	10,230	67.0	4.9	66.6	22.4	8.9	40.7
<b>19-24 months</b>							
Married:							
Spouse employed .....	28,466	84.7	21.4	82.3	6.0	11.8	71.9
Spouse not employed .....	37,086	77.6	18.6	73.1	9.0	15.2	57.8
Not married .....	32,127	72.6	22.4	65.3	28.2	9.1	35.1
<b>25 months or more</b>							
Married:							
Spouse employed .....	22,459	100.0	100.0	77.9	11.1	9.3	67.6
Spouse not employed .....	31,825	100.0	100.0	71.5	14.9	14.1	52.5
Not married .....	27,759	100.0	100.0	63.4	30.7	10.0	30.9

<sup>1</sup> Due to the small number of cases, estimates for this period are unreliable.

“optional” coverage groups (such as, individuals who are “medically needy” or participate in “State-only” plans). Coverage by CHAMPUS appears to be uniformly distributed, with the exception of families in the lowest income categories. These individuals are covered at a rate only one-third of that in the higher income categories. Coverage by “other” health insurance plans increases dramatically with family income.

Among beneficiaries in families with income of \$5,000 or less per year only 1 in 5 have “other” health insurance coverage. For those in families with income exceeding \$20,000 per year better than 4 in 5 have such coverage. This may reflect two things. First, the higher family income probably results from a family member’s employment and potential eligibility for employer-based coverage. Second, among those who work, individuals with

higher paying jobs are more likely to have access to employer-based coverage.

### Demand for Health Insurance Coverage

The analysis now turns to an evaluation of the factors that influence the demand for health insurance coverage among beneficiaries. The analysis is concerned only with the “other” (private) sources of health insurance

**Table 4.—Number and percent of beneficiaries with health insurance coverage, by most recent employer category, marital status, and type of coverage <sup>1</sup>**

Employer and marital status	Total number	Percent with—		Non-Medicare coverage			
		Any coverage	Medicare coverage	Total	Medicaid	CHAMPUS	Other
Total .....	207,301	86.3	49.7	72.4	16.1	11.6	52.9
Private industry .....	148,282	85.6	49.9	71.0	15.0	10.7	52.8
Government and nonprofit groups .....	33,191	89.3	51.1	76.4	15.6	14.5	56.9
Self-employed .....	16,423	87.5	45.5	76.8	11.2	18.2	57.9
Other/unknown .....	9,405	84.4	50.1	72.1	42.9	5.2	31.8
<b>Private industry</b>							
Married:							
Spouse employed .....	43,516	89.3	48.3	79.4	6.8	8.4	71.2
Spouse not employed .....	57,531	86.6	50.8	72.0	12.2	13.4	55.1
Not married .....	47,235	81.1	50.2	62.1	26.1	9.5	33.0
<b>Government and nonprofit groups</b>							
Married:							
Spouse employed .....	9,077	94.4	51.7	87.4	9.8	15.6	76.2
Spouse not employed .....	10,700	88.6	49.3	75.7	8.4	18.4	58.3
Not married .....	13,414	86.3	52.1	69.4	25.4	10.8	42.8
<b>Self-employed</b>							
Married:							
Spouse employed .....	5,172	93.2	44.4	82.3	7.8	20.7	64.6
Spouse not employed .....	8,156	85.2	44.5	75.8	7.9	17.8	61.1
Not married .....	3,095	83.9	50.0	70.0	25.5	14.9	38.2
<b>Other</b>							
Married:							
Spouse employed .....	1,291	85.9	53.7	76.2	23.5	11.1	52.4
Spouse not employed .....	1,742	78.9	44.4	68.8	22.3	7.4	44.3
Not married .....	6,372	85.6	50.9	72.2	52.4	3.4	24.2

<sup>1</sup> For survey respondents whose Medicare coverage was unknown (2.7 percent of the sample; 5,593 weighted cases), it was conservatively assumed that they do not have such coverage.

because eligibility for the Medicare, CHAMPUS/VA/military, and Medicaid programs is determined by law and is not decided by the individual's choice.<sup>9</sup>

<sup>9</sup>Eligibility for Medicare coverage is available only after 24 months of entitlement to DI benefits (or attainment of age 65). The controlling factors for Medicaid eligibility include being a member of a covered group (for example, Supplemental Security Income, Aid to Families with Dependent Children, or the "medically needy") and meeting certain income and resource tests. States determine Medicaid eligibility and the level of coverage. Eligibility for CHAMPUS/VA/military program coverage requires a record of current or past military service.

Two factors known to influence the decision to obtain private health insurance are price and perceived risk (or expected health expenditures). Price, of course, is a factor in all purchases. Preference, or the utility one obtains from a purchase, is the other factor that determines demand. Insurance is intended to spread the risk of loss across a large number of individuals so that no one person will bear the entire expense of the loss. In the case of health insurance, the loss would represent high health care expenditures. With health insurance, the risk of loss is often known by the individual and, hence, the more

health services an individual consumes, or alternatively the higher the perceived risk of ill health, the more likely the individual would be to obtain insurance at some price (often referred to as moral hazard). Although it is beyond the scope of this research to determine the actual price of health insurance or the perceived risk of ill health, a number of variables can be employed in the model as proxies for these concepts.

**Price variables.**—A number of variables in this model are proxies for price. The first and foremost determiner for price is whether or not the insurance is offered as a benefit by an employer at limited or

**Table 5.**—Number and percent of beneficiaries with health insurance coverage, by age, marital status, and type of coverage at time of interview

Age and marital status	Total number	Percent with—		Non-Medicare coverage			
		Any coverage	Medicare coverage	Total	Medicaid	CHAMPUS	Other
Total .....	207,301	86.3	49.7	72.4	16.1	11.6	52.9
Under age 35 .....	21,336	80.0	51.5	63.1	35.8	4.8	28.0
35-44 .....	19,663	80.8	50.3	63.2	16.6	8.5	43.9
45-54 .....	43,056	87.1	52.5	73.0	16.6	11.8	53.2
55-64 .....	123,246	88.3	48.4	75.2	12.4	13.3	58.5
<b>Aged 35</b>							
Married:							
Spouse employed .....	3,307	92.2	55.9	79.4	12.8	5.4	65.0
Spouse not employed .....	3,382	73.3	46.3	58.0	29.8	7.7	26.0
Not married .....	14,647	78.8	51.7	60.6	42.3	4.0	20.0
<b>Age 35-44</b>							
Married:							
Spouse employed .....	6,578	88.2	49.6	80.5	5.8	5.8	72.9
Spouse not employed .....	5,241	75.6	48.3	50.1	16.7	12.6	24.9
Not married .....	7,844	78.0	52.1	57.4	25.7	8.0	32.2
<b>Aged 45-54</b>							
Married:							
Spouse employed .....	15,715	89.3	51.6	81.2	9.5	10.1	71.2
Spouse not employed .....	13,802	84.7	53.7	69.7	11.0	14.6	51.9
Not married .....	13,539	87.0	52.2	66.9	30.4	10.8	33.6
<b>Age 55-64</b>							
Married:							
Spouse employed .....	33,456	91.1	46.3	80.8	6.7	12.3	71.6
Spouse not employed .....	55,704	88.9	49.2	76.6	9.9	14.9	61.6
Not married .....	34,086	83.6	49.1	67.4	22.0	11.6	41.1



**Table 6.—Number and percent of beneficiaries with health insurance coverage, by number of years of educational attainment, marital status, and type of coverage <sup>1</sup>**

Education and marital status	Total number	Percent with—		Non-Medicare coverage			
		Any coverage	Medicare coverage	Total	Medicaid	CHAMPUS	Other
Total .....	207,301	86.3	49.7	72.4	16.1	11.6	52.9
0-8 years .....	65,125	82.6	49.7	65.5	18.8	10.7	43.2
9-12 years .....	107,092	87.3	49.1	74.2	15.2	11.5	55.8
13 years or more .....	33,841	90.3	51.5	79.9	13.2	14.5	62.6
<b>0-8 Years</b>							
Married:							
Spouse employed .....	15,941	86.8	46.7	74.5	8.4	11.3	63.4
Spouse not employed .....	28,259	82.3	50.0	66.6	15.8	12.0	46.5
Not married .....	20,925	80.0	51.6	57.0	30.9	8.3	23.3
<b>9-12 Years</b>							
Married:							
Spouse employed .....	31,780	90.8	48.6	81.8	8.4	9.8	71.8
Spouse not employed .....	39,069	88.7	49.5	75.2	8.6	14.3	61.1
Not married .....	36,243	82.8	49.2	66.3	28.3	9.9	36.0
<b>13 Years or more</b>							
Married:							
Spouse employed .....	11,082	94.6	51.6	86.9	4.9	12.1	79.2
Spouse not employed .....	10,590	90.2	49.6	80.7	10.5	21.5	61.8
Not married .....	12,169	86.4	53.0	72.8	23.2	10.6	48.1

<sup>1</sup> Excludes 1,243 weighted cases (29 unweighted cases) for whom educational attainment is unknown.

**Table 7.—Number and percent of beneficiaries with health insurance coverage, by employment status and type of coverage**

Type of coverage	Total	Employed	Not employed
Total number .....	207,301	7,169	200,132
Percent covered .....	86.3	88.6	86.2
Medicare .....	49.7	52.2	49.6
Non-Medicare .....	72.4	77.2	72.2
Medicaid .....	16.1	17.4	16.1
CHAMPUS .....	11.6	7.4	11.8
Other .....	52.9	61.3	52.6

Note: Excludes 1,243 weighted cases (29 unweighted cases) for whom educational attainment is unknown.

no cost to the employee. To account for possible employer contribution, indicators for the beneficiary working, the spouse working, the type of previous employment, and the length of time since the beneficiary was last employed have been included in the model. Another cost determinant is the number of persons to be covered. To control for this factor, variables representing marital status and number of persons in the family are included in the model.

**Anticipated health care costs.—**

There are a number of factors which affect utilization and, subsequently, health care expenditures. First, all DI beneficiaries are severely disabled and are likely to have relatively high health care utilization rates, compared with the general

population. Even within this group of severely disabled individuals, certain conditions are likely to be associated with higher rates of health care utilization. For this reason, a vector of dummy variables representing the types of conditions reported by the respondent has been included in the analysis.<sup>10</sup> These dummy variables, though simplistic, are intended to control for differences in health care utilization

<sup>10</sup> These variables were constructed from questions 139 and 141 in the NBS, as follows:

- Vision/hearing—a positive response to 139 a, b, or c.
- Orthopedic—a positive response to 139 d, e, f, or h.
- Nervous system—a positive response to 139 g.
- Respiratory system—a positive response to 139 i.
- Digestive system—a positive response to 139 j.
- Malignancy—a positive response to 139 k.
- Mental/nervous—a positive response to 139 l.
- Heart/circulatory system—a positive response to 141.

The exact wording and composition of the health condition questions are shown on pages 16-17.

among the beneficiaries. The survey did not provide information about coverage or utilization for family members.

Obviously, the presence of another type of health plan would significantly reduce expected health care costs. Therefore, variables representing the presence of coverage by Medicare, Medicaid, and CHAMPUS were included.

Age is also a determinant of health care utilization as general health seems to decline with age. Finally, sex, race, and education variables were included to further evaluate health risks. These variables may, however, also be reflected in the price of health insurance as they are strongly linked to current and past work.

### Analytic Results

The model was estimated using a multivariate logit technique. The results of the analysis are presented in table 9. The employment status of the respondent played a significant role in determining health coverage. Respondents who indicated they had a job at the time of the survey

were more likely to have "other" health coverage, presumably because the respondent's employer provided the coverage. With the exception of having worked in the past year, more recent work experience (such as, having worked 2 or 3 years before the survey date) raised the probability of having "other" health insurance. The lack of significance of the coefficient on work experience within the past year may be due to its correlation to the previously discussed variable relating to current work status. The variables representing the type of employer at the respondent's last job were not significant in determining privately provided health coverage. The lack of detail in the employer categories (private, government or nonprofit, self-employed or other) may have contributed to this result.

The variable representing the spousal employment produced a somewhat surprising result. When other factors are held constant, the fact that a respondent had a working spouse did not significantly change the probability of having "other" coverage. This variable may be highly correlated with marital

**Table 8.**—Number and percent of beneficiaries with health insurance coverage, by annual family income and type of coverage

Annual income	Total number	Percent with—		Non-Medicare coverage			
		Any coverage	Medicare coverage	Total	Medicaid	CHAMPUS	Other
Total .....	207,301	86.3	49.7	72.4	16.1	11.6	52.9
\$0-\$5,000 .....	33,237	78.9	50.8	57.5	39.0	4.0	19.6
\$5,001-\$10,000 .....	61,472	79.9	49.5	60.0	19.6	13.6	33.2
\$10,001-\$12,500 .....	22,828	86.8	48.8	73.0	11.2	14.6	55.9
\$12,501-\$20,000 .....	48,953	92.4	49.4	84.0	7.9	11.3	74.6
\$20,000 or more .....	40,811	94.3	50.0	88.7	4.6	13.5	81.9

Note: Annual income figures are based on four times quarterly income figure provided in NBS data. The 1982 poverty level for a family of four was \$9,862, which indicates that most persons in the first two income categories were below the poverty level. The third category roughly corresponds to 125 percent of the poverty level.

status and family income, both of which were associated with significantly increased probability of health insurance coverage in this model.

Coverage by another form of health insurance uniformly reduced the likelihood that an individual had insurance from a private source. Coverage by the Medicare, Medicaid, and CHAMPUS programs each reduced the demand for health insurance of the type under consideration. Medicare coverage is available only after 24 months of entitlement to disability benefits, which means that for individuals who have Medicare coverage more time has passed since the respondent last worked. Employers may not continue previous coverages for extended periods and the respondent's financial situation may deteriorate over this period. However, these factors have been controlled for by the inclusion of variables representing the length of time since the respondent last worked and family income. Although direct causality has not been established, this result indicates that beneficiaries may have a propensity to discontinue "other" coverages at the point when they become eligible for Medicare. Likewise, coverage by Medicaid or CHAMPUS may reduce the propensity to seek or maintain other coverage.

Demographic characteristics were also included in the model. As mentioned above, married individuals were more likely to have health insurance coverage from a private source than were single individuals. The size of the family, however, had no significant effect on the demand for health insurance. The conflicting impacts of more expensive family coverage and a greater risk of high health care expenditures in a larger family may contribute to that result. Men were less likely to be covered by "other"

**Table 9.**—Logit analysis of variable characteristics of persons having "other" health insurance coverage

Variable characteristic	Coefficient	t-value
Constant	-2.943	-8.89
Sex (1 if male)	-.323	-3.93
Race (1 if white)	.674	7.11
Marital status (1 if married)	.245	2.52
Spouse works	.153	1.63
Respondent works	.699	3.32
Medicare coverage	-.140	-1.98
Medicaid coverage	-1.144	-10.59
CHAMPUS/VA/military	-1.452	-12.52
Worked past year	.037	.09
Worked 2 years prior	.358	1.94
Worked 3 years prior	.306	3.94
Previous employer-private	-.188	-.96
Previous employer-government and nonprofit	.046	.22
Previously self-employed	-.114	-.50
Age	.029	7.04
Education	.036	3.40
Number in family	-.026	-.96
Family income (in thousands)	.092	14.66
Health conditions:		
Vision/hearing	-.196	-2.72
Orthopedic	-.116	-1.20
Nervous system	-.029	-.26
Respiratory system	.037	.46
Digestive system	.155	2.09
Malignancy	.081	.64
Mental/nervous condition	-.062	-.82
Heart/circulatory system	.049	.64

Note: For a two-tailed test, the t-value 1.645 results in a significance level of .10; for 1.960 the significance level is .05; and for 2.576 the significance level is .01.

health insurance than women, and minorities were less likely to be covered than were whites.

The probability of having coverage was positively associated with age: Older individuals were more likely to have private insurance. This probably reflects the increasing risk of high medical bills associated with older age. Educational attainment, too, was positively associated with coverage, even when controlling for family income. The result could reflect different preferences among those with higher levels of education, or it could be the result of occupational differences that lead to availability of coverage through a previous employer.

The coefficient on family income shows a clear income effect in the purchase of health insurance. Those beneficiaries with higher incomes were more likely to have "other" coverage and the result was highly significant.

In most cases, the coefficients on the dummy variables controlling for type of disabling condition were not statistically significant. The coefficients on two variables—vision/hearing and digestive system—were significant. As one might suspect vision/hearing, which would be associated with low utilization, reduced the probability of having "other" health insurance

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coverage. Conditions associated with the digestive system, which result in higher rates of utilization, increased the probability of having "other" health insurance coverage.

## Conclusions

This analysis indicates that substantial numbers of recently entitled disabled-worker beneficiaries are covered by some type of health insurance plan. Major findings of this research show that 86 percent of the disabled-worker beneficiaries surveyed in the New Beneficiary Survey had Medicare and/or some other source of coverage. Among beneficiaries in the Medicare waiting period, 73 percent had health insurance from another source. Among those covered by Medicare, 72 percent had an additional source of health insurance coverage. Plans other than Medicare, Medicaid, and CHAMPUS (presumably private health insurance coverage) provided the largest source of coverage. More than 50 percent of those surveyed had such coverage. Medicaid covered 16 percent of this population, and CHAMPUS covered approximately 12 percent.

Although the vast majority of beneficiaries had some type of health insurance before they were eligible for the Medicare program, 1 in 4 beneficiaries in the Medicare waiting period were not covered by any type of health insurance. Virtually all of these beneficiaries were in the second year of the waiting period and the current survey did not permit an assessment of health insurance coverage during the earlier portions of the waiting period. If some beneficiaries lost coverage available

to them during their first year on the DI program rolls, the data in this study may overstate the noninsured population of beneficiaries in the Medicare waiting period.

In a separate analysis of the demand for private health insurance, it was discovered that those covered by Medicare, Medicaid, or CHAMPUS were less likely to have "other" coverage. Although direct causality has not been demonstrated, this finding may indicate a propensity to drop private insurance coverage when Medicare becomes available. Furthermore, employed individuals were more likely to have private coverage, as were those with higher family income. Surprisingly, when other factors were held constant, employment of the spouse did not affect the probability of having "other" sources of coverage.

This analysis has shown that most recently entitled beneficiaries have some health insurance coverage; however, gaps in coverage do exist. The largest source of coverage was "other," presumably private, insurance coverage. The data did not identify the particular source of that coverage (such as, privately purchased, previous employer, or spouse's employer) or the adequacy of the coverage (deductibles, coinsurance rates, and limits, for example). The relationship between Medicare and other sources of coverage remains unclear.

Further research is necessary to address the issues mentioned and to address groups of beneficiaries not included in this survey—those in earlier portions of their waiting period, those who have remained in beneficiary status for longer periods of time, and those who return to work and eventually lose Medicare coverage. The consistency of coverage over time is also important, with respect to both lapses in coverage and changes in the level of coverage. Finally, it is important to learn more about the role of Medicare coverage as it relates to the choice of maintaining private insurance coverage and the impact these decisions play in coverage for other family members. These questions await new data and further research.

**Table I.—Conservative generalized sampling errors <sup>1</sup> of estimated percentages <sup>2</sup> for differences between two subgroups**

n <sub>2</sub> (in thousands)	n <sub>1</sub> (in thousands)									
	10	15	50	100	175	250	400	600	900 or more	
p* = 1 or 99 percent										
10 .....	1.3									
15 .....	1.2	1.2								
50 .....	1.0	1.0	0.8							
100 .....	.9	.8	.7	0.6						
175 .....	.7	.7	.6	.6	0.5					
250 .....	.7	.7	.6	.5	.5	0.5				
400 .....	.6	.6	.5	.5	.4	.4	0.4			
600 .....	.5	.5	.5	.4	.4	.4	.3	0.3		
900 or more .....	.4	.4	.4	.4	.3	.3	.3	.3	0.3	
p* = 5 or 95 percent										
10 .....	2.9									
15 .....	2.7	2.6								
50 .....	2.2	2.1	1.8							
100 .....	1.9	1.8	1.6	1.4						
175 .....	1.6	1.6	1.4	1.3	1.1					
250 .....	1.5	1.4	1.3	1.2	1.1	1.0				
400 .....	1.3	1.2	1.1	1.0	1.0	.9	0.8			
600 .....	1.1	1.1	1.0	.9	.9	.8	.7	0.7		
900 or more .....	1.0	.9	.9	.8	.8	.7	.7	.6	0.6	
p* = 10 or 90 percent										
10 .....	3.9									
15 .....	3.8	3.6								
50 .....	3.1	2.9	2.5							
100 .....	2.6	2.5	2.2	1.9						
175 .....	2.3	2.2	1.9	1.7	1.6					
250 .....	2.0	2.0	1.8	1.6	1.5	1.4				
400 .....	1.7	1.7	1.5	1.4	1.3	1.2	1.1			
600 .....	1.5	1.5	1.4	1.3	1.2	1.1	1.0	0.9		
900 or more .....	1.3	1.3	1.2	1.1	1.0	1.0	.9	.9	0.8	

See footnotes at end of table.

**Table I.—Conservative generalized sampling errors <sup>1</sup> of estimated percentages <sup>2</sup> for differences between two subgroups—Continued**

n <sub>2</sub> (in thousands)	n <sub>1</sub> (in thousands)									
	10	15	50	100	175	250	400	600	900 or more	
p* = 25 or 75 percent										
10 .....	5.7									
15 .....	5.4	5.2								
50 .....	4.4	4.2	3.6							
100 .....	3.8	3.6	3.2	2.8						
175 .....	3.3	3.2	2.8	2.5	2.3					
250 .....	2.9	2.8	2.5	2.3	2.1	2.0				
400 .....	2.5	2.5	2.2	2.1	1.9	1.8	1.6			
600 .....	2.2	2.1	2.0	1.8	1.7	1.6	1.5	1.4		
900 or more .....	1.9	1.9	1.7	1.6	1.5	1.4	1.3	1.2	1.1	
p* = 40 or 60 percent										
10 .....	6.4									
15 .....	6.1	5.8								
50 .....	5.0	4.8	4.0							
100 .....	4.3	4.1	3.6	3.2						
175 .....	3.7	3.6	3.1	2.8	2.6					
250 .....	3.3	3.2	2.9	2.6	2.4	2.2				
400 .....	2.8	2.8	2.5	2.3	2.1	2.0	1.8			
600 .....	2.5	2.4	2.2	2.1	1.9	1.8	1.7	1.5		
900 or more .....	2.1	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3	
p* = 50 percent										
10 .....	6.6									
15 .....	6.3	6.0								
50 .....	5.1	4.9	4.1							
100 .....	4.3	4.2	3.6	3.2						
175 .....	3.8	3.6	3.2	2.9	2.6					
250 .....	3.4	3.3	2.9	2.7	2.4	2.3				
400 .....	2.9	2.8	2.6	2.4	2.2	2.0	1.9			
600 .....	2.5	2.5	2.3	2.1	2.0	1.9	1.7	1.6		
900 or more .....	2.2	2.1	2.0	1.9	1.8	1.7	1.5	1.4	1.3	

<sup>1</sup> Sampling errors are based on a paired selections model for calculating sampling errors from complex samples. The sampling errors shown here are given in percentage points and are equal to one standard deviation of an estimated percentage.

<sup>2</sup> Arbitrarily, assume that n<sub>2</sub> ≥ n<sub>1</sub>. To use the proper table, calculate p\* = (n<sub>1</sub>p<sub>1</sub> + n<sub>2</sub>p<sub>2</sub>)/(n<sub>1</sub> + n<sub>2</sub>) where p<sub>1</sub> and p<sub>2</sub> are the proportions being contrasted; n<sub>1</sub> and n<sub>2</sub> are the weighted totals in groups 1 and 2, respectively. Once p\* is calculated, turn to the table that has a value closest to p\* in the upper right corner (in percent).

Source: 1982 New Beneficiary Survey Users' Manual.

### Health-Related Questions\*

Now I would like to ask you some questions about your health at this time.

139. At the present time, do you have any of the following conditions:

	YES	NO
a. blindness or serious trouble seeing with one or both eyes, even when wearing glasses?	1	2
b. cataracts, glaucoma, or any other condition affecting the eye or retina?	1	2
c. deafness or serious trouble hearing with one or both ears, even when wearing a hearing aid?	1	2
d. a missing hand, or arm, foot, or leg?	1	2
e. arthritis, rheumatism, or any other condition affecting the bones or muscles?	1	2
f. permanent stiffness or any deformity of the foot, leg, fingers, arm, or back?	1	2
g. multiple sclerosis, cerebral palsy, epilepsy, or any other condition affecting the nervous system?	1	2
h. paralysis of any kind not already mentioned above?	1	2
i. asthma, emphysema or any other condition affecting the lungs or respiratory system, including work-related respiratory conditions such as sil-i-co-sis or pneu-mo-co-ni-o-sis?	1	2
j. gallbladder, stomach, kidney or liver trouble, diabetes, or any other condition affecting the digestive system?	1	2
k. cancer or a malignant tumor or growth not already mentioned above?	1	2
l. nervous or emotional problems, or mental illness?	1	2

<p>140. Have you ever had a heart attack or stroke?</p>	<p>Yes</p>	<p>1</p>
	<p>No</p>	<p>2</p>
<p>141. Do you <u>now</u> have any heart problems, such as hardening of the arteries, high blood pressure, or chest pain?</p>	<p>Yes</p>	<p>1</p>
	<p>No</p>	<p>2</p>
<p>162. Are you covered by (Medicaid or Medical Assistance/MediCal or California Medicaid), the state public assistance program that pays for health care? This is <u>not</u> the federal health plan called Medicare.</p>	<p>Yes</p>	<p>1</p>
	<p>No</p>	<p>2</p>
<p>163. Are you covered by CHAMPUS, VA, or military health care?</p>	<p>Yes</p>	<p>1</p>
	<p>No</p>	<p>2</p>
<p>164. Are you now covered by any <u>other</u> health insurance or belong to any <u>other</u> health plan? Do not count Medicare or any health insurance you already told me about, including (Medicaid or Medical Assistance/MediCal or California Medicaid), CHAMPUS, VA, or military health care.</p>	<p>Yes</p>	<p>1</p>
	<p>No</p>	<p>2</p>

\*Reproduced from The 1982 New Beneficiary Survey Users' Manual.