

A Look at Workers' Compensation Beneficiaries

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Little is known about workers' compensation beneficiaries. This article fills that gap by discussing the results of the March 1973 Current Population Survey, which identified some 12 million individuals who had received cash benefits from workers' compensation during 1972. The personal and economic characteristics of these individuals are compared with those of the entire experienced work force. The aggregate number of beneficiaries reported here is compared with data from other sources. An attempt is made to convert the estimates of the number reporting receipt of benefits during the year to a number receiving benefits in an average week.

WHAT ARE THE PERSONAL and economic characteristics of workers' compensation beneficiaries? As of March 1973, proportionately more men were among workers' compensation beneficiaries than were among the total experienced work force. Beneficiaries were older, less educated, and more apt to be the head of a household than were experienced workers. These findings are based on the data reported in the March 1973 Bureau of the Census Current Population Survey (CPS) that identified 12 million individuals as have been beneficiaries some time in 1972. Most were receiving benefits as injured workers, a few as family members (dependents or survivors of workers injured or killed on the job).

Among the men, 1 in 8 did no work during the year in which he reported being a beneficiary (1972), and most of the others worked only part of the year—both reflections of the effects of their disabilities. About four-fifths of the men were in the labor force in March 1973. Beneficiaries who were in the labor force in that month were much more likely to be blue-collar workers and in manufacturing industries than were all experienced workers.

The data for workers' compensation beneficiaries described here are based on information on 12 million persons for whom data were reported in the CPS. This total is somewhat lower than estimates derived from other sources for

the number of persons receiving benefits at some time during 1972—even after adjustment to 13 million is made for nonresponse cases. Data from insurance industry records and information from another Federal survey that included workers' compensation beneficiaries produce an estimated range of 15–20 million workers' compensation beneficiaries. In addition, based on data from several workers' compensation administrative agencies, an estimated 700,000–1,000,000 beneficiaries were on the rolls in an average week in 1972.

SOURCES OF DATA

Information on workers' compensation has been published for a number of years by the Social Security Administration in the areas of coverage, benefits paid, relationship of statutory rates of benefits to earnings, insurance costs, and administrative costs.¹ The sources used to derive these estimates have generally lacked data on the number of beneficiaries and their characteristics.

Over the years some attempt has been made to fill the gap. In the early 1950's the Social Security Administration explored the possibility of obtaining data from insurance companies. A preliminary survey disclosed that the various methods of defining and recording data used by insurance companies precluded obtaining meaningful data. Information on the type of disability award is available from the National Council on Compensation Insurance by State and for the Nation. These data have limited applicability because they are for policy years rather than calendar years, are on an incurred-case basis rather than actual receipt in a given year, and, most important, do not include individuals whose workers' compensation protection comes from self-insured employers or from the publicly operated insurance funds in a number of States.

Individual workers' compensation administra-

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¹ See Daniel N. Price, "Workers' Compensation Coverage Payments and Costs, 1974," *Social Security Bulletin*, January 1976, and earlier articles.

tive agencies publish data about their programs, but practically none report the number or characteristics of beneficiaries at a given time or over the course of a year. Some State agencies publish information on the number of awards or new cases in a year or the number of workers injured on the job (or in some cases, disabled on the job either through injury or disease), particularly by industry. In general, these are fragmentary data not suitable for aggregating to national levels.

A number of one-time and periodic surveys conducted by the Federal Government have provided information about persons in income-maintenance programs, including workers' compensation.² The survey of economic opportunity (conducted for the Office of Economic Opportunity), for example, provided national data for 1966 and 1967 on various sources of income, including workers' compensation. Families and unrelated individuals formed the smallest unit for which information was collected. In addition, workers' compensation was combined with "illness or accident benefits." That survey item did not allow clear-cut identification of workers' compensation beneficiaries because nonoccupational sickness is thought to be much more prevalent than work-related disability.

CPS AND WORKERS' COMPENSATION

Although the CPS data are subject to the limitations described in this section, they are useful because they provide information on individual workers' compensation beneficiaries and are drawn from a representative sample of the total US civilian population. It thus identifies the group to be described and covers almost the complete relevant universe (The institutional population is not covered.)

The March 1973 CPS included individuals who reported having received periodic cash payments from workers' compensation any time during 1972, not, for example, in a particular week or month. The estimates given in this article,

²For a description of the nature and limitations of those surveys, see Monroe Berkowitz, "Sources of Information about Workmen's Compensation Recipients," in *Supplemental Studies for the National Commission on State Workmen's Compensation Laws*, The Commission, 1973.

therefore, cannot be directly compared with the cross-sectional data most often generated for other groups of workers and social insurance beneficiaries.

The CPS data also differ from some other sources that count individuals only at the time they first are reported—that is, on an initial claim basis. Presenting the data for those receiving benefits at any time during the year gives much greater weight to those receiving benefits over an extended period, compared with those on the rolls a short time. This effect is readily seen for beneficiaries who are survivors of workers whose death was job-related. The following distribution of losses incurred (bene-

Type of benefit payment, policy year 1971-72	Number (in thou- sands)	Percent
Total	1 057 5	100 0
Permanent total disability	1 5	1
Death	5 6	5
Permanent partial disability	250 3	23 7
Temporary total disability	800 1	75 7

fit payments made primarily by commercial insurance companies and some State funds) shows that the number of death cases is minimal, compared with that of other indemnity cases.³

Benefits are likely to be paid for many years to a survivor, and therefore survivors are represented more heavily in the CPS—8 percent of the beneficiaries were widowed, most of whom probably were receiving benefits as a result of a worker's death. To the extent that characteristics of long-term beneficiaries differ from those of workers with, let us say, temporary total disability awards, the information examined here would be different from data obtained from a sample of initial claims.

Two groups of individuals who receive workers' compensation benefits have been excluded in the CPS: Workers who received medical care but no cash benefit through workers' compensation and workers who in 1972 received only a lump-sum payment through a compromise-and-release settlement. Most workers' compensation benefits are for medical care only—at least four-fifths. Those that involve sufficient loss of work time

³Unpublished data on initial awards from the National Council on Compensation Insurance.

to receive cash indemnity payments, however, account for most (nine-tenths) of the dollar amount (including medical services) of benefits provided.⁴ Thus, including only income-loss compensation cases should give a picture of the main dimension of the current workers' compensation program if dollar benefits are assumed to be a reasonable reflection of the program's operations.

The effect of excluding workers with compromise-and-release settlements is hard to gauge. The median number of such settlements as a proportion of all cash benefit cases in 1971 was 11 percent among 24 jurisdictions for which data were available.⁵ Claimants who received periodic payments before being granted a lump-sum settlement are represented in the CPS Workers in "agreement" States (in which payments may not begin until agreement is reached on compensability or amount to be paid) are much less likely to be counted than those in other States.

Aside from these conceptual issues, the survey procedure itself affects the quality of information about workers' compensation. First, because the CPS is based on a sample and workers' compensation beneficiaries are a very small part of the population, the extent to which data on workers' compensation can be cross-classified for analysis is limited by sample-error considerations. Second, some data in any survey are not as well reported as others, and income queries generally result in underreporting. Hence, the number of workers' compensation beneficiaries given here is no doubt less than the true total since information on them comes from a question asking about workers' compensation as a source of income. The technical note on page 46 gives illustrative sampling error measures and further discusses underreporting.

BENEFICIARY CHARACTERISTICS

Tables 1 and 2 show some characteristics of individuals who received workers' compensation some time in 1972. For purposes of comparison,

⁴ Estimated from *Countrywide Workmen's Compensation Experience*, National Council on Compensation Insurance, July 1971.

⁵ *The Report of the National Commission on State Workmen's Compensation Laws*, The Commission, July 1972.

TABLE 1—Percentage distribution of workers' compensation beneficiaries and of all workers, by personal and family characteristics, March 1973

Characteristic	Workers compensation beneficiaries ¹			All workers ²		
	Total	Men	Women	Total	Men	Women
Total number (in thousands)	1,161	853	308	87,238	53,053	34,185
Percentage distribution	100	73	27	100	61	39
Total percent	100	100	100	100	100	100
<i>Personal characteristics</i>						
<i>Age</i>						
Under 25	15	16	12	23	21	27
25-34	24	26	18	22	23	21
35-44	17	17	17	19	19	18
45-54	21	20	25	19	20	19
55-59	10	10	9	8	8	7
60 and over	13	11	19	9	9	8
<i>Race</i>						
White	89	89	88	89	90	87
Black and other	11	11	12	11	10	13
<i>Veterans status</i>						
World War II veteran	(³)	17	(³)	(³)	19	(³)
Other veteran	(³)	29	(³)	(³)	27	(³)
Nonveteran	(³)	54	(³)	(³)	54	(³)
<i>Education (years of school)</i>						
0-7	13	14	13	7	8	5
8-11	36	38	31	26	27	25
12 (high school graduate)	37	34	45	39	35	44
13-15	9	10	8	14	14	14
16 or more (college graduate)	4	4	3	14	15	12
<i>Family characteristics</i>						
<i>Marital status</i>						
Single, divorced	17	15	20	29	26	36
Married, spouse present	75	83	55	67	73	58
Widowed	8	2	25	4	1	7
<i>Household head status</i>						
Head, with no family	10	7	19	8	7	11
Head, with family	67	83	20	49	74	10
Wife of head	15	-	55	22	-	57
Others in household	8	9	8	20	19	22

¹ Received workers' compensation benefit any time during 1972.

² Includes unemployed persons with previous labor force experience. Totals may differ slightly from other published labor force data because individuals aged 14 and 15 are included here.

³ Data not available.

Includes married persons with spouse not present.

information is also presented on all experienced workers in the United States. The term "experienced" worker refers to employed persons and to currently unemployed persons who had previous work experience. For the most part, the sample of those who were workers' compensation beneficiaries some time during 1972 came from the universe of those who worked some time in 1972 (Survivor beneficiaries and those whose claims began before 1972 would not necessarily have worked during 1972.) A more useful comparison can be made with those working at a given time since the universe of those who worked at any time during the year is weighted by persons generally out of the labor force except for summer, seasonal, after-school, or other intermittent employment. The worker data given here, then, are for those who were experienced workers.

as of March 1973 The personal and labor-force characteristics discussed are for identical periods for both workers and beneficiaries

TABLE 2—Percentage distribution of workers' compensation beneficiaries and of all workers, by labor-force characteristics, March 1973

Characteristic	Workers' compensation beneficiaries ¹			All workers ²		
	Total	Men	Women	Total	Men	Women
Total number (in thousands) ..	1,161	853	308	87,238	53,053	34,185
Total percent.....	100	100	100	100	100	100
<i>Labor-force experience, 1972</i>						
Weeks worked						
0	15	12	24	4	2	7
1-26	18	17	23	12	9	17
27-49	43	35	41	16	14	18
50-52	25	28	18	68	75	58
Work status						
Year round ³	25	28	18	68	75	58
Part year						
Full time	55	57	50	18	17	20
Part time	4	3	8	9	6	15
No work	15	12	24	4	2	7
Part year work	59	60	58	28	23	35
Unemployed	12	14	8	9	10	8
Out of labor force						
Ill	41	42	40	3	3	3
Worked at home, or in school	3	2	9	12	6	21
Other	2	3	(⁴)	4	4	3
Full-year employment or not in labor force all year ..	41	40	42	72	77	65
No work at all						
Ill	15	12	24	4	2	7
Other	10	9	12	(⁴)	(⁴)	(⁴)
Worked during the year ..	5	2	12	4	2	6
85	88	76	90	98	93	
<i>Labor force status, March 1973</i>						
Employment status						
Employed	72	77	58	96	96	95
With job but not at work due to illness	6	7	5	2	1	2
Unemployed	4	4	52	4	4	5
Not in labor force	23	18	37	---	---	---
Class of worker ⁵						
Government	6	6	7	16	14	19
Private industry wage and salary						
Blue collar	66	73	41	31	41	15
White collar	17	11	39	32	26	40
Service	7	5	12	11	6	18
Self-employed, farm, family workers	4	5	2	11	13	7
Industry division ⁶						
Construction, mining, and agriculture	14	17	1	10	15	3
Manufacturing	46	46	47	25	28	19
Transportation, utilities, and finance	7	8	5	11	11	10
Trade	17	14	27	20	19	22
Service	9	8	13	18	12	28
Government	6	6	7	16	14	20
Occupation ⁷						
Professional and managerial	9	7	16	25	29	19
Sales	4	2	5	7	6	7
Clerical	9	5	24	17	7	33
Craft workers	19	25	5	13	21	1
Operatives	39	40	37	17	19	14
Laborers	10	14	0	6	9	2
Service	9	7	14	14	9	23

¹ Received workers' compensation any time during 1972

² Includes unemployed persons with previous labor-force experience Totals may differ slightly from other published labor-force data because individuals aged 14 and 15 are included here

³ Represents all full time employment except for 1 percent of workers compensation beneficiaries and 7 percent of all workers who had part time employment

⁴ Less than 0.5 percent

⁵ Data for workers' compensation beneficiaries apply only to those in the labor force—men, 698,500, women, 193,900

Personal Characteristics

Almost three-fourths (73 percent) of the 12 million workers' compensation beneficiaries studied were men In contrast, only three-fifths (61 percent) of all experienced workers in March 1973 were men These data include survivor beneficiaries—generally a spouse—of workers who died from work-related causes Thus the comparison between the sex distribution of workers' compensation beneficiaries and that of all workers is better if death cases are related to sex of the deceased worker rather than of the beneficiary

The CPS did not allow any direct identification of survivor recipients A reasonable approximation, however, can be made from the available sex-marital status data Almost all survivor beneficiaries are generally thought to be widows, not widowers Maryland, one of the few States with any information on beneficiary characteristics, supports this hypothesis by reporting 264 claims by women identified as widows or likely to be widows out of 289 death claims in the period June 1971–June 1975⁸ The CPS showed that 78,000, or 25 percent, of women beneficiaries in March 1973 were widows Some of these widows were workers with compensation claims on their own account About 7 percent of all women workers in the United States were widows If 7 percent of the 25 percent of workers' compensation widow beneficiaries were collecting benefits in their own right, a rough estimate of 18 percent is obtained for widows collecting survivor benefits This adjustment would produce an estimate of 78 percent of workers' compensation beneficiaries who were men The contrast between this proportion and that for men among all experienced workers, 61 percent, is a strong indicator of the different experience of men and women with respect to comparable occupational injury

The California Department of Industrial Relations, which also collects work-injury statistics by sex, reported that 82 percent of work injuries in 1971 were for men⁹ The similarity of this proportion to that for men workers' compensation beneficiaries nationally is in part circumstantial The California data are not directly comparable

⁸ Annual Report of the Workmen's Compensation Commission of Maryland, for fiscal years ending June 1972–75 (published yearly)

⁹ National Safety Council, Accident Facts, 1973 edition, 1974

with these national data. Work-injury figures are on an initial report basis, they do not reflect the coverage, eligibility, waiting period, and other requirements of State workers' compensation laws nor the effects of regulations and litigation, all of which help determine the composition of the universe of workers' compensation beneficiaries. A number of States publish information on work-injury prevalence, although even these statistics are generally limited or lack personal and other individual characteristics.

Workers' compensation beneficiaries were somewhat older than other workers. Forty-four percent of them were at least aged 45, compared with 36 percent of all experienced workers. For women the age distributions show significant differences between beneficiaries and all workers. The age pattern of women beneficiaries who are not workers—that is, surviving widows of workers killed on the job—should be remembered. Four-fifths of the widow beneficiaries were at least age 45; if they were excluded, the age distribution for women beneficiaries would more closely resemble that for all women workers.

Conflicting views exist as to whether younger or older workers are more susceptible to work injuries. It might be expected that younger workers would be more likely to have industrial injuries because of their inexperience, and, perhaps, by virtue of their being in physically more demanding and risky jobs. On the other hand, the gradual reduction of dexterity and visual acuity and the slowing down of other bodily functions and recuperative ability of older workers would tend to raise the work-injury rates in higher age brackets. Other sources of data also show unclear patterns by age. Data from the Public Health Service health interview survey,⁸ for example, show rising rates of restricted activity and bed disability days following work accidents for those aged 45-74, compared with those aged 17-44, but the rate for those aged 65 and over showed a drop. The report also indicated a lower rate of work injuries reported for those aged 45-64, compared with those aged 17-44.

One out of every 10 beneficiaries was black. Adjustment of the data to exclude the nonworker widow beneficiaries would have little effect, since 87 percent of the widow group was white, almost

⁸ U.S. Public Health Service, *Current Estimates from the Health Interview Survey, U.S. 1972*, September 1973.

the same as the percentage for all beneficiaries. The white-black beneficiary ratio was similar to that for all workers.

Two interesting patterns are evident in the analysis of education of beneficiaries and of all experienced workers as of March 1973: (1) The beneficiaries had less formal schooling than workers, and (2) as measured by completion of high school, the men beneficiaries and workers were less educated than the women. Fifty-percent of the beneficiaries had completed high school, but among all workers 67 percent were at that level. The proportion of high school graduates was 48 percent among the men and 56 percent among the women. The difference would have been heightened if an adjustment was made for widows since just 47 percent of that group completed high school.

A higher level of formal education is associated with younger individuals, and the age distribution described earlier for beneficiaries and workers may account for much of the education pattern reported. This difference is seen in the fact that widows, who generally are older, received less education on the average than other women beneficiaries. In addition, it is reasonable to expect that persons with higher educational attainment are more likely to be in less risky occupations, as indicated in the discussion of occupational characteristics below.

Family Characteristics

The substantial number of widows among workers' compensation beneficiaries in 1972 represented, for the most part, survivors of men killed on the job. Consequently, the proportion of married women beneficiaries (55 percent) was much lower than the corresponding proportion (83 percent) of married men beneficiaries. A notable distinction existed between the marital status of workers and beneficiaries, with the latter showing a lower proportion of single and divorced workers (17 percent, compared with 29 percent).

The data on household-head status show that more than three-fourths (77 percent) of the beneficiaries were heads of households (90 percent of the men). Significantly fewer experienced workers (57 percent) were reported as the head of a household. Questions raised about the ade-

quacy of benefits in the past⁹ have particular importance in terms of the extent of household responsibility by beneficiaries reported in the CPS

Labor-Force Characteristics

The effect of work-related disability is clearly marked in the labor-force characteristics described in table 2. Fifteen percent of the beneficiaries did not work in 1972, compared with only 4 percent of all workers. A review of the labor-force participation figures for men alone shows a similar degree of difference in the proportions of beneficiaries and all workers who did not work in 1972, 12 percent and 2 percent, respectively. Examining the data for men separately avoids the complication presented by the level of labor-force participation of surviving widow beneficiaries.

The large majority (72 percent) of the 85 percent of beneficiaries who worked in 1972 were employed only part of the year. Among part-year workers, 69 percent reported illness as the reason for not working the full year. In contrast, the large majority of experienced workers (68 percent) were employed year round, and few of those who worked less than a full year did so because of illness.

Among both workers and beneficiaries, proportionately more men than women worked throughout 1972. The employment record for women beneficiaries would have been fuller if widows were excluded in the tables. 59 percent had no work in 1972. For both men and women, part-time work is more prevalent among all workers than among beneficiaries. This trend runs counter to what might be imagined a priori—that is, beneficiaries (including partly disabled workers) might be expected to have part-time work proportionately more often than other workers. The pattern reported may reflect employment in low-risk occupations among major groups of part-time workers such as students and housewives.

In the survey week, 72 percent of the beneficiaries had a job and 6 percent were employed but not at work because of illness. Twenty-seven

percent were out of the labor force or unemployed. The role of surviving widows is implicit in these data. Eighteen percent of the men were out of the labor force and 37 percent of the women.

The idea that educational attainment influences successful labor-force participation appears accurate for workers' compensation beneficiaries. As the tabulation below shows, the higher the

Labor force status March 1973	Education (years of school)								
	Total			Men			Women		
	Less than 8	8-11	12 or more	Less than 8	8-11	12 or more	Less than 8	8-11	12 or more
Total number (in thousands)	155	414	592	114	317	422	42	96	170
Total percent	100	100	100	100	100	100	(1)	100	100
Employed	48	73	81	54	77	87	(1)	59	64
Unemployed	2	5	5	3	5	5	(1)	4	6
Out of labor force --	50	22	14	43	18	8	(1)	37	30

¹ Not shown, base less than 75,000

educational attainment, the higher the proportion of recipients who were employed in March 1973 and, conversely, the lower the proportion who were out of the labor force. Thus, even after being disabled on the job, highly educated workers have job skills less likely to be adversely affected by their disability than do beneficiaries with less schooling. Among men the contrast was dramatic. Of those with less than an eighth grade education, 54 percent were employed, the proportion was 87 percent among high school graduates. The trend is consistent for more detailed educational categories (in particular high school graduates, compared with college graduates) and for women in each education group.

An analysis by class of worker and by occupation is made for beneficiaries in the labor force in March 1973. The preponderance (66 percent) of blue-collar employees among the beneficiaries reflected the fact that such workers are more likely to become occupationally disabled than are white-collar workers in private industry or government. Blue-collar occupations were much less common among experienced workers, accounting for only 31 percent of the employment. The occupational data reported show a similar type of distinction between beneficiaries and all workers. Professional and managerial positions, for ex-

⁹ See, for example, *The Report of the National Commission on State Workmen's Compensation Laws*, July 1972, pages 15-27.

ample, were almost three times as prevalent among all workers (25 percent) as they were for beneficiaries (9 percent)

Beneficiaries who were still in the labor force in 1973 were more likely to be employed in goods-producing industries (60 percent) than in service-producing work (39 percent) About the same proportion of men and women—46 percent and 47 percent, respectively—were in manufacturing work But the proportions of men and women beneficiaries in construction and trade were markedly different Very few women were in construction, as might be expected, and almost twice as many women (27 percent) as men (14 percent) were in wholesale and retail trade

The much higher concentration in goods-producing industries among beneficiaries (60 percent) than among all experienced workers (35 percent) was associated with industry differences in risk levels for work-related injury, as shown in the following tabulation The distribution of

Industry division	Rate of lost workdays per 100 full time workers	Percentage distribution of—	
		All workers	Workers with lost workdays
Total number (in thousands) ¹	— — —	58,519.2	1,722.8
Percent..	3.3	100	100
Construction	6.0	6	10
Manufacturing	4.2	32	45
Transportation and public utilities.	4.5	7	10
Trade	2.8	27	22
Finance, insurance, and real estate8	7	2
Service	2.0	21	11

¹ Excludes government and agriculture

lost workday cases for 1972 roughly matches the distribution of workers' compensation beneficiaries by industry,¹⁰ if it is noted that farm and government work are excluded If those workers are excluded from the data in table 2, 50 percent of the beneficiaries are shown to be in manufacturing, with that industry accounting for 45 percent of the lost workday cases It is not surprising that the two sets of data are not identical since (1) lost workday cases pertain to the industry where workers' disablement occurred and the CPS beneficiary information to post-injury employment and (2) lost workday statis-

¹⁰ Bureau of Labor Statistics, *Occupational Injuries and Illnesses by Industry, 1972*, Bulletin 1830, 1974

tics, like the California work-injury statistics, differ from CPS—they are on an initial-report basis and do not reflect the specific exclusions of State workers' compensation statutes

NUMBER OF BENEFICIARIES

Number on Rolls During Year

To evaluate the information on the characteristics of workers' compensation beneficiaries obtained from the CPS, it would be useful to measure to what extent the available data included fewer beneficiaries than were actually on the rolls some time in 1972 Some fragmentary data are available to help estimate the 1972 universe of beneficiaries One estimate made in the early 1960's suggested that 1½ million workers received cash benefits in the course of a year,¹¹ without giving a basis for the figure

Most available data are based on initial claims An estimate of the number of initial claims for cash benefits in 1972 can be used to compute the number of insurance cases incurred each year The number that involved cash benefit payments for the policy year 1972-72 was 1.1 million This total that the actual figure on the rolls will include beneficiaries who receive benefits that continue from year to year, a higher figure than just the total for initial claims

NCCI—The National Council on Compensation Insurance (NCCI) compiles data on the number of insurance cases incurred each year The number that involved cash benefit payments for the policy year 1971-72 was 1.1 million This total omits cases in six States with public funds only, in Montana, under Federal programs, and of self-insured employers throughout the country If the number of beneficiaries is related to benefit payments, adjustment can be made for the missing segments Total workers' compensation payments, as estimated by the Social Security Administration for 1972 (excluding payments under Federal programs) were \$3.3 billion This total is 137 percent of the \$2.4 billion figure reached by subtracting benefits paid through the programs noted above The ratio can be modified slightly—to 135 percent—to take into account

¹¹ Henry Kessler, "The Impact of Workmen's Compensation on Recovery," in *Occupational Disability and Public Policy*, Earl F. Cheit and Margaret S. Gordon, editors, 1963

the difference in statutory benefit levels between the jurisdictions reported on by NCCI and the other areas¹² Application of the 135-percent factor to the 11 million NCCI estimate produces almost 15 million beneficiaries Addition of the 60,000 beneficiaries¹³ on the Federal civilian employee rolls during 1972 brings the total closer to 15 million beneficiaries

The 15 million estimate is, of course, low in terms of the number of beneficiaries during the course of 1972 because (except for the Federal employee data) it does not include individuals for whom an incurred loss was first reported in a previous year and whose benefit payments continued into 1972 Information is not available to quantify the beneficiaries in this group It may be noted, however, that the cases apt to be of longest duration—survivor and permanent total disability cases—represented only 06 percent of the 11 million cases reported by the NCCI

NSC—Work-injury data compiled by the National Safety Council (NSC) are one measure of the maximum number of workers' compensation beneficiaries in 1972 For that year the Council reported 24 million workers with disabling injuries and 14,100 with work-caused deaths¹⁴ Although these figures do not include disability from occupational disease, they may be used as an upper estimate of the number of new workers' compensation cases in the year. The NSC defines an injury as preventing a person from performing any of his usual activities for a full day beyond the day of the accident The figure thus includes substantial numbers of workers who would not become beneficiaries because of the statutory requirements under workers' compensation that the disability last a specified number of days ranging from 2 to 7, with the majority of States having a 7-day waiting period Furthermore, some persons with work-related injuries do not receive workers' compensation benefits because of statutory coverage restrictions and other limitations arising from the nature of the program

CES—Data from the 1970 census employment survey (CES) are another source that can be

¹² Adjustment made by comparison of maximum weekly benefit amounts as of January 1, 1973, weighted by employment covered under State workers' compensation programs

¹³ Estimated from unpublished data from the U S Department of Labor

¹⁴ *Accident Facts*, op cit

used for a maximum estimate of the number of beneficiaries in 1972 That survey provided data on family income throughout the year in low-income Census tracts,¹⁵ which pertain to workers' compensation more directly than data from the NSC Workers' compensation benefits were an income source for 85,000, or 274 percent, of the families represented in the urban segment of the sample If the same relationship can be assumed for individual workers' compensation beneficiaries and the 736 million wage and salary workers in the Nation in 1972, then an estimated 20 million persons would have been receiving workers' compensation cash benefits

Since the CES data refer to families, not individuals, the proportion of 274 percent is likely to be too high to use as the percentage of workers' compensation beneficiaries nationally More families would be likely to have two or more persons in the labor force than they would to have that number receiving workers' compensation benefits The percentage is too high, also, if it is assumed that these benefits are more frequently an income source for those with low income than for other income groups Therefore, the estimate based on the data from all three sources discussed here falls between 15 and 20 million beneficiaries some time in 1972

The nature of the estimating procedure used here is rough at best, but, despite the differences, the available sources do seem to converge The CPS total comes closer to the level derived from other sources if adjustment is made for respondents for whom workers' compensation information was not available Allocation of this group revises the CPS number of beneficiaries in 1972 to 13 million persons Since this figure excludes the institutional population, the CPS total is close to the 15–20 million estimate arrived at here Because this figure is sufficiently larger than the 12 million from the CPS, it is clear that the data on beneficiary characteristics presented here give a tentative picture, subject to possible change, of the characteristics if all the beneficiaries were to be included

Average Weekly Number of Beneficiaries

It would be desirable to compare the number of workers' compensation beneficiaries on the rolls

¹⁵ Monroe Berkowitz, *op cit*

as of a given date, week, or month with similar data reported regularly for persons receiving other social insurance benefits such as unemployment insurance and disability insurance benefits under the social security program. No data are available for workers' compensation nationally, but the Federal Employees' Compensation Act (FECA) program and a few State programs provide such information.

In the following tabulation, FECA data are used to show the relationship between the number

Fiscal year	Estimated number on—		Ratio of number on rolls at beginning of year to those on rolls any time during year
	Rolls at beginning of year	Rolls any time during year ¹	
1972	26,100	60,300	43
1973	28,900	61,000	47
1974	30,600	67,100	46

¹ Includes temporary disability cases of at least 4 days' duration compensated by sick leave.

Source: *Annual Statistical Report for Federal Employees Compensation Act, Longshoremen and Harbor Worker's Compensation Act, and Extensions*, Department of Labor Employment Standards Administration, October 1975, and unpublished estimates from Employment Standards Administration.

of persons on the rolls on a given date and those on the rolls at any time in the year. To estimate the number of persons receiving benefits in a given week, the average of the ratios—45 percent—is applied to the 1.5–2.0 million beneficiary figure for the Nation, and the figure for the average number of beneficiaries is estimated at 700,000–900,000.

Some State workers' compensation agencies report the number of cases or awards in a year. The number on the rolls in a given week can be approximated by relating the number of cases being compensated at the beginning of the year to the number of new awards in the year, as estimated by the Employment Standards Administration for the FECA program. For 1972, that ratio was 77 percent. It was applied to several States in which the data reported on new cases or awards appeared comparable (that is, included only cash indemnity, included self-insurers, and exceeded in each instance the number of cases reported by the NCCI for private commercial insurers). Figures from annual reports of the Florida, Maryland, Michigan, and Virginia administrative agencies were projected to a national total by relating total benefit payments in the

United States in 1972 to those paid by each of the States. The average number of cases in a week was estimated at 900,000.

Another way to estimate the weekly number of beneficiaries in 1972 is to project the national estimate reported for 1951 in 1954.¹⁶ Multiply the range, 340,000–470,000, by the change in the proportion of workers covered between 1951 and 1972 (estimated at 107.6 percent by the Social Security Administration) and by the increase reported by the Bureau of Labor Statistics in nonagricultural wage and salary employment (154.0 percent). The resulting 600,000–800,000 beneficiary range does not take into account significant improvements in statutory benefit provisions since 1951 nor the greater awareness among workers in recent years of benefits available under workers' compensation. Both these factors would raise the average number on the rolls at a given time.

Consideration of these factors and the two earlier estimates suggests that the number of disabled workers and surviving dependents who received benefits during an average week in 1972 was 700,000–1,000,000. This estimate, along with the estimated 1.5–2.0 million on the rolls at some time during 1972, is presented in rounded figures because of the crudeness of the manner in which the estimates are reached. As an illustration, the assumption that the number of beneficiaries is proportionate to the dollar amount of benefits paid is, of course, an oversimplification since variations in statutory provisions (including benefit maximums) and in duration of benefit claims influence the relationship between the number of beneficiaries and the amount of benefits paid. The results presented here should be evaluated in the light of this fact and the limitations discussed earlier.

Technical Note

The data in tables 1 and 2 and in the text, unless otherwise specified, are from the March 1973 Current Population Survey (CPS). Definitions of characteristics and explanations of survey procedures for the CPS, beyond those provided here, are published in a number of Bureau of the

¹⁶ See Dorothy McCammon and Alfred M. Skolnik, "Workmen's Compensation Measures of Accomplishment," *Social Security Bulletin*, March 1954, page 34.

Census reports¹⁷ The individuals described as workers' compensation beneficiaries are those who answered yes to the question "During 1972, did _____ receive any money from workers' compensation?"

This definition may differ from that used in other reports of CPS data that include individuals with workers' compensation benefits Differences can occur because respondents are asked for a dollar amount received from all income sources combined For some purposes (income analyses, for example) only positive responses that included a dollar amount were considered usable The main concern here, however, is to identify those who received benefits, whether or not they reported amounts received

The number of beneficiaries reported probably is an underestimate Available evidence shows that income—including such transfer income as workers' compensation benefits—is underreported in the CPS¹⁸ The actual number of workers' compensation beneficiaries is not available, State administrative agencies do not compile such data How many beneficiaries were missed by the questionnaire thus is not known Looking at the estimated range of 1.5–2.0 million beneficiaries developed in the preceding section and the 1.2 million figure in the CPS count provides an indicator of underreporting

To the extent that receipt of these benefits is an underreported item, the procedures used here may improve the representativeness of the data For this article, 765 sample cases were tabulated, for the CPS surveys in the early 1970's, about 500 cases from the same survey had usable income information after editing and indicated receipt of workers' compensation benefits Using all cases that indicated receipt of such benefits eliminated the problem of deciding how to allocate the income reported when workers' compensation and another source of income were received About 4 percent of the positive responses reported receiving two or three of the four sources of income in the March 1971 CPS¹⁹

¹⁷ See, for example, Bureau of the Census, *Current Population Reports*, Series P-60, No 97, "Money Income in 1973 of Families and Persons in the United States," 1975

¹⁸ Bureau of the Census, *Current Population Reports*, op cit, Table A-8

¹⁹ John F Coder, "Selected Sources of Public Transfer Money Income from the Current Population Survey," in *American Statistical Association Proceedings for 1972*, 1972

Some respondents may not report receipt of workers' compensation benefits because they do not know the specific nature of the payment being made—particularly family members answering for the disabled worker Instructions to the interviewers distinguished between "workmen's compensation" and "sick pay" and between insurance benefits paid for by the employer and those paid for by the worker Since most States allow employers to pay workers' compensation directly as self-insurers and many workers are in health plans (including those with cash sickness benefits) to which they contribute jointly with the employer, some CPS respondents may not be able to correctly identify a workers' compensation benefit

Sampling Error

The CPS data, like that from any sample survey, may differ from figures that would be obtained from a complete census, using the same questionnaires and other procedures Interpretation of figures based on a relatively small number of cases, as well as small differences between figures, should be evaluated for sampling variability The importance of sampling variability may be overshadowed, however, by unknown effects of underreporting or misreporting

A measure of the sampling variability of an estimate is given by the standard error of the estimate Generally, the chances are about 68 out of 100 that an estimate will differ from the value given by a complete census by less than one standard error The chances are about 95 out of 100 that the difference will be less than twice the standard error

Table I gives approximate standard errors for estimated percentages²⁰ Linear interpolation may be used to obtain values not specifically given A number of assumptions and approximations were used to derive standard errors that are applicable to a wide variety of items As a result the table of standard errors provides an indication of the order of magnitude rather than the precise standard error for any specific item It is estimated, for example, that 13 percent of the

²⁰ *Current Population Reports*, Series P-60, No 98, "Characteristics of the Low-Income Population 1973," Bureau of the Census, 1975

TABLE I—Approximate standard errors of estimated percentage of persons

[68 chances out of 100]

Estimated percentage	Size of base (in thousands)						
	100	300	850	1,000	25,000	50,000	100,000
2 or 88	1.7	1.0	0.6	0.5	0.11	0.08	0.1
5 or 95	2.7	1.6	1.0	.9	.2	.2	.1
10 or 90	3.7	2.2	1.4	1.2	.2	.2	.1
25 or 75	5.4	3.2	1.9	1.7	.3	.2	.2
50	6.2	3.7	2.2	2.0	.4	.3	.2

308,000 women beneficiaries had fewer than 8 years of education. By interpolation from table I the standard error is 2.4 percent. Thus with 95-percent confidence the proportion of women beneficiaries with less than 8 years of education lies between 8.2 percent and 17.8 percent.

To make a rough determination of the statistical significance of the difference between two independent percentages, find estimates of the standard errors of the percentages in question in table I; square these standard errors to get

variances; add the variances, and take the square root of this sum to get the standard error of the difference. If the absolute difference between the two percentages is greater than twice the standard error of the difference, they are said to be significantly different from one another at the 95-percent level.

If, for example, from table I the 8-point difference between the proportion of women beneficiaries with fewer than 8 years of formal education (13 percent) and that of experienced women workers at that educational level (5 percent) is to be examined for statistical significance, the standard error of the difference is computed as follows: Take the square root of the sum of 2.4 squared plus 0.2 squared, or the square root of 5.8, which equals 2.4. Since the absolute difference (8.0) is 3.3 times the standard error of the difference (2.4), the proportion of women beneficiaries is said to be significantly higher than that of all experienced women workers at the 95-percent level.

Notes and Brief Reports

Social Security Beneficiaries With Spanish Surnames in the Southwest*

Some information on the characteristics of social security beneficiaries of Spanish origin can be gained from examining the program data in States with sizable populations of Spanish heritage and comparing them with other beneficiaries in those States. Such comparisons have been made for five Southwestern States—Arizona, California, Colorado, New Mexico, and Texas.¹

* Prepared by George Stepanovich, Division of OASDI Studies. The beneficiary data file was prepared by Walter E. Kelsey and John W. Wagner of the Statistical Operations Branch.

¹ Bureau of the Census, *Comparison of Persons of Spanish Surname with Persons of Spanish Origin in the United States* (Technical Paper No. 38), June 1975. See also Jack Schmulowitz, "Spanish-Surnamed OASDI Beneficiaries in the Southwest," *Social Security Bulletin*, April 1973, pages 33-36.

The data are derived from the Social Security Administration's master beneficiary record, which contains detailed information for all beneficiaries. The concept of the Spanish "surname" as defined in the 1970 Decennial Census data was used here since persons of Spanish background could not otherwise be identified in the beneficiary record. Matching the surnames in the beneficiary data with the list of Spanish surnames compiled by the Bureau of the Census made it possible to assemble information for the five Southwestern States studied.

At the end of June 1972, 4.4 million beneficiaries residing in these States were receiving monthly social security benefits amounting to \$497.2 million (table 1). About 442,000—or 1 in 10 of all those receiving benefits—had Spanish surnames, and their monthly benefits amounted to \$38.5 million or 8 percent of total payments in the Southwest group. About 82 percent of the Spanish-surnamed were old-age and survivors insurance (OASI) beneficiaries and 89 percent of the others. Eighty-five percent of the total