Health Care Coverage of Survivor Families With Children: Determinants and Consequences

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This article, which is based on data from the Social Security Administration's 1978 Survey of Survivor Families With Children, examines the continuity of health care coverage held by families headed by widows from the time of the husband's death to the interview. The data are presented by duration of widowhood and kind of coverage the family had before the husband died. Over this period, it was found that new kinds of coverage, such as the widow's job-related health insurance or directly purchased protection, often replaced the former coverage. At the time of the interview, about three-fourths of the families had coverage, including government assistance such as Medicaid. Whether or not the young survivor families had coverage was affected by the widow's current employment status and by family income. Premiums varied by type of policy: those with individual policies paid more (and received less extensive coverage) than did those with group policies. Compared with the general population, the widows and their children were in poorer health, generally used physician services less, and had somewhat higher expenditures for health care.

When a breadwinner dies, many young families experience not only a loss in earnings but the loss of a variety of fringe benefits as well. The most important of these benefits is group health insurance. Social Security cash benefits may be available to partially replace lost earnings, but noncash benefits usually are not replaced.[1] The lack of health insurance coverage is particularly serious because this protection is especially needed by widows with young children.

Other events regarding health care coverage[2] may also occur following a breadwinner's death. Families with health insurance policies not based on the primary worker's employment may lose this coverage or have it modified, depending on changing circumstances.

This article is based on data from the Social Security Administration's 1978 Survey of Survivor Families

With Children. It begins by discussing the coverage held by widows with minor children at the time of the husband's death. Was health care coverage present and, if so, what source provided it? How did the worker's death affect this coverage over the short run? What coverage existed in 1977, at the time of the survey?[3] The patterns of continuity and change since the death are described. Adaptation of and deterioration in coverage will be related to duration of time since the death of the primary worker.

In addition, possible determinants of current coverage are described, such as the widow's labor-force status and her family income. Since labor-force status can, in turn, be affected by health status and children's age, the interrelationship of these factors with coverage is also analyzed.

Young survivors' current coverage, which results from a number of factors related to the death of the primary worker, is contrasted with coverage for the general population. Do beneficiaries lack coverage compared with members of the larger society?

Some characteristics of the sources of health care cov-

[1] To the extent that employers provide free health care or pay insurance premiums, Medicare, when received by disabled and retired workers, could be viewed as a benefit that replaces noncash wages.

[2] Coverage here includes private health insurance, where premiums are paid by individuals, employers, or both and benefits are based on contractual arrangements. Coverage also encompasses social assistance, which is financed from general government funds and received in accordance with individually determined need. Coverage also includes miscellaneous military-related programs.

[3] For the purposes of this article, the term "current" is synonymous with "at the time of the survey"—that is, 1977. At least 1 year elapsed between the time of death and the "current" time.

erage are also reported, specifically premiums paid and scope of coverage. How much does the family pay and what benefits are received in relation to the source of coverage?

The implications of health care coverage for utilization of health services and for health care expenditures are then analyzed. Does lack of coverage make a difference in use of physicians? Given their health, are young survivor families using physicians to the same extent as members of the general population? Given their health, coverage, and incomes, are their expenditures high or low compared with those of the general population?

The 1978 Survey of Survivor Families With Children interviewed 5,752 persons representing 910,000 families with entitled minor children who were receiving Social Security survivor benefits in December 1977.[4] Twenty percent of these families (183,000) included remarried widows and 13 percent (122,000) were headed by widowers. The circumstances of both types of families were similar at the time of the survey to what they had been before the death occurred. Accordingly, these families are not considered here. Analysis is confined to families currently headed by unmarried widows, who made up 66 percent (605,000) of the population. These widows had a median age of 47 years. This sample is of persons with benefits in current-payment status and is not representative of new awards (see the Technical Note on page 13).

The interviews provided health-related data about the family head and minor children as well as other demographic, socioeconomic, and attitudinal characteristics of this population. Comparisons with nonbeneficiary populations are made by using other data sources, such as the Health Interview Survey and the National Health Care Expenditure Survey.

Sources of Coverage at Worker's Death

At the time of the husband's death, 31 percent of the families currently headed by widows with children had no health insurance coverage at all.[5] Thirty-five percent had coverage from the husband's job-related health insurance, 18 percent from the wife's employment-related health insurance, and 8 percent from the direct purchase of individual plans (table 1).

Within 6 months after the death, 45 percent of the families formerly covered lost their health care coverage. The tabulation in the next column indicates that the proportion of families that lost coverage varied greatly according to the source of this protection. As can be seen, about three-fifths of the families whose coverage

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[4] Robert I. K. Hastings and Philip B. Springer, **Preliminary Findings From the 1978 Survey of Survivor Families With Children** (Research and Statistics Note No. 12), Office of Research and Statistics, Office of Policy, Social Security Administration, 1980.

[5] Lack of coverage before the death of the breadwinner has no relation to duration of illness.

| Item | Total | Source of coverage | | | | |
		Wife's employment	Husband's employment	Direct purchase	Government assistance	Other
Total number (in thousands)	391	96	202	44	38	11
Percent that lost coverage....	45	35	61	16	27	15

was derived from the husband's past job lost it within 6 months, compared with one-sixth of those who purchased it directly. More than a third of the families with coverage derived from the widow's past employment lost it within this period, probably because she changed jobs or stopped working. More than a fourth of the families formerly receiving coverage from government assistance, mainly Medicaid, lost this protection within 6 months of the death.

Twenty-nine percent of all those who lost coverage within 6 months of the death of the breadwinner were without coverage at the time of the survey (table 2). Among the families that had lost the coverage of the deceased husband in that period, 29 percent still were without coverage when they were surveyed; 27 percent then had health insurance related to the widow's job; 39 percent had other coverage; and 5 percent had reestablished coverage related to the deceased husband's employment. Among those families that had not lost the deceased husband's coverage, only 6 percent had no coverage when they were surveyed.

Health Care Coverage at Time of Survey

Table 1 shows that 26 percent of the widows had no health care coverage at the time of the survey, 28 percent had private insurance based on a group plan obtained at the place of employment, 10 percent had coverage based on the deceased husband's job, 22 percent had purchased insurance directly as individuals, and 11 percent were covered through government assistance, principally Medicaid. About 3 percent were covered under a Veterans' Administration or Defense Department program (CHAMPVA or CHAMPUS).

A comparison of coverage at the time of the survey with that held at the death of the spouse reveals that 23 percent of the families that previously had coverage from the husband's job maintained that coverage. At the time of the survey, coverage came from the widow's job-related health insurance in 25 percent of these cases, from other coverage in 32 percent of the cases, and did not exist in 20 percent of the cases.

In cases where the previously held coverage was related to the wife's job, 65 percent of the families continued to have this kind of coverage, 15 percent had purchased individual policies directly, 4 percent had other sources

Table 1.—Percentage distribution of current health care coverage for widows with minor children in 1977, by source of coverage at death of husband

Source of coverage at death of husband [1]	Total number	Total percent	Source of current coverage [1]					
			Widow's job	Husband's job	Direct purchase	Government [2]	Miscellaneous [3]	No coverage
All families	[4]605,000	100	28	10	22	11	3	26
Widow's job........................	108,000	100	65	5	15	3	1	11
Husband's job	210,000	100	25	23	26	4	2	20
Direct purchase....................	50,000	100	18	3	61	5	2	11
Government [2].....................	40,000	100	10	1	7	54	4	24
Miscellaneous [3]	11,000	100	13	3	11	6	51	16
No coverage	186,000	100	19	1	14	16	2	48

[1] Some persons had coverage from more than one source. In classifying coverage, priority was given in the following order: respondent's job, spouse's job, direct purchase, and government programs other than Veterans' Administration or military-related programs.

[2] Includes government assistance, usually Medicaid.

[3] Includes Veterans' Administration and military programs (CHAMPVA and CHAMPUS).

[4] Excluded are approximately 1,000 weighted cases for which data are not available on current or past coverage.

Table 2.—Percentage distribution of current health care coverage for widows with minor children in 1977, by source of coverage at death of husband and by whether or not prior coverage was lost within 6 months of death

Source of coverage at death of husband	Total number [1]	Total percent	Source of current coverage			
			Husband's job	Widow's job	Other [2]	No coverage
Lost within 6 months, total...............	175,000	100	4	29	38	29
Husband's job........................	122,000	100	5	27	39	29
Widow's job	34,000	100	2	50	30	18
Other [2]	19,000	100	0	9	46	45
Not lost within 6 months, total [3]...........	215,000	100	22	34	37	7
Husband's job.........................	80,000	100	52	21	21	6
Widow's job	62,000	100	7	73	15	5
Other	73,000	100	2	16	73	9

[1] Excluded are 185,000 cases with no prior coverage and 30,000 cases with unknown or other responses about continuation of coverage.

[2] Includes direct purchase, government assistance, and miscellaneous sources.

[3] Where current differs from prior coverage, change occurred after 6 months.

of coverage, including government assistance, and 11 percent had no coverage. Five percent were able to continue policies acquired through the husband's employment, probably at greater expense.

Of the families that formerly had held individual, directly purchased policies, 61 percent continued them, but 11 percent subsequently had no coverage. Of the large group that formerly had no coverage, almost half still had none, but 14 percent, faced with the risk of health expenses after the loss of the breadwinner, bought individual policies and 16 percent obtained government assistance, such as Medicaid.

While coverage obtained from the deceased spouse's employment can continue after his death, it nonetheless is not likely to last indefinitely. Where the husband had been dead 7 years or longer, only 15 percent of the families still had coverage associated with his employment, compared with 35 percent of the families when the death had occurred within the preceding 3 years (table 3). Twenty-four percent of the families formerly covered by the husband's job-related insurance had no current coverage when the death occurred 7 or more years earlier, compared with 15 percent when the death occurred less

than 3 years earlier. Further, the longer the duration since the death, the more likely it was that the widows formerly covered by husband's job-related insurance now had their own employment-related coverage. In cases where the death took place less than 3 years earlier, the proportion was 20 percent; when it was 7 or more years earlier, it was 31 percent.

Determinants of Current Coverage

Current coverage is likely to be indirectly affected by the youngest child's age, which influences the availability of the mother for employment. Her employment, in turn, is a strong determinant of her health coverage.

Such coverage is clearly related to the age of the youngest child in the surviving family. Where the child was less than 6 years old, about 20 percent of the families had coverage through the mother's job (table 4). When the child was older and the mother freer of child care responsibilities, the proportion was higher: 34 percent when the child was aged 16 or older. Conversely, in cases where the child was younger, the family was more likely to have Medicaid or no coverage. When the

Table 3.—Percentage distribution of current health care coverage of widows with minor children in 1977, by coverage at death of husband and duration of widowhood

Duration of widowhood and former health care coverage	Total number [1]	Total percent	Current health care coverage					
			Widow's job	Husband's job	Direct purchase	Government	Miscellaneous	No coverage
Less than 3 years, total [2]	155,000	100	30	14	23	7	3	23
Widow's job	41,000	100	69	3	14	1	2	11
Husband's job	55,000	100	20	35	27	1	2	15
Direct purchase	13,000	100	10	0	73	2	5	10
Government	12,000	100	9	0	9	45	5	32
Miscellaneous	2,000	(3)	...	...	...	...	...	...
No coverage	32,000	100	14	1	16	13	1	55
3-7 years, total	231,000	100	27	10	22	11	3	27
Widow's job	40,000	100	65	8	16	3	1	7
Husband's job	80,000	100	22	23	28	4	3	20
Direct purchase	19,000	100	20	3	62	2	1	13
Government	18,000	100	11	2	6	57	2	23
Miscellaneous	3,000	(3)	...	...	...	...	...	...
No coverage	71,000	100	17	1	14	16	1	51
7 years or longer, total	218,000	100	29	6	21	12	4	28
Widow's job	27,000	100	58	4	14	8	2	14
Husband's job	76,000	100	31	15	24	4	2	24
Direct purchase	18,000	100	22	3	53	9	3	10
Government	9,000	100	10	1	7	60	7	15
Miscellaneous	6,000	(3)	...	...	...	...	...	...
No coverage	82,000	100	22	1	14	17	3	43

[1] Excluded are approximately 1,000 cases for which data are not available on current or past coverage.
[2] Women widowed in the preceding 12 months were excluded from the survey.
[3] Fewer than 50 sample cases.

Table 4.—Percentage distribution of current health care coverage of families with minor children headed by widows, by age of youngest child in 1977

Age of youngest child in 1977	Total number [1]	Total percent	Current health care coverage			
			Widow's job	Government	No coverage	Other [2]
All families	597,000	100	29	11	26	25
Less than 6	74,000	100	20	17	34	...
6-7	51,000	100	19	14	33	...
8-10	93,000	100	25	12	29	...
11-13	130,000	100	31	11	24	...
14-15	118,000	100	30	9	22	...
16 or older	131,000	100	34	6	23	...

[1] Because data were not available, total excludes 7,000 cases on age of youngest child and 1,000 cases on current health care coverage.
[2] Includes coverage from husband's job, direct purchase, and miscellaneous sources. Percentages are not shown since they have no meaningful relation to age of child.

youngest child was less than 6 years of age, 17 percent had Medicaid and 34 percent were without coverage; when the child was aged 16 years or older, the proportions were 6 percent and 23 percent, respectively.

Does the age of the youngest child affect coverage because age and coverage are both related to work status? An examination of table 5 reveals that the proportion of widows who worked increases with the child's age. Further, the proportion with government-assisted or no coverage is lower where the youngest child was older and where the widow was employed. Is work status the variable intervening between age of child and source of coverage? Not entirely. When work status is controlled, the relationship persists, although it is slightly attenuated. Apparently, age has an independent relationship to coverage apart from its relation "through" work status. Age of child, related to age of parent, might in turn be related to the work experience of the parent. Such work experience could lead to employment that provides health insurance coverage.

Health care coverage is a function of family income as well as employment status (table 6). At the time of the survey the proportion of widows with no coverage decreased as family income increased. Lack of coverage was also greater for widows not in the labor force or unemployed, compared with those who were employed,

and greater for part-time than for full-time earners. When these data are compared with those for the general population, similar relationships are also found among the latter group.

Since family income and full-time employment are both higher in the general population, this finding suggests that these variables partially explain the difference in coverage between current widows with minor children and the general population. Overall, 26 percent of the widows had no health care coverage at the time of the survey. This proportion is considerably higher than the 11 percent reported for the population as a whole in 1978.[6]

When family income and labor force status are controlled, however, lack of coverage is still more prevalent among current widows than among the total population. For example, 13 percent of current widows employed full time and with annual family incomes of $10,000-$14,999 had no coverage, compared with only 5 percent of the general population. (Full-time wage earners with incomes of $15,000 or more and part-time wage earners and unemployed persons with incomes of $10,000 or more were exceptions to the rule.) Part of this difference is probably related to the industry where employed, uncontrolled in this table.[7] Part of the differ-

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[6] "Health Care Coverage under Private Health Insurance, Medicare, Medicaid, and Military or Veterans Administration Health Benefits: United States, 1978," **Advance Data** (No. 71), June 29, 1981, page 2. The estimate for the proportion of persons under age 65 without coverage under private health insurance, Medicare, Medicaid, or military and/or Veterans' Administration health benefits programs was 12 percent.

[7] Women are less likely to be employed in unionized, manufacturing industries, which are characterized by the availability of health insurance benefits.

Table 5.—Percent of widows with minor children who had no health care coverage or received government assistance,[1] by widow's work status and age of youngest child

| Widow's work status [2] | Total | Age of youngest child | | | |
		Less than 6	6-11	12-15	16-17
All widows:					
Total number......	592,000	74,000	179,000	210,000	129,000
Percent with no coverage or with government assistance	37	51	42	33	28
Widows who worked:					
Total number	337,000	33,000	101,000	124,000	79,000
Percent with no coverage or with government assistance..........	23	32	28	20	16
Widows who did not work:					
Total number	255,000	41,000	78,000	86,000	50,000
Percent with no coverage or with government assistance..........	55	66	59	51	47

[1] Government assistance is mainly Medicaid.
[2] "Worked" includes full-time and part-time employment and self-employment. "Did not work" includes unemployed persons and those not in the labor force.

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ence in coverage between widows who were full-time employees and full-time workers in the general population can also be explained by the fact that working spouses are more likely to be found among the general population, with a corresponding greater probability of job-related health insurance coverage.

Among those with annual incomes of $10,000-$14,999, 22 percent of the current widows, compared with 11 percent of the general population not in the labor force, were without coverage. In the $5,000-$9,999 income range, the respective proportions were 44 percent and 19 percent. These large differences are at least partially explained by the fact that in the general population a spouse could be present, working, and have job-related health insurance coverage.

Correlates of Sources of Coverage

Associated with sources of coverage are premiums paid and scope of coverage. In 1977, the annual amount of premiums paid for private health insurance by families headed by widows was higher in cases where the policy was purchased directly from an insurance company than where it was job-related, either to the deceased spouse's job or to the widow's employment in 1977. The proportion of families paying more than $500 in premiums was 47 percent where the insurance was directly purchased, 36 percent where it was related to the deceased husband's job, and 22 percent where it was obtained through the widow's employment (table 7).

The following tabulation shows that the health insurance premiums paid by employees in the general population in 1977[8] were smaller than premiums paid by widows with health insurance obtained through their employment:

Contribution among general population	Percent
$0......................................	40.8
$1-$250	53.8
$251-$500.............................	4.7
$501-$750.............................	.4
$751-$1,000	.4

Seventy-four percent of the widows with policies obtained through their employment paid some premium, compared with 59 percent of employees with job-related health insurance in the general population. Approximately 1 percent of the general population with health insurance obtained at their job paid more than $500 a year, compared with 22 percent of the widows.

At the same time that the annual premium payments are higher for widows whose coverage is directly purchased rather than obtained through employment, the coverage is less extensive. Although virtually all policies

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[8] "Employer and Employee Expenditures for Private Health Insurance" (Data Preview 7), **National Medical Care Expenditure Survey: Health Insurance Cost Survey,** National Center for Health Service Research, 1977, table 4.

Table 6.—Percent of widows with minor children and of the general population without health care coverage, by employment status and family income, 1976 and 1977

Family income	Employment status				
	Full-time wage earners	Part-time wage earners	Self employed	Unem- ployed	Not in labor force
All widows: [1]					
Total number	200,000	112,000	19,000	57,000	196,000
Percent without coverage	13	23	21	40	37
Less than $5,000:					
Total number	6,000	8,000	1,000	12,000	39,000
Percent without coverage	(2)	40	(2)	54	47
$5,000–$9,999:					
Total number	47,000	41,000	7,000	30,000	99,000
Percent without coverage	25	36	(2)	45	44
$10,000–$14,999:					
Total number	69,000	38,000	6,000	11,000	36,000
Percent without coverage	13	16	(2)	20	22
$15,000 or more:					
Total number	78,000	25,000	6,000	4,000	22,000
Percent without coverage	3	8	(2)	(2)	14
Percent of general population without health care coverage, total [3]	7	12	15	27	11
Less than $5,000	24	27	25	35	16
$5,000–$9,999	13	20	19	32	19
$10,000–$14,999	5	17	12	23	11
$15,000 or more	4	6	11	21	6

[1] Income for widows in 1977 adjusted to 1976 dollars to reflect changes in CPI. Excluded are approximately 21,000 cases for which data on family income are not available.

[2] Fewer than 50 sample cases.

[3] Data for general population from **Profile of Health Care Coverage: The Haves and Have-Nots**, Congressional Budget Office, March 1979, page 22. Original source was **Survey of Income and Education**, Department of Health, Education, and Welfare, 1976. Percentages are rounded to make them comparable with data for current widows. The retired are excluded from the "not in labor force" column.

Table 7.—Percentage distribution of annual out-of-pocket health care premiums paid by widows with minor children, by type of private health insurance, 1977

Type of private health insurance	Total number [1]	Total percent	Premiums					
			$0	$1– $250	$251– $500	$501– $750	$751– $994	$995 or more
Total	350,000	100	22	22	23	18	8	7
Job-related	220,000	100	28	25	21	15	5	6
Widow's job	166,000	100	26	30	22	14	5	3
Deceased husband's job	54,000	100	36	10	18	16	8	12
Direct payment	130,000	100	11	16	26	25	13	9

[1] Total excludes approximately 65,000 cases with government-provided medical assistance; 18,000 with miscellanous coverage (including that provided under Veterans' Administration, CHAMPUS, and CHAMPVA programs); 159,000 with no coverage; and 13,000 cases with unknown premium amounts.

cover hospital care, some difference is observed in coverage for physician care. As the following tabulation shows, only 84 percent of the policies purchased directly

Item	Source of coverage		
	Deceased spouse's job	Widow's job	Direct purchase
Percent with some—			
Hospital care provided	99	100	99
Physician care provided	91	93	84
Coverage for medicine provided	56	55	33
Dental care provided	17	27	4

by widows covered some portion of physician care, compared with 93 percent of the policies obtained by widows through their jobs.

Differences in coverage for medicine and dental care were more marked. Medicine was covered for 55 percent of the widows with job-related policies, compared with only 33 percent of those with directly purchased policies. Four percent of the widows with individual policies had some dental coverage, compared with 27 percent of those with group coverage through their employment and 17 percent of those with policies derived from the husband's employment.

Health Status and Health Care Coverage

Though health care protection is desirable for all persons, it is even more appropriate for a population in poor health. What is the health status of widows and their minor children?

The reported health of young survivor beneficiaries is

substantially poorer than that of the general population of women and children. Twenty-nine percent of the widows under age 45 reported their health as "fair" or "poor," compared with 10 percent of the women aged 17–44 in the general population.[9] For current widows aged 45 or older, the proportion was 43 percent; in the general population of women aged 45–64, it was 22 percent. The proportion of widow's families in which at least one minor child's health was perceived to be fair or poor was 13 percent; [10] in the general population, 5 percent of the children aged 16 or younger were reported to be in fair or poor health.

The mean number of bed-disability days per year,[11] another measure of poor health, was 8.8 for the widows under age 45 and 11.2 for those aged 45 or older interviewed in the 1978 Survey of Survivor Families With Children. In the general population of women aged 25–44, it was 7.1 days; among those aged 45–64, it was 10.1 days.[12]

The health self-assessment of current widows is related to their health care coverage. It was earlier observed that 26 percent of their families had no coverage at all. The proportion of those lacking coverage is higher where health is assessed as poorer (table 8). Thirty-four percent of the widows with fair or poor health had no insurance, compared with 24 percent of those with good health and 19 percent of those reporting excellent health. The proportion receiving government medical assistance, usually Medicaid, was higher where health was poor than where health was fair—22 percent, compared with 12 percent. Where health was poor—the condition reported by 11 percent of the widows at the time of the survey—more than half received government medical assistance or had no health care coverage at all. Widows potentially most in need of health care coverage, namely, those in fair or poor health, were least likely to have such protection. The earlier discussion of the link between the widow's employment and her health insurance suggests part of the explanation for this finding.

Health Care Coverage and Utilization of Services

Health care coverage is important in providing for utilization of health care services. Young survivors apparently have less access to these services than does the general population, given their health status. The limited use of services by the young survivors is probably due to lack of coverage.

The number of physician visits, an important indicator of utilization, is shown in table 9. At every age interval, current widows had fewer median visits than did women in the general population.[13] For example, at ages 35–44, the median number of visits for those widows with visits was 2.6; for all women, the figure was 3.1. At ages 45–54, the median number of visits for widows was 3.0; for all women, it was 3.8.

Data on the mean number of physician visits per person per year are available for all children under age 17.[14] This number, 4.1, is greater than that for young survivor children, 3.0. Thus, both beneficiary widows and children use fewer physician services than their counterparts among the general population, despite the perceived poorer health of young survivors and the fact that poor health is strongly related to number of physician visits. Table 10 shows that the proportion of widows with five or more visits in 1977 was greater where health

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[9] National Center for Health Statistics, **Americans Assess Their Health: United States, 1978** (Series 10, No. 142, Vital and Health Statistics), 1983, table 2. In both the National Health Interview Survey and the Survey of Survivor Families With Children, respondents were asked to compare the status of their health (excellent, good, fair, or poor) and that of their children with that of other persons their age.

[10] **1978 Survey of Survivor Families With Children,** page 9.

[11] Bed-disability days are days during which a person is kept in bed for illness or injury most of the day. Days spent as a hospital patient are included.

[12] National Center for Health Statistics, **Current Estimates From the Health Interview Survey: U.S., 1978** (Series 10, No. 130), 1978, page 22.

[13] This finding is supported by data from another source on mean number of visits. At ages 25–44, current widows had 5.3 visits; all women in that age interval had 5.8 visits. At age 45–64, the mean number of visits was 5.4 for widows and 5.9 for women in the general population. **Ibid.,** page 30.

[14] **Ibid.**

Table 8.—Percentage distribution of health care coverage of widows with minor children, by current health self-assessment, 1978

Current health self-assessment	Total number	Total percent	Health care coverage						
			Job related			Direct purchase	Govern-ment	Miscel-laneous	No coverage
			Total	Widow's job	Spouse's job				
Total	[1] 604,000	100	38	28	10	22	11	3	26
Excellent.......................................	151,000	100	48	37	11	24	6	3	19
Good	233,000	100	41	31	10	22	10	3	24
Fair	151,000	100	31	23	8	20	12	3	34
Poor...	69,000	100	22	13	9	19	22	3	34

[1] Excluded are approximately 1,000 cases for which data are not available on health self-assessment and health care coverage.

Table 9.—Percentage distribution of physician visits per year for current widows with minor children and all women, by age, 1977

Age	Total number	Total percent	Number of visits						Median number of visits for women with visits
			0	1	2	3	4	5 or more	
Widows: [1]									
Under 25	8,000	100	17	23	18	11	4	27	2.0
25–34	89,000	100	15	23	15	9	8	30	2.4
35–44	190,000	100	18	20	16	9	6	31	2.6
45–54	234,000	100	18	20	14	7	8	33	3.0
55–64	73,000	100	18	21	10	11	7	33	2.9
All women: [2]									
19–24	...	100	19	16	14	10	8	33	3.1
25–34	...	100	14	15	11	12	8	40	3.6
35–44	...	100	19	17	13	10	8	33	3.1
45–54	...	100	18	14	12	9	8	39	3.8
55–64	...	100	17	12	10	11	9	41	3.9

[1] Excluded are approximately 3,000 cases in which the widow was aged 65 or older, 4,000 cases for which her age was unknown, and 3,000 cases for which the number of visits was unknown.

[2] Unpublished National Medical Care Expenditure Survey Household Data: United States, 1977; National Health Care Expenditure Study, National Center for Health Services Research.

Table 10.—Percentage distribution of number of physician visits per year for current widows with minor children, by current health self-assessment, 1978

Current health self-assessment	Total number	Total percent	Number of visits					
			0	1	2	3	4	5 or more
Total	[1] 602,000	100	18	20	14	9	7	32
Excellent	151,000	100	25	33	18	8	4	12
Good	233,000	100	19	23	16	10	8	24
Fair	150,000	100	13	10	12	8	10	47
Poor	68,000	100	7	4	4	5	6	74

[1] Excluded are approximately 1,000 cases on health self-assessment and 3,000 on number of visits for which data are not available.

was poorer: 74 percent where health was "poor," 47 percent where it was "fair;" 24 percent where it was "good;" and only 12 percent where health was "excellent."

The lower level of health service utilization among young survivors compared with the general population might be related to the relative lack of coverage of the former group. Lack of coverage appears to lessen physician contact (table 11).[15] When health self-assessment is controlled, a consistent difference by coverage is observed in the proportion of widows with three or more physician visits in the year: a higher percentage of those with job-related insurance had this many physician visits than did those with no coverage.

Health Care Coverage and Out-of-Pocket Expenditures

It could be hypothesized that inferior coverage or no coverage at all results in higher out-of-pocket health care expenditures for young survivors and their families. The available evidence, based on comparisons of out-of-pocket expenditures of young survivors with those of the general population,[16] apparently confirms this expectation. The extent to which these expenditures for young survivors exceed those for the total population is shown in the Appendix to this article.

Why do young survivors outspend their counterparts in the general population in this regard? Most factors that lead to high health care expenditures are more characteristic of the general population than of young survivors. First, high family income is more characteristic of the general population than of young survivors,[17] and such income is related positively to health care expenditures (table 12).

Second, the presence of health care coverage is more characteristic of the general population than of young survivors and is positively related to higher out-of-pocket expenditures (table 12 shows this relationship among young survivors). A general explanation for this rela-

[15] Other studies have shown that the proportion of persons seeing physicians is lower where voluntary health insurance is lacking than where it is present. See Ronald Anderson, J. Lion, and O. W. Anderson, **Two Decades of Health Services: Social Survey Trends in Use and Expenditure**, Ballinger Publishing Co., 1976, page 184.

[16] The preferred comparison, total family out-of-pocket health expenditures between the two groups, could not be made; alternatively, comparisons for personal expenditures were drawn.

[17] In 1977, the median income for families of current widows was $10,770 and that for families in the general population was $16,009. See Bureau of the Census, "Money Income in 1977 of Families and Persons in the United States," **Current Population Reports** (Series P-60, No. 118), page 92.

Table 11.—Percent of widows with minor children having three or more physician visits, by health care coverage and current health self-assessment, 1978

Current health self-assessment	Total	Health care coverage				
		Job-related	Direct purchase	Government	Miscellaneous	No coverage
All widows:						
Total number [1]	602,000	229,000	132,000	64,000	18,000	158,000
Total percent	100	100	100	100	100	100
Percent with 3 or more visits	48	47	43	61	40	47
Excellent:						
Total number	151,000	73,000	37,000	9,000	4,000	28,000
Total percent	100	100	100	100	(2)	100
Percent with 3 or more visits	24	26	20	41	...	21
Good:						
Total number	233,000	96,000	51,000	22,000	7,000	56,000
Total percent	100	100	100	100	(2)	100
Percent with 3 or more visits	41	47	38	39	...	37
Fair:						
Total number	150,000	46,000	31,000	18,000	4,000	52,000
Total percent	100	100	100	100	(2)	100
Percent with 3 or more visits	65	68	63	75	...	61
Poor:						
Total number	68,000	15,000	13,000	15,000	3,000	22,000
Total percent	100	100	100	100	(2)	100
Percent with 3 or more visits	85	92	83	89	...	77

[1] Because data were not available, total excludes 3,000 cases on number of physician visits and 1,000 cases on health self-assessment and health care coverage.

[2] Fewer than 50 sample cases.

tionship is that whatever reduction in expenditures insurance produces is countered by the increase in the use of services that is also generated by such coverage. The positive relationship between coverage and out-of-pock-

Table 12.—Percent of families headed by widows with minor children having total out-of-pocket health care expenses of $500 or more, by health care coverage and total family income, 1977

Total family income	Total	Health care coverage		
		Private [1]	Government or miscellaneous	No coverage
All families:				
Total number	[2] 558,000	337,000	76,000	145,000
Total percent	100	100	100	100
Percent with expenses of $500 or more	43	51	21	36
Less than $10,000:				
Total number	248,000	91,000	52,000	105,000
Total percent	100	100	100	100
Percent with expenses of $500 or more	32	42	17	31
$10,000 or more:				
Total number	310,000	246,000	24,000	40,000
Total percent	100	100	100	100
Percent with expenses of $500 or more	51	53	32	49

[1] Includes job-related insurance and coverage purchased directly.

[2] Because data were not available, total excludes approximately 34,000 cases on some component of health care expenses, 1,000 on health care coverage, and 12,000 on total family income. Health care expenses include expenditures for hospital care, physician care, eye care, medicine, dental care, and miscellaneous items for widows and their minor children.

et expenditures is also partly due to the positive relationship of coverage to family income. Accordingly, health care coverage differences do not explain differences in these expenditures between young survivors and the general population.

Third, greater use of physician services is related to higher out-of-pocket expenditures (table 13). Despite their lesser use of these services, however, young survivors have higher expenditures.

How then can these higher out-of-pocket expenditures be explained? Since poor health is more characteristic of young survivors than of the general population and poor health is related to higher expenditures, it is likely that the poorer health of young survivors overrides the effects of lower income, less coverage, and less utilization, and results in higher out-of-pocket health care expenditures.

Differences in out-of-pocket expenditures are relatively small between survivor beneficiaries and the general population because income and health factors operate in opposing directions (table 14). Sicker persons have higher out-of-pocket expenditures and higher-income persons have higher expenditures, but sicker persons tend not to be higher-income persons. Similarly, persons in better health—who tend to have lower out-of-pocket expenditures—generally have higher incomes—which is related to higher expenditures. Thus, sharp polarization in out-of-pocket expenditures does not occur. The survey data suggest, however, that if health status could be controlled in the comparisons of beneficiary and nonbeneficiary populations, out-of-pocket expenditures would be lower among benefi-

Table 13.—Percentage distribution of personal out-of-pocket expenses for physician services for widows with minor children, by number of physician visits, 1977

Number of physician visits	Total number	Total percent	Out-of-pocket expenses			
			$0	$1–$99	$100–$199	$200 or more
All widows..	[1] 593,000	100	35	34	15	16
0...............	106,000	100	90	6	2	2
1...............	121,000	100	29	61	6	4
2...............	85,000	100	21	55	14	10
3...............	51,000	100	20	45	20	15
4...............	43,000	100	18	36	26	20
5 or more	187,000	100	24	20	23	33

[1] Because data were not available, total excludes approximately 9,000 cases on expenses and 3,000 cases on visits.

Table 14.—Percent of families headed by widows with minor children having total out-of-pocket health care expenses of $500 or more, by family health status and total family income, 1977

Total family income	Total	Family health status	
		Widow's health fair or poor or child has special health problem	Family has neither problem
All families:			
Total number	[1] 558,000	245,000	313,000
Total percent...........	100	100	100
Percent with expenses of $500 or more......	43	47	39
Less than $10,000:			
Total number	248,000	133,000	115,000
Total percent.............	100	100	100
Percent with expenses of $500 or more	32	38	26
$10,000 or more:			
Total number	310,000	113,000	197,000
Total percent	100	100	100
Percent with expenses of $500 or more	51	58	47

[1] Because data were not available, total excludes approximately 34,000 cases on some component of health care expenses, 1,000 on widow's or child's health care status, and 12,000 on total family income. Health care expenses include expenditures for hospital care, physician care, eye care, medicine, dental care, and miscellaneous items for widows and their minor children.

ciaries, whose income is lower, than among the general population, whose income is higher.[18]

To recapitulate, the out-of-pocket health care expenditures of young survivors are greater than those of the general population, probably reflecting the poorer health of the former group. However, relative to the poor health of young survivors these expenditures are low—low because of low income, low utilization, and low coverage. That is, if young survivors and the general population were compared at the same health level, one would expect to find higher out-of-pocket expenditures for the general population. The relatively low expenditures of young survivors may be attributed to

[18] Current widows in fair or poor health spend less on health care when their income is lower.

limited use of health care services. This limited use, in turn, overlaps with lower income and lack of health care coverage. Such use would probably be increased by greater health care coverage.

In sum, the death of the spouse disrupted the health care coverage of many families with children. Though coverage was often restored, many families remained without health care protection. Besides the deceased's job, other determinants of coverage are higher family income and widow's full-time employment. Such correlates of coverage as premiums paid and scope were described: job-related group health insurance costs less and provides more than does individually purchased insurance.

The interrelationships of health care coverage with health status, health services utilization, and health care expenditures were presented. Health status affects the opportunities for coverage. Coverage, in turn, encourages utilization and out-of-pocket expenditures.

Appendix: Out-of-Pocket Health Expenditures

At the time of the survey, the proportion of widows with total personal out-of-pocket health care expenses of $100 or more was 60 percent for those under age 45, compared with 50 percent for all women aged 17–44 (table A). At ages 45–64, the proportions were 66 percent for current widows and 64 percent for all women.[19] Similarly, 45 percent of the current widows under age 45 had out-of-pocket expenses for physician services of $50 or more, compared with 39 percent for all women of the same age (table B). No difference was found between widows and all women aged 45 or older.

The same tendency is observed for out-of-pocket hospital expenditures of $50 or more. Among those under age 45, 15 percent of the current widows spent this much, compared with 9 percent of the women in the general population. Among those aged 45 or older the proportion for current widows was 11 percent; for all women, it was 10 percent.

Generally, widows under age 45 spent more than their counterparts in the general population. Among those aged 45 or older, widows and women in general had similar expenditure patterns.

The per capita total out-of-pocket expenses were higher for child beneficiaries under age 6 than for all

[19] The age distribution of current widows differs from that of the general population of women. Current widows under age 45 are older on the average than all women. Of the general population aged 20–44, 31 percent are aged 35–44; among current widows with minor children, 66 percent fall within that age range; among women aged 45 or older, current widows are more likely to be skewed toward younger intervals: 76 percent are under age 55, compared with 53 percent in the general population. See **United States Population Projection by Marital Status to OASDI Cost Estimates, 1980** (Actuarial Study No. 84), Office of the Actuary, Social Security Administration, October 1980, page 14.

Table A.—Percentage distribution of total personal out-of-pocket health care expenses, excluding premiums, for young survivors and the general population, by age, 1977 [1]

Group and age	Total number	Total percent	Annual expenses				
			$0	$1–$49	$50–$99	$100–$249	$250 or more
Young survivors:							
Current widows [2] aged—							
17–44	281,000	100	16	12	12	24	36
45–64	295,000	100	13	9	12	27	39
Children [3] aged—							
0–5	74,000	100	20	31	15	22	12
6–16	463,000	100	14	18	16	28	24
General population:							
Women aged—							
17–44	36,648,000	100	18	15	17	25	25
45–64	18,719,000	100	13	10	13	27	37
Children aged—							
0–5	14,459,000	100	29	22	19	20	10
6–16	32,992,000	100	30	22	18	19	11

[1] Age of young survivor children is that of youngest child. Expenses for the general population are based on preliminary and unpublished data from the 1978 Health Interview Survey, National Center for Health Statistics.

[2] Excludes approximately 3,000 persons who were aged 65 or older, 22,000 for which data on expenses were not available, and 4,000 widows whose age was unknown.

[3] Excludes approximately 7,000 persons for whom the age of youngest child was unknown. Also excluded are 61,000 persons over age 16 to make data comparable with available statistics for general population.

children in that age bracket. The proportion with such expenses of $100 or more was 34 percent for beneficiaries in families where the youngest child is under age 6, compared with 30 percent for the total population of the same age (table A). Where the youngest child was aged 6–16, the proportion was 52 for child beneficiaries; in the general population, the corresponding figure was 30 percent.

The picture for component services is mixed, although out-of-pocket expenditures are generally higher for child beneficiaries than for all children. Twenty-seven percent of child beneficiaries under age 6 had physician service expenses of $50 or more, compared with 34 percent for all children in that age group. But among children aged 6–16, a higher proportion of beneficiaries (32 percent) than of the general population (18 percent) had such expenses (table B). The proportion of families with out-of-pocket expenses of $50 or more for children's hospital care was 10 percent where a child beneficiary under age 6 was present in the household; the proportion with this level of expenses was 7 percent for all children under age 6. The proportions for older children were 11 percent and 4 percent, respectively (table B).

Technical Note

Most of the information presented in this article is from sample data collected in the 1978 Survey of Survivor Families With Children. The Institute for Survey Research, Temple University, collected the data under contract with the Social Security Administration. The Office of Retirement and Survivors Insurance designed the study and performed data analysis.

Background

The Social Security program has provided cash benefits to surviving dependents of insured deceased workers since 1939. Survivor benefits are now paid to an aged spouse or dependent parents; widows or widowers disabled at ages 50–59 or caring for minor children; and children under age 18, disabled, or enrolled in school full time at ages 18–21.[20] Benefits are contingent on the deceased worker's having met the requirements for fully or currently insured status. The benefit amount is subject to reduction or suspension because of the beneficiary's own earnings above an exempt amount ($3,240 in 1978 for persons under age 65) or because of limitation under the family maximum provision.

The number of widows and orphans benefiting from this insurance rose steadily from 1940 to 1973 (table I). Then, after first appearing as a drop in the number of awards to orphans in 1973, declines followed in the number of children and mothers (or fathers after 1975) having benefits payable at the end of each year. These declines are mostly a function of sharply decreasing fertility in recent years, coupled with the relatively young composition of persons now in the child-rearing years (that is, due to the "baby-boom bubble").

Table I also shows that the average monthly benefit amount, which is now keyed to increases in the cost of living, has continued to rise. Because of this increase, the total amount of benefits paid to young survivor

[20] Recent legislation (Public Law 97-35) ends entitlement for mother's and father's benefits when the youngest child in the care of a surviving spouse reaches age 16, rather than age 18, as was true at the time of the survey. The provision is effective with respect to current beneficiaries at the end of August 1983, but is effective immediately for parents becoming newly entitled (or reentitled) to benefits for months after August 1981.

Table B.—Percentage distribution of personal out-of-pocket health care expenses for young survivors and the general population, 1977

Item	Young survivors [1]					General population [2]				
	Total percent	$0	$1-$49	$50-$99	$100 or more	Total percent	$0	$1-$49	$50-$99	$100 or more
Physician expenses:										
Women aged—										
17-44	100	36	19	15	30	100	36	25	15	24
45-64	100	36	19	14	31	100	33	21	16	30
Children aged—										
0-5	100	39	34	13	14	100	37	29	17	17
6-16	100	34	34	16	16	100	49	33	10	8
Hospital expenses:										
Women aged—										
17-44	100	79	6	5	10	100	87	4	2	7
45-64	100	84	5	4	7	100	86	4	3	7
Children aged—										
0-5	100	71	19	5	5	100	88	5	2	5
6-16	100	75	14	5	6	100	93	3	1	3
Prescription medicine expenses:										
Women aged—										
17-44	100	41	30	13	16	100	42	39	12	7
45-64	100	39	25	14	22	100	35	29	14	22
Children aged—										
0-5	100	43	44	9	4	100	45	44	8	3
6-16	100	45	42	8	5	100	59	35	4	2
Optical expenses:										
Women aged—										
17-44	100	73	5	12	10	100	74	9	10	7
45-64	100	53	8	22	17	100	62	10	16	12
Children aged—										
0-5	100	82	15	2	1	100	98	1	1	0
6-16	100	67	16	10	7	100	85	6	7	2
Dental expenses:										
Women aged—										
17-44	100	55	15	10	20	100	53	25	10	12
45-64	100	59	14	9	18	100	53	20	10	17
Children aged—										
0-5	100	56	32	6	6	100	85	12	1	2
6-16	100	40	25	14	21	100	51	28	10	11
Other health expenses:										
Women aged—										
17-44	100	97	1	1	1	100	93	4	2	1
45-64	100	96	2	1	1	100	87	7	3	3
Children aged—										
0-5	100	97	2	1	0	100	95	4	1	0
6-16	100	97	1	1	1	100	96	3	1	0

[1] Age of young survivor children is that of youngest child. Women aged 17-64 are current widows with minor children.

[2] Expenses for the general population are based on preliminary and unpublished data from the 1978 Health Interview Survey, National Center for Health Statistics.

families has also continued to rise despite the decline in the number of recipients.

Sample Design

The population studied consisted of survivor families with children under age 18 who were receiving benefits in December 1977. This population includes families of widowers and remarried widows as well as those of unmarried widows. Families in which neither parent was present (about 125,000 children in 80,000 families) were excluded to ease questionnaire design. Further, Social Security regulations forbid nonadministrative contact with survivors within 1 year of the worker's death (thereby excluding about 185,000 children in 110,000 families). The resultant population consisted of 940,770 families, which was further reduced to 910,303 when those in Alaska and Hawaii were excluded.

The sampling frame consisted of an area probablity design conducted in three stages. First, the 99 primary sampling units (PSU's) in the contractor's national design, including 18 self-representing units, were selected. Next, the choice of ZIP codes within the PSU's was made with probability proportional to size. Finally, cases within the specified ZIP codes were selected systematically using a Social Security list of eligible cases. A sampling rate of 1 in 120 was used to select the sample from which a reserve sample (which was not used) was randomly subselected at the rate of 1 in 27. This procedure yielded a final fraction of 1 in 125.

Field work was carried out by household interviewers

Table I.—Survivor families with children under age 18, 1940-78

[Number in thousands; current payment status at end of year]

Year	Awards to children under age 18	Families with children under age 18 [1]	Children under age 18		Mothers/fathers with benefits in current-payment status	
			Number	Average monthly amount of benefit	Number	Average monthly amount of benefit
1940	51	...	48	$12	...	$20
1945	120	215	377	12	121	20
1950	97	437	653	28	169	37
1955	198	637	1,154	38	292	46
1960	232	838	1,530	51	395	59
1965	264	937	1,817	60	462	65
1970	338	1,114	2,161	80	512	87
1971	342	1,141	2,210	88	522	96
1972	347	1,166	2,240	107	528	115
1973	331	1,199	2,286	108	558	118
1974	303	1,188	2,245	123	555	134
1975	294	1,184	2,184	135	564	147
1976	264	1,174	2,133	148	557	166
1977	232	1,172	2,097	161	559	181
1978	212	...	2,022	178	553	198

[1] Social Security Bulletin, June 1979, tables Q-9—12, Q-17; Social Security Bulletin; December 1977, table 8; Annual Statistical Supplement to the Social Security Bulletin for 1950, 1955, 1960, 1970-76; and unpublished data.

in April–July 1978. Of the 6,804 selected cases, 134, or 2 percent, were ineligible because the payee children did not live in the household in the survey year. Of the remaining 6,670 cases, 5,752 interviews were obtained—a response rate of 86.2 percent. This assumes a 100-percent eligibility rate among the cases in which household information was not obtained; so the response rate is a conservative estimate.

Weighting

The estimates of survivor families with children are projected from the sample. The weight for each sample case was the inverse of the probability of selection adjusted by a noninterview factor. The latter was developed using cross-tabulations of respondents and nonrespondents by race, sex of deceased, primary insurance amount, and number of children. The average overall weight was 158, ranging from 145 for surviving black women to 200 for surviving black men. The weighted counts provide estimates of the population of survivor families with minor children in January 1978 (with the stated exclusions).

Particular care should be exercised when using the survey data to discuss characteristics at the time of death or award. Families with benefits first payable when the children are very young remain in current-payment status longer than those awarded when the youngest child is nearer age 18. Thus, the distribution of families by age of youngest child differs sharply depending on whether one discusses age of youngest child in 1978 or age at time of parent's death (chart I). To the extent that characteristics of interest are related to the youngest child's age at the parent's death (or alternatively the age of the deceased or the surviving spouse at the time of the death), the survey will misstate the char-

acteristics. For example, were the amount of assets held to increase with age of family head, workers who die at younger ages and thus have younger children would be likely to have fewer accumulated assets than those who die when older. The latter would likely have older children who would remain in benefit status a relatively short time. This relative longevity on the rolls of children awarded benefits at younger ages leads to a smaller estimated level of asset accumulation at the worker's death than would actually have been the case because the survey excludes all the families who have "aged out" of payment status.

Sampling Variability

The estimates from the 1978 Survey of Survivor Families With Children are based on a sample and thus may differ from the figures that would have resulted from an identical survey of all survivor families with minor children. The standard errors shown in table II provide a measure of this sampling variability. The standard errors were calculated after the data had been corrected for differential nonresponse.

The interval from one standard error above the estimated percentage to one standard error below contains the average estimate from all possible samples in roughly 68 percent of all samples. This level of confidence increases to 90 percent if the figures in the tables are multiplied by 1.6, to 95 percent if 2.0 is used, and to 99 percent if 2.5 is used.

To derive standard errors that are applicable to a wide variety of items, numerous assumptions and approximations are required. As a result, these standard errors provide an indication of the order of magnitude rather than the precise standard error for any specific item.

Standard errors of differences. To make a rough

Chart I.—Percentage distribution of age of youngest child in survivor families with benefits in current-payment status in January 1978, at death of worker for those with benefits in current-payment status in January 1978, and at death of worker for those awarded benefits in 1977
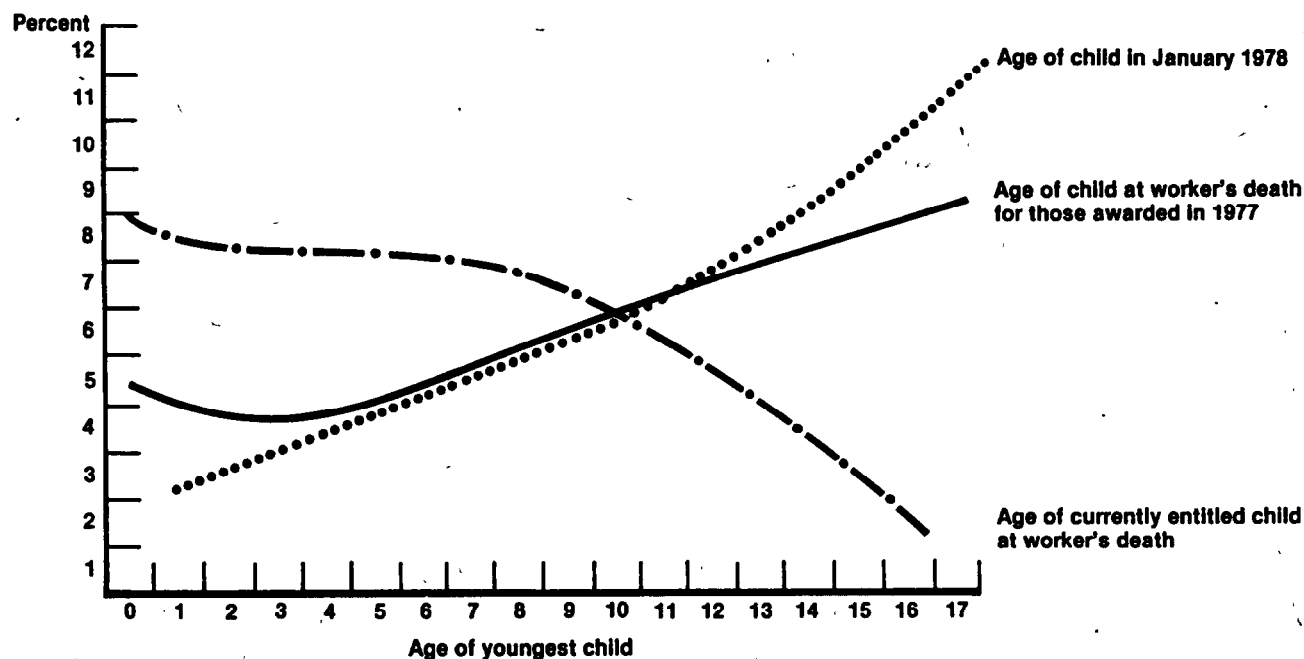
Table II.—Generalized standard errors of estimated percentages

Base of percentage	Sample cases	Estimated percentage										
		98 or 2	95 or 5	90 or 10	85 or 15	80 or 20	75 or 25	70 or 30	65 or 35	60 or 40	55 or 45	50
8,000	50	2,8	4.3	5.9	7.0	7.9	8.5	9.0	9.4	9.7	9.8	9.9
10,000	63	2.5	3.8	5.3	6.3	7.0	7.6	8.1	8.4	8.6	8.8	8.8
15,000	95	2.0	3.1	4.3	5.1	5.7	6.2	6.6	6.8	7.0	7.1	7.2
20,000	127	1.7	2.7	3.7	4.4	5.0	5.4	5.7	5.9	6.1	6.2	6.2
25,000	158	1.6	2.4	3.3	4.0	4.5	4.8	5.1	5.3	5.5	5.5	5.6
50,000	317	1.1	1.7	2.4	2.8	3.1	3.4	3.6	3.8	3.9	3.9	3.9
75,000	475	.9	1.4	1.9	2.3	2.6	2.8	2.9	3.1	3.1	3.2	3.2
100,000	633	.8	1.2	1.7	2.0	2.2	2.4	2.6	2.7	2.7	2.8	2.8
125,000	791	.7	1.1	1.5	1.8	2.0	2.2	2.3	2.4	2.4	2.5	2.5
150,000	949	.6	1.0	1.4	1.6	1.8	2.0	2.1	2.2	2.2	2.3	2.3
200,000	1,266	.5	.9	1.2	1.4	1.6	1.7	1.8	1.9	1.9	2.0	2.0
250,000	1,582	.5	.8	1.1	1.3	1.4	1.5	1.6	1.7	1.7	1.8	1.8
300,000	1,899	.4	.7	1.0	1.1	1.3	1.4	1.5	1.5	1.6	1.6	1.6
350,000	2,215	.4	.6	.9	1.1	1.2	1.3	1.4	1.4	1.5	1.5	1.5
400,000	2,532	.4	.6	.8	1.0	1.1	1.2	1.3	1.3	1.4	1.4	1.4
500,000	3,165	.3	.5	.7	.9	1.0	1.1	1.1	1.2	1.2	1.2	1.2
600,000	3,798	.3	.5	.7	.8	.9	1.0	1.0	1.1	1.1	1.1	1.1
700,000	4,430	.3	.5	.6	.8	.8	.9	1.0	1.0	1.0	1.0	1.1
800,000	5,063	.3	.4	.6	.7	.8	.9	.9	.9	1.0	1.0	1.0
900,000	5,696	.3	.4	.6	.7	.7	.8	.9	.9	.9	.9	1.0

determination of the statistical significance of the difference between two independent percentages, the following procedure may be used. Find estimates of the standard errors of the percentage in question using table II. Square these standard errors to get variances and add the variances. Take the square root of this sum to get the standard error of the difference. If the absolute difference between the two percentages in question is greater than twice the standard error of the difference, they are said to be significantly different from one another at the 5-percent level.

Confidence intervals for medians. For confidence intervals of medians, select the standard error for a 50-percent characteristic from the table, using the appropriate base. For a 95-percent confidence interval, add and subtract two standard errors from 50 percent. Using the cumulative distribution of the variable in question, interpolate to find the values that correspond to the range about the median value.

Display of data. Population estimates based on fewer than 50 sample cases are considered too unreliable for analysis. Thus, computations are not shown when the base of the estimate is less than 8,000 weighted cases. Numbers in the tables are rounded to the nearest 1,000.