
Changing the Method for Calculating Quarters of Coverage: The Impact on Workers' Insured Status

by William J. Nelson, Jr.*

The 1977 Social Security Amendments specified that, beginning in 1978, a worker would be credited with one quarter of coverage for a designated amount of annual earnings. For 1978, a worker received one quarter of coverage (up to a total of four) for each \$250 in annual earnings from employment or self-employment. Before 1978, a worker who was paid \$50 in wages in a calendar quarter was credited with a quarter of coverage. A person who had \$400 or more in self-employment income in a year was credited with four quarters of coverage. Some workers received more quarters of coverage under the new provisions than they would have under the old, and other workers received less. Since a worker's receipt of benefits depends on his or her insured status, which is based on quarters of coverage, this change can affect a worker's eligibility for benefits. This study indicates that if \$250 in annual earnings had been required for one quarter of coverage in 1977, more than 2.1 million workers would have had a change in their insured status for disabled-worker benefits, and about 700,000 workers would have had a change in their insured status for survivor benefits. Those whose insured status was affected were most likely to have had marginal earnings records—for example, they had four to seven quarters of coverage when six were needed. (This effect was expected when the legislation was passed.) This article examines those whose eligibility for benefits was most likely to have been affected.

Monthly Social Security benefits are paid as a matter of earned right to workers with insured status and to their eligible spouses, children, and survivors. Individuals gain protection (insured status) under the Social Security program through work in covered employment. Any change in the method for calculating quarters of coverage—including modifications in the amount of wages required for coverage—would affect their eligibility for retired-worker, survivor, and disabled-worker benefits.

The provisions for accruing quarters of coverage remained basically unchanged for most workers in the four decades preceding 1978. Generally, a worker was credited with one quarter of coverage for each calendar quarter in which he was paid at least \$50 in wages from covered employment. Beginning with 1951, when self-employment was covered under Social Security, a self-

employed person was credited with four quarters of coverage for each year in which he or she had \$400 or more in net earnings from self-employment. Legislation in 1977 made annual earnings the basis for crediting quarters of coverage in all cases, effective January 1, 1978.

The change to annual wage reporting was designed to reduce the burden that quarterly reporting imposed on employers. Under annual reporting, the employer is required to submit one report a year and the worker receives one quarter of coverage for a designated amount of annual earnings (\$250 in 1978) without regard to the quarter in which the wages were paid. As a result of this change, to receive four quarters of coverage an employee had to be paid a minimum of \$1,000 in calendar year 1978, compared with \$200 (\$50 per calendar quarter) under the old provisions.

The 1977 legislation also provided for the designated earnings amount to be adjusted annually, based on in-

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creases in average wages. These adjustments were made to assure that the quarter of coverage measure would reflect increases in earnings levels that have occurred since 1978. For 1984, a person must have annual earnings of \$390 to be credited with a quarter of coverage.

An earlier study that focused on workers with wage and salary income in 1977 noted that 28 percent of those workers would have had a change in the credited number of quarters of coverage if the new law had been in effect.¹ Those who would have had additional quarters of coverage under the new law outnumbered those who would have had fewer quarters by about 4 to 1. Nearly 99 percent of all workers with four quarters of coverage under the old law would not have had any change in coverage as a result of the new law; the corresponding proportions were 4 percent of those with three quarters of coverage, 11 percent of those with two quarters of coverage, and 24 percent of those with one quarter of coverage. More than half of the workers who would have had a decrease in quarters of coverage were paid at least \$50 in one calendar quarter, but less than the \$250 in annual earnings required for one quarter of coverage under the new law.

This article assesses the effect that these changes in crediting quarters of coverage would have had on insured status for disabled-worker or survivor benefits. Approximately 1.8 million workers would have gained insured status for disabled-worker benefits and 343,000 for survivor benefits as a result of the change in the law. In contrast, 341,000 would have lost insured status for disabled-worker benefits and 325,000 for survivor benefits.

Methodology

This study assesses the hypothetical impact on the insured status of workers of the legislation that changed the quarters of coverage provisions. Age and sex variables are used to describe those workers most likely to gain or lose insured status for survivor or disabled-worker benefits under the new system. In calculating insured status, the worker is assumed to have died or become disabled on January 1, 1978.

If a worker qualifies for more quarters of coverage under the new law than under the old (as would be the case if earnings are compressed into a short period), that worker will become insured for benefits earlier in his or her working life than would have been possible before the change. If a worker has low earnings that are spread out through the year, fewer quarters of coverage are earned under the new law than the old. Such a worker and his or her family may remain uninsured and thus

¹ See William J. Nelson, Jr., *Changing the Method for Calculating Quarters of Coverage: The Impact on Workers* (Research and Statistics Note No. 2), Office of Research, Statistics, and International Policy, Office of Policy, Social Security Administration, July 26, 1983.

may be ineligible for benefits if the worker becomes disabled or dies. The worker may have to delay retirement until sufficient quarters of coverage have been accrued.²

The 1-percent Continuous Work History Sample (CWHHS) is the source of data for this analysis. This file is a 1-percent sample of Social Security numbers issued through 1978 and reflects the individual's entire work experience in covered employment. Although the file contains about 2 million records, only those 1 million workers with wage and salary and/or self-employment earnings in 1977 were considered. Because the CWHHS represents a 1-percent sample of all workers, it is subject to sampling error.³

Workers are eligible for disabled-worker benefits provided they have sufficient quarters of coverage based, in part, on recent employment. The number of quarters of coverage credited to workers' earnings records in 1977 were compared with the number that would have been credited to their records under the new law. The new number was then used to redetermine their disability-insured status. Did an increased number of quarters of coverage result in the worker now being insured for disabled-worker benefits? Did a lower number of quarters resulting from the change in the law cause the worker to be uninsured if disability occurs? The number of affected workers was evaluated at each age level since the requirements for eligibility to disabled-worker benefits vary with the worker's age. The extent to which this change in the coverage provisions affects women more than men was also examined.

Similarly, workers were considered to have lost insured status for survivor benefits if they were insured based on actual quarters of coverage credited in 1977 and in previous years but the quarters of coverage that would have been credited under the new law were insufficient to maintain insured status. A similar procedure was followed for those who would have been credited with more quarters of coverage under the new law. Age and sex variables were used to determine those groups that would have been most affected by the change in the law.

General Impact on Insured Status

About 26 percent of the 104 million workers with earnings from wage and salary and/or self-employment would have had a change in the number of quarters of coverage credited to their earnings records if the new law had been in effect in 1977 (table 1). Since part-time workers were much more likely than full-time workers

² See Lucy B. Mallan and Donald Cox, "Older Workers Uninsured for Retired-Worker Benefits," *Social Security Bulletin*, December 1978, pages 3-11. This study examines the level of coverage for workers approaching retirement age.

³ See Robert H. Finch, Jr., *Sampling Variability in the 1-Percent Continuous Work History Sample*, Office of Research and Statistics, Social Security Administration, 1977.

Table 1.—Hypothetical impact of 1977 legislation on workers' quarters of coverage and insured status, by age and sex
 (Numbers in thousands)

Age of worker	All workers	Change in quarters of coverage			Change in insured status for—					
		Gains	Losses	Gain/loss ratio ¹	Disability benefits			Survivor benefits		
					Gains	Losses	Gain/loss ratio ¹	Gains	Losses	Gain/loss ratio ¹
Total.....	104,271	20,645	6,207	3.33	1,820	323	5.63	343	325	1.06
Under 20.....	8,750	3,111	2,054	1.51	433	92	4.72	111	197	.57
20-24.....	17,556	5,469	1,074	5.09	896	123	7.29	87	55	1.57
25-29.....	15,133	3,287	597	5.51	233	43	5.43	23	15	1.59
30-34.....	12,338	2,142	453	4.73	87	16	5.51	29	11	2.75
35-39.....	9,922	1,441	339	4.25	55	11	4.98	24	8	2.85
40-44.....	8,363	1,080	267	4.05	36	8	4.27	21	7	2.31
45-49.....	7,877	930	248	3.75	27	8	3.47	19	6	3.05
50-54.....	7,843	868	245	3.54	22	7	3.00	12	8	1.57
55-59.....	7,030	782	231	3.39	20	7	2.76	10	6	1.62
60-64.....	5,287	728	214	3.40	12	8	1.44	5	6	.85
65 or older.....	4,173	808	486	1.66	...	...	...	3	7	.43
Men.....	60,915	10,601	2,595	4.09	934	142	6.57	118	132	.89
Under 20.....	4,853	1,782	1,063	1.68	263	51	5.16	52	99	.53
20-24.....	9,586	2,848	429	6.64	457	50	9.15	31	18	1.68
25-29.....	8,680	1,649	218	7.58	110	18	6.14	8	3	2.76
30-34.....	7,449	1,006	140	7.21	37	6	5.79	9	1	6.92
35-39.....	5,994	641	91	7.07	21	4	6.00	5	1	5.44
40-44.....	4,982	492	76	6.50	14	2	6.17	3	1	3.00
45-49.....	4,628	431	74	5.81	10	3	3.37	3	2	1.82
50-54.....	4,646	415	79	5.24	9	3	3.42	2	1	2.22
55-59.....	4,203	400	77	5.21	8	2	4.00	3	1	1.93
60-64.....	3,242	417	86	4.83	5	4	1.42	1	2	.38
65 or older.....	2,653	520	263	1.98	...	...	...	1	2	.41
Women.....	43,356	10,043	3,612	2.78	886	181	4.90	225	193	1.17
Under 20.....	3,897	1,328	991	1.34	170	41	4.17	59	97	.61
20-24.....	7,970	2,621	645	4.06	439	73	6.02	56	37	1.51
25-29.....	6,453	1,638	379	4.32	123	25	4.93	15	12	1.30
30-34.....	4,889	1,136	314	3.62	51	10	5.33	20	9	2.16
35-39.....	3,928	800	248	3.23	34	8	4.51	19	8	2.53
40-44.....	3,382	588	191	3.08	22	6	3.56	18	6	2.98
45-49.....	3,249	499	174	2.87	17	5	3.53	16	5	3.51
50-54.....	3,197	452	166	2.73	13	5	2.77	10	7	1.49
55-59.....	2,827	381	154	2.48	11	5	2.24	7	5	1.52
60-64.....	2,046	312	128	2.43	6	4	1.45	4	4	1.07
65 or older.....	1,520	288	223	1.29	...	...	...	2	5	.45

¹ Ratio obtained by dividing number of workers with gains (in hundreds) by the number with losses.

to be affected by the law, many of those experiencing either gains or losses were under age 20. Among workers who would have been credited with more quarters of coverage under the new law than under the old, 42 percent were under age 25; among workers who would have received fewer quarters under the new law, 50 percent were under age 25. By comparison, only 25 percent of all workers were under age 25.

The impact of these changes on the insured status of workers for disability or survivor benefits was quite different. Among the 20.6 million workers credited with more quarters of coverage because of the change in the law, 1.8 million or about 8.8 percent would have gained insured status for disabled-worker benefits; among the 6.2 million who would have been credited with fewer quarters of coverage, about 323,000 or 5.2 percent would have lost insured status for disabled-worker benefits.

In the event of the father's death, an additional number of widowed mothers and children would have

been entitled to survivor benefits because 343,000 workers had become insured (1.7 percent of all workers would have been credited with more quarters of coverage). However, an almost equal number of workers—325,000—would have lost their insured status for benefits because they would have been credited with fewer quarters of coverage under the new law. Those workers who would have lost insured status for survivor benefits for their families represented about 5 percent of all workers credited with fewer quarters of coverage.

Disability Benefits

To qualify for disabled-worker benefits, a worker must be fully insured and meet a recency of employment test. A worker is fully insured if he or she has at least one quarter of coverage (acquired at any time after 1936) for each calendar year after 1950 or, if later, after the year in which he or she attained age 21, and prior to the year in which the disability occurs. The recency test requires that the worker have at least 20 quarters of cov-

erage during the 40-quarter period ending with the quarter of disability. Workers who become disabled before age 31 will meet the recency of work test—and thus be insured for benefits—if they have quarters of coverage in half the quarters between attainment of age 21 and onset of disability. A minimum of six quarters of coverage is required.

The insured status of 2.1 million workers would have been affected by the change in crediting quarters of coverage. Changes in insured status were most prevalent among young workers since 86 percent of those with gains and 80 percent of those with losses were under age 30. Many of these workers needed only six quarters of coverage within the 12 calendar quarters immediately preceding their onset of disability to be insured. Because of limited work experience, many workers had between 4 and 7 quarters of coverage; thus gains or losses of 1 or 2 quarters would result in a change of insured status.

However, the incidence of disability among young workers is low. In 1980, for instance, about 400,000 disabled-worker benefits were awarded, representing 0.4 percent of the 100.4 million workers insured for disability. Workers under age 30 accounted for only 32,000 of these awards, less than 0.1 percent of the 39.5 million workers in this age group with insured status. The net gain in insured status of workers under age 30 (1.3 million) might produce 1,000 additional disabled-worker awards annually. Among workers age 30 or older, the net gain of about 200,000 might produce an additional 800 awards annually.

A loss of insured status was more likely among workers whose earnings were low and spread throughout the year. These workers would have been credited with fewer quarters of coverage under the new law, and the smaller number earned during their working life was not sufficient to maintain coverage. Those most likely to gain insured status were young workers with seasonal employment, such as summer jobs. Because their earnings were concentrated in a short period, they gained enough quarters of coverage to be eligible for disabled-worker benefits.

The number of workers gaining insured status was more than five times greater than the number who would have lost insured status. This gain/loss ratio was more than 7 to 1 at ages 20–24, but decreased with increasing age. Nearly all older workers who would have lost insured status for disabled-worker benefits were fully insured but had been credited with only 20 or 21 quarters of coverage in the previous 10 years. The loss of 1 or 2 quarters would cause the worker to be ineligible if disability occurs, since the recency test (20 quarters of coverage in past 40 quarters) would no longer be met.

About 1 out of 41 women would either gain or lose insured status for disabled-worker benefits, compared with only 1 out of 57 men. There are several reasons for the

greater impact on women. First, workers most likely to experience a change in the number of quarters of coverage were those who had intermittent or part-time employment; workers with regular full-time employment would obtain the maximum of four quarters of coverage whether the law required \$50 in wages per quarter for four quarters or \$1,000 in annual earnings. Because women often have irregular earnings due to part-time or seasonal employment, they are more likely to gain or lose quarters of coverage and thus insured status for benefits. Secondly, because women are more likely to have irregular employment patterns during childbearing ages, they generally have fewer quarters of coverage than men of the same age. A lower number of quarters of coverage makes it more likely that gains or losses in quarters credited will affect insured status.

Only 23 percent of all men who would gain insured status were aged 25 or older compared with 31 percent of all women. Among those who would lose insured status for disabled-worker benefits, 29 percent of the men and 37 percent of the women were aged 25 or older.

Survivor Benefits

When an insured worker dies, Social Security benefits may be paid to eligible children, widows and widowers, and parents. A worker is fully insured if he or she has at least one quarter of coverage (acquired at any time after 1936) for each calendar year after 1950 or, if later, after the year in which he or she attained age 21, and prior to the year in which death occurs. A person is currently insured if he or she has at least six quarters of coverage during the full 13-quarter period ending with the calendar quarter in which he or she died.

A surviving child is eligible for benefits if the child is either under age 18⁴ or aged 18 or older if disabled before age 22. Mothers and fathers benefits may also be paid to surviving spouses if they have in their care a child under age 16 or disabled who is entitled to a survivor benefit. Widows and widowers of the deceased worker are generally eligible for benefits if they are at least 60 years old (aged 50–59, if disabled). Dependent parents of a deceased worker may receive benefits if they are aged 62 or older.

Although 26.9 million workers would have realized either a gain or loss in the number of quarters of coverage credited to their earnings record because of the change in the law, 668,000 would have had a change in their insured status for survivor benefits. As with those experiencing a change in disability insured status, the distribution of hypothetical gainers and losers was concentrated among the youngest workers. Thus, children and widowed mothers and widowed fathers are most

⁴ An elementary or secondary school student under age 19 is also eligible.

likely to be affected by any gains or losses in the worker's insured status. Although workers under age 20 accounted for less than 9 percent of all workers and 19 percent of all workers with a change in quarters of coverage, they were more than 46 percent of all workers with a change in insured status as a result of the change in the law. Gains or losses of insured status for benefits are more likely among workers under age 20 since only six quarters of coverage are needed to be either fully or currently insured and thus eligible for survivor benefits. Because of limited work experience, most workers under age 20, if insured, have just enough quarters of coverage; thus, any loss of quarters of coverage often results in a loss of insured status. Similarly, among those young workers who are uninsured, the addition of one or two quarters often permits the worker to become insured.

On the other hand, older workers had more work experience; thus, changes in the number of quarters of coverage credited had much less impact on their insured status for survivor benefits. For instance, among workers aged 40-59 who had a change in the number of quarters of coverage, less than 2 percent had a change in insured status, compared with 6 percent among workers under age 20.

Losses of insured status were more likely than gains among workers under age 20 and over age 60 although gainers outnumbered losers by nearly 2 to 1 between ages 25 and 59. Although workers aged 60 or older were less likely to be affected by the change in the law than were workers in any other age group, those who were affected were more likely to lose than gain insured status. Many of those who would lose insured status under the new law are workers with the minimum number of quarters of coverage required to be fully insured. Often, this level was being maintained with earnings as low as \$50 in one quarter each year. Under provisions of the new law, such workers would fall short of the \$250 required in 1978 for one quarter of coverage, and this could result in a loss of insured status. A worker age 62 in 1978 needs 27 quarters of coverage to be fully insured; a man age 70 in 1978 needs 22 quarters of coverage to be fully insured and a woman 19; a man age 80 in 1978 needs 12 quarters of coverage to be fully insured and a woman 9.

Women make up 63 percent of all workers experiencing a change in insured status and 51 percent of those experiencing a change in the number of quarters of coverage credited, but they are less than 42 percent of all workers with covered earnings. The higher proportion of women than men experiencing changes reflects women's greater part-time and intermittent employment.

Of the nearly 418,000 women who would have realized a change in insured status for survivor benefits, there were slightly more gainers (225,000) than losers (193,000). By contrast, more men lost (132,000) than gained (118,000). However, when workers under age 20 are excluded, gainers outnumbered losers by 2 to 1 among men and about 5 to 3 among women.

Conclusions

The Social Security Amendments of 1977 included the first major change in the quarters of coverage provisions of the Social Security Act since the 1939 amendments which established \$50 in wages paid in a calendar quarter as the minimum amount of earnings needed for a worker to be credited with a quarter of coverage. This study indicates that the change would have been beneficial for the majority of workers credited with a different number of quarters of coverage as a result of the change in the law.

The change in the law would have had a greater impact on immediate eligibility for disabled-worker benefits as six times more workers would have gained, rather than lost, insured status for such benefits. A smaller impact was noted among workers becoming insured for survivor benefits for their families because approximately the same number of workers gained as lost insured status. However, since the number of workers credited with more quarters of coverage (20.6 million) exceeds the number who gained insured status (0.3 million) by a wide margin, many families will become insured for survivor benefits earlier in the worker's lifetime.

Data for 1978 and subsequent years should provide additional information on the extent to which workers have been able to adjust their earnings pattern to meet the change in crediting quarters of coverage.