
Workers' Compensation: 1980-84 Benchmark Revisions

by William J. Nelson, Jr.*

The first workers' compensation program was introduced 80 years ago. Its purpose was to compensate occupationally injured workers and their families for lost wages and medical expenses from job-related injury, regardless of fault. Today, each of the State and Federal programs that provides coverage to more than 86 percent of the work force uses a combination of private insurance, State or Federal funds, and self-insurance to meet its benefit obligations.

The workers' compensation program is of continuing interest to the Social Security Administration (SSA) for several reasons. Since 1965, Social Security Disability Insurance benefits have been subject to reduction if such benefits, when combined with those provided under workers' compensation laws, exceed 80 percent of the worker's earnings. Because the two programs have gaps in protection as well as duplication in coverage, a periodic review of the workers' compensation program is necessary. In addition, SSA administers Part B of the Black Lung program—established to provide income-maintenance protection to coal miners disabled by pneumoconiosis—to about 1 million beneficiaries whose claims were filed before July 1973. This article provides revised benchmark data on the workers' compensation programs and presents a review of program operations during the early 1980's.

The workers' compensation series consists of two parts—an annual article on program benefits and costs,¹ and the benchmark revisions prepared every 4 years. These revisions update and expand the benefit and cost data in the annual series and include information on coverage and benefit adequacy. Also, an article containing more detailed information on workers' compensation laws as well as general information on costs and benefits is prepared as part of the biennial article "Social Security Programs in the United States."

Background

Workers' compensation, the oldest social insurance program in the United States, was established to provide benefits to workers disabled from work-related injury or illness and to dependents of workers whose deaths resulted from such injury or illness. The laws established under workers' compensation provide that employers compensate employees for medical costs and wages lost as a result of occupational injury or illness regardless of fault.

Before the enactment of these laws, well-established common law principles held that an injured worker had the right to recover damages only if proof could be furnished that the injury occurred as a result of the employer's negligence. The difficulties in obtaining pay-

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¹See William J. Nelson, Jr., "Workers' Compensation: Coverage, Benefits, and Costs, 1985," *Social Security Bulletin*, January 1988, pages 4-9.

ment under this system led to the enactment of employees' liability acts in many States. These acts restricted the defenses that an employer could use, but often resulted in delays due to court action and considerable expense without assurance of indemnification. As the economy shifted from largely agricultural to industrial, however, compensation claims became more frequent and pressure mounted for legislation that would be more favorable to the worker.

The first workers' compensation program, enacted in 1908, extended coverage to specified Federal civilian employees engaged in hazardous work and was broadened in 1916. Today, Federal programs provide coverage to all Federal workers through the Federal Employees' Compensation Act, and to private employees under the District of Columbia Workers' Compensation Act. Private employees are protected under the Longshore and Harbor Workers' Compensation Act—a Federal program enacted in 1927.

Each of the 50 States and the District of Columbia has its own workers' compensation program but State laws differ greatly in the extent of coverage, level of benefits, and the insurance method employed to underwrite the risk of job injury. The first State program was developed in 1911. By 1921, all but six States had legislated some form of workers' compensation coverage.

The Federal Black Lung program—a specialized workers' compensation program—was established in 1970 under the Federal Coal Mine Health and Safety Act to provide cash benefits to totally disabled coal miners, their dependents, and their survivors. Medical benefits are also payable on the basis of a diagnosis of pneumoconiosis (black lung disease). The program is administered by the Social Security Administration (for claims initiated before July 1973 and, in certain survivor cases, before December 1983) and the Department of Labor.

Although all compensatory plans are based on the principle that employers should provide reasonable income and medical benefits to employees who incur work-related disabilities, regardless of fault, these programs have continued to undergo change and refinement to meet the needs of both the worker and the employer. Coverage has been expanded, benefits have been raised, and eligibility requirements liberalized. In 1980-84, alone, more than 1,000 amendments to workers' compensation laws were enacted. Today, 56 separate programs constitute the workers' compensation program, including those of Puerto Rico and the Virgin Islands. This report covers the laws in the 50 States and the District of Columbia, as well as those employees protected under the Federal Employees' Compensation Act (FECA), the Coal Mine Health and Safety Act, and the Longshore and Harbor Workers' Compensation Act. See the appendix on page 17 for a description of the methodology

used in preparing benefit and cost estimates under these programs.

Coverage

About 81.9 million workers were protected under State and Federal workers' compensation laws in an average month in 1984 (table 1). This number was 5 percent larger than the number in 1980 and generally paralleled the change in the labor force, resulting in coverage for 86.1 percent of the work force. Since 1973, when 86.3

Table 1.—Estimated number of workers covered in average month and total annual payroll in covered employment, by selected years, 1940-84¹

Year	Workers covered in average month		Total payroll in covered employment	
	Number (in millions)	Percent of employed wage and salary workers ²	Amount (in billions)	Percent of civilian wage and salary disbursements
1940.....	24.6	70.8	\$36	72.1
1946.....	32.7	76.8	80	76.8
1948.....	36.0	77.0	105	79.9
1949.....	35.3	76.9	103	79.1
1950.....	36.8	77.2	114	79.9
1951.....	38.6	78.4	132	80.8
1952.....	39.4	78.9	142	80.9
1953.....	40.7	80.0	154	81.5
1954.....	39.8	79.7	153	81.8
1955.....	41.4	80.0	168	83.2
1956.....	43.0	80.2	182	82.7
1957.....	43.3	80.5	190	82.7
1958.....	42.5	80.2	192	83.1
1959.....	44.0	80.3	209	83.8
1960.....	44.9	80.4	220	83.8
1961.....	45.0	80.3	226	83.7
1962.....	46.2	80.4	241	83.7
1963.....	47.3	80.5	254	83.7
1964.....	48.8	80.8	272	83.6
1965.....	50.8	81.5	292	83.2
1966.....	53.6	83.1	321	83.5
1967.....	55.0	83.1	342	83.1
1968.....	56.8	83.8	376	83.0
1969.....	59.0	84.6	414	83.1
1970.....	59.2	83.8	441	83.2
1971.....	59.4	83.3	469	83.2
1972.....	62.3	84.2	512	83.0
1973.....	66.3	86.3	578	84.2
1974.....	68.0	86.7	637	85.0
1975.....	67.2	86.7	678	85.7
1976.....	69.6	86.4	750	85.7
1977.....	72.1	86.4	827	85.3
1978.....	75.6	86.7	922	84.3
1979.....	78.6	87.7	1,041	85.0
1980.....	78.8	86.7	1,136	85.6
1981.....	78.3	86.0	1,247	85.5
1982.....	77.0	85.6	1,301	85.2
1983.....	78.0	85.6	1,382	85.3
1984.....	81.9	86.1	1,516	85.4

¹ Before 1959, excludes Alaska and Hawaii.

² Beginning 1967, excludes those aged 14 and 15 (as well as younger workers), and includes certain workers previously classified as self-employed.

Source: Data on employed wage and salary workers from **Current Population Survey**, Bureau of Labor Statistics, Department of Labor. Data on wage and salary disbursements from Bureau of Economic Analysis, Department of Commerce.

percent of wage and salary workers were covered under workers' compensation laws, this ratio has remained relatively stable despite coverage extensions and changes from elective to compulsory coverage in many States.

Some of this stability may be attributed to the nationwide decline in agricultural employment, which tended to reduce the impact of expanded coverage to farm workers in many States. Since 1980, coverage changes resulting from statutory amendments to State laws have been minimal: Volunteer fire/rescue personnel, library employees in counties of a certain size, and additional farm workers in Maryland, Virginia, and North Carolina were included in coverage and some corporate officers and motor vehicle lessees were excluded from coverage.

Exclusions

Among the occupational and industrial groups most likely to be excluded from full workers' compensation coverage are farm and domestic labor, casual labor, and State and local government employment. Although farm workers are currently covered on the same basis as other employees in 12 States and the District of Columbia, coverage for such employees is usually excluded or restricted. This nonuniform coverage of farm workers causes some distortions in geographic coverage patterns, depending on the extent of agricultural work within the State.

Similarly, coverage of State and local government employees differs markedly from one State jurisdiction to another. Some jurisdictions exclude specific groups such as elected or appointed officials and others limit coverage to employees of specified political subdivisions or to employees engaged in hazardous occupations. In other jurisdictions, coverage is either optional or without any restrictions or exclusions.

Geographical Distribution

Although coverage levels have remained relatively stable nationwide, considerable geographical variations exist. The number of workers covered by workers' compensation as a proportion of wage and salary workers in each State is shown in chart 1. In the Northeast region and the East North Central and Pacific regions, coverage has been higher than the national average; in the South, fewer workers have been protected by workers' compensation laws. This pattern may have been affected by the provisions in some State laws that exempt from coverage those firms hiring fewer than a specified number of employees (usually three). In 1984, 8 of the 14 States with such provisions were in the South Atlantic and East South Central States (chart 2).

In 1984, at least 85 percent of the workers in 27 States and the District of Columbia were covered under

Chart 1.—Actual coverage as a percent of potential coverage, by jurisdiction, 1984

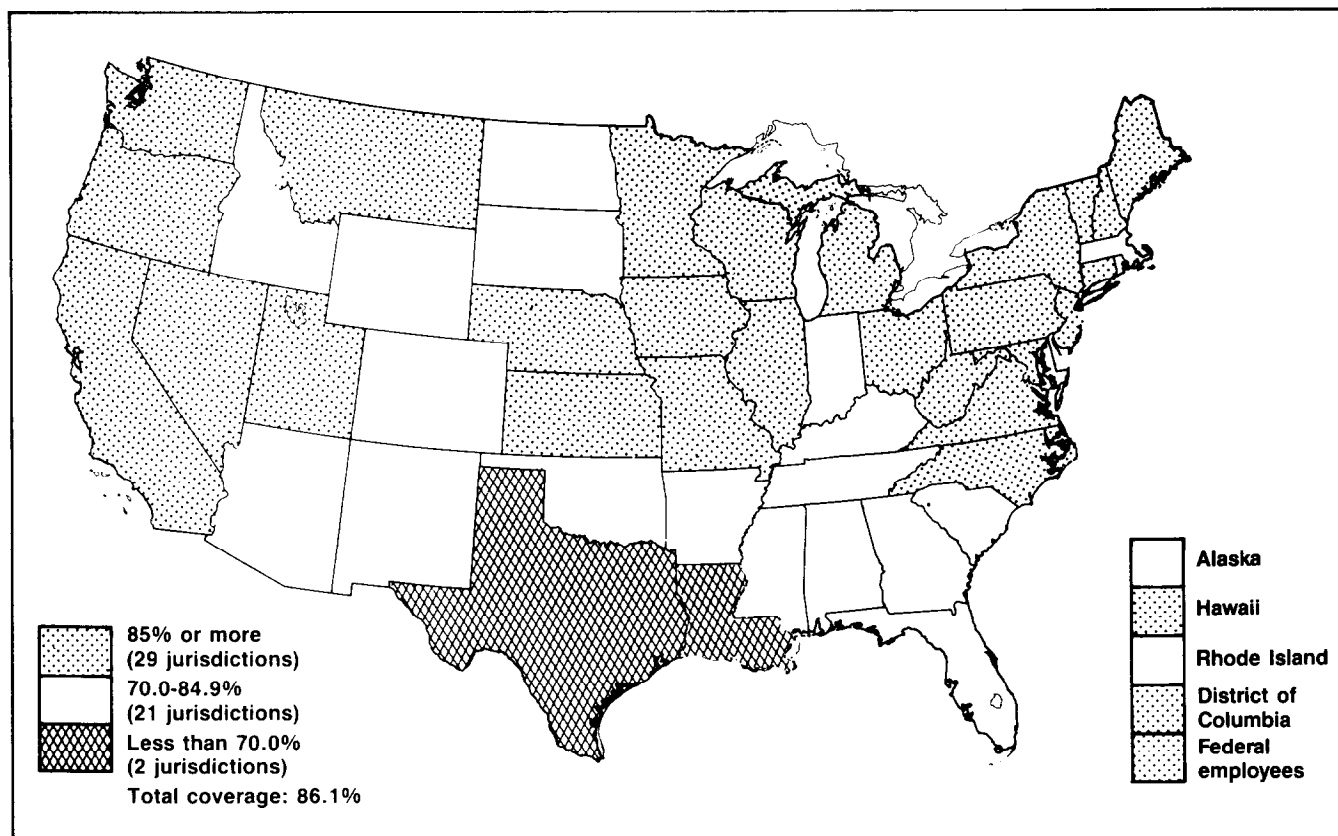
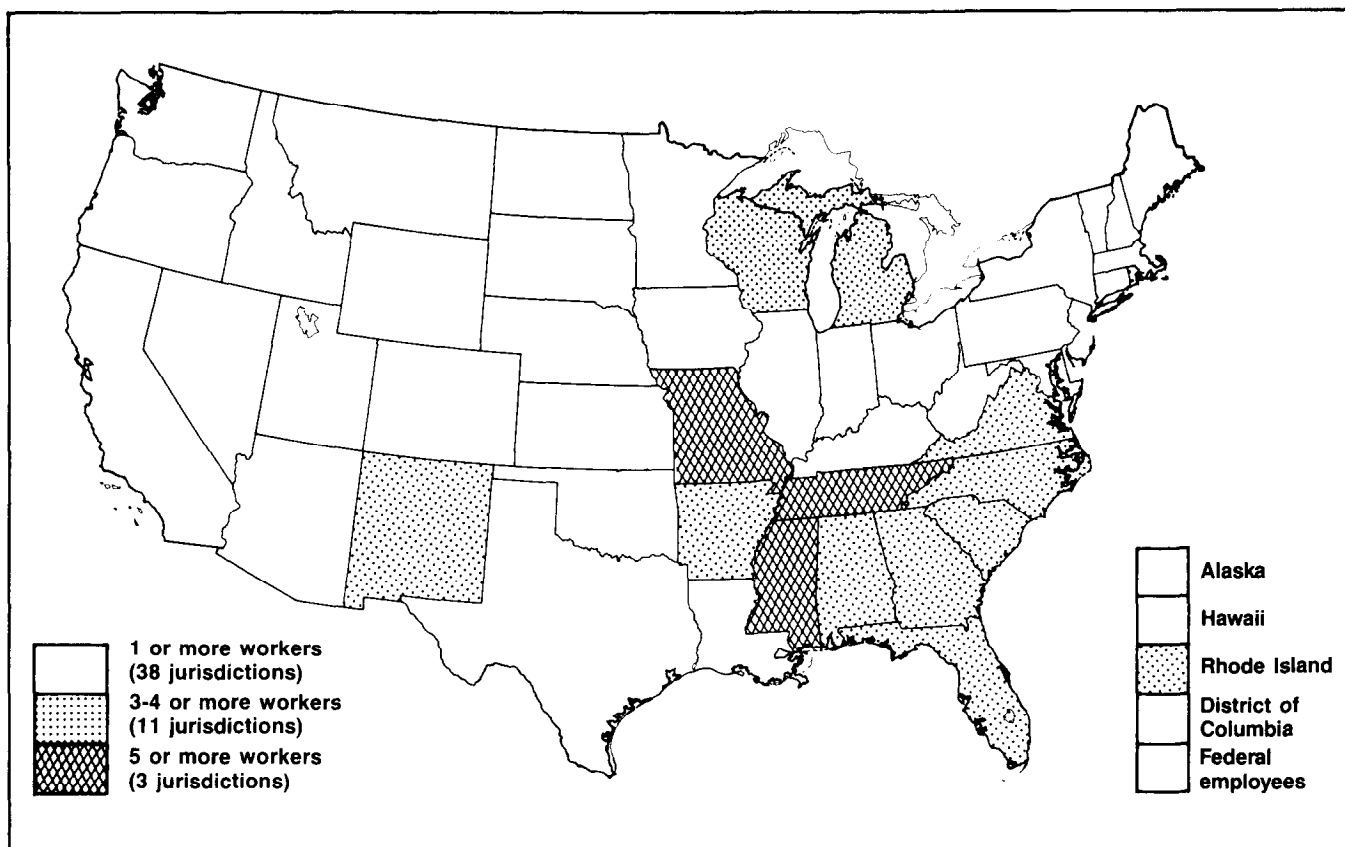


Chart 2.—Statutory provisions: Minimum size of firm covered by workers' compensation, January 1984



workers' compensation; however, less than 70 percent of the workers in Texas and Louisiana had coverage. These proportions reflect a dramatic improvement in the extension of workers' compensation laws since 1968, when 15 States provided coverage for less than 70 percent of their workers.

Benefits

Benefit Growth

Workers' compensation benefits totaled \$19.7 billion in 1984. This amount included periodic cash payments, lump-sum payments, and medical service reimbursements incurred during periods of disability, as well as death and survivor benefits. This total is an increase of 12.0 percent from the previous year's total and nearly 64 percent from the 1979 total (table 2). The increase in benefit levels over the past 5 years has not been uniform across the United States. In those geographic divisions with smaller populations—the New England, West South Central, and Mountain regions—benefit levels doubled in the 5-year period; increases were below the national average in the more populated Middle Atlantic and East North Central regions in the same period. The growth in benefit levels in the early 1980's was a continuation of the rapid increases experienced during the 1970's when widespread liberalization of State benefit formulas oc-

cured, in part as a result of overall wage and price rises. During this period, automatic increases in maximum weekly benefit amounts became law in many States. This legislation resulted in higher benefits because the maximums generally were adjusted based on the level of wages covered by unemployment insurance.

The Federal Black Lung program has paid out a declining amount of benefits over the past 5 years (table 3), thus, the benefit increases were limited to regular State programs. Approximately \$1.6 billion was paid in Black Lung program benefits in 1984, a decline from a peak of \$1.7 billion annually in the 1979-81 period. The amount of benefits paid under this program is expected to continue decreasing as older beneficiaries die and a smaller number of new claimants come into the program. In 1979, black lung benefit payments accounted for more than 14 percent of all workers' compensation benefits; in 1984, only 8 percent of all payments were made under the Black Lung program.

Type of Benefit

During 1984, about two-thirds of all payments made under the workers' compensation program were in the form of cash compensation (\$13.3 billion); \$11.7 billion was paid to disabled workers and the remaining \$1.6 billion went to survivors. Payments for medical care

Table 2.—Benefit payments, by type, 1939–84¹

[Amounts in millions]

Year	Total	Medical and hospitalization payments	Compensation payments		
			Total	Disability	Survivor
1939.....	\$235	\$85	\$150	\$120	\$30
1940.....	256	95	161	129	32
1941.....	291	100	191	157	34
1942.....	329	108	221	185	36
1943.....	353	112	241	203	38
1944.....	385	120	265	225	40
1945.....	408	125	283	241	42
1946.....	434	140	294	250	44
1947.....	486	160	326	280	46
1948.....	534	175	359	309	50
1949.....	566	185	381	329	52
1950.....	615	200	415	360	55
1951.....	709	233	475	416	60
1952.....	785	260	525	460	65
1953.....	841	280	561	491	70
1954.....	876	308	568	498	70
1955.....	916	325	591	521	70
1956.....	1,002	350	652	577	75
1957.....	1,062	360	702	617	85
1958.....	1,112	375	737	647	90
1959.....	1,210	410	800	700	100
1960.....	1,295	435	860	755	105
1961.....	1,374	460	914	804	110
1962.....	1,489	495	994	879	115
1963.....	1,582	525	1,057	932	125
1964.....	1,707	565	1,142	1,007	135
1965.....	1,814	600	1,214	1,074	140
1966.....	2,000	680	1,320	1,170	150
1967.....	2,189	750	1,439	1,284	155
1968.....	2,376	830	1,546	1,381	165
1969.....	2,634	920	1,714	1,529	185
1970.....	3,031	1,050	1,981	1,751	230
1971.....	3,563	1,130	2,433	2,068	365
1972.....	4,061	1,250	2,811	2,351	460
1973.....	5,103	1,480	3,623	2,953	670
1974.....	5,781	1,760	4,021	3,351	670
1975.....	6,598	2,030	4,568	3,843	725
1976.....	7,584	2,380	5,204	4,394	810
1977.....	8,630	2,680	5,950	5,075	875
1978.....	9,796	2,980	6,816	5,851	965
1979.....	12,027	3,520	8,507	7,232	1,275
1980.....	13,618	3,947	9,671	8,359	1,312
1981.....	15,054	4,431	10,623	9,224	1,399
1982.....	16,407	5,058	11,349	9,862	1,488
1983.....	17,575	5,681	11,894	10,385	1,509
1984.....	19,685	6,424	13,261	11,666	1,595

¹ Before 1959, excludes Alaska and Hawaii. Beginning 1970, includes Federal black lung benefits.

Source: Estimated by Social Security Administration on the basis of unpublished policy-year data from the National Council on Compensation Insurance.

(\$6.4 billion) accounted for the remaining one-third of benefit payments—a ratio that has remained roughly the same for the past 15 years (table 3).

Payments made under regular programs (excluding the Federal Black Lung program) have reflected a similar degree of stability. Medical and hospitalization benefits have totaled about 35 percent of all payments since 1970. Total indemnity benefits to survivors have declined slightly, accounting for less than 5 percent of all regular-program benefits in 1984, compared with nearly 7 percent in 1970.

By contrast, indemnity benefits to survivors constituted

a much larger proportion of benefits paid (43 percent) under the Federal Black Lung program. Total compensation payments amounted to \$1.5 billion in 1984 (more than 93 percent of the total) and medical payments accounted for the remaining 7 percent.

Classification of Benefit

The data available on the amount of private insurance payments under workers' compensation programs by type

Table 3.—Benefit payments under regular programs and the Federal Black Lung program, by type of payment, 1970–84

[Amounts in millions]

Year	Total	Medical and hospitalization payments	Compensation payments		
			Total	Disability	Survivor
Total					
1970.....	\$3,031	\$1,050	\$1,981	\$1,751	\$230
1971.....	3,563	1,130	2,433	2,068	365
1972.....	4,061	1,250	2,811	2,351	460
1973.....	5,103	1,480	3,623	2,953	670
1974.....	5,781	1,760	4,021	3,351	670
1975.....	6,598	2,030	4,568	3,843	725
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1981.....	15,054	4,431	10,623	9,224	1,399
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1983.....	17,575	5,681	11,894	10,385	1,509
1984.....	19,685	6,424	13,261	11,666	1,595
Regular programs ¹					
1970.....	\$2,921	\$1,050	\$1,871	\$1,672	\$199
1971.....	3,184	1,130	2,054	1,837	217
1972.....	3,507	1,250	2,257	2,017	240
1973.....	4,058	1,480	2,578	2,303	275
1974.....	4,826	1,759	3,067	2,747	320
1975.....	5,641	2,028	3,613	3,248	365
1976.....	6,603	2,377	4,226	3,796	430
1977.....	7,663	2,678	4,985	4,500	485
1978.....	8,773	2,978	5,795	5,260	535
1979.....	10,315	3,506	6,809	6,199	610
1980.....	11,879	3,920	7,959	7,282	677
1981.....	13,319	4,395	8,923	8,191	733
1982.....	14,740	5,012	9,728	8,947	781
1983.....	15,884	5,560	10,324	9,514	810
1984.....	18,044	6,315	11,728	10,845	884
Federal Black Lung program ²					
1970.....	\$110	0	\$110	\$77	\$33
1971.....	379	0	379	232	147
1972.....	554	0	554	330	224
1973.....	1,045	0	1,045	650	395
1974.....	955	\$1	954	604	350
1975.....	957	2	955	595	360
1976.....	981	3	978	598	380
1977.....	967	2	965	575	390
1978.....	1,023	2	1,021	591	430
1979.....	1,712	14	1,698	1,033	665
1980.....	1,739	27	1,712	1,077	635
1981.....	1,735	35	1,700	1,033	667
1982.....	1,667	46	1,621	914	706
1983.....	1,691	121	1,570	871	699
1984.....	1,641	108	1,533	822	711

¹ Includes all workers' compensation programs, except Federal Black Lung.

² Cash benefit payments made through the Social Security Administration and, beginning in 1974, cash and medical payments made through the Department of Labor.

of benefit, including the extent of disability, are shown in table 4. These data include compensable cases for a given year (rather than beneficiaries receiving the benefits during the year) and exclude cases in which only medical benefits were paid.

More than three-fourths of all compensable cases in policy year 1982 were those in which the worker suffered a temporary total disability. In these cases, the worker was expected to recover fully and to return to work after a period of absence. Temporary disability insurance benefits are paid under most State laws as long as the disability lasts and the condition continues to improve with medical treatment. Nearly 18 percent of all compensation benefits were paid in the cases of temporary disability in 1982, compared with more than 24 percent of benefits paid in 1974.

If the temporary total disability becomes permanent, most State laws provide weekly benefits either for life or for the duration of the disability. These benefits are usually a percentage of the worker's weekly earnings at the time of the accident. This percentage is usually set at 66½, although the existence of a maximum (cap) on the weekly benefit amount may reduce this percentage in some cases. Permanent disability cases account for less than one-fourth of all compensable cases and more than three-fourths of all cash payments. Since 1974, the average benefit per compensable case involving permanent total disability has increased more than threefold, from \$37,544 to \$123,316.

Nearly 70 percent of all disability benefits were paid to those workers whose permanent disability was partial and thus may or may not have affected their ability to

Table 4.—Percentage distribution of compensable cases and of aggregate cash benefits (incurred loss) and average benefit, by disability classification, selected policy years, 1939-82 ¹

Policy year	Total		Type of benefit					
			Total	Death	Disability				Temporary total
	Permanent total ²	Permanent partial						
		Major ³			Minor ⁴			
Percentage distribution for compensable cases ⁵								
First report basis: ⁶								
1939.....	365.0	...	100.0	1.0	0.1	1.8	12.1	85.0
1954.....	632.1	...	100.0	.8	.1	2.6	23.2	73.3
1966.....	843.0	...	100.0	.7	.1	3.2	24.1	71.8
1970.....	896.3	...	100.0	.6	.1	5.3	22.6	71.4
1974.....	1,030.7	...	100.0	.5	.2	4.1	20.7	74.5
1978.....	1,283.0	...	100.0	.4	.2	5.0	18.8	75.7
Fifth report basis: ⁶								
1978.....	1,298.7	...	100.0	.4	.3	5.9	18.2	75.2
1982.....	1,346.7	...	100.0	.4	.3	6.0	16.7	76.7
Percentage distribution for cash benefit payments								
First report basis: ⁶								
1939.....	...	\$84.0	100.0	16.2	3.9	22.3	26.2	31.4
1954.....	...	393.5	100.0	11.5	2.0	20.7	36.8	29.1
1966.....	...	886.5	100.0	11.1	2.1	23.9	38.1	24.9
1970.....	...	1,263.1	100.0	10.6	2.8	33.9	31.4	21.2
1974.....	...	1,788.8	100.0	9.7	3.6	31.4	31.3	24.1
1978.....	...	3,436.5	100.0	8.4	4.0	37.4	26.5	23.8
Fifth report basis: ⁶								
1978.....	...	4,483.7	100.0	7.5	6.2	44.4	22.0	19.8
1982.....	...	7,149.2	100.0	6.5	6.5	53.0	16.4	17.6
Average benefit per compensable case								
First report basis: ⁶								
1939.....	...	...	...	\$3,873	\$9,415	\$2,792	\$500	\$85
1954.....	...	...	...	9,207	16,758	5,010	986	247
1966.....	...	...	...	15,869	28,128	7,832	1,659	364
1970.....	...	...	...	23,077	28,914	9,070	1,961	418
1974.....	...	...	...	32,204	37,544	13,327	2,627	518
1978.....	...	...	...	58,284	68,023	19,982	3,780	841
Fifth report basis: ⁶								
1978.....	...	...	...	64,878	73,408	25,890	4,168	911
1982.....	...	...	...	98,446	123,316	46,742	5,205	1,220

¹ Excludes cases receiving medical benefits only. Data for individual policy years not strictly comparable because of shift in States included and in definitions of policy year.

² Disability rate at 75-100 percent of total.

³ Disability with severity equal to about 25-75 percent of total.

⁴ Disability with severity equal to less than 25 percent of total.

⁵ For permanent injury cases, includes, in addition to compensation for loss

of earning power, payment during periods of temporary disability. For temporary disability cases, includes only closed cases known not to have involved any permanent injury and open cases in which, in the carrier's judgment, the disability will be only temporary.

⁶ First report includes the earliest available data. Subsequent reports have more complete information.

Source: Unpublished data from the National Council on Compensation Insurance.

work. In 1982, these benefits averaged \$46,742 per compensable case when the severity of the disability was major (25-75 percent) and \$5,205 when the severity was minor (less than 25 percent). These payments were made to compensate for the injury (including permanent loss of function and handicap) and to offset any future reduction in earnings resulting from the disability.

Major partial disability cases accounted for about 6.0 percent of all compensable cases in 1982, compared with 4.1 percent in 1970. Payments for such disabilities were 53.0 percent of all benefits paid in 1982, compared with 44.4 percent in 1978 and 23.9 percent in 1966. From 1978 to 1982, the average benefit amount for major permanent partial disability cases nearly doubled (from \$25,890 to \$46,742) although the average benefit paid in minor cases was only 24.9 percent higher in 1982 (from \$4,168 to \$5,205).

Indemnity benefits to survivors were payable in only 0.4 percent of all compensable cases, with the average benefit reaching \$98,446. Such payments constituted less than 7 percent of all benefits in 1982, compared with more than 10 percent in 1970.

Type of Insurer

Workers' compensation laws provide three options to protect workers against job-related disabilities: (1) private or commercial insurance, (2) publicly operated insurance, and (3) self-insurance by individual employers or groups. Employers in most jurisdictions are allowed to purchase private insurance, self-insure, or group self-insure, with self-insurance options available for large firms that can provide proof of financial ability to insure their own risk. In six States, private or commercial insurance is not available, and employers are required either to self-insure (four States) or to insure with an exclusive State fund. Federal employees are protected through a federally financed and operated system.

Approximately 54 percent of all benefits were paid by private insurers in 1984 (table 5), a higher proportion than in any year since 1971. Disbursements from State and Federal funds represented 27.5 percent of the total in 1984, having declined gradually from 39.2 percent in 1973. State and Federal fund disbursements increased sharply in 1973 due to the expansion of the Federal Black Lung program.

The remaining \$3.7 billion was paid by self-insurers, an option that has accounted for an increasing share of the total since 1973, as employers attempted to curtail escalating premiums. In 1984, self-insurance payments accounted for 18.7 percent of all payments, compared with 11.6 percent in 1973. Since 1979, payments made by self-insurers have doubled (in part as a result of changes in State laws permitting such insurance), and payments made by State and Federal funds have increased by one-third.

Relationship of Benefits to Payrolls

Benefit payments represented 1.21 percent of payrolls covered under workers' compensation in 1984, extending the annual increases that began in the early 1970's (table 6). This ratio remained in a narrow range of 0.54-0.63 percent through the 1950's and 1960's, but broadened as benefit improvements were made in the 1970's. Chart 3 shows the relationship of benefits to payroll in each State and the District of Columbia. In 1984, benefits were less than 0.9 percent of payroll in 15 jurisdictions, compared with 40 in 1972. Only four States were below the 1972 national average of 0.67 percent in 1984: Indiana (0.46 percent), North Carolina (0.59 percent), New York (0.65 percent), and Missouri (0.66 percent).

The increase in the benefit/payroll ratio is a result of the growing costs of medical and hospital benefits, as well as increased use of such services due to longer periods of absence from work. In the manufacturing industry in 1984, an average of 17 workdays per case was lost due to job-related injuries, a gradual increase from 15 days in the early 1970's.

Benefit Adequacy

The effectiveness of an income-maintenance program such as workers' compensation is measured in terms of the degree to which it replaces the wages lost by the disabled worker. This measurement is referred to as the replacement rate. Each State program sets its own replacement rate and maximum weekly benefit amount, the latter to control benefit growth.

Replacement Rates and Maximum Benefits

At the beginning of 1984, the replacement rate set in all States except Idaho and Washington equaled or exceeded two-thirds of the worker's average gross weekly wage (subject to the State's maximum weekly benefit).² This rate represented an improvement in 13 States from the 1970 rate, as States implemented recommendations of the National Commission on State Workers' Compensation Laws, calling for an increase to the two-thirds level.³

²For the average worker in 35 States and the District of Columbia, the limitation imposed by a maximum (or cap) has no effect. For example, in 1984, the replacement rate in Illinois was set at 66½ percent and the maximum weekly payment at about \$463. A worker with weekly wages of \$377 (the State's average weekly wage) could receive a weekly compensation of \$251, well below the State's maximum. In fact, any worker in Illinois with gross weekly wages up to \$695 would have had 66½ percent of wages replaced under the workers' compensation program.

³See the *Report of the National Commission on State Workmen's Compensation Laws*, Washington, D.C., 1972. Laws in Idaho and Washington specify 60 percent of the worker's gross weekly wage; in New Jersey and West Virginia, the rate is 70 percent; Ohio law established a rate of 72 percent for the first 12 weeks. The replacement rate in Alaska, Iowa, and Michigan is set at 80 percent of spendable (after-tax) earnings.

Table 5.—Benefit payments, by type of insurance, 1939–84¹

[Amounts in thousands]

Year	Total		Type of insurance					
			Private insurance (losses paid by carriers) ²		State and Federal fund disbursements ³		Self-insurance payments ⁴	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
1939.....	\$234,723	100.0	\$122,183	52.0	\$68,464	29.2	\$44,067	18.8
1940.....	255,653	100.0	134,653	52.7	72,528	28.4	48,472	18.9
1941.....	290,812	100.0	159,823	55.0	77,408	26.6	53,581	18.4
1942.....	328,669	100.0	190,239	57.9	81,247	24.7	57,183	17.4
1943.....	353,035	100.0	213,123	60.4	80,574	22.8	59,338	16.8
1944.....	385,236	100.0	236,655	61.4	85,990	22.3	62,591	16.3
1945.....	408,374	100.0	252,570	61.9	91,255	22.3	64,549	15.8
1946.....	434,232	100.0	269,799	62.1	96,053	22.1	68,380	15.8
1947.....	485,794	100.0	301,833	62.1	110,303	22.7	73,658	15.2
1948.....	533,584	100.0	334,699	62.7	120,989	22.7	77,896	14.6
1949.....	566,295	100.0	353,140	62.4	131,734	23.3	81,421	14.4
1950.....	614,702	100.0	381,329	62.0	148,693	24.2	84,680	13.8
1951.....	709,047	100.0	444,416	62.7	170,445	24.0	94,186	13.3
1952.....	784,956	100.0	490,958	62.5	193,107	24.6	100,891	12.9
1953.....	841,126	100.0	524,176	62.3	210,337	25.0	106,613	12.7
1954.....	876,216	100.0	540,497	61.7	225,473	25.7	110,246	12.6
1955.....	915,665	100.0	562,515	61.4	238,445	25.9	114,705	12.5
1956.....	1,002,007	100.0	618,109	61.7	259,074	25.9	124,824	12.4
1957.....	1,062,171	100.0	660,903	62.2	271,406	25.6	129,862	12.2
1958.....	1,111,599	100.0	649,402	62.5	284,780	25.6	132,417	11.9
1959.....	1,209,808	100.0	752,580	62.2	315,990	26.1	141,238	11.7
1960.....	1,294,945	100.0	809,921	62.5	324,580	25.1	160,444	12.4
1961.....	1,374,176	100.0	850,872	61.9	347,433	25.3	175,871	12.8
1962.....	1,488,816	100.0	923,989	62.1	370,722	24.9	194,105	13.0
1963.....	1,582,459	100.0	987,580	62.4	388,242	24.5	206,637	13.1
1964.....	1,707,189	100.0	1,069,577	62.7	411,876	24.1	225,736	13.2
1965.....	1,813,807	100.0	1,124,013	62.0	445,382	24.5	244,412	13.5
1966.....	2,000,316	100.0	1,239,120	61.9	486,167	24.3	275,029	13.8
1967.....	2,189,294	100.0	1,362,938	62.3	523,683	23.9	302,673	13.8
1968.....	2,375,988	100.0	1,481,606	62.4	556,340	23.4	338,042	14.2
1969.....	2,633,917	100.0	1,640,964	62.3	606,675	23.0	386,278	14.7
1970.....	3,030,603	100.0	1,843,264	60.8	754,892	24.9	432,447	14.3
1971.....	3,563,084	100.0	2,004,534	56.3	1,098,440	30.8	460,110	12.9
1972.....	4,061,419	100.0	2,178,617	53.6	1,379,206	34.0	503,596	12.4
1973.....	5,103,129	100.0	2,513,545	49.3	1,998,018	39.2	591,566	11.6
1974.....	5,780,993	100.0	2,970,811	51.4	2,086,015	36.1	724,167	12.5
1975.....	6,597,767	100.0	3,421,688	51.9	2,324,351	35.2	851,728	12.9
1976.....	7,584,058	100.0	3,975,784	52.4	2,569,492	33.9	1,038,764	13.7
1977.....	8,630,466	100.0	4,628,695	53.6	2,750,416	31.9	1,251,355	14.5
1978.....	9,795,732	100.0	5,256,227	53.7	3,042,956	31.1	1,496,549	15.3
1979.....	12,027,271	100.0	6,156,997	51.2	4,022,091	33.4	1,848,183	15.4
1980.....	13,618,162	100.0	7,028,576	51.6	4,330,284	31.8	2,259,302	16.6
1981.....	15,053,959	100.0	7,876,064	52.3	4,595,205	30.5	2,582,690	17.2
1982.....	16,407,140	100.0	8,646,668	52.7	4,767,650	29.1	2,992,822	18.2
1983.....	17,575,336	100.0	9,265,303	52.7	5,060,858	28.8	3,249,170	18.5
1984.....	19,685,368	100.0	10,609,775	53.9	5,404,553	27.5	3,671,040	18.7

¹ Before 1959, excludes Alaska and Hawaii.

² Net cash and medical benefits paid by private insurance carriers under standard workers' compensation policies. Data from **Spectator: Insurance by States of Fire, Marine, Casualty, Surety, and Miscellaneous Lines**; published and unpublished reports of State insurance commissions; and A. M. Best Company.

³ Net cash and medical benefits paid by competitive and exclusive State funds and the Federal systems. Beginning 1970, includes Federal black lung benefits. Includes payment of supplemental pensions from general funds.

Compiled from State reports (published and unpublished) and from **Spectator: Insurance by States of Fire, Marine, Casualty, Surety, and Miscellaneous Lines** and the **Argus Fire, Casualty, and Surety Chart** (annual issues) and other insurance publications. For some funds, data for fiscal years.

⁴ Cash and medical benefits paid by self-insurers, plus the value of medical benefits paid by employers carrying workers' compensation policies that do not include the standard medical coverage. Estimated from available State data.

In 15 States, however, a worker with wages equal to those of the average worker in the State would not receive the 66⅔ percent replacement rate because of the State maximum. For instance, the average weekly wage in New York was about \$397 in 1984. Although the State used a 66⅔ percent replacement rate that would provide a weekly benefit of nearly \$265 to a worker

with average wages, application of the State's maximum would limit that payment to \$255 for an effective replacement rate of 64 percent (chart 4).

Although the imposition of a State maximum restricts compensation payments in some cases, most States have addressed benefit adequacy by implementing flexible maximums that increase annually based on the State's

average weekly wages. Much of the move toward flexible maximums occurred during the 1970's as States responded to the recommendation of the National Commission, establishing maximums at 100 percent or more of the average covered wage in the State. Without such automatic increases, benefit levels often failed to keep pace with wage increases, a common situation during the 1950's and 1960's.

Waiting Periods

The extent to which overall amount of wage loss is replaced under workers' compensation laws is also affected by the length of the waiting period in each State. The waiting period—usually set at 3, 5, or 7 days—is the length of time that must elapse between the date of the disability onset and the date on which benefits may be paid. Compensation payments are made retroactive to include the waiting period for persons whose disability lasts longer than the period specified in the State's workers' compensation law.

The length of the period varies from 5 days in Nevada and North Dakota to 6 weeks in Louisiana and Nebraska. Thus, if a worker in Nevada or North Dakota, for example, is disabled 21 days, compensation will be made for the entire period because the worker was paid retroactively for the 3-day waiting period. However, in Louisiana and Nebraska—each with 7-day waiting periods

and 6-week retroactive periods—the worker disabled for 21 days would not be compensated for the waiting period; instead, the worker would receive payment for 14 days of the period. This formula reduces the replacement rate from 66⅔ percent to 44-4/9 percent for a worker earning wages equal to the State's average weekly wage.

The effect of waiting-period and retroactive-pay provisions as of January 1984 is shown in chart 4. A disability period of 3 weeks was selected because in 1984 workers lost an average of 17 workdays due to disability—a period roughly equivalent to 21 calendar days. For each State, total benefits payable for the first 3 weeks of a temporary total disability are related to the wages lost by a worker who had no dependents and who earned the State's average 1984 wage. As chart 4 indicates, Federal civilian workers and workers in 29 States and the District of Columbia receive at least two-thirds of their weekly wages when disabled for a 3-week period although in 10 States, the ratio of weekly benefits to average weekly wages dropped below 50 percent.

Employer Costs

The cost of workers' compensation to employers consists of several components. In addition to benefit costs (commonly referred to as "pure premium"), overhead costs are also reflected in the premium rates (or their

Chart 3.—Total benefits as a percent of payrolls in covered employment, by jurisdiction, 1984

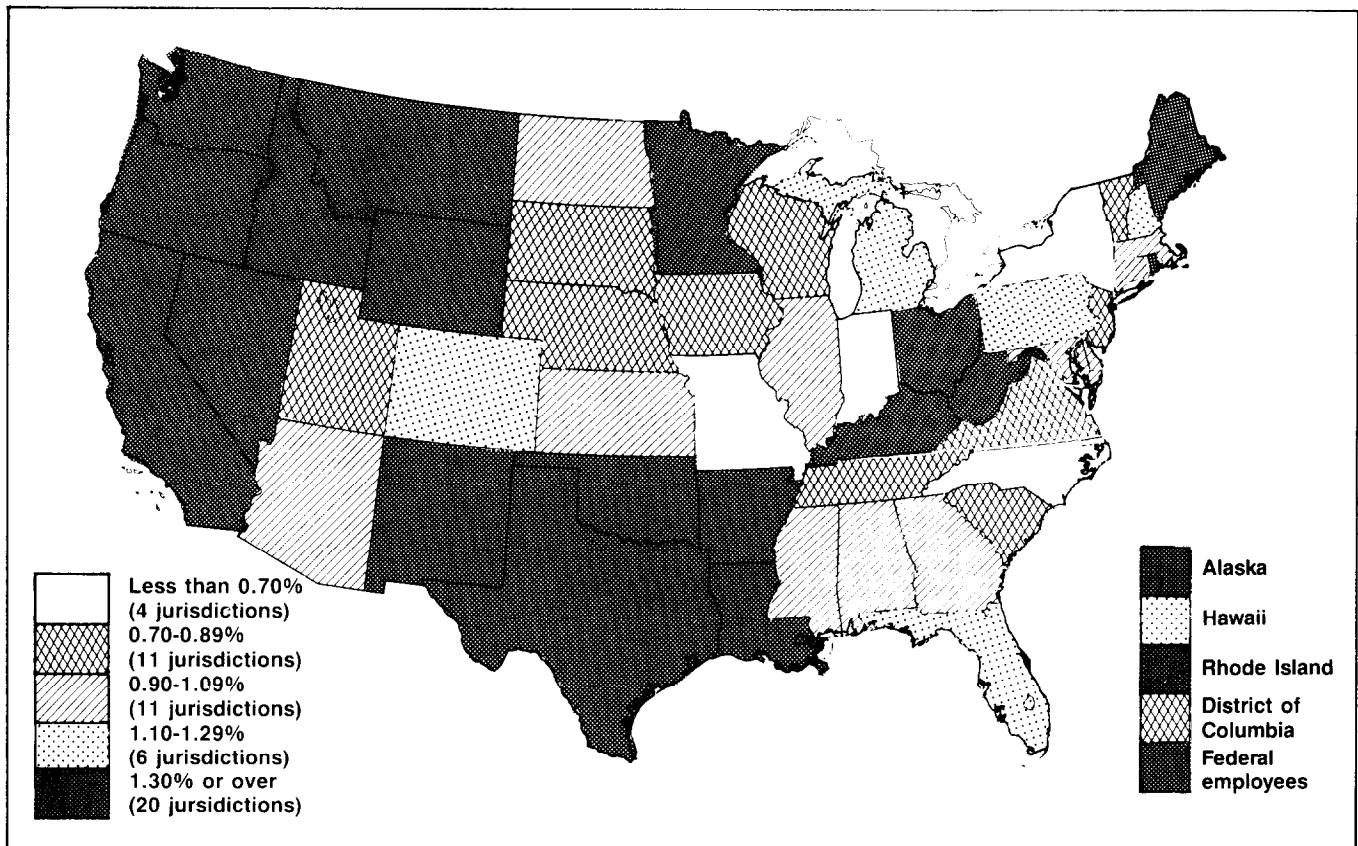


Table 6.—Aggregate benefit payments as percent of payroll in covered employment and occupational disability incidence rates in manufacturing and in nonfarm private industry, by selected years, 1940–84 ¹

Year	Benefits as percent of payroll ²	Manufacturing, average number of—		Nonfarm private industry, average number of—	
		Lost workday cases ³	Lost workdays per lost workday case	Lost workday cases ³	Lost workdays per lost workday case
1940.....	0.72	15.3	(4)	(4)	(4)
1946.....	.54	19.9	(4)	(4)	(4)
1948.....	.51	17.2	(4)	(4)	(4)
1949.....	.55	14.5	(4)	(4)	(4)
1950.....	.54	14.7	(4)	(4)	(4)
1951.....	.54	15.5	(4)	(4)	(4)
1952.....	.55	14.3	(4)	(4)	(4)
1953.....	.55	13.4	(4)	(4)	(4)
1954.....	.57	11.5	(4)	(4)	(4)
1955.....	.55	12.1	(4)	(4)	(4)
1956.....	.55	12.0	(4)	(4)	(4)
1957.....	.56	11.4	(4)	(4)	(4)
1958.....	.58	⁵ 11.4	(4)	(4)	(4)
1959.....	.58	12.4	(4)	(4)	(4)
1960.....	.59	12.0	(4)	(4)	(4)
1961.....	.61	11.8	(4)	(4)	(4)
1962.....	.62	11.9	(4)	(4)	(4)
1963.....	.62	11.9	(4)	(4)	(4)
1964.....	.63	12.3	(4)	(4)	(4)
1965.....	.61	12.8	(4)	(4)	(4)
1966.....	.61	13.6	(4)	(4)	(4)
1967.....	.63	14.0	(4)	(4)	(4)
1968.....	.62	14.0	(4)	(4)	(4)
1969.....	.62	14.8	(4)	(4)	(4)
1970.....	.66	15.2	(4)	(4)	(4)
1971.....	.67	⁶ 4.3	⁶ 13	⁶ 3.7	⁶ 13
1972.....	.68	4.2	15	3.3	14
1973.....	.70	4.5	15	3.4	15
1974.....	.75	4.7	15	3.5	16
1975.....	.83	4.5	17	3.3	17
1976.....	.87	4.8	16	3.5	17
1977.....	.92	5.1	16	3.8	16
1978.....	.94	5.6	15	4.1	16
1979.....	1.01	5.9	15	4.3	16
1980.....	1.07	5.4	16	4.0	17
1981.....	1.08	5.1	16	3.8	16
1982.....	1.16	4.4	17	3.5	17
1983.....	1.17	4.3	17	3.4	17
1984.....	1.21	4.7	17	3.7	17

¹ Before 1959, excludes Alaska and Hawaii.

² Excludes benefits financed from general funds, primarily most of the Federal Black Lung benefits program.

³ Per 100 full-time workers, beginning 1971. Data for 1940–70 are the average number of disabling work injuries per million employee-hours worked.

⁴ Data not available. Before 1971, the manufacturing series related days lost to hours worked among all workers.

⁵ Beginning 1958, series based on revised Standard Industrial Classification Manual. Comparable 1958 figure under earlier series was 10.8.

⁶ Data for July–December.

Source: Work-injury rates derived from published and unpublished data from the Bureau of Labor Statistics, Department of Labor.

equivalent) that employers pay to insure or self-insure the risk of work injury. These overhead costs include the expenses of policywriting, ratemaking, payroll auditing, claims investigation and adjustment, safety inspection,

legal and medical services, and general administration. The cost of insurance provided by commercial carriers also includes acquisition charges (commissions and brokerage fees), taxes and license fees, and allowances for underwriting profit. These costs vary from one employer to another depending on industrial classification, industry hazards, and the prevalence of high risk groups within the work force. Insurance costs also vary from one State to another, influenced, in part, by State statutory benefit provisions.

Employer costs exceeded \$25.1 billion in 1984 (table 7). This amount is an increase of 9 percent over the previous year and is nearly 13 percent higher than employer costs in 1980. In sharp contrast to these modest increases of the 1980's, employer costs rose fivefold from 1969 to 1980. The earlier period was characterized by inflationary pressures on wages and medical costs and the rapid expansion of program coverage and benefit provisions. More recently, employers and State regulators have worked to contain costs following the decline in benefit growth during the 1977-82 period.

The inflationary impact on employer costs can be eliminated partially by examining the relationship of premium costs to the payrolls of workers covered under the workers' compensation program. During the 1960's, this ratio moved slowly upward from 0.93 percent to 1.08 percent, accelerating during the 1970's from 1.11 percent to 1.95 percent. Costs in 1980 reached a plateau of 1.96 percent of payroll but subsequently declined to 1.66 percent in 1984 as cost containment efforts became effective.

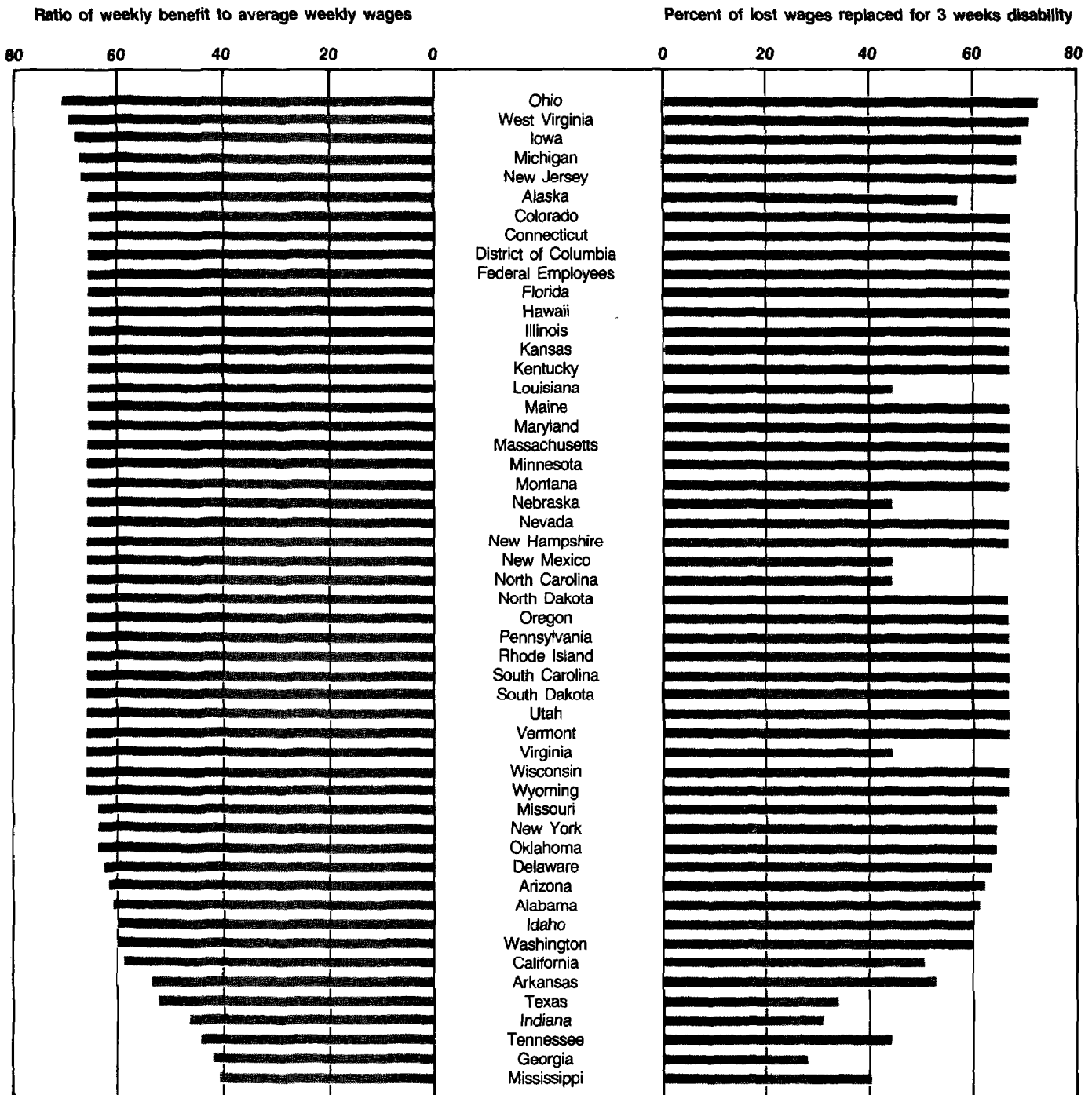
Loss and Expense Ratios

The effectiveness of workers' compensation programs in providing income-maintenance protection to disabled workers can be measured by relating benefits to employer costs. This "loss" ratio or benefit cost indicates the proportion of each premium dollar that is returned to the worker as cash or medical benefits. As the following tabulation shows, in 1984 about 73 percent of all employer costs were returned to workers as benefits, the highest percentage since the series began in 1950.

Year	Costs ¹ (in millions)	Benefit payments	
		Amount ¹ (in millions)	As percent of costs
1950.....	\$1,013	\$615	60.7
1960.....	2,055	1,295	63.0
1970.....	4,894	2,889	59.0
1980.....	22,256	12,107	54.4
1981.....	23,014	13,523	58.8
1982.....	22,765	15,151	66.6
1983.....	23,048	16,231	70.4
1984.....	25,122	18,399	73.2

¹ Benefits and costs for 1970 and later are the net of the amounts financed by general revenues (primarily Federal black lung benefits and supplemental payments made by a few States).

Chart 4.—Measures of interstate variation: Weekly benefit payable for temporary total disability as a percent of average weekly wage, 1984, and percent of lost wages replaced for worker with 1984 average weekly wage for temporary total disability lasting 3 weeks, January 1984¹



¹Maximum weekly benefit for worker without eligible dependents; average wage for workers covered by unemployment insurance program.

The loss ratio fluctuated in the 50-60 percent range during the 1970's and then increased to almost 67 percent in 1982 and to more than 70 percent in 1983. This increase in the percentage reflects stability in program costs during the early 1980's—a sharp contrast with the previous decade when insurers increased premiums to compensate for program changes and inflation.

This loss ratio reflects the combined experience of all types of insurers, and it must be applied carefully. The overall ratio of 73.2 percent in 1984 conceals wide variations in ratios for different types of insurers. For example, the ratio for self-insurers and the Federal employees' program is 90-95 percent because the computation is based on payments made during the year plus an

Table 7.—Estimated costs of workers' compensation to employers as percent of payroll in covered employment, by selected years, 1940-84

Year	Amount ¹ (in millions)	Percent of payroll
1940.....	\$421	1.19
1946.....	726	.91
1948.....	1,013	.96
1949.....	1,009	.98
1950.....	1,013	.89
1951.....	1,185	.90
1952.....	1,333	.94
1953.....	1,483	.97
1954.....	1,499	.98
1955.....	1,532	.91
1956.....	1,666	.92
1957.....	1,734	.91
1958.....	1,746	.91
1959.....	1,869	.89
1960.....	2,055	.93
1961.....	2,156	.95
1962.....	2,323	.96
1963.....	2,510	.99
1964.....	2,713	1.00
1965.....	2,908	1.00
1966.....	3,279	1.02
1967.....	3,655	1.07
1968.....	4,034	1.07
1969.....	4,460	1.08
1970.....	4,894	1.11
1971.....	5,191	1.11
1972.....	5,832	1.14
1973.....	6,771	1.17
1974.....	7,881	1.24
1975.....	8,977	1.32
1976.....	11,140	1.49
1977.....	14,151	1.71
1978.....	17,191	1.86
1979.....	20,330	1.95
1980.....	22,256	1.96
1981.....	23,014	1.85
1982.....	22,765	1.75
1983.....	23,048	1.67
1984.....	25,122	1.66

¹ Premiums written by private carriers and State funds and benefits paid by self-insurers increased by 5-10 percent to allow for administrative costs. Also includes benefit payments and administrative costs of Federal system. Where necessary, fiscal year data converted to calendar year data. Before 1959, excludes Alaska and Hawaii. Excludes costs of benefits financed from general funds, primarily most of the Federal Black Lung benefits program.

estimate of administrative expenses. For private carriers and some State funds, costs may be overstated (and thus the loss ratio understated) because dividends are not taken into account. These dividends may be considered as part of the premium that is later returned to the employers.

For private insurers and State funds, a loss ratio based on losses (benefits) paid during the year is lower than one based on losses (benefits) incurred. Incurred losses reflect large amounts of premium income that must be set aside to pay future benefits at a time when the statutory maximums will be higher. These losses invariably will be greater than current payments for cases from earlier years when wages and compensation were lower. This difference between incurred and paid losses becomes especially large in a period when insured

payrolls are rising rapidly, requiring that statutory maximums be adjusted accordingly.

Private insurers. In 1984, the loss ratio based on actual losses paid by private insurers was 63.8 percent (table 8). This ratio has increased significantly since 1979 when such losses represented 43.0 percent of premiums written.

The loss ratio based on incurred losses and earned premiums is commonly used by insurance companies for evaluating and adjusting premium rates. As indicated in table 8, the loss ratio based on incurred losses exceeded the ratio based on actual losses paid in 1950-70, usually

Table 8.—Comparative ratios of benefits to premiums, private carriers, 1950-84 ¹

Year	[Amounts in millions]					
	Direct premiums written in relation to losses (benefits) paid ²			Premiums earned in relation to losses (benefits) incurred ⁴		
	Direct premiums written ³	Direct losses paid	Loss ratio	Premiums earned ¹	Losses incurred	Loss ratio
Total ..	\$184,183.7	\$95,525.7	51.9	\$164,836.3	\$114,753.5	69.6
1950.....	721.5	381.3	52.8	696.6	427.7	61.4
1951.....	844.5	444.4	52.6	789.9	518.5	65.6
1952.....	956.3	491.0	51.3	903.7	371.9	63.3
1953.....	1,074.1	524.2	48.8	1,010.6	605.4	59.9
1954.....	1,067.3	540.5	50.6	1,010.8	561.4	55.5
1955.....	1,078.4	562.5	52.2	1,027.9	594.3	57.8
1956.....	1,152.8	618.1	53.6	1,103.4	649.3	58.8
1957.....	1,234.1	660.9	53.6	1,173.5	706.7	60.2
1958.....	1,235.0	694.4	56.2	1,193.9	746.6	62.5
1959.....	1,322.5	752.6	56.9	1,271.4	821.7	64.6
1960.....	1,452.3	809.9	55.8	1,367.9	874.2	63.9
1961.....	1,530.9	850.9	55.6	1,434.0	930.8	64.9
1962.....	1,651.1	924.0	56.0	1,562.6	982.1	62.8
1963.....	1,782.3	987.6	55.4	1,671.3	1,071.7	64.1
1964.....	1,924.8	1,069.6	55.6	1,827.8	1,153.4	63.1
1965.....	2,074.4	1,124.0	54.2	1,966.6	1,236.4	62.9
1966.....	2,366.4	1,239.1	52.4	2,229.4	1,412.8	63.4
1967.....	2,640.2	1,362.9	51.6	2,500.4	1,584.7	63.4
1968.....	2,940.0	1,481.6	50.4	2,796.9	1,727.2	61.8
1969.....	3,255.0	1,641.0	50.4	3,089.9	1,930.3	62.5
1970.....	3,578.4	1,843.3	51.5	3,356.5	2,124.3	63.3
1971.....	3,749.3	2,004.5	53.5	3,516.3	2,396.3	68.1
1972.....	4,180.6	2,178.6	52.1	3,887.4	2,704.0	69.6
1973.....	4,868.7	2,513.5	51.6	4,523.7	3,113.4	68.8
1974.....	5,602.0	2,970.8	53.0	5,174.9	3,725.7	72.0
1975.....	6,343.8	3,421.7	53.9	5,747.7	4,275.6	74.4
1976.....	7,832.2	3,975.8	50.8	6,909.8	5,434.7	78.7
1977.....	9,919.6	4,628.7	46.7	8,841.0	6,913.9	78.2
1978.....	12,154.6	5,256.2	43.2	10,243.7	7,650.5	74.7
1979.....	14,329.5	6,157.0	43.0	12,307.7	8,660.0	70.4
1980.....	15,743.5	7,028.3	44.6	13,608.0	9,173.8	67.4
1981.....	16,163.7	7,876.0	48.7	13,990.7	9,276.1	66.3
1982.....	15,397.9	8,646.7	56.2	13,544.5	8,688.2	64.1
1983.....	15,383.9	9,265.3	60.2	13,669.1	9,535.5	69.8
1984.....	16,632.1	10,609.8	63.8	14,886.8	11,974.4	80.4

¹ Before 1959, excludes Alaska and Hawaii.

² Data for 1950-58 from *Spectator: Insurance by States* (annual issues). Data for 1959-66 compiled from published and unpublished reports of the State insurance commissions. Beginning 1967, data from A. M. Best Company.

³ Excludes premium discounts and retrospective adjustments but not dividends.

⁴ From National Council on Compensation Insurance, *Insurance Expense Exhibit (Countrywide)*, annual issues.

by 5-15 percentage points. This difference widened in the 1970's, however, and exceeded 25 percent, on average, in 1975-79, when uncertainty over benefits and cost levels accelerated estimates of losses to be paid in future years. The spread between the two ratios averaged less than 13 percentage points during the 1981-84 period as the amount of losses paid increased much more rapidly than the amount of incurred benefits—50 percent to 30 percent from 1980 to 1984.

Most workers' compensation insurance is underwritten by stock and mutual companies. The experience of these two types of companies is shown in table 9, reflecting premium amounts paid by employers to cover benefits as well as the insurers' operating expenses and their margin of profit. However, comparisons of the ratios of benefits and expenses to premiums for these companies must be made cautiously because their operating methods differ.

Nonparticipating stock companies distribute profits to their stockholders, for example, while participating stock companies and mutual companies make such distributions to policyholders in the form of dividends. In 1984, these dividends totaled 8.8 percent of premiums for stock companies and 13.4 percent of premiums for mutual companies, according to data furnished by the National Council on Compensation Insurance. In computing the 1984 loss ratio, incurred losses would represent 88.5 percent of premiums for stock companies and 92.1 percent of premiums for mutual companies—if these dividends are subtracted from premiums earned. Excluding the impact of such dividends from the computation, the loss ratio was about 80 percent for both types of insurers.

The gap between the expense ratios—the ratio of expenses to premiums—of both stock and mutual companies has remained steady in recent years. During the

Table 9.—Countrywide workers' compensation experience of stock and mutual companies, 1939-84

[Amounts in thousands]

Year ¹	Premiums earned	Losses (benefits) incurred	Loss ratio	Expenses incurred	Expense ratio	Net gain ratio ²
Stock companies ³						
1939-47.....	\$1,934,554	\$1,110,676	57.4	\$733,512	37.9	4.7
1948-56.....	3,920,104	2,318,171	59.1	1,403,189	35.8	5.1
1957-64.....	6,131,817	3,924,643	64.0	2,119,200	34.6	1.5
1965-68.....	6,217,537	3,936,791	63.3	1,948,892	31.3	5.4
1969-72.....	9,576,112	6,367,446	66.5	2,872,614	30.0	3.5
1973-76.....	16,144,093	12,184,220	75.5	4,688,766	29.0	-4.5
1977-80.....	32,681,083	23,944,724	73.3	9,103,100	27.9	-1.1
1981-84.....	42,753,532	30,186,537	70.6	13,280,221	31.1	-1.7
1977.....	6,322,192	5,018,125	79.4	1,762,175	27.9	-7.2
1978.....	7,346,313	5,607,891	76.3	2,009,008	27.3	-3.7
1979.....	8,926,651	6,391,313	71.6	2,534,473	28.4	0
1980.....	10,085,927	6,927,395	68.7	2,797,444	27.7	3.6
1981.....	10,488,700	6,982,458	66.6	3,082,011	29.4	4.0
1982.....	10,262,628	6,597,691	64.3	3,147,151	30.7	5.1
1983.....	10,477,917	7,306,542	69.7	3,386,050	32.3	-2.1
1984.....	11,524,287	9,299,846	80.7	3,665,009	31.8	-12.5
Mutual companies ³						
1939-47.....	\$1,200,334	\$684,948	57.1	\$273,267	22.8	20.1
1948-56.....	2,614,500	1,533,125	58.6	626,992	24.0	17.4
1957-64.....	3,421,181	2,140,765	62.6	891,391	26.1	11.3
1965-68.....	2,979,624	1,846,522	62.0	759,943	25.5	12.5
1969-72.....	3,926,109	2,556,717	65.1	991,898	25.3	9.6
1973-76.....	5,573,957	3,871,636	69.5	1,350,577	24.2	6.3
1977-80.....	11,441,993	7,852,408	68.6	2,427,286	21.2	10.2
1981-84.....	12,555,600	8,782,528	70.0	3,244,703	25.8	4.2
1977.....	2,262,580	1,678,476	74.2	469,017	20.7	5.1
1978.....	2,700,827	1,922,687	71.2	560,684	20.7	8.1
1979.....	3,154,631	2,120,470	67.2	681,600	21.6	11.2
1980.....	3,323,955	2,130,775	64.1	715,985	21.5	14.4
1981.....	3,313,687	2,182,501	65.9	790,322	23.9	10.3
1982.....	3,083,811	1,984,021	64.3	803,978	26.0	9.6
1983.....	2,994,469	2,095,166	70.0	790,381	26.4	3.6
1984.....	3,163,633	2,520,840	79.7	860,022	27.3	-6.9

¹ Annual figures for 1939-76 previously published in workers' compensation articles that appeared in the *Social Security Bulletin* in March 1954, August 1958, October 1966, October 1970, October 1974, May 1979, and July 1984.

² Underwriting gains before dividends to stockholders and policyholders; excludes investment income.

³ Disregards dividends to policyholders; if taken into account, dividends would result in higher loss and expense ratios.

Source: Data for 1939-64 are compiled from annual reports of the New York State Insurance Department and from the annual casualty-surety editions of the *Eastern Underwriter* and refer to countrywide business of private carriers operating in the State of New York (representing about 80 percent of all business underwritten for United States employers by insurance companies). Beginning 1965, data are from annual issues of National Council on Compensation Insurance, *Insurance Expense Exhibit (Countrywide)* and refer to countrywide business of all private carriers operating in the United States.

1939-47 period, the expense ratio for stock companies was 15 percentage points higher than that of mutual companies, but by the 1969-72 period, the difference between the expense ratios of the two companies had narrowed to less than 5 points, where it has generally remained. As with the loss ratio, the consideration of dividends is important when evaluating the expense ratio. For instance, if dividends are subtracted from premiums earned, the expense ratio would be 34.9 percent for stock companies and 31.4 percent for mutual companies. Without consideration of the dividends, in 1984 incurred expenses were 31.8 percent for stock companies, compared with 27.3 percent for mutual companies.

The net gain ratio—expressed as the relationship of underwriting gains before payment of dividends to total premiums—is also shown in table 9. The workers' compensation area has generally been less profitable for stock than mutual companies (largely due to inflation) although 1984 was a difficult year for both, as stock and mutual companies recorded underwriting losses of 12.5 percent and 6.9 percent, respectively. The loss in 1984 was the first for mutual companies in the 45 years of this series. During the 1981-84 period, stock companies experienced a loss measured by a net gain ratio of -1.7 percent while mutual companies experienced a drop from 10.2 percent (in 1977-80) to 4.2 percent (in 1981-84). This change reversed a series of annual increases in 1977-80. These data on underwriting gains and losses do not include investment income (earned by companies), an important source of profit because such investment returns on future benefit reserves can be substantial.

The detailed expenses incurred by private insurance companies in administering the workers' compensation program are reflected in table 10. In the past, these expenses have been highest for stock companies whose policies have been sold through independent agents, resulting in higher commission costs, than commissions to the employees of mutual companies who sell their own policies. Administrative expenses for mutual companies were 27.3 percent in 1984, compared with 31.0 percent for participating stock companies and 32.5 percent for nonparticipating companies.

State funds. Nineteen States have currently established publicly operated funds to meet the insurance requirements of the State program. In six of these States, the public fund is the exclusive insurance provider; in the additional 13 States, the public fund operates in competition with private insurers.

For the State funds, the ratios of benefits to premiums are noticeably higher than for private carriers. Financial data for these public funds, shown in table 11, indicate that the loss ratio rebounded from a low of about 50 percent in the 1977-78 period to 90.4 percent in 1983, before declining to 87.6 percent in 1984. Among private carriers, the loss ratio was also at a low point (43.1 percent) during 1978-79, although it increased steadily to reach

63.8 percent in 1984 (table 8). Even though the differential has been higher in recent years, the loss ratio for the State funds generally has been 15-20 percentage points higher than that for private carriers.

Several operational factors contribute to the higher loss ratios among State funds. First, the premium income received by State funds usually reflects changes in dividends and rates. Second, the difference between actual and anticipated cost of insurance for private carriers (especially mutual companies) is usually reflected in dividends that are returned to policyholders—dividends that are not taken into account in the ratios shown in table 8.

The higher loss ratio for State funds can also be attributed to their lower cost. Some State funds are not required to cover allowances for items such as maintaining reserves, publicly financed administrative and legal services, taxes, special assessments, and profits, which are generally included in the costs of private companies. Finally, States often incur higher losses (pay more benefits) because they insure a higher-risk segment of the work force, many of whom cannot obtain insurance with private carriers.

Administrative expenses of State funds dropped to 15.5 percent in 1984, declining from a high of 16.7 percent in 1983. These expenses represented 12.6 percent of the premiums written in 1970 but dropped to 8.0 percent in 1978 before increasing to a level of about one-half that of private carriers in 1984. The expense ratio of stock and mutual companies shows a similar pattern (table 9) even though such comparisons are not entirely valid because the latter is based on earned premiums rather than written premiums.

The primary contributor to the gap between the administrative costs of public and private carriers relates to their operational differences. Acquisition costs are a major expense consideration for private carriers that must compete for new business, for example, but such costs are of minor concern for competitive State funds and virtually of no concern for exclusive State funds. Other items such as taxes are absorbed by other government departments and thus are of minimal consequence in the administrative expenses of State funds, compared with private insurers.

Appendix: Workers' Compensation Benefits

State Data Collection

Generally, employers furnish workers' compensation protection to their employees by buying a policy with a commercial insurance company or—in 19 States—through a public fund. Alternatively, in all but three States, they may self-insure the risk. Regulatory agencies supervise

Table 10.—Administrative expenses incurred as percentage of net premiums earned,¹ by category of expense and major type of private carrier, selected years, 1950–84²

Year	Total	Investigation and adjustment of claims	Acquisition, field supervision, and collection expenses ³	Taxes, licenses, and fees	Safety inspection and engineering	Payroll audit	Other ⁴
Nonparticipating stock companies							
1950.....	40.9	10.3	17.4	3.8	1.6	2.7	5.1
1955.....	36.5	8.7	15.8	3.5	1.4	2.3	4.8
1960.....	36.9	9.4	15.4	3.6	1.2	1.9	5.4
1965.....	34.6	8.9	14.5	3.7	1.1	1.4	5.0
1970.....	30.9	8.5	12.0	3.8	1.0	1.0	4.6
1975.....	30.8	8.3	11.7	4.1	(5)	(5)	6.7
1976.....	29.7	8.5	10.9	4.0	(5)	(5)	6.3
1977.....	29.5	9.3	10.4	3.8	(5)	(5)	6.0
1978.....	28.8	8.6	10.2	3.9	(5)	(5)	6.1
1979.....	29.3	9.4	9.7	3.8	(5)	(5)	6.4
1980.....	28.9	8.8	10.2	3.6	(5)	(5)	6.3
1981.....	30.3	9.6	9.8	3.9	(5)	(5)	7.0
1982.....	31.0	9.3	9.8	4.0	(5)	(5)	7.9
1983.....	32.7	9.6	10.5	4.2	(5)	(5)	8.4
1984.....	32.5	10.2	10.2	4.3	(5)	(5)	7.8
Participating stock companies							
1950.....	28.6	8.2	11.5	2.4	1.1	1.1	4.3
1955.....	28.3	7.9	11.9	2.3	1.0	.9	4.3
1960.....	26.8	8.3	11.0	2.3	.7	.6	3.9
1965.....	25.1	8.1	9.9	2.3	.7	.6	3.5
1970.....	25.2	8.7	8.4	2.8	.6	.6	4.1
1975.....	24.7	8.1	7.4	4.1	(5)	(5)	5.1
1976.....	24.3	8.6	7.4	4.0	(5)	(5)	4.3
1977.....	24.3	9.3	6.7	3.8	(5)	(5)	4.5
1978.....	24.6	10.0	5.8	3.9	(5)	(5)	4.9
1979.....	26.7	9.2	7.6	4.2	(5)	(5)	5.7
1980.....	25.6	7.9	8.3	3.8	(5)	(5)	5.6
1981.....	28.1	8.5	9.1	4.1	(5)	(5)	6.4
1982.....	30.3	9.0	9.9	4.0	(5)	(5)	7.4
1983.....	31.8	9.0	10.9	4.3	(5)	(5)	7.6
1984.....	31.0	9.4	10.4	4.3	(5)	(5)	6.9
Mutual companies							
1950.....	25.0	8.0	7.4	3.1	2.3	1.2	3.0
1955.....	25.0	7.7	7.5	2.8	2.3	1.1	3.6
1960.....	25.6	8.3	7.4	3.0	2.2	1.0	3.7
1965.....	26.6	8.9	7.4	3.5	2.1	1.0	3.7
1970.....	24.0	8.1	6.4	3.6	1.8	.9	3.2
1975.....	24.6	8.3	6.5	4.1	(5)	(5)	5.7
1976.....	22.5	8.2	5.3	3.9	(5)	(5)	5.1
1977.....	20.7	8.1	4.6	3.7	(5)	(5)	4.4
1978.....	20.7	8.5	3.9	3.8	(5)	(5)	4.5
1979.....	21.6	9.0	4.3	3.7	(5)	(5)	4.6
1980.....	21.5	8.2	4.5	3.5	(5)	(5)	5.3
1981.....	23.9	8.5	5.4	3.8	(5)	(5)	6.2
1982.....	26.0	8.8	6.5	4.2	(5)	(5)	6.5
1983.....	26.4	8.4	6.9	4.4	(5)	(5)	6.7
1984.....	27.3	9.1	7.2	4.4	(5)	(5)	6.6

¹ Net premiums earned excludes premium discounts and retrospective adjustments but not dividends.

² Before 1959, excludes Alaska and Hawaii.

³ Includes commission and brokerage expenses.

⁴ Includes general administration and rating bureau expenses. Beginning

1972, data include safety inspection and payroll audit costs.

⁵ Included in "other."

Source: National Council on Compensation Insurance, **Insurance Expense Exhibit (Countrywide)**, annual issues.

the administration of the law; State insurance commissions monitor the insurance and self-insurance regulations. Few States have a coordinated workers' compensation program operated directly by one public agency.

Because most States are not directly involved in setting rates, collecting premiums, administering claims, and paying benefits, they are not in a position to gather the type of data that are the byproducts of other social in-

Table 11.—Benefit payments and administrative expenses in relation to premiums written, 18 State funds, 1950-84¹

[Amounts in millions]

Year	Premiums written ²	Benefits paid ³		Administrative expenses ⁴	
		Amount	Percent of premiums	Amount	Percent of premiums
1950-63, total ..	\$4,222.3	\$3,053.2	72.3	\$388.4	9.2
1950.....	172.1	126.7	73.6	16.5	9.6
1951.....	204.9	140.9	68.3	18.6	9.1
1952.....	228.6	158.3	69.2	20.4	8.9
1953.....	250.1	170.4	68.1	21.9	8.8
1954.....	265.9	183.2	68.9	24.1	9.1
1955.....	279.6	192.6	68.9	24.4	8.7
1956.....	324.3	209.5	64.6	26.0	8.0
1957.....	300.8	216.7	72.0	26.3	8.7
1958.....	302.4	225.9	74.7	29.6	9.8
1959.....	328.4	247.6	75.4	31.2	9.5
1960.....	366.9	266.0	72.5	33.6	9.2
1961.....	370.7	287.0	77.4	36.0	9.7
1962.....	394.8	307.8	78.0	38.4	9.7
1963.....	432.8	320.6	74.1	41.4	9.6
1964-84, total ..	33,180.4	22,600.7	68.1	3,919.1	11.8
1964.....	469.8	337.4	71.8	57.9	12.3
1965.....	493.9	351.3	71.1	61.3	12.4
1966.....	531.9	374.2	70.4	66.0	12.4
1967.....	591.8	394.6	66.7	68.9	11.6
1968.....	621.7	415.4	66.8	76.4	12.3
1969.....	664.2	450.2	67.8	81.5	12.3
1970.....	698.9	487.1	69.7	87.8	12.6
1971.....	775.9	539.4	69.5	96.4	12.4
1972.....	899.1	608.2	67.6	108.3	12.0
1973.....	1,014.2	720.2	71.0	121.7	12.0
1974.....	1,171.2	850.9	72.7	139.2	11.9
1975.....	1,283.1	977.9	76.2	142.7	11.1
1976.....	1,665.8	1,092.1	65.6	159.4	9.6
1977.....	2,297.1	1,169.7	50.9	191.0	8.3
1978.....	2,754.2	1,363.7	49.5	221.6	8.0
1979.....	2,999.4	1,592.1	53.1	252.6	8.4
1980.....	3,008.2	1,824.0	60.6	302.4	10.1
1981.....	2,900.0	2,024.3	69.8	360.4	12.4
1982.....	2,640.3	2,160.7	81.8	407.0	15.4
1983.....	2,694.6	2,435.6	90.4	449.7	16.7
1984.....	3,005.1	2,631.7	87.6	466.9	15.5

¹ For some States, fiscal year data have been converted to calendar year data.

² Disregards dividends to policyholders but allows for premium discounts.

³ Excludes payment of supplemental pensions from general revenues.

⁴ Excludes loss-adjustment expenses for certain competitive State funds before 1964. Includes administrative expenses financed through appropriations from general revenues, generally not separable.

Source: *Spectator: Insurance by States* (annual issues); *Argus Fire, Casualty, and Surety Chart* (annual issues); and State reports.

insurance programs. For example, less than one-third of the States collect data on the number of covered workers or the amount of covered payrolls under workers' compensation. About one-half of the States do not publish basic data on the amount of benefits paid either by the type of insurance or the type of benefit. Over a number of years, the Social Security Administration (SSA), therefore, developed procedures to estimate various key indicators to monitor the experience under workers' compensation.

Estimating Procedures

Coverage. One method for evaluation of a national social insurance program such as workers' compensation is to examine the number of workers protected, especially in relation to the work force. Because coverage data are not available from program operations as they are for Social Security and many other public income-maintenance programs, SSA needed to develop a methodology for estimating the number of covered workers.

Information compiled by insurance companies and used as the basis for these coverage estimates is based on policy years that generally overlap calendar years. Such data cannot be fully evaluated until the end of the policy year. A time lag in the availability of converted calendar-year data is therefore inevitable. The estimating methodology developed by SSA provides benchmark estimates for workers covered in an average month in the latest full calendar year for which private carrier coverage estimates can be computed. The benchmark estimates presented here are for calendar years 1981 and 1984, which reflect the usual 4-year update cycle. As new benchmark figures are developed, coverage estimates are also made for years between benchmarks and for years beyond the benchmark period. In this article, the employment trend data, adjusted by the estimated effects of legislative changes in coverage, are projected to provide national estimates of coverage for 1982-84, with individual State figures reported for 1984.

The coverage estimates are compiled by developing an estimated covered-payroll amount for each State and then converting this amount to the number of workers, based on the relationship between payroll and the number of workers covered under unemployment insurance.

The primary source of payroll data is the National Council on Compensation Insurance. For 1981, payroll data were reported by private insurance companies in 43 States and the District of Columbia. These policy year payroll figures were converted to calendar year payroll estimates by SSA and were supplemented with payroll estimates for both self-insurers and State funds. Figures for the latter are obtained from State administrative agencies and various other sources.

The average monthly number of workers covered by the workers' compensation program in each State can then be estimated. This figure is much smaller than the total number of individuals covered at any particular time in the year. The estimates include all employees of firms that actually carry workers' compensation insurance or firms that submit the required proof of financial ability to self-insure, as well as employees of self-insured State and local government agencies (regardless of whether or not State law requires proof of financial security to self-insure). Employees of firms that voluntarily purchase workers' compensation insurance are also included

because they cannot be separated from employees of firms that are required to insure.

This method of estimating coverage has the advantage of being applicable to all States on a uniform basis. The primary data are compiled from national sources such as the National Council on Compensation Insurance and the unemployment insurance program, and the concept of coverage is applied uniformly in each State.

The State totals also include an estimate of the number of workers covered by the Longshore and Harbor Workers' Compensation Act, practically all of whom are insured by private carriers. The number of Federal workers covered under the Federal Employees' Compensation Act is estimated separately and is not distributed among the States. The estimates exclude railroad workers in interstate commerce and seamen in the United States Merchant Marine who are covered by statutory provisions for employer liability rather than by a workers' compensation law.

Benchmark coverage figures for 1981 and coverage projections through 1984 are shown, by State, in table 12. Differences in coverage levels from one period to another and the difference in levels from State to State are a combination of several factors, including statutory changes, labor-force trends, and variations in the quality of available data. The National Council on Compensation Insurance payroll data now include additional States and improved techniques for estimating coverage are available for some States. Nevertheless, the estimates are not uniformly good. Obtaining data on coverage by self-insured firms is especially difficult in a number of States.

Benefits. The benefit estimates in tables 2, 3, and 5 are for actual cash payments and for the cost of medical care provided in a calendar year. That is, the SSA series is for direct losses paid, rather than incurred losses. The data are a composite of payments by type of insurance. Private carrier benefits are compiled by the A. M. Best Company, a national data collection agency for private insurance.

Payments made through State funds are primarily from published and unpublished reports of the State funds and, in some cases, from the National Underwriter Company and other secondary sources. Since 1970, benefits under the Federal Black Lung benefits program have been included in this series. These data are obtained from administrative records of the Social Security Administration and the Department of Labor.

The SSA estimates of benefits paid by self-insurers are obtained from a variety of sources. When available, current benefit information from State agencies is used. Alternatively, estimates are derived from program statistics other than actual benefit payments, such as the number of closed cases or assessments paid, by type of insurer. As part of the procedure for developing the benchmark revisions in this article, SSA requests that the

State agencies review estimates for self-insurance benefits and for other benefit and coverage data. This procedure is used to update and improve available information. A new source of information has emerged in the past few years to help estimate self-insurance benefits. The Supplemental Data System (SDS) is the result of a Federal-State cooperative program of the Bureau of Labor Statistics. It provides standardized occupational injury

Table 12.—Estimated average monthly number of wage and salary workers covered by workers' compensation, 1981 and 1984

[Numbers in thousands]		
State	1981	1984
Total	78,316	81,909
Alabama	955	990
Alaska	139	172
Arizona	830	950
Arkansas	595	625
California	9,400	9,940
Colorado	1,020	1,100
Connecticut	1,240	1,310
Delaware	185	200
District of Columbia	371	382
Florida	2,950	3,330
Georgia	1,690	1,900
Hawaii	384	389
Idaho	265	270
Illinois	3,860	3,910
Indiana	1,610	1,660
Iowa	945	940
Kansas	795	805
Kentucky	910	925
Louisiana	1,120	1,100
Maine	400	420
Maryland	1,340	1,430
Massachusetts	2,070	2,280
Michigan	2,900	2,900
Minnesota	1,520	1,580
Mississippi	605	610
Missouri	1,635	1,700
Montana	230	235
Nebraska	555	565
Nevada	355	370
New Hampshire	350	390
New Jersey	2,730	2,970
New Mexico	375	400
New York	6,110	6,360
North Carolina	2,020	2,230
North Dakota	208	212
Ohio	3,860	3,840
Oklahoma	875	865
Oregon	895	890
Pennsylvania	4,190	4,140
Rhode Island	310	320
South Carolina	930	990
South Dakota	175	184
Tennessee	1,210	1,260
Texas	3,710	4,160
Utah	475	515
Vermont	197	209
Virginia	1,880	2,050
Washington	1,470	1,470
West Virginia	540	510
Wisconsin	1,830	1,860
Wyoming	163	148
Federal employees	2,939	2,948

and illness data derived from State workers' compensation records. For several States, the number of cases reported is classified by type of insurer, which provides a useful tool for measuring the relationship of self-insurance to commercial insurance in these States. That relationship can be used to help in estimating the amount of self-insurance benefits paid.

Employer costs. Similar to the coverage and benefit measures, the calendar year totals for premium costs to employers shown in table 7 are assembled from data for each of the two types of insurance. Published and unpublished reports on premiums are available for private carrier and public funds. The cost for employers insured by private carriers is the sum of premiums written by all such carriers in each State (as reported by the A. M. Best Company).

State fund premium totals are derived from several sources. Some State funds publish annual reports; other

States obtain premium information from unpublished reports of the State fund or of the State insurance commission. Secondary sources also are relied on—including the annual **Argus Fire, Casualty, and Surety Chart** (published by the National Underwriter Company)—to obtain premium totals, in some instances. All State fund data reported on a fiscal year basis are converted to calendar year estimates to establish comparability among States.

An estimated 5-10 percent for the cost of administering self-insurance plans is added to self-insurance benefit payments to account for the administrative costs that employers pay directly or through taxes to cover the administrative costs of the State regulatory agency. This total produces a hypothetical premium for that sector. Total premium costs are estimated on a national basis only because no consistent method is currently available for deriving self-insurance premiums by State.