

# Workmen's Compensation: Coverage, Premiums, and Payments

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WORKMEN'S compensation, the first of the social insurances to be adopted in this country, plays a significant role in any evaluation of the scope and character of protection afforded by social security programs. Yet, until 10 years ago, most persons concerned with workmen's compensation in national perspective had given major attention to statistics on accidents and accident prevention and relatively little attention to the insurance protection features of the program. As a result there were no measurements on a Nation-wide basis of the number of persons actually protected by these laws, the number of beneficiaries, or the amount of benefits paid.

To fill what would otherwise have been a major gap in its series of payments under social insurance and related programs, the Bureau of Research and Statistics—now the Division of Research and Statistics—undertook the development of comparable Nation-wide statistics on workmen's compensation payments under each of the State and Federal programs. The annual estimates of payments have been published periodically in the *BULLETIN* and *YEAR-BOOK*. These data meet a need beyond that of the Social Security Administration as evidenced by their use by the National Income Division of the Department of Commerce in its income payments series, by the Subcommittee on Accident Costs of the President's Conference on Industrial Safety, and by various State workmen's compensation agencies that do not themselves obtain information on the total payments made under the laws they administer.

From time to time, the Division of Research and Statistics has worked on the problem of developing estimates of coverage and beneficiaries under workmen's compensation pro-

grams. The project on beneficiaries was abandoned when it became clear that published statistics on the number of cases classified by extent of disability lacked comparability and reflected drastic differences among the States in the practice of classification. Only through a field study could an estimate be developed that would be comparable to the beneficiary estimates available for other programs.

The first attempt to estimate coverage was an experimental estimate of average monthly coverage as of 1939, developed for each State. Although this project was not undertaken until 1944, basic premium data for years more recent than 1939 were not available due to a wartime curtailment in the operations of the National Council on Compensation Insurance, the major rate-making organization in the workmen's compensation field. The 1939 estimate for each State was submitted to the State agency for review as to accuracy of estimating method and results, along with a request for any data that would be useful in improving the 1939 estimate and in developing estimates for subsequent years. In general, the responses indicated approval of the estimating method and the results achieved. A number of States provided useful data for a revision or projection of the estimates. The 1939 national estimate was never completed, however, in part because of loss of personnel and in part because its lack of timeliness made it advisable to consider this as only a pilot study for use as a guide when more recent data would again be available.

The project of estimating coverage was later resumed but under conditions that necessitated somewhat less intensive analysis than had originally been planned. Although an estimate was again developed for each State, the data that could be assembled were not uniformly good from State to State, and there was no opportunity

to submit the individual estimates to the State agencies for approval. Consequently, the result is an estimate of the total coverage under all workmen's compensation programs in the United States, rather than a State distribution of coverage.

As a byproduct of the work done annually in estimating payments and of the special coverage project, other data on workmen's compensation operations have been assembled and are summarized in this article.

## Nature of the Programs

Workmen's compensation legislation is designed to assure prompt payment of benefits to injured employees and to the dependents of persons killed in industry, with a minimum of inconvenience to the persons involved and with costs paid by the employer as part of the expense of production. Before such legislation was adopted, an injured employee who sued his employer for damages had to prove negligence on the part of the employer; the court remedy was apt to be slow, costly, and uncertain. Under compensation laws, workers are spared the difficulties of court procedure and, since the cost of work injuries is considered a production expense, the question of fault or blame for the accident is not raised.

In 1908 a Federal workmen's compensation program covering Government employees in hazardous jobs was enacted. During the next few years there was a wave of State legislative activity in this field; 10 laws were approved in 1911, eight in 1913, eight in 1915, and several in each of the intervening years. By the end of 1920, all but six States had enacted workmen's compensation programs. Mississippi, the last of the six to adopt such legislation, enacted its law in 1948. In addition to the 48 State laws, there are Federal acts covering Federal Government employees, private employees in the District of Columbia,

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and longshoremen and harbor workers.

One of the primary differences among the States in the framework of their compensation systems is in the organizational method of ensuring that compensation will be paid when due. Most laws permit the employer to insure with private insurance companies. In seven of the 18 States that have State insurance funds, however, employers are required to use the State fund in insuring their risks; these are known as the "exclusive" funds. In the other 11 State insurance systems the fund is "competitive," and employers choose between insuring with the State fund or a private carrier. Under all but a few acts an employer may qualify as a "self-insurer" by giving proof of ability to carry his own risk.

Another major difference among the systems is in the use of compulsory or elective methods of covering employments. A compulsory statute is one that requires every employer within the scope of the compensation law to accept the act and pay the compensation specified. An elective act may be accepted or rejected by the employer, but employers who elect to reject it lose the customary common-law defenses—assumed risk of the employment, negligence of fellow workers, and contributory negligence. In some instances, the laws are in part compulsory and in part elective. The compulsory acts now slightly outnumber the elective acts.

The acts differ too with respect to the types of employment they are designed to protect. This source of difference is brought out in connection with the following discussion of the coverage estimates.

## Coverage

Wide variations in the coverage patterns of workmen's compensation legislation have handicapped the measurement of the number of workers who are actually protected by such programs. None of the State laws covers all employments. Quite commonly, the laws exempt employers of agricultural, domestic, and casual labor, as well as other employers who have fewer than a specified number

of employees. These exemptions do not in themselves constitute an insuperable problem in building up a coverage estimate from available employment data. Most acts, however, permit such legally exempt employers to accept voluntarily the coverage of the law, and elective acts, of course, permit employers who fall within the prescribed scope to reject the act if they prefer to risk a suit for damages. With such elective and voluntary provisions, it is impossible to arrive at an estimate of the effective coverage by deducting specifically exempt groups from the total employment in the State. Even in States with compulsory laws, the deduction method ignores the fact that there is a margin—however slight—of noncompliance. And to further complicate this line of approach toward a coverage estimate, coverage under a number of laws is defined in terms of hazardous or extra-hazardous employment and therefore cannot be estimated by use of employment data from the Bureau of the Census or from the programs of other Federal agencies.

In estimating coverage, the Division of Research and Statistics has relied primarily on data on insured payrolls, available through the generosity of the National Council on Compensation Insurance. With this approach, it has been unnecessary to determine whether an employer who falls within the defined scope of the act has elected to remain outside and whether another who would be legally exempt has chosen to come under. It has also been unnecessary to make arbitrary judgments as to the hazardous nature of employments.

## Estimating Method

As a basis for the survey of coverage as of 1946, the National Council on Compensation Insurance provided payroll data for 37 States—33 States for which it makes rates and four States that have independent rating bureaus but make their experience available to the Council. The payrolls amounted to \$37.3 billion for the policy year 1945 and to \$45.5 billion for the policy year 1946. These payrolls, although insured primarily by private carriers, include also payrolls insured by those competitive State funds that

are members of the National Council.

The policy year, the basic period of time in calculating compensation rates, is the period covered by all the policies issued in a given calendar year. It consequently cuts across two calendar years. Payrolls covered by the first policy issued in the policy year 1945, for example, would fall almost entirely in the calendar year 1945; the payrolls covered by the last policy issued would fall almost entirely in the calendar year 1946. Similarly, payrolls insured under policies issued in the policy year 1946 would be composed of wages earned in the calendar year 1947 as well as in the calendar year 1946. As a first step in the estimate, policy-year payrolls were converted to calendar-year 1946 payrolls by using the average of the two policy years, 1945 and 1946. Implicit in this conversion method is the widely accepted assumption that policy-writing is evenly distributed throughout the year in such a way that each policy-year payroll is made up of half the payroll for that calendar year and half of that for the following calendar year.

The completeness of the Council's coverage of private insurance carriers varies somewhat from State to State, depending on whether the law or regulation of the supervisory State agency requires carriers to report their experience for rate-making purposes. Members of the Council, however, report their experience for every State. Although data are not available to show what proportion of total private-carrier business in each State is written by members reporting to the Council, Council membership is known to be preponderant and representative in each of the States for which the Council makes rates. To identify those States in which Council membership was incomplete and private-carrier business was consequently underreported, the premiums of the carriers reporting payrolls to the Council were compared with the premiums compiled by the *Spectator*, which obtains reports for all private carriers. For most of the 37 States, the difference was not more than a few percentage points in one direction or the other. Since *Spectator* data consisted of written premiums for a calendar year and

Council data of earned premiums converted from policy years to a calendar-year basis, differences of this magnitude were to be expected, and the Council reports of payroll could be accepted as complete. For other States, where comparison with *Spectator* premiums indicated that the Council did not have a complete report of private-carrier business, the relationship based on premiums was used to inflate the payroll insured by Council members.

Fortunately, recent data on payrolls insured by private carriers and—where relevant—by State funds have been published for a number of the States for which the National Council does not have reports. For some additional States, data on payrolls insured by carriers had been obtained at the time of the exploratory coverage study, and there were recent data of other types that could be used in projecting payrolls to 1946.

It was necessary to obtain a measure of the payrolls of self-insurers in the 37 States for which Council data were available, as well as in the other States that permit employers to carry their own risks. Many of the State agencies have information on the amount of payrolls of employers who qualify as self-insurers. In some instances these payrolls are published periodically in the reports of the agencies. In other instances, self-insurers' payrolls had been made available by the agency at the time of the 1944-45 coverage study and could be projected on the basis of trends—the ratio, for example, of the number of cases compensated by self-insurers to cases compensated by private carriers. Where no information was available as to the payrolls of self-insurers, estimates were developed using known relationships between self-insurers and private carriers in the State on such items as taxes, benefit payments, and number of cases. These relationships served as indicators rather than exact measures and were adjusted to reflect the fact that self-insurance in one State may be concentrated in the mining industry and have high benefit payments in relation to payrolls, while in another State self-insurers are predominantly governmental units with low benefit payments in

relation to payrolls. The use of such adjusted relationships had been approved by the State agencies in connection with the original exploratory survey of coverage.

Through these devices a covered payroll figure was built up for each State. When much estimating was involved, a range was used in order to embrace the probable situation. The covered payroll thus developed for each State was translated into an estimate of the number of workers covered in an average month by using the relationship between payrolls and average monthly employment under the State's unemployment insurance program in 1946. This estimate assumes that the average wage as well as the turn-over of workers covered under workmen's compensation is comparable with that of workers covered by the unemployment insurance program—a valid assumption according to the comments made by the administrators of the workmen's compensation programs at the time the conversion method was originally used.

The estimating procedure described here was employed also in developing an estimate of coverage as of 1940, thus providing a measurement of the growth in workmen's compensation coverage. The year 1940 was sufficiently close to the base period of the pilot study to permit incorporation of the special data growing out of that study. Moreover, the development of an estimate of 1940 coverage has an advantage over a revision of the 1939 estimate in that it can be compared with an estimate of potential coverage arrived at by Arthur H. Reede through application of the provisions of the laws to the 1940 Census data.<sup>1</sup>

### *Estimated Coverage, 1940, 1946, and 1948*

In an average month in 1940, slightly less than 25 million employees were covered by the State and Federal workmen's compensation programs; the range of the estimate is from 24.2 to 25.0 million. Although all States except Mississippi had workmen's

<sup>1</sup> Arthur H. Reede, *Adequacy of Workmen's Compensation*, Harvard University Press, 1947.

compensation laws at that time, no coverage is included for Arkansas since its law did not go into effect until the end of 1940. In addition, there were the Federal laws covering private employees in the District of Columbia, longshoremen and harbor workers, and Federal Government employees. The total 1940 payroll covered under workmen's compensation is estimated at \$34.7-35.8 billion.

By 1946, average monthly covered employment had increased almost a third, to between 32.0 and 33.0 million workers. Covered payrolls amounted to about \$78.3-80.6 billion, two and one-quarter times the 1940 payroll.

The closeness of these estimates to the coverage of the unemployment insurance programs—both in absolute amounts and in percentage increase over the years—makes it possible to obtain a rough estimate of workmen's compensation coverage in a more recent year. Average monthly employment covered by unemployment insurance was 23 million in 1940 and 30 million in 1946, about the same levels as the workmen's compensation coverage after exclusion of 1.1 million Federal Government employees in 1940 and 2.7 million in 1946. Actually, although the overlap of the coverage of unemployment insurance and workmen's compensation is great, significant numbers of workers are covered by one or the other of the two programs but not by both. Employees of States and local governmental units, for example, are rarely covered by unemployment insurance but are frequently covered under workmen's compensation programs—indeed, the latter type of law may cover them compulsorily even though coverage for other employments is elective. On the other hand, higher numerical exemptions under some of the workmen's compensation laws and the elective nature of many such laws may result in the exclusion of workers who are protected by unemployment insurance.

Application of the percentage increase under unemployment insurance to the workmen's compensation coverage estimates (with Federal workers treated separately) yields an estimate of 34-35 million workers covered in an average 1948 month, with a payroll of \$100-103 billion for the

year. By 1948, Mississippi had enacted a workmen's compensation law, but no coverage is included for this State because the program did not go into effect until 1949.

### *Comparison With Other Estimates*

The coverage estimates indicate that, in both 1946 and 1948, roughly 3 out of 4 civilian wage and salary workers were protected against employment injuries. The Bureau of Labor Standards, Department of Labor, states in its Bulletin No. 99, 1948, that measurements of the extent of coverage are not available but "probably not more than fifty percent of gainfully employed workers are actually protected by workmen's compensation." Our analysis indicates that this estimate is not high enough. In contrast, a recent workmen's compensation analysis prepared by the Chamber of Commerce contains the statement: "It is estimated that approximately 45,000,000 workers are protected by workmen's compensation in the United States."<sup>2</sup> That this latter figure is an overestimate—if it is intended to refer to the number protected at any time or in any short period—is obvious from a comparison with the total number of employed workers in an average week in 1948 or 1949. After excluding interstate railroad workers and unpaid family workers—neither of which group falls within the scope of workmen's compensation legislation—the total number of civilian wage and salary workers is in the neighborhood of 44 million (1949) or 45 million (1948). It is possible that the Chamber of Commerce estimate is intended to relate to total employment during the year, rather than to average weekly or monthly employment. But total employment during the year is not an altogether meaningful concept in relation to workmen's compensation since the protection of this program is definitely tied to employment at a particular time.

The 1940 estimate of the number of workers actually having work-

men's compensation protection can be compared with Arthur H. Reede's estimate of the number of workers who would have been covered if all elections provided for by law had been made. His estimate of "applicable" as contrasted to "actual" coverage and earlier estimates of the same nature are described in detail.<sup>3</sup> Mr. Reede used Census data for March 1940 to subtract from the total labor force in each State the unemployed and five groups of employed persons that he described as "not eligible for coverage by state laws: (a) unpaid family workers, (b) employers and self-employing persons, (c) railroad workers engaged in interstate transportation, (d) employees engaged in water transportation, some of whom are covered by the United States Longshoremen's Act, and (e) employees of the federal government, largely covered by the United States Civil Compensation Act." The remaining number was assumed to be "eligible" for coverage. He then computed the exclusions—hired farm workers, domestics, casual workers, small-firm employees, and others—"by applying census indications to the terms of the several laws in the light of their interpretation by responsible authorities." For all States with laws and for the District of Columbia, Mr. Reede arrived at a total of 5,178,000 exclusions out of a total of 31,161,000 "eligible employees" (31,704,000 when Mississippi and Arkansas are included). Thus his applicable coverage as of March 1940 is just short of 26 million in the 47 jurisdictions. If his March estimate is converted to average monthly employment in 1940 by using the relationship under the unemployment insurance program, it is increased to 27 million. Our estimate of actual coverage, excluding Federal employees, for the same period is 23-24 million, about 85-89 percent of the Reede estimate.

Assuming that both sets of estimates are reliable measures of what they are intended to measure, the difference of 3-4 million is an indication of the extent to which employers chose to remain outside the scope of an elective act and failed to comply

when they were subject to a compulsory act. Although the 1940 State estimates of actual coverage are not presented here and are not equally reliable for all States, they permit an interesting comparison between actual and applicable coverage under elective and compulsory laws. As of July 1, 1940, the insurance requirements of only 16 of the 47 laws were classified as compulsory in Bureau of Labor Statistics publications. Under eight, or just half, of the compulsory laws the estimated actual coverage—or the midpoint of the range—is 90 percent or more of the applicable coverage; under none was the proportion less than 70 percent. In contrast, under only eight of the 31 laws classified as elective—or about one-fourth—was the ratio of actual to potential coverage as high as 90 percent; under five, the ratio was between 60 and 70 percent.

No conclusions as to the relationship between actual and applicable coverage in more recent years can safely be drawn from the 1940 comparison. Many of the laws that were then elective have subsequently been made compulsory. Also, general business conditions, among other factors, appear to influence the amount of nonelection and noncompliance. Reede points out that "the small retailer when hard pressed feels obliged to reject the compensation act" and that "a wave of rejections is sometimes induced by drastic upward revision of benefit scales."

### **Premiums**

What does it cost an employer to protect his employees under the workmen's compensation program? To a great extent, the cost of his insurance is determined by his industrial classification and the hazards of that classification, subject to modification for his experience rating. The premium rate he pays, as compared with the premium rate for the same industrial classification in another State, reflects the level of benefits provided in his jurisdiction. His costs will depend on the method by which he insures his compensation liability—through a private carrier, through an exclusive or competitive State fund, or through carrying his

<sup>2</sup> Chamber of Commerce of the United States, *Analysis of Provisions of Workmen's Compensation Laws and Discussion of Coverages*, January 1950.

<sup>3</sup> *Op. cit.*

own risk—and what proportion of his premium is assigned to acquisition costs and costs for services and general administration. Some over-all measurements of this cost, and of the variations in costs, are available at this time.

### Earned Premiums as Percent of Payroll

Premiums and payroll data for the policy year 1939 for 36 States were made available by the National Council on Compensation Insurance. The earned premiums amounted to \$247.4 million, or 1.4 percent of the \$17.4 billion payroll. For the policy year 1946, a total of \$45.5 billion in payrolls was reported for 37 States; data were lacking, however, on earned premiums for a few States. For those States for which both premiums and payroll were available, the 1946 rate was 1.2 percent. When the comparison is limited to 33 identical States in the 2 years (using 1945 policy-year data for a few States in which 1946 data had not yet been reported), the drop in premium rates is from 1.3 percent in 1939 to 1.1 in 1946.

A wide spread in rates among the States results from differences in industrial patterns and benefit levels. In 1939 the lowest rate among the 33 identical States was 0.8 percent of payroll, and the highest was 3.2 percent. About half the States had rates of 1.0–1.3 percent, and only three were less than 1.0 percent. In 1946 the range was from 0.7 to 2.5 percent of payroll, and though half the States were again found in the intervals of 1.0–1.3, another one-third fell below 1.0 percent. In general, the period 1939–46 was marked by decreasing rates. In only a few States had rates failed to decline during this period. The downward trend may have been reversed, however, in 1947. In the 14 States for which Council data permit a comparison between the policy years 1946 and 1947, the ratio was the same in both years for six States, was higher in 1947 for seven States, and was lower for only one.

The analysis based on Council data relates primarily to private-carrier premiums as a percent of payroll, although—as pointed out above—the operations of some competitive State

**Table 1.—Workmen's compensation: Net premiums written in relation to losses paid by all private carriers, 1939–48**

[Amounts in millions]

Year	Premiums	Losses	Loss ratio <sup>1</sup>
Total, 10 years...	\$4,750.6	\$2,217.1	46.7
1939.....	260.1	123.8	47.6
1940.....	270.9	134.6	49.7
1941.....	342.0	159.8	46.7
1942.....	458.2	190.2	41.5
1943.....	503.7	213.2	42.3
1944.....	501.8	236.7	47.2
1945.....	488.4	252.7	51.7
1946.....	512.1	269.4	52.6
1947.....	662.9	301.9	45.5
1948.....	750.5	334.8	44.6

<sup>1</sup> Calculated on unrounded figures.

Source: *Spectator: Premiums and Losses by States of Casualty, Surety and Miscellaneous Lines, 1940-49* editions.

funds are included. No separate data are available by which to measure the ratio of premiums to payrolls covered by State funds only. State funds, especially the exclusive funds, achieve certain economies not possible under private-carrier insurance. An over-all ratio of premiums to payrolls would not necessarily reflect these economies, since the competitive State funds often insure an undue proportion of the poorer risks.

For comparison with the estimate of total payroll of employers who are insured by private carriers or State funds or who carry their own risks, an estimate of total "premiums" has been built up for 1940 and 1948. Obviously, self-insurers do not pay premiums as such. In a number of States, their "hypothetical premiums" are calculated for purposes of assessing them their share of the costs of the State agency in administering the program. A more realistic measure of the actual costs to self-insurers, however, was considered to be their payments for compensation and medical care plus an additional amount, say 5–10 percent, for the administrative costs that the employer pays directly and through his taxes to cover the administrative costs of the State agency. In building up the estimate of total premiums, the *Spectator* was used for data on premiums of all private carriers and of those State funds for which it includes reports. Premiums of the remaining State funds were obtained from State publications or were made available by the adminis-

trators. The system for Federal employees, classified as a State fund, is financed through annual congressional appropriation; therefore, the premium estimate for this fund consists of the sum of the benefit payments and administrative costs, as published in annual reports.

The total premium figure thus derived amounts to \$418–420 million for 1940 and to \$1,014–1,018 million for 1948. These amounts, when related to the covered payroll estimates, indicate that the cost of workmen's compensation was about 1.2 percent of payroll in 1940 and 1.0 percent in 1948.

### Ratio of Losses to Premiums

On the basis of the estimated cost figures described above, workmen's compensation payments amounted to 61 percent of premiums in 1940 and to 53 percent in 1948. The relatively high loss ratio results from the method of estimating the premiums of self-insurers; when this segment of the total is excluded the loss ratio falls to 57 percent in 1940 and 49 percent in 1948. For private carriers alone, payments amounted to 50 percent of premiums in 1940 and 45 percent in 1948. All State funds combined paid out a considerably higher proportion of their premium income in benefits: 76 percent in 1940 and 69 percent in 1948. Published data are available for a more detailed examination of the loss ratios of private carriers.

The relationship of the amount of losses incurred to the premiums earned during a policy year is commonly used by insurance organizations in evaluating and revising their manual rates. Especially in a period when premiums are large because of rising payrolls, the use of incurred losses—which reflect these high payrolls—results in a more valid loss ratio than can be obtained by using actual disbursements, which are subject to some lag. But since the present analysis does not require the exactness necessary in determining the adequacy of manual rates, it has been based on the more readily obtainable relationship between losses paid and net premiums written. By extending this comparison over a 10-year period, it gains a validity not

present in a single-year comparison of losses paid to premiums written.

For the calendar years 1939 through 1948, private carriers wrote a total of \$4.8 billion in premiums and paid out \$2.2 billion in losses, a ratio of 47 percent. The ratio fluctuated unevenly from year to year, and was as high as 53 percent in 1946 and as low as 42 percent in 1942 and 1943 (table 1).

## Payments, 1939-48

### Total Payments

Workmen's compensation payments have more than doubled over the 10-year period for which estimates have been developed. The total of \$536 million for 1948 (distributed by State in table 2 is 128 percent higher than the 1939 total of \$235 million.

These amounts represent the payments of cash compensation in disability or death cases and the cost of medical and hospitalization benefits. They do not include certain other direct costs to the employer for occupational injuries; for example, the various costs—frequently including wage replacement—of injuries that result in a time loss shorter than the compensation waiting period. An exact measure of the amount of such additional direct costs is not available. However, a report of the Subcommittee on Accident Costs of the President's Conference on Industrial Safety states, with reference to 1946 when payments alone amounted to \$435 million, "a conservative estimate places the direct employer cost at over 600 million dollars annually."

Three factors combine to account for the rapid increase in payments over the 10-year period: the expanding labor force protected by workmen's compensation programs, the rise in wage rates on which benefits are based, and liberalizations in the cash and medical benefits provided by the laws.

With respect to the first factor, the 40-percent increase in estimated coverage between 1940 and 1948 has undoubtedly been accompanied by a marked increase in the number of compensable injuries, but no measure of this latter increase is available. Bureau of Labor Statistics data on work injuries shed some light on this

question, although only indirectly, since the data relate to all employees regardless of coverage by compensation programs and to all disabilities lasting a day or more, many of which would be noncompensable because of the waiting periods. If the classifi-

cations of agriculture and railroads are subtracted from the Bureau of Labor Statistics totals to bring them closer to the coverage of the workmen's compensation programs, the number of injuries to employees rose from 1.4 million in 1940 to a high

Table 2.—Workmen's compensation: Estimated payments, by State and type of insurance, 1947 and 1948<sup>1</sup>

[In thousands]

State	1947				1948				Percentage change in total payments, 1948 from 1947
	Total	Insurance losses paid by private insurance carriers <sup>2</sup>	State fund disbursements <sup>3</sup>	Self-insurance payments <sup>4</sup>	Total	Insurance losses paid by private insurance carriers <sup>2</sup>	State fund disbursements <sup>3</sup>	Self-insurance payments <sup>4</sup>	
Total	\$487,400	\$301,833	\$110,849	\$74,718	\$536,494	\$334,689	\$121,563	\$80,232	+10.1
Alabama	2,377	1,897		480	2,587	2,067		520	+8.8
Arizona	5,328	158	5,085	85	7,450		7,297	85	+39.8
Arkansas	3,100	2,560		550	3,149	2,519		630	+1.6
California	45,667	31,338	9,829	4,500	50,536	33,999	11,537	5,000	+10.7
Colorado	2,640	855	1,185	600	2,956	995	1,411	550	+12.0
Connecticut	8,814	7,933		881	9,244	8,320		924	+4.9
Delaware	549	461		88	627	527		100	+14.2
Dist. of Col.	1,572	1,453		119	1,972	1,816		156	+25.4
Florida	5,356	4,994		362	6,402	5,950		452	+19.5
Georgia	3,227	2,827		400	3,601	3,161		440	+11.6
Idaho	1,490	764	376	350	1,822	1,022	450	350	+22.3
Illinois	26,999	20,970		6,029	30,219	23,310		6,909	+11.9
Indiana	7,972	6,702		1,270	8,563	7,193		1,370	+7.4
Iowa	3,584	2,867		717	3,961	3,171		790	+10.5
Kansas	3,113	2,363		750	3,682	2,792		890	+18.3
Kentucky	6,171	3,171		3,000	6,242	3,802		2,440	+1.2
Louisiana	8,122	6,822		1,300	9,139	7,679		1,460	+12.5
Maine	2,046	1,766		280	1,996	1,721		275	-2.4
Maryland	5,921	4,346	507	1,068	6,379	4,779	528	1,072	+7.7
Massachusetts	17,759	16,189		1,570	19,516	17,746		1,770	+9.9
Michigan	18,797	11,002	1,125	6,670	20,749	12,185	1,204	7,360	+10.4
Minnesota	7,663	6,245		1,418	8,680	7,074		1,606	+13.3
Mississippi	75	75			95	95			+26.7
Missouri	8,848	7,168		1,680	9,777	8,017		1,760	+10.5
Montana	1,972	346	1,162	464	2,353	543	1,299	511	+19.3
Nebraska	1,726	1,646		80	1,987	1,902		85	+15.1
Nevada	1,176	1	1,050	125	1,340	2	1,238	100	+13.9
New Hampshire	1,339	1,313		26	1,550	1,520		30	+15.8
New Jersey	26,208	22,362		3,846	27,200	23,386		3,814	+3.8
New Mexico	1,115	990		125	1,303	1,183		120	+16.9
New York	89,122	55,940	18,630	14,552	100,139	63,320	20,469	16,350	+12.4
North Carolina	5,027	4,131		896	5,791	4,761		1,030	+15.2
North Dakota	854	1	853		891		800		+4.3
Ohio	32,938	146	28,492	4,300	35,464	2	30,862	4,600	+7.7
Oklahoma	6,243	4,928	283	1,032	6,998	5,785	353	860	+12.1
Oregon	5,911	600	5,311		6,875	772	6,103		+16.3
Pennsylvania	27,600	16,294	2,131	9,175	28,907	17,188	2,329	9,390	+4.7
Rhode Island	4,208	4,012		196	3,730	3,560		170	-11.4
South Carolina	3,753	3,153		600	3,993	3,303		690	+4.8
South Dakota	518	436		83	686	576		110	+32.4
Tennessee	4,084	3,326		758	4,406	3,510		896	+7.9
Texas	23,497	23,497			28,133	28,133			+19.7
Utah	1,579	551	763	265	1,657	622	765	270	+4.9
Vermont	750	680		70	750	680		70	0
Virginia	4,481	3,501		980	5,057	3,951		1,106	+12.9
Washington	11,862	456	10,906	500	12,769	369	11,900	500	+7.6
West Virginia	8,296	8	7,880	408	8,800	3	8,382	415	+6.1
Wisconsin	10,665	8,595		2,070	11,881	9,615		2,266	+11.4
Wyoming	720	5	715		878	4	874		+21.9
Federal employees	14,566		14,566		13,672		13,672		-6.1

<sup>1</sup> Data for 1948 preliminary. Calendar-year figures, except for Montana, North Dakota, Oregon, and West Virginia, for Federal employees, and for State fund disbursements in Maryland and Utah, for which actual or estimated data for fiscal years ended in 1947 and 1948 were used. Includes benefit payments under the Longshoremen's and Harbor Workers' Compensation Act and the Defense Base Compensation Act for the States in which such payments are made.

<sup>2</sup> Net cash and medical benefits paid by private insurance carriers under standard workmen's com-

penation policies. Data from the *Spectator: Premiums and Losses by States of Casualty, Surety and Miscellaneous Lines*, 1948 and 1949 editions.

<sup>3</sup> Net cash and medical benefits paid by State funds; compiled from State reports (published and unpublished) and from the *Spectator*; estimated for some States.

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

**Table 3.—Workmen's compensation: Payments by type of insurance, 1939–48**

[Amounts in thousands]

Year	Total		Type of insurance					
			Insurance losses paid by private insurance carriers <sup>1</sup>		State fund disbursements <sup>2</sup>		Self-insurance payments <sup>3</sup>	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
1939.....	\$234,875	100.0	\$122,183	52.0	\$68,481	29.2	\$44,211	18.8
1940.....	256,061	100.0	134,653	52.6	72,541	28.3	48,867	19.1
1941.....	291,318	100.0	159,823	54.9	77,202	26.5	54,293	18.6
1942.....	330,492	100.0	190,239	57.6	81,758	24.7	58,495	17.7
1943.....	355,862	100.0	213,123	59.9	81,609	22.9	61,130	17.2
1944.....	386,628	100.0	236,593	61.2	85,318	22.1	64,717	16.7
1945.....	410,828	100.0	252,570	61.5	91,368	22.2	66,890	16.3
1946.....	435,213	100.0	269,353	61.9	96,053	22.1	69,807	16.0
1947.....	487,400	100.0	301,833	61.9	110,849	22.8	74,718	15.3
1948 <sup>4</sup> .....	536,494	100.0	334,699	62.4	121,563	22.7	80,232	14.9

<sup>1</sup> Net cash and medical benefits paid by private insurance carriers under standard workmen's compensation policies. Data from the *Spectator: Premiums and Losses by States of Casualty, Surety and Miscellaneous Lines*.

<sup>2</sup> Net cash and medical benefits paid by State funds; compiled from State reports (published and unpublished) and from the *Spectator*; estimated for some States.

<sup>3</sup> Cash and medical benefits paid by self-insurers, plus the value of medical benefits paid by employers carrying workmen's compensation policies that do not include the standard medical coverage. Estimated from available State data.

<sup>4</sup> Preliminary.

of 1.8 million in 1943 (the wartime peak resulting from a large labor force combined with a rise in accident-frequency rates due in part to long hours of work and overtime) and then declined to 1.4 million again in 1948. In manufacturing, which forms a large share of the Bureau of Labor Statistics totals and an even larger share of the workmen's compensation coverage, the injury-frequency rate per million employee-hours worked rose from 14.9 in 1939 to a peak of 20.0 in 1943, decreasing thereafter to 17.2 in 1948. The severity rate in manufacturing—the average number of days lost per 1,000 employee-hours worked—was 1.4 in 1939, reached a high of 1.7 in 1941, and was 1.5 in 1948. These data indicate that the increased coverage of the workmen's compensation programs over the 10-year period has not been offset by lower accident rates and that there has undoubtedly been a substantial rise in the number of compensated cases.

Higher wage rates, another factor accounting for the tremendous growth in workmen's compensation payments, may be gauged from the 1939–48 increase of 127 percent in the average weekly wage of production workers in manufacturing and of 113 percent in the average wage of all workers covered by the unemployment insurance program. The workmen's compensation coverage estimates

show an increase in the average wage of 105 percent for the period 1940–48. But, as pointed out below, not all this increase in wage rates is reflected in benefit payments. Statutory limits on the maximum weekly benefit amount hold down the portion of the wage loss that is compensated. Although the laws have been liberalized with respect to the maximum weekly payment, such liberalizations have lagged behind the rise in wages. Nevertheless, higher maximum payments, combined with such liberalizations as shorter waiting periods and removal of the limits on medical care, have undoubtedly contributed significantly to the rise in payments over the 10 years.

### Payments, by Type of Insurance

The 10-year growth in workmen's compensation payments has not been evenly distributed among the three types of workmen's compensation insurance. Private insurance companies have outstripped State funds and self-insurance to account for the bulk of the increase in the total. In 1948, payments by private carriers were 174 percent above the 1939 level, as compared with a 78-percent increase in State fund disbursements and an 81-percent increase in self-insurance payments.

Of the 1939 total compensation payments of \$235 million, private carriers

accounted for 52 percent, State funds for 29 percent, and self-insurers for 19 percent. By 1948 the private-carrier segment of the \$536 million total payments had risen to 62 percent; State fund and self-insurance payments had dropped to 23 and 15 percent, respectively.

As is apparent from table 3, the 10-year period is actually composed of two 5-year periods marked by very different rates of growth for the several types of insurance. Between 1939 and 1943, private-carrier losses increased 74 percent, while self-insurance payments increased 38 percent, and State fund disbursements went up only 19 percent. But between 1944 and 1948, there was a slackening in the rate of increase for private carriers (41 percent) and self-insurance (24 percent) and a marked acceleration in State fund disbursements (42 percent).

### Distribution of Payments and Incurred Losses

Of the average dollar in workmen's compensation payments in 1948, an estimated 33 cents went to provide injured workmen with medical care and hospitalization (table 4). Medical benefits, which represented 36 percent of 1939 payments and 37 percent of 1940 payments, accounted for decreasing proportions of the total during the war years. Beginning in 1946, there has been a slight relative rise.

Payments to survivors, including a small but unknown amount of lump-sum funeral benefits and of payments to the State when there were no dependents, have increased much more slowly than payments to injured workers—reflecting a decline in the proportion of work injuries that result in death. Of the nonmedical payments under the workmen's compensation programs in 1939, 20 percent were for fatalities, as compared with 14 percent in 1948.

While payments as a whole had increased 128 percent, the increase in cash compensation benefits for disabled workers was 159 percent.

The distribution of payments is based on data on incurred losses made available by the National Council on Compensation Insurance, adjusted to take account of intrinsic differences

**Table 4.—Workmen's compensation: Payments by type, 1939-48**

[In millions]

Year	Total	Type of payment			
		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.....	330	108	222	186	36
1943.....	356	112	244	206	38
1944.....	387	120	267	227	40
1945.....	411	125	286	244	42
1946.....	435	140	295	251	44
1947.....	487	160	327	281	46
1948 <sup>1</sup> .....	536	175	361	311	50

<sup>1</sup> Preliminary.

between paid losses (actual disbursements to all persons receiving payments in a given year) and incurred losses (the amounts paid plus amounts outstanding on the claims under policies written in the year). The actual disbursements will include payments made to survivors and injured workmen with respect to accidents of past years; the incurred loss figure will exclude such payments and include instead the estimated value of payments that will be made in years to come. In a period of rapid growth, the carry-over from past awards does not completely offset the outstanding amount. There is, of course, a wide area of overlap between the two loss figures, since a large portion of the payments for short-duration disabilities and medical care are actually made in the year for which the policy is written.

In the absence of a distribution of actual payments by severity of injury, the National Council's information on the classification of incurred losses is interesting. The data in table 5 for the policy year 1939 relate to about \$84 million in incurred compensation losses in 36 States and, for the policy year 1946, to almost \$200 million in 37 States. Incurred losses for permanent injury cases include, in addition to the compensation for loss of earning power, payments to these cases during periods of temporary disability. The classification of temporary disability is thus limited to those closed cases known not to have involved any permanent injury and to open cases in which, in the judgment of the car-

rier, the disability will be temporary only. Cases classified as temporary, roughly 85 percent of all compensation cases in both years, received a small but increasing share of the losses—36 percent in 1946 as against 31 percent in 1939.

### Proportion of Wage Loss Compensated

An analysis of the provisions of workmen's compensation legislation indicates that the intent of the majority of the laws is to provide weekly payments for total disability ranging from three-fifths to two-thirds of wages. But, to a great extent in recent years, the liberality of these proportions—and even of the fairly common proportion of 50 percent—has been nullified by the statutory maximum on the dollar amount of weekly benefits.

In 1939, half the laws provided weekly maximum amounts of less than \$20; \$25 was the highest amount payable under the State laws. These maximums were high enough, however, so that in virtually every State the worker receiving the average weekly wage (as measured by the unemployment insurance program because of its similarity to workmen's compensation coverage) could receive the proportion of his wage loss specified in the statute.

By 1948 the dollar maximums under the laws had been raised consid-

erably. When dependents' allowances—where provided—were included, only four fell below \$20 and about half were \$25 or more. Despite these liberalizations, the average worker could receive a benefit as large as the proportion intended by the law in only a few States.

A number of States raised their weekly maximum amounts in 1949. As a result, more than three-fourths of the laws provided maximum weekly benefits (including allowances for dependents) of \$25 or more; 11 acts provided a maximum of \$35 or more—six of them more than \$40. But even had these liberalizations been in effect in 1948, only two States would have been added to the group with maximum dollar amounts high enough to permit the statutory percentage to be effective for workers with average wages. Under the maximums effective October 1, 1949, a single worker in receipt of the average 1943 wage would have been paid, under more than half the laws, a benefit amounting to less than 50 percent of his wage, as shown below.

Maximum as percent of average wage	Number of laws
30-34.9.....	1
35-39.9.....	8
40-44.9.....	9
45-49.9.....	10
50-54.9.....	6
55-59.9.....	8
60 and over.....	8

**Table 5.—Workmen's compensation: Percentage distribution of cases and incurred losses, and average incurred loss, by injury classification, policy years 1939 and 1946**

Classification	Percentage distribution				Average incurred loss per case	
	Cases		Incurred losses			
	1939	1946	1939	1946	1939	1946
All compensable cases.....	100.0	100.0	100.0	100.0	-----	-----
Death.....	1.0	.7	16.2	11.5	\$3,873	\$5,691
Injury:						
Permanent total.....	.1	.1	3.9	3.0	9,415	12,033
Major permanent.....	1.8	2.1	22.3	21.7	2,792	3,500
Minor permanent.....	12.1	12.8	26.2	27.7	500	720
Temporary total.....	85.0	84.4	31.4	36.1	85	143

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

The most significant 1949 liberalization in the maximum dollar amount occurred in the Federal Employees' Compensation Act. The maximum monthly compensation was raised from \$116.66 to \$525.00; for workers having one or more dependents the rate of compensation was increased from 66 $\frac{2}{3}$  percent to 75 percent of wages, with this additional 8 $\frac{1}{3}$  percent applying only to monthly pay below \$420.

There is no over-all measurement of the proportion of wage loss from work injuries that is met by workmen's compensation programs. The worker (or perhaps to some extent his employer) is expected to bear the weekly wage loss above the effective rate of compensation as well as other losses that fall outside the arbitrary

(Continued on page 24)

Table 6.—Old-age and survivors insurance: Monthly benefits in current-payment status<sup>1</sup> at the end of the month, by type of benefit and by month, April 1949–April 1950, and monthly benefit actions, by type of benefit, April 1950

[Amounts in thousands; data corrected to May 16, 1950]

Item	Total		Primary		Wife's		Child's		Widow's		Widow's current		Parent's	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
Monthly benefits in current-payment status at end of month:														
1949														
April	2,480,350	\$19,750.5	1,140,960	\$29,195.5	347,861	\$4,711.6	604,375	\$7,890.5	227,811	\$4,711.9	146,958	\$3,071.7	12,376	\$169.3
May	2,517,142	50,631.0	1,161,046	29,782.3	353,709	4,801.8	609,528	7,968.1	232,170	4,806.1	148,184	3,101.3	12,544	171.3
June	2,554,248	51,520.0	1,180,909	30,369.1	359,840	4,898.1	614,714	8,043.8	236,394	4,897.7	149,724	3,137.9	12,667	173.5
July	2,577,386	52,131.4	1,195,955	30,823.4	364,009	4,965.4	614,601	8,044.5	239,902	4,973.7	150,130	3,149.2	12,789	175.3
August	2,613,604	53,036.1	1,216,963	31,450.4	373,293	5,065.1	618,097	8,100.4	244,420	5,072.3	150,937	3,170.5	12,924	177.4
September	2,644,910	53,775.4	1,232,421	31,909.4	375,103	5,140.9	624,257	8,196.9	248,890	5,169.4	151,191	3,179.5	13,048	179.2
October	2,673,888	54,450.8	1,247,513	32,345.7	379,594	5,210.0	629,705	8,279.3	253,031	5,260.2	150,866	3,174.5	13,179	181.1
November	2,710,279	55,318.9	1,258,050	32,938.5	385,576	5,301.1	634,705	8,355.6	257,228	5,352.1	151,416	3,183.7	13,304	183.0
December	2,742,838	56,074.4	1,285,893	33,437.4	390,583	5,376.3	639,437	8,427.0	261,336	5,441.9	152,121	3,206.8	13,438	185.0
1950														
January	2,781,800	57,034.1	1,308,643	34,105.7	396,750	5,473.4	644,114	8,500.2	265,775	5,539.3	152,987	3,229.0	13,533	186.5
February	2,824,829	58,074.3	1,332,875	34,815.0	404,014	5,587.0	649,758	8,585.0	270,384	5,640.9	154,177	3,257.6	13,621	187.9
March	2,861,536	58,956.6	1,351,985	35,330.8	409,330	5,671.9	655,588	8,673.6	275,050	5,764.9	154,884	3,275.7	13,729	189.7
April	2,888,715	59,638.4	1,365,504	35,807.4	413,456	5,741.3	659,584	8,736.3	280,890	5,871.7	155,432	3,290.2	13,849	191.5
Monthly benefit actions, April 1950:														
In force <sup>2</sup> at beginning of month	3,189,874	66,944.9	1,544,550	41,002.8	459,698	6,437.9	682,462	9,030.9	279,937	5,840.3	209,360	4,441.5	13,867	191.5
Benefits awarded in month	55,177	1,264.8	26,354	771.0	9,793	147.6	9,342	133.8	6,052	131.5	3,412	77.7	224	3.3
Entitlements terminated <sup>3</sup>	22,105	436.4	8,728	226.5	4,310	58.8	5,370	72.9	1,150	23.4	2,430	53.1	117	1.6
Net adjustments <sup>4</sup>	183	17.3	48	11.1	25	1.6	81	3.4	2	(?)	22	1.2	5	.1
In force at end of month	3,223,129	67,790.7	1,562,224	41,558.3	465,206	6,528.4	686,515	9,035.2	284,841	5,948.3	210,364	4,467.3	13,979	193.2

<sup>1</sup>Benefit in current-payment status is subject to no deduction or only to deduction of fixed amount that is less than the current month's benefit.

<sup>2</sup>Represents total benefits awarded (including benefits in current, deferred, and conditional-payment status) after adjustment for subsequent changes in number and amount of benefits (see footnote 4) and terminations (see footnote 3), cumulative from January 1940.

<sup>3</sup>Benefit is terminated when a beneficiary dies or loses entitlement to a benefit for some other reason.

<sup>4</sup>Adjustments result from operation of maximum and minimum provisions and from recomputations and administrative actions.

<sup>5</sup>Less than \$50.

## WORKMEN'S COMPENSATION

(Continued from page 10)

limits fixed by the compensation act. These include the wage loss from work injuries that are not disabling beyond the waiting period and—in States that do not pay compensation retroactively to the date of the injury—the entire wage loss in the early days of disabilities that last long enough to be compensable. They include also losses beyond the maximums specified in the act with respect to aggregate payments or duration of payment. In attempting to measure the effect of these various factors, Reede made<sup>4</sup> detailed calculations for two States: North Carolina, which he described as having a law “of average generosity,” and Massachusetts, with a scale “better than

<sup>4</sup> Ibid, pp. 205–225.

average.” His estimate for Massachusetts, relating to policy year 1935, places at 34.6 percent the proportion of wage loss compensated. He estimates that, in 1940, the North Carolina law compensated only 26.4 percent of the wage loss.

### Summary

Rapid growth in the operations of workmen's compensation programs marked the decade 1939 through 1948. By the close of the period all States had such programs; however, the Mississippi law is not reflected in this growth since it did not begin operations until 1949. About 34–35 million workers were protected in an average month in 1948, as compared with about 25 million in 1940.

Workmen's compensation costs as a percent of payroll are estimated at

roughly 1.2 percent of covered payroll in 1940 and 1.0 percent in 1948. Out of the average dollar spent by the employer to insure his workers, only about 60 cents in 1940 and a somewhat smaller proportion in 1948 found its way back in benefits to the injured workman or his dependents.

Payments under the workmen's compensation programs more than doubled over the 10 years. Of the total payments of \$536 million in 1948, about one-third went for medical costs and the other two-thirds for compensating the wage loss of injured or deceased workmen.

Workmen's compensation programs, despite limitations in their coverage and in the proportion of wage loss that they compensate, provide important protection for a large segment of the working population.