

# Growth in Protection Against Income Loss From Short-Term Sickness: 1948-56\*

*Each year since 1948, when the Social Security Administration began its studies of income-loss protection from sickness, public and private measures to provide sick or disabled workers with a temporary substitute income have expanded. In 1948 benefit payments amounted to an estimated \$0.8 billion and represented 16 percent of the estimated income loss of \$4.7 billion. By 1956, benefits had reached a level of \$1.8 billion and were replacing about 25 percent of the income loss of \$7.2 billion. The methodology and sources used in making these estimates, as well as the detailed findings, are presented below.*

FORMAL protection under public and private auspices against the loss of income caused by short-term sickness continued to grow in 1956, both in dollar amounts and as a percentage of lost earnings. The estimated benefits of \$1,785 million paid out in 1956 through government and nongovernment disability insurance and paid sick-leave plans were \$180 million higher than the 1955 estimate and replaced 25 percent of the actual and potential income loss. This ratio may be compared with the 24 percent of income loss compensated in 1955 and the 16 percent in 1948, when this series on income-loss protection against sickness began.

In preparing these annual estimates, the Division of Program Research has always recognized the need for developing new source material and refining existing procedures and data. This year's article follows the same format and incorporates the same basic tables as did the earlier articles,<sup>1</sup> but the estimates have been revised as the result of a reappraisal of certain assumptions underlying the methodology used and the introduction of new sources of data.

The major areas of revision are in connection with the estimates of income loss incurred by the different segments of the labor force and of the value of paid sick-leave protection afforded workers in pri-

mate industry and in State and local government service. These revisions have been carried back to the beginning of the series so that comparable data are available for all the years.

Income loss due to illness, when broadly defined, exceeds the Nation's expenditures for medical care.<sup>2</sup> In this survey, however, the estimate of income loss is restricted to that attributed to nonoccupational illness and injury; it encompasses only current income loss from short-term or temporary disability and the loss in the first 6 months of extended disability. It therefore excludes the loss of future earnings arising from extended or permanent disability.

Protection against loss of earnings in periods of nonoccupational disability is provided in a number of ways. For wage and salary workers in private industry, protection may be obtained through voluntary action by the employer or the employee, or it may be made compulsory through a temporary disability insurance law. The most usual method of providing voluntary protection is through group or individual accident and sickness insurance policies sold by commercial carriers that pay cash amounts during specified periods of disability. Employers may also self-insure, providing either cash benefits or paid sick leave. Some unions, union-management trust funds, fraternal societies, and mutual benefit associations pay cash disability benefits. These methods are not mutually exclusive,

since employers often use a paid sick-leave plan to supplement benefits under insurance plans.

For workers covered by temporary disability insurance laws, the medium used for providing protection depends on the individual statute. In California and New Jersey, benefits may be paid through publicly operated funds or through the types of private arrangements mentioned above (except individual insurance). The compulsory benefits for railroad workers and workers in Rhode Island are paid exclusively through publicly operated funds, though private plans may be used to supplement the government-paid benefits. In New York, though employers are permitted to insure with a publicly operated carrier (the State Insurance Fund), the overwhelming majority of employees are protected through private arrangements.

For government workers, the most common method of providing protection is through sick-leave plans. Almost all Federal civilian full-time employees and an estimated four-fifths of full-time State and local government employees are eligible for sick-leave benefits. For the self-employed, the provisions used for replacing income lost because of short-term disability are necessarily different from the group provisions available to wage and salary workers. In some instances the temporary incapacity of a self-employed person, especially a business proprietor, may not result in a serious cessation of income. In other instances, where income is dependent on personal services rendered, the need for formal protection may be just as great as that of wage and salary workers. Such protection for the self-employed, when secured, is generally confined to individual accident and sickness insurance or fraternal policies.

Because these components of the labor force have different methods of obtaining income-loss protection against short-term sickness, table 1 identifies potential and actual in-

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<sup>1</sup> For previous articles in this series dealing exclusively with protection against income loss from sickness, see the *Bulletin* for January of 1956 and 1957.

<sup>2</sup> See "Voluntary Health Insurance and Medical Care Costs, 1948-56," *Social Security Bulletin*, December 1957, for the most recent data on medical care expenditures.

**Table 1.—Estimated income loss from nonoccupational short-term sickness<sup>1</sup> by type of employment, 1948-56**

[In millions]

Year	Total	Wage and salary workers				Self-employed persons <sup>7</sup>	
		Total	In private employment <sup>2</sup>		In public employment		
			Covered by temporary disability insurance laws <sup>3</sup>	Other <sup>4</sup>	Federal <sup>5</sup>		State and local <sup>6</sup>
1948.....	\$4,704	\$3,650	\$387	\$2,809	\$179	\$275	\$1,054
1949.....	4,562	3,625	490	2,636	195	304	937
1950.....	4,936	3,944	704	2,708	207	325	992
1951.....	5,641	4,521	1,050	2,849	266	356	1,120
1952.....	5,986	4,864	1,129	3,943	299	393	1,122
1953.....	6,287	5,212	1,213	3,274	298	427	1,075
1954.....	6,237	5,178	1,219	3,206	287	466	1,059
1955.....	6,672	5,596	1,293	3,496	306	501	1,076
1956.....	7,157	6,069	1,427	3,772	322	548	1,088

<sup>1</sup> Short-term or temporary non-work-connected disability (lasting not more than 6 months) and the first 6 months of long-term disability.

<sup>2</sup> Average annual earnings per wage worker in private employment from table 27 in the *Survey of Current Business, National Income Supplement*, 1954 edition, and in the *National Income Number*, July 1957 (Department of Commerce), divided by 255 (estimated workdays in year) and multiplied by 7 (estimated average workdays lost per year due to short-term sickness). Result multiplied by number of full-time equivalent employees in private industry (from above sources, table 25).

<sup>3</sup> Average annual wages of workers covered by temporary disability insurance laws in Rhode Island, California, New Jersey, New York, and in the railroad industry, divided by 255 and multiplied by 7 and then multiplied by the mean employment each year.

<sup>4</sup> Represents the difference between total loss for

all wage workers in private employment and for those covered by temporary disability insurance laws.

<sup>5</sup> Average annual earnings per Federal employee (excluding members of the Armed Forces and United States citizens employed abroad) from *Survey of Current Business* data, divided by 283 (workdays in year) and multiplied by 8 (estimated average workdays lost per year due to short-term sickness). Result multiplied by number of full-time equivalent Federal employees in the continental United States.

<sup>6</sup> Average annual earnings per State and local employee from *Survey of Current Business* data, divided by 255 (estimated workdays in year) and multiplied by 8 (estimated average workdays lost per year due to short-term sickness). Result multiplied by the number of full-time equivalent State and local employees.

<sup>7</sup> See footnote 2 for method and source.

come loss separately for each component.

### Measuring Income Loss

This year's estimates introduce two refinements with respect to the income loss incurred by wage and salary workers. First, a new procedure is used to estimate the aggregate wage loss of employees in private industry. In the past this figure was obtained through a residual method, whereby the wage loss of government employees was subtracted from the income loss of all wage and salary workers. Since it was assumed that the latter group loses on the average 7 workdays a year because of nonoccupational short-term sickness and that government employees (for whom sick-leave plans are more prevalent) lose 8 workdays a year, this residual method resulted in an average loss of somewhat less than 7 workdays a year for private wage and salary workers. Available evidence, however, continues to indicate that wage and salary workers in private industry lose, on the average, at

least 7 days a year because of sickness.<sup>3</sup> Consequently, the current article computes the income loss of wage and salary workers in private industry directly, by assigning each employee 7 days of worktime lost during the year.

Second, a new method is used to estimate the wage loss of employees covered by temporary disability insurance laws. The earlier estimates were based on the number of these employees who had built up sufficient wage credits under the law to qualify for benefits during the year. The number of such employees, since they include many part-time and temporary workers, is greater than the number in covered employment at any one time. Since income loss due to sickness for the entire wage and salary labor force is based on average full-time employment during the

<sup>3</sup> Mark S. Blumberg and James C. Coffin, "A Syllabus on Work Absence." *A.M.A. Archives of Industrial Health*, Chicago, American Medical Association, January 1956, pages 55-70.

year, a similar method should be used to estimate income loss for any subgroups. Consequently, the wage loss of employees covered by the temporary disability insurance laws is now based on average employment in the year, rather than on the number of qualified employees during the year.

With these refinements, the income loss of wage and salary workers is estimated to have risen from \$3,650 million in 1948 to \$6,069 million in 1956, or 66 percent. In contrast, the income loss of the self-employed, which was \$1,088 million in 1956, varied little during this period; the lack of change reflects the diminishing importance of self-employment in the economy.<sup>4</sup> Wage and salary workers accounted for 85 percent of the Nation's income loss due to short-term sickness in 1956, compared with 78 percent in 1948.

Federal, State, and local government employees had an estimated wage loss of \$870 million in 1956, or about 14 percent of the loss of all wage and salary workers. This proportion has been rising slowly since 1948, when the estimated wage loss of \$454 million for government employees made up 12 percent of the loss to wage and salary workers.

The estimated value of time lost through short-term sickness of workers covered by the five temporary disability insurance laws was \$1,427 million in 1956, or 27 percent of the loss of private wage and salary workers and 24 percent of the loss of all wage and salary workers. These proportions have remained rather constant since 1951, when New York's law—the last to be enacted—became fully effective. In 1948, when only three laws were in effect—those of Rhode Island and California and that covering railroad workers—the wage loss covered represented 12 percent of the loss of private wage and salary workers and 11 percent of the

<sup>4</sup> Because of the estimating methods used, year-to-year changes in income loss, as well as the loss to subgroups of the labor force, reflect changes in the number of workers and in average annual earnings rather than any changes in the average amount of time lost because of sickness and disability. In the absence of nationwide morbidity data on an annual basis, the average time lost is assumed to be constant.

amount lost by all wage and salary workers.

### Protection Against Income Loss

Four forms of protection against income loss caused by temporary disability are considered in tables 2-6. They are private arrangements through insurance companies or self-insured cash sickness programs, private-plan coverage required by law, publicly operated funds, and paid sick-leave programs. All involve formal arrangements for protection against income loss. Although some employers make informal arrangements for continuation of salary, there is no basis for estimating the amounts actually paid or the assurance the workers have that they will receive such payments. This article considers only formal arrangements designed to offer specified amounts of protection against income loss resulting from short-term disability.

#### Private Insurance

Table 2 is confined to the operations of private insurance carriers and private plans other than those providing sick leave. Such insurance may be voluntarily provided by employers or purchased by employees, it may result from collective bargaining for fringe benefits, or it may be written in compliance with State laws in California, New Jersey, and New York. The table shows separately the insurance written under voluntary arrangements and that written under public provisions.

Premiums for private insurance providing for cash replacement of lost income amounted to about \$1.2 billion in 1956, \$83 million more than in 1955 and more than double the 1948 total of \$545 million. The 7.5-percent rise in premium income was the greatest since 1953.

A parallel development took place with respect to benefit payments. The \$788 million expended in 1956 under private insurance was 17 percent higher than the \$671 million reported for 1955; a percentage increase of equal dimensions has not occurred since 1950 and 1951. Dollarwise, the rise of \$117 million was the greatest that has been recorded in any year in the series.

Among private insurance plans,

Table 2.—Premiums and benefit payments for private insurance against income loss, 1948-56<sup>1</sup>

Year	Type of private insurance							
	Total	Under voluntary provisions				Under public provisions		
		Total	Group	Individual	Other <sup>2</sup>	Total	Group	Other <sup>3</sup>
Insurance premiums <sup>4</sup>								
1948.....	\$544.9	\$531.8	\$162.1	\$346.0	\$23.7	\$13.1	\$12.8	\$0.3
1949.....	587.8	548.7	177.6	352.0	19.1	39.1	32.1	7.0
1950.....	670.9	593.5	219.3	355.0	19.2	77.4	64.6	12.8
1951.....	776.9	627.2	249.6	361.0	16.6	149.7	122.7	27.0
1952.....	852.9	691.2	266.2	399.4	25.6	161.7	132.8	28.9
1953.....	1,005.5	816.0	299.2	481.9	34.9	189.5	158.5	31.0
1954.....	1,053.1	872.1	319.0	520.7	32.4	181.0	150.9	30.1
1955.....	1,109.1	927.8	363.2	533.9	30.7	181.3	151.3	30.0
1956.....	1,192.3	1,013.5	403.9	578.3	31.3	178.8	148.1	30.7
Benefit payments								
1948.....	\$278.0	\$268.7	\$114.9	\$139.0	\$14.8	\$9.3	\$9.1	\$0.2
1949.....	312.0	284.9	124.5	148.0	12.4	27.1	22.5	4.6
1950.....	374.0	319.8	156.8	151.0	12.0	54.2	46.2	8.0
1951.....	474.4	361.1	196.8	154.0	10.3	113.3	96.7	16.6
1952.....	536.0	408.2	218.2	173.4	16.6	127.8	108.9	18.9
1953.....	586.1	446.3	224.3	197.1	24.9	139.8	118.7	21.1
1954.....	610.9	478.9	236.2	218.6	24.1	132.0	111.8	20.2
1955.....	671.3	536.2	274.6	238.4	23.2	135.1	114.4	20.7
1956.....	787.7	638.5	343.1	271.0	24.4	149.2	125.9	23.3

<sup>1</sup> Premiums earned and losses incurred as reported by the Health Insurance Council for the continental United States, by type of insurance benefit, adjusted (a) to include accidental death and dismemberment provisions in individual policies that insure against income loss to offset understatement arising from omitting current short-term income-loss insurance in automobile, resident liability, life, and other policies and (b) to remove data for fraternal societies, shown with "other" forms of income-loss insurance in this table. For 1956, dividends de-

ducted from earned premiums (group, 3 percent; individual, 1 percent).

<sup>2</sup> Fraternal-society, union-management trust fund, trade union, and mutual benefit association plans.

<sup>3</sup> Self-insured operations and some union and union-management plans under California, New Jersey, and New York laws.

<sup>4</sup> Loss ratios applicable to all group insurance were applied to the benefits under private auspices and under public laws to obtain the premiums applicable to each.

group accident and sickness insurance is playing an increasingly important role in furnishing wage-replacement income during disability. In 1948, private group insurance contracts, whether under voluntary or public auspices, accounted for 45 percent of the benefit payments and individual insurance for 50 percent. By 1956, group insurance paid 60 percent of total benefits, with individual insurance payments dropping to 34 percent. Benefits under self-insured and other private plans amounted to 5 percent in 1948 and to 6 percent in 1956.

Benefits paid by private insurance companies under the public provisions of California, New Jersey, and New York amounted to \$126 million and equaled 27 percent of all group insurance benefits (\$469 million) paid by insurance companies nationally in 1956. This proportion was only 7 percent in 1948, when California was the only jurisdiction permitting private insurance to be writ-

ten under the public provisions.

#### Public Provisions

The total protection under the temporary disability insurance laws, according to the type of insurance arrangements, is shown in table 3. To the extent that the protection is provided through private insurance companies or other private arrangements, the data overlap those in table 2. In 1948, when only three of the public programs were in operation, benefits totaled \$66 million. By 1951, when all five laws were fully effective, payments had reached \$174 million, of which \$113 million or 65 percent was made available through private group insurance contracts or self-insurance. Since 1951, benefit payments from publicly operated funds have been expanding at a faster rate than those provided through private arrangements. In 1956, benefits under private plans represented only 57 percent of the total payments of \$263 million.

The proportion of private-plan benefits under these laws that have been underwritten by commercial insurance companies has leveled off since 1951. In that year, of the \$113 million paid in benefits through private auspices, \$97 million (85 percent) was paid through group accident and sickness insurance policies and the balance from self-insured employer, union, union-management, and mutual benefit plans. In 1956, group insurance policies accounted for 84 percent of the \$149 million paid under private plans.

### Paid Sick Leave

Table 4 presents estimates of the amount of income replaced through formal paid sick-leave benefits in private industry and in government employment, including the value of sick-leave benefits paid as a supplement to group insurance, publicly operated plans, or other types of group protection.

For State and local government employees, the annual estimates have been revised to give fuller recognition to the growth and liberalization of formal sick-leave provisions since 1948.

**Table 3.—Benefit payments under temporary disability insurance laws provided through private plans and through publicly operated funds, 1948–56<sup>1</sup>**

[In millions]				
Year	Total	Type of insurance arrangement		Publicly operated funds <sup>4</sup>
		Private plans <sup>2</sup>		
		Group insurance	Self-insurance <sup>3</sup>	
1948	\$66.4	\$9.1	\$0.2	\$57.1
1949	89.2	22.5	4.6	62.1
1950	117.4	46.2	8.0	63.2
1951	174.2	96.7	16.6	60.9
1952	202.3	108.9	18.9	74.5
1953	230.2	118.7	21.1	90.4
1954	235.1	111.8	20.2	103.1
1955	244.5	114.4	20.7	109.4
1956	262.9	125.0	23.3	113.7

<sup>1</sup> Programs under the Railroad Unemployment Insurance Act and the laws of Rhode Island, California, New Jersey (beginning 1949), and New York (beginning 1950). Excludes hospital benefits in California and hospital, surgical, and medical benefits in New York.

<sup>2</sup> Under the laws of California, New Jersey, and New York.

<sup>3</sup> Employers may self-insure by observing certain stipulations of the law. Includes some union plans whose provisions come under the law.

<sup>4</sup> Includes State-operated plans in Rhode Island, California, and New Jersey, the State Insurance Fund and the special fund for the disabled unemployed in New York, and the railroad program.

Although this growth has lagged somewhat behind the development of fringe benefits in private industry and, in general, has been given less publicity, there is evidence that it has become no less significant a factor in the economic security of the workers affected.

Several examples of the growth of sick-leave plans in government employment may be noted. The data published annually by the International City Managers' Association in their *Municipal Year Books* show that, in 1947, 60 percent of the cities with a population of 10,000 or more reporting had formal sick-leave plans for their administrative and clerical employees; by 1956, the proportion had topped 80 percent. Similarly, analyses of data published by the Council of State Governments indicate that, whereas in 1951 about 72 percent of the State employees were

covered by formal sick-leave plans, this ratio had advanced to 87 percent in 1956.<sup>5</sup> The National Education Association surveys of city public school systems show that 78 percent of the systems reporting provided sick leave at full pay for teachers in 1940–41, compared with 95 percent in 1950–51 and 98 percent in 1955–56.<sup>6</sup> On the basis of these studies, it is estimated that the proportion of all full-time State and local government employees with sick-leave plans had risen from 65 percent in 1948 to 80 percent in 1956.

A comparison of the provisions of individual government sick-leave plans also reveals a steady growth

<sup>5</sup> *State Government*, April 1952, page 80; and *The Book of the States, 1956–57*, pages 174–177.

<sup>6</sup> *Educational Research Service, Circulars* No. 8, 1942; No. 5, 1952; and No. 7, 1956.

**Table 4.—Estimated value of formal paid sick leave in private industry and in Federal, State, and local government employment, 1948–56**

Year	Total	Workers in private industry <sup>1</sup>			Government workers		
		Total	Not covered by temporary disability insurance laws	Covered by temporary disability insurance laws <sup>2</sup>	Total	Federal <sup>3</sup>	State and local <sup>4</sup>
1948	\$419	\$157	\$145	\$12	\$262	\$154	\$108
1949	470	163	147	16	307	180	127
1950	500	178	155	23	322	179	143
1951	597	197	163	34	400	231	169
1952	683	219	182	37	464	265	199
1953	731	239	200	39	492	272	220
1954	758	248	207	41	510	262	248
1955	826	270	225	45	556	280	276
1956	884	283	235	48	601	291	310

<sup>1</sup> Sum of estimated value of formal paid sick leave for employees with (a) sick leave but no other group protection and (b) sick leave supplemental to group insurance or other forms of group protection, including publicly operated plans. Under each category, number of employees was adapted from Health Insurance Council, *Annual Survey of Accident and Health Coverage in the United States 1948–54* and *The Extent of Voluntary Health Insurance Coverage in the United States as of December 31, 1955 and 1956*, after reducing estimates of exclusive sick-leave coverage in early years by a third to allow for exclusion of informal and supplemental sick-leave plans. Further adjustments made to allow for conversion of exclusive protection to supplemental protection under temporary disability insurance laws. Estimates take into account for later years, growth in labor force and gradual expansion of exclusive and supplemental plans. Assumes that workers in private industry receive an average of 4 days of paid sick leave a year, excluding other protection, and 3.2 days when they have other group protection. Daily wages obtained by dividing average annual earnings per full-time private employee as reported in table 27, *Survey of Current Business, National Income Supplement, 1954* edition, and *National Income Number, July 1957*, by 255 (estimated workdays in a year).

<sup>2</sup> Assumes that some workers entitled to cash benefits under temporary disability insurance laws have sick leave in addition to their benefits under

the laws, but only to the extent needed to bring up to 80 percent the replacement of their potential wage loss.

<sup>3</sup> Based on studies showing that Federal employees, who work 253 days a year, use paid sick-leave benefits of 7.8 days on the average, or 3.1 percent of payroll. Payroll data derived by multiplying number of paid civilian full-time employees as of June 30 in all branches of the Federal Government in the continental United States, by their mean earnings as reported in *Pay Structure of the Federal Civil Service, Annual Reports* (Federal Employment Statistics Office, U. S. Civil Service Commission). Practically all full-time employees are covered by paid sick-leave provisions.

<sup>4</sup> Number of full-time employees on State and local government payrolls from *State Distribution of Public Employment, Annual Reports* (Bureau of the Census). Assumes that the number of State and local employees covered by sick-leave plans has increased gradually from 65 percent of the total number employed in 1948 to 80 percent in 1956 and that workers covered by such plans received on the average paid sick leave ranging from 5.2 days in 1948 to 5.8 days in 1956. Daily wages obtained by dividing average annual earnings per full-time State and local employee as reported in table 27, *Survey of Current Business, National Income Supplement, 1954* edition, and *National Income Number, July 1957*, by 255 (estimated workdays in a year).

from 1948 to 1956 in the number of plans that permit accumulation of leave from 1 year to another and in the maximum that can be accumulated. To cite one example, 33 percent of the city public schools covered by the National Education Association survey reported cumulative sick-leave plans in 1940-41, compared with 84 percent in 1950-51 and 94 percent in 1955-56. It is estimated that, as a result of such liberalization, the amount of sick leave used per covered State and local government employee has risen from 5.2 days in 1948 to 5.8 days in 1956.

The combined effect of these modifications is to produce an estimate of \$310 million paid in sick-leave benefits during 1956 for State and local government employees, almost triple the 1948 estimate of \$108 million. As a result, State and local government sick-leave benefits surpassed those paid by the Federal Government (\$291 million) in 1956.

Unfortunately, the background material available for estimating sick-leave protection of wage and salary workers in private industry is neither so voluminous nor so reliable as that used for government employees. As a result, the estimates derived for private industry have been subject to constant analysis and reexamination. Estimates developed by the Health Insurance Council<sup>7</sup> on the number of workers in private industry covered by sick-leave plans were utilized in the earlier articles, with minor changes, as a basis for estimating the value of the sick leave used. For the purpose of this article, however, the Council estimates have not been entirely satisfactory since in the early years of the series they did not make a sharp enough distinction between (1) formal sick-leave plans and informal arrangements administered according to an employer's discretion or (2) plans that provide exclusive protection and those that supplement other forms of group protection, including publicly operated plans. Furthermore, it is believed

<sup>7</sup> *Survey of Accident and Health Coverage in the United States*, annual series, 1948-56. The Council is composed of representatives of commercial insurance companies writing various forms of health and disability policies.

that the Council estimates did not make sufficient allowance for the effect of the compulsory temporary disability insurance laws on existing sick-leave protection, which for the most part was converted from exclusive into supplemental protection.

Consideration of these factors has led to the conclusion that using the Council estimates results in an overstatement of the number of workers covered by exclusive formal sick-leave plans in private industry, particularly in the earlier years of the series. Consequently, the Council estimates have been reduced roughly by a third in the early years, with a further adjustment made for the growth of supplemental sick-leave plans at the expense of the exclusive plans in States with compulsory temporary disability insurance laws. The revised estimates were then carried forward to 1956, allowing for the growth in the labor force and for the continued expansion of supplemental sick-leave plans. In the later years, these estimates and the Council estimates have moved closer together as the result of revisions made by the Council in its own data. Because of gaps in the available data, however, any estimates in this field may contain a considerable margin of error.

With these revisions, the estimated value of the sick leave paid in 1956 under both exclusive and supplemental plans in private industry is \$283 million. Adding to this amount the sick-leave protection provided to Government employees (\$601 million) gives a total of \$884 million paid out to American workers in sick leave, more than double the \$419 million estimated for 1948.

The distribution of sick leave between private industry and public employment has undergone a change as a result of the expanding protection provided government employees. In 1948, 37 percent of the sick leave provided was attributable to private industry's sick-leave provisions; by 1956, this ratio had dwindled to 32 percent.

Since a growing number of workers are entitled to both sick leave and cash disability insurance through their employment, any measure of the value of sick leave in alleviating the potential income loss of workers should take into account any additional protection afforded by their disability insurance. Table 5 shows the extent of protection afforded workers with sick leave and distinguishes between those with and those without supplementary disability in-

Table 5.—*Estimated value of potential income loss<sup>1</sup> due to short-term sickness and of formal paid sick leave and disability insurance<sup>2</sup> among workers covered by formal paid sick leave, 1948-56*

Item	[Amounts in millions]									
	1948	1949	1950	1951	1952	1953	1954	1955	1956	
Workers with sick leave only										
Potential income loss.....	\$583	\$619	\$655	\$758	\$854	\$908	\$937	\$1,020	\$1,092	
Value of sick leave.....	381	423	440	523	599	640	661	719	772	
Ratio (percent) of benefits to potential income loss.....	65.4	68.3	67.2	69.0	70.1	70.5	70.5	70.5	70.7	
Workers with sick leave and insurance										
Potential income loss.....	\$97	\$116	\$151	\$185	\$207	\$227	\$243	\$266	\$280	
Value of sick leave and insurance <sup>3,4</sup> .....	77	93	121	148	165	182	195	213	224	
All workers under sick-leave plans										
Potential income loss.....	\$679	\$735	\$806	\$943	\$1,061	\$1,135	\$1,180	\$1,286	\$1,372	
Value of sick leave and insurance <sup>3</sup> .....	458	516	561	671	764	822	856	932	996	
Ratio (percent) of benefits to potential income loss.....	67.5	70.2	69.6	71.2	72.0	72.4	72.5	72.5	72.6	

<sup>1</sup> Estimated total loss, whether protected by sick leave and insurance or not.

<sup>2</sup> Includes group accident and sickness insurance, publicly operated plans, and other forms of group protection.

<sup>3</sup> Understated, since no benefits from the pur-

chase of individual insurance policies are included as protection.

<sup>4</sup> Assumes that supplementary protection derived from insurance was at a level that would, in combination with sick leave, replace 80 percent of the potential income loss.

**Table 6.—Benefits provided as protection against income loss, summary data, 1948–56**

[In millions]

Year	Total	Under voluntary provisions			Under public provisions			
		Total	Cash sickness insurance and self-insurance	Sick leave	Total	Publicly operated cash sickness funds	Cash sickness insurance and self-insurance	Sick leave for government employees
1948.....	\$754.1	\$425.7	\$268.7	\$157.0	\$328.4	\$57.1	\$9.3	\$262.0
1949.....	844.1	447.9	284.9	163.0	396.2	62.1	27.1	307.0
1950.....	937.2	497.8	319.8	178.0	439.4	63.2	54.2	322.0
1951.....	1,132.3	558.1	361.1	197.0	574.2	60.9	113.3	400.0
1952.....	1,293.5	627.2	408.2	219.0	666.3	74.5	127.8	464.0
1953.....	1,407.5	685.3	448.3	239.0	722.2	90.4	139.8	492.0
1954.....	1,472.0	726.9	478.9	248.0	745.1	103.1	132.0	510.0
1955.....	1,606.7	806.2	536.2	270.0	800.5	109.4	135.1	556.0
1956.....	1,785.4	921.5	638.5	283.0	863.9	113.7	149.2	601.0

insurance. It thus serves two purposes—determining the extent of protection afforded persons covered by sick-leave provisions and identifying their income loss.

Among persons with sick leave as their only protection, approximately 71 percent of their potential loss of income in 1956 was met through sick leave. For those with both sick leave and group insurance, it is assumed that 80 percent of the loss was met. For the two groups combined, their protection equaled 73 percent of their potential loss of income. If it were possible to take into account the additional protection provided by individual insurance policies purchased as a supplement to sick leave, the losses shown would be even lower.

### Summary of Protection Provided

Data from tables 2, 3, and 4 have been summarized in table 6 to show the total value of all forms of protection against the loss of income incurred because of nonoccupational illness.

The dollar value of all forms of protection rose from \$754 million in 1948 to \$1,785 million in 1956. Benefits under voluntary provisions (including insurance company policies, self-insurance, and sick leave for nongovernmental employees but excluding private insurance under public laws) amounted to \$426 million in 1948 and \$922 million in 1956. Benefits under public auspices, either through the temporary disability insurance laws or as sick leave granted government employees, equaled \$328 million in 1948 and 8 years later \$864

million. Benefits under public auspices increased 163 percent, and those under voluntary provisions increased 116 percent.

### Measuring the Extent of Protection

Table 7 relates the income loss experienced each year because of non-occupational sickness to the dollar value of the various forms of protection against this loss. It is thus possible to measure the effective growth in economic security against the risk of income loss from illness. The secondary cost of operating the mechanism for providing cash disability insurance is also shown in the table.<sup>8</sup> The net cost of providing insurance represents the difference between the insurance losses incurred and premiums earned (table 2), plus the cost of administering the public temporary disability insurance programs (not shown elsewhere). For the years before 1956, net costs are slightly overstated because insurance premiums included an unknown amount of dividends returnable to policyholders.

From 1948 to 1956, total income loss increased 52 percent, but the protection provided showed a 137-percent rise. As a result the proportion of lost earnings covered by cash sickness benefits advanced from 16.0 percent in 1948 to 24.9 percent in 1956, or approximately 1.1 percent a year. Despite this growth, the amount of income loss not replaced by insurance or formal sick leave con-

<sup>8</sup> The costs of operating sick-leave programs, which employers absorb, are not known.

tinued to rise during the period under review—from \$3,950 million to \$5,372 million. The rise of more than \$300 million in 1956 was one of the largest recorded since the series was started.

While the net cost of providing the disability insurance portion of the protection also advanced about 53 percent from 1948 to 1956, it actually declined \$32 million between 1955 and 1956 and since 1954 has

**Table 7.—Growth in protection against income loss, 1948–56**

[Amounts in millions]

Year	Income loss and protection provided			Income loss not protected	Net cost of providing insurance <sup>3</sup>
	Income loss <sup>1</sup>	Protection provided <sup>2</sup>	Protection as percent of loss		
1948.....	\$4,704	\$754	16.0	\$3,950	\$271
1949.....	4,567	844	18.5	3,718	281
1950.....	4,936	937	19.0	3,999	303
1951.....	5,641	1,132	20.1	4,509	310
1952.....	5,986	1,204	21.6	4,682	324
1953.....	6,287	1,408	22.4	4,879	428
1954.....	6,237	1,472	23.6	4,765	450
1955.....	6,672	1,607	24.1	5,065	446
1956.....	7,157	1,785	24.9	5,372	414

<sup>1</sup> From table 1.

<sup>2</sup> Total benefits, including sick leave.

<sup>3</sup> Includes retention costs (for contingency reserves, taxes, commissions, acquisition, claims settlement, and underwriting gains) of private insurance companies (from table 2) and administrative expenses for publicly operated plans and for supervision of the operation of private plans.

shown no increase at all. The higher loss ratios (proportion of premium income returned as benefits) prevailing in cash disability insurance in the recent years have counteracted the aggregate rise in the cost of underwriting an increasing volume of insurance.

When the extent of income-loss protection available to various segments of the labor force is being considered, wage and salary workers should properly be considered separately from the self-employed. Benefits from individually purchased disability insurance policies cannot be separated, however, into those going to the self-employed or to nonworkers and those that augment the other protection available to wage and salary workers. The data therefore include both the benefits from individually purchased disability insurance policies and the estimated income loss of the self-employed.

**Table 8.—Estimates of extent of income-loss protection for workers without formal sick leave, 1948-56**

[Amounts in millions]

Item	1948	1949	1950	1951	1952	1953	1954	1955	1956
Insurance benefits <sup>1</sup> .....	\$296	\$328	\$377	\$462	\$529	\$586	\$616	\$674	\$790
Total income loss <sup>2</sup> .....	4,025	3,832	4,130	4,698	4,925	5,152	5,057	5,386	5,786
Ratio (percent) of insurance benefits to:									
Total income loss.....	7.4	8.6	9.1	9.8	10.7	11.4	12.2	12.5	13.7
Income loss excluding first 3 days <sup>3</sup> .....	10.5	12.2	13.0	14.0	15.3	16.3	17.4	17.9	19.5
Two-thirds of income loss excluding first 3 days.....	15.7	18.3	19.6	21.1	23.0	24.4	26.1	26.8	29.2
Income loss excluding first 7 days <sup>4</sup> .....	14.7	17.1	18.3	19.7	21.5	22.7	24.4	25.0	27.3
Two-thirds of income loss excluding first 7 days.....	22.0	25.7	27.4	29.5	32.2	34.1	36.5	37.5	40.9

<sup>1</sup> Excludes sick leave and estimated amount of insurance benefits of persons with both sick leave and insurance (see table 5, line 7).

<sup>2</sup> Excludes all income loss of persons covered by sick-leave plans (see table 5, line 6).

<sup>3</sup> Based on 70 percent of total income loss (line 2 above).

<sup>4</sup> Based on 50 percent of total income loss (line 2 above).

It is also of interest to examine that portion of the residue of lost income that might conceivably be recovered if insurance policies and sick-leave plans were more widespread and if all benefits were more nearly at the relatively high level of some plans. Though the income that the wage earner fails to receive because he is ill represents a loss to the national income, the expenses that the individual incurs while he is working, his income taxes, and his social security contributions are reduced, and he therefore suffers only a part of the loss directly. At the same time the worker may encounter medical expenses for his illness that, unless met by other than out-of-pocket expenditures—by prepaid health insurance, for example—may be greater than any savings in carefare, meals, clothing, or taxes.

Most cash sickness plans undertake to compensate for only a part of the income lost; they are not intended to apply to medical expenses and, by paying less than a "take-home" wage, are designed to discourage malingering. Insurance policies usually do not cover the first few days or first week of illness, since it is believed that the worker can carry this loss himself; furthermore, the administrative

burden of processing large numbers of short-period claims is avoided. The Nation's potentially compensable and the potentially insurable income losses are therefore somewhat less than the total income loss so far considered.

Sick-leave plans generally provide for 100-percent continuance of pay from the first day of sickness; insurance plans, in contrast, require a waiting period before benefits are paid and reimburse only part of the weekly wage or salary loss. Consequently, a large portion of the potential income loss represented by wage continuation under sick-leave plans falls outside the bounds of what might be considered compensable or insurable under current insurance practices. A hypothetical figure that can meaningfully represent the portion of the income loss due to sickness that might be covered by prevailing insurance provisions must therefore be confined to the income loss of persons not covered by sick-leave plans.

Table 8 compares disability insurance benefits with the full income loss of all persons who do not have sick-leave protection and shows the proportions of their potentially insurable loss and potentially compen-

sable income loss that would be met by existing insurance benefits.

Income loss for persons not covered by sick leave increased from \$4.0 billion in 1948 to \$5.8 billion in 1956. In the same period, applicable insurance benefits went from \$296 million to \$790 million. Benefits, which equaled 7.4 percent of the total income loss in 1948, had increased to 13.7 percent by 1956.

When the first 3 days of sickness are excluded from the measure of income loss, by omitting 30 percent of the total, insurance was meeting 19.5 percent of the loss in 1956. This proportion may be looked on as a reasonable measure of the protection currently being provided in relation to a potentially insurable income loss, since some insurance is now being written with only a 3-day waiting period required. If the first 7 days of income loss, equivalent to 50 percent of the total income loss, are excluded, insurance met 27.3 percent of this amount in 1956 and 14.7 percent in 1948.<sup>9</sup>

Another type of adjustment was also made in table 8 to obtain the ratio of existing protection to potentially compensable income loss—that portion of the potentially insurable loss that might be compensated according to a reasonable insurance standard. In this article, two-thirds of the wage loss for the period of disability after the waiting period is assumed to be a reasonable standard, even though some policies may compensate for less. Insurance in 1956 was meeting approximately 41 percent of this theoretical benchmark (with the first 7 days excluded)—almost twice the 22 percent of 1948.

<sup>9</sup> There is a slight degree of overstatement when the insurance benefits are compared with this concept of income loss, to the extent that some insurance benefits begin with the fourth day in the case of illness and with the first day in the case of accidents.

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Benefit checks went to 1,020,100 unemployed workers during an aver-

age week in October. This average was 5 percent higher than that in September and 36 percent greater than the average in October 1956. Total benefits paid went up 16 per-

cent to \$131.8 million—44 percent more than the total a year earlier. The average weekly benefit for total unemployment advanced 56 cents to \$29.20.