
Income Replacement During Sickness, 1948-78

by Daniel N. Price*

Estimates have been published by the Social Security Administration for each year beginning with 1948 on cash benefits to replace the income loss associated with illness or accidents suffered away from work.

The benefits paid by plans included in this series were recorded at \$0.8 billion in 1948. By 1978, benefits paid reached \$11.7 billion. The rate of income replacement achieved by these benefits also grew markedly from 17 percent in 1948 to 36 percent in 1978. As the fourth decade of the series begins, the most prominent issues are: Availability of maternity benefits, concern about appropriate tax treatment of benefits, and the still unresolved question of whether and how to provide a national system of income-loss protection against sickness.

Under the old-age, disability, and survivors insurance program (OASDI), workers who become severely disabled for long periods may be entitled to cash benefits replacing lost earnings after 5 months. In 1978, for example, cash benefits of \$12.5 billion were paid under this program. Further, workers disabled on the job may receive income replacement regardless of the duration of the disability through workers' compensation laws. Workers' compensation cash benefits totaled \$6.8 billion in 1978. For nonwork connected disability, however, there is no national program to provide benefits for the first 5 months of long-term disability, nor for any of the income lost during shorter term illness. Nevertheless, many workers do have such protection, generally through their place of employment. In 1978, sickness benefit plans paid \$11.7 billion.

In addition to the amount of benefits paid, the main features for 1978 in income lost through sickness and in benefit plans for replacing these earnings were:

1. Income lost during the year because of short-term disability totaled \$32.9 billion, almost 17 percent above the 1977 level, in large part because of inflationary effects on income levels.

2. Payments made by both voluntary and mandatory sick-pay benefit plans replaced 36 percent of the amount lost.

3. Fifty-six million workers, representing about 65 percent of all wage and salary workers in private industry and government, were protected by sick-pay benefit plans including sick leave.

4. Although more wage and salary workers were covered by insurance or self-insurance benefit plans, the greater share of benefits paid was in the form of sick-leave pay (\$7.3 billion of \$10.5 billion). Further, the share accounted for by sick-leave payments has been growing as the proportion of workers under sick-leave plans has risen.

5. Sick leave received by government workers totaled \$4.6 billion and accounted for three-fifths of all sick-leave payments.

Sickness-Income Loss and Protection

This section describes the magnitudes and trends in the amount of wages, salaries, and self-employment income that workers lose while sick. Also examined are what kind of protection is available and the number of workers covered by the two basic types of plans: sickness insurance and sick leave. The rate of income-loss replacement achieved by available benefits is presented to measure adequacy of the current system.

Income-Loss Estimates

About \$32.9 billion in income was lost due to sickness in 1978, a level 17 percent above that of the previous year (see table 1). Wage and salary workers lost \$30.1 billion of this amount; in addition, \$2.8 billion was estimated to have been lost by self-employed individuals. Income loss for the self-employed was 20 percent more than in 1977, a greater rate of change than in any other year during the 1970's. Generally though, the share of total income lost because of sickness in the self-

* Division of Retirement and Survivors Studies, Office of Research and Statistics, Office of Policy, Social Security Administration.

Table 1.—Estimated income-loss from nonoccupational short-term sickness,¹ by type of employment, 1948–78²
 [In millions]

Year	Wage and salary workers						
	Total	In private employment ³			In public employment		
		Total	Covered by temporary disability insurance laws ⁴	Other ⁵	Federal ⁶	State and local ⁷	Self-employed ⁸
1948.....	\$4,582	\$3,632	\$391	\$2,809	\$174	\$258	\$950
1949.....	4,445	3,602	483	2,644	190	285	843
1950.....	4,816	3,921	712	2,703	201	305	895
1951.....	5,494	4,495	1,059	2,843	259	334	999
1952.....	5,834	4,832	1,132	3,040	291	369	1,002
1953.....	6,163	5,199	1,213	3,295	290	401	964
1954.....	6,114	5,162	1,212	3,233	280	437	952
1955.....	6,565	5,574	1,299	3,508	297	470	991
1956.....	7,052	6,035	1,430	3,774	313	518	1,017
1957.....	7,386	6,336	1,512	3,931	323	570	1,050
1958.....	7,477	6,371	1,507	3,884	352	628	1,106
1959.....	7,749	6,680	1,580	4,090	356	654	1,069
1960.....	8,591	7,462	1,773	4,526	403	760	1,129
1961.....	8,664	7,527	1,770	4,524	420	813	1,137
1962.....	9,653	8,426	1,983	5,051	467	925	1,227
1963.....	10,213	8,956	2,084	5,359	504	1,009	1,257
1964.....	10,298	9,065	2,085	5,435	506	1,039	1,231
1965.....	11,333	9,971	2,244	6,017	548	1,162	1,362
1966.....	12,268	10,833	2,403	6,553	597	1,275	1,435
1967.....	12,838	11,401	2,529	6,928	632	1,312	1,437
1968.....	14,585	13,032	2,852	7,904	698	1,578	1,553
1969.....	15,307	13,747	3,025	8,334	757	1,631	1,560
1970.....	16,757	15,161	3,201	9,147	841	1,912	1,596
1971.....	17,146	15,550	3,273	9,321	897	2,059	1,596
1972.....	19,507	17,641	3,653	10,649	961	2,378	1,866
1973.....	21,059	18,881	3,881	11,441	1,026	2,533	2,178
1974.....	21,804	19,852	4,026	12,059	1,118	2,649	1,952
1975.....	23,595	21,565	4,270	13,036	1,213	3,045	2,030
1976.....	26,447	24,320	4,771	14,884	1,301	3,364	2,127
1977.....	28,223	25,922	5,242	15,813	1,395	3,483	2,290
1978.....	32,898	30,146	5,892	18,838	1,523	3,893	2,752

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

² Beginning 1960, data include Alaska and Hawaii. Beginning 1959, data adjusted to reflect changes in sickness experience (average number of disability days), as reported in the health interview survey of the Public Health Service.

³ Annual payrolls of wage and salary workers in private employment, multiplied by 7 (estimated average workdays lost per year due to short-term sickness) and divided by 255 (estimated workdays in year). Data for 1948-72 from unpublished advance tables, **Benchmark Revision of National Income and Product Accounts**, Department of Commerce. Comparable data since 1972 from **Survey of Current Business, National Income Issue** published annually.

⁴ Total annual payrolls of wage and salary workers in industries covered by temporary disability insurance laws in Rhode Island, California, New Jersey, and New York and in the railroad industry, multiplied by 7 and divided by 255.

⁵ Difference between total loss for all wage workers in private employment and for those covered by temporary disability insurance laws.

⁶ Federal civilian payroll in United States from Office of Personnel Management, multiplied by 8 (estimated average workdays lost per year due to short-term sickness) and divided by 260 (scheduled workdays in year).

⁷ Annual wage and salary payrolls of State and local government employees from Department of Commerce data (see footnote 3) multiplied by estimated average workdays lost per year due to short-term sickness (for 1948-66, 7.5 days; 1967, 7.35 days; for 1968, 7.2 days; and for 1969 to date, 7.0 days) and divided by 255 (estimated workdays in year).

⁸ Annual farm and nonfarm proprietors income from Department of Commerce data (see footnote 3), multiplied by 7 (estimated income-loss days per year due to short-term sickness) and divided by 300 (estimated workdays in year).

employment sector has declined considerably from 1948, the first year in this series. In 1948, the self-employed accounted for 21 percent of total income loss, compared with just 8 percent of the total in 1978.

A high rate of growth in income loss through sickness during 1978 (17 percent) was observed among private industry wage workers. Workers in areas not under temporary disability insurance laws¹ experienced an

¹ Five States, Puerto Rico, and the railroad industry have temporary disability-insurance laws requiring employers to provide cash-sickness benefits to their employees during non-work-related sickness.

even higher rate of growth in sickness income loss (19 percent). The lowest rates of change in income loss from 1977 to 1978 occurred among government workers (9 percent for Federal employees and 12 percent for State and local government workers) primarily because of largely stable levels of government employment between 1977 and 1978.

Contributing to the high overall growth in income loss through sickness was a 5-percent rise in civilian employment, a 7 percent rise in civilian wages during the year, a 3-percent increase in sickness rates, and a 17-percent rise in aggregate income among the self-

employed. The first two factors followed a pattern similar to that for the previous year. But the sickness rate had declined from 1976 to 1977. (See the technical note at the end of the article concerning trends in sickness rates.) And growth of self-employment income grew at a somewhat lesser rate in 1977 than in 1978, contributing to the much more modest growth of income loss for sickness in 1977 (7 percent).

Benefit Protection

Workers covered and types of protection. Protection against income loss in the event of non-work-connected disability can be provided through the worker's place of employment, through the purchase of individual sickness-insurance policies from insurance companies, or through membership in fraternal societies. Most protection against income loss through sickness comes through the employment relationship. Some employers insure their workers against this risk either by purchasing group policies from commercial companies, under which cash benefits are paid during specified periods of disability, or by providing similar payments by self-insuring. Others establish formal, paid sick-leave plans that provide for continuation of wages (usually full wages) for a certain number of days. Still others combine the two methods and establish both sick-leave and group insurance plans that supplement each other. Among other sources of employment-connected protection against income loss resulting from sickness are mutual benefit associations and union or union-management plans, often on a regional or industrywide basis.

Of the 87.2 million wage and salary workers subject to this risk in December 1978, 56.3 million (or 65 percent) were covered by a formal sickness-benefit plan. Since more than nine of ten Federal, State, and local government employees have this protection, the greatest gap in coverage occurs among workers in private industry. As indicated in table 2, 42.6 million workers in private industry—about three out of five—were covered under cash sickness benefit plans. Excluding those areas where protection is mandated by temporary disability insurance laws, slightly under one-half the workers in private industry had sickness protection. The extent of sickness-income loss protection has been fairly stable for many years except for some growth in protection through State and local government sick-leave plans and, to a lesser degree, through sick-leave plans in private industry.

Workers in seven jurisdictions are protected against income loss in the event of nonoccupational illness and accidents by statutory Temporary Disability Insurance (TDI) programs. These jurisdictions include: California, Hawaii, New Jersey, New York, and Rhode Island, as well as workers in Puerto Rico, and railroad workers

covered under the Railroad Retirement Act. The coverage provided by TDI laws is generally similar to unemployment insurance programs in those jurisdictions. Besides covering almost all workers in industry and commerce, TDI programs also cover farm workers to a varying degree. California, Hawaii, Puerto Rico, and Rhode Island include all farm workers, and New Jersey includes workers on farms with 10 or more employees in 20 or more weeks. The program in New York excludes farm workers from coverage. State and local government employees are largely excluded from TDI programs. Self-employed individuals may elect coverage in California.

Many of the workers not protected by statutory TDI programs in these jurisdictions, however, have disability insurance or sick leave provided by their employers. Most State and local government workers and many employees of nonprofit firms are covered under such income-maintenance programs. In all, 17 million—or more than 9 out of 10 of all wage and salary workers in States with TDI programs—are eligible for some form of income maintenance when they are ill.

Elsewhere than in the seven jurisdictions with statutory programs, sickness protection is available to workers primarily through labor-management contracts or employer-initiated fringe benefit programs. The two major forms of such protection are insurance (including self-insurance) and sick leave. Voluntary insurance plans, excluding private insurance in jurisdictions with mandatory TDI protection, covered an estimated 17 million workers in 1978. These plans generally provide for the replacement of one-half to two-thirds of wages after a waiting period of 3–7 days. The duration of benefits may vary by length of work experience, or more commonly, may be for some fixed number of weeks for all workers under the plan with the maximum duration ranging from 13 to 26 weeks.

Another form of sickness insurance that began growing in importance in the mid-1970's should be noted. To combine advantages of insurance and self-insurance, many employers began to protect their workers through Administrative Service Only (ASO) and Minimum Premium Plans (MPP). Under ASO's, employers establish a self-funded income maintenance plan, and pay a fee or premium to an insurance organization for administering claims under the plan. The insurance company may perform all or some of the following: Accept, review, authorize, and make payment from established funds for claims received. Under an MPP, the plan administrator pays a premium to an insurance company to pay any benefits payable to an individual beyond an agreed upon amount. Thus MPP's are essentially reinsurance plans to avoid excessive risk. By 1978, the Health Insurance Institute estimated that ASO and MPP arrangements accounted for 18 percent of total insurance company premiums earned for all types of

Table 2.—Degree of income-loss protection against short-term sickness for all employed wage and salary workers in private industry and for those not under temporary disability insurance laws, selected years, December 1954–78

Year	Total number (in thousands) ¹	With protection	
		Number (in thousands) ²	Percent of total
All wage and salary workers			
1954.....	43,000	25,600	59.5
1956.....	46,000	27,700	60.2
1958.....	45,900	26,900	58.6
1960.....	47,000	28,200	60.0
1962.....	48,900	29,800	60.9
1964.....	51,200	28,700	56.1
1966.....	54,800	30,700	56.0
1968.....	56,800	33,500	59.0
1970.....	58,000	35,300	60.9
1971.....	58,900	35,500	60.3
1972.....	61,400	36,500	59.4
1973.....	63,800	38,100	59.7
1974.....	62,800	36,900	58.8
1975.....	62,700	36,000	57.4
1976.....	65,400	38,700	59.2
1977.....	68,700	40,200	58.5
1978.....	71,600	42,600	59.5
Wage and salary workers not under temporary disability insurance laws			
1954.....	31,400	15,000	47.8
1956.....	34,200	16,400	48.0
1958.....	33,600	16,000	47.6
1960.....	34,300	16,800	49.0
1962.....	35,900	17,400	48.5
1964.....	38,100	16,000	42.0
1966.....	41,000	17,000	41.5
1968.....	42,600	19,300	45.3
1970.....	43,300	20,600	47.6
1971.....	44,300	20,900	47.2
1972.....	46,500	21,600	46.5
1973.....	47,700	22,000	46.1
1974.....	47,700	21,800	45.7
1975.....	48,000	21,300	44.4
1976.....	50,200	23,500	46.8
1977.....	52,700	24,200	45.9
1978.....	54,700	25,700	47.0

¹ Number in private industry. For the areas not under temporary disability insurance laws, total excludes railroad workers and is adjusted by ratio of private industry employees on nonagricultural payrolls in the States with temporary disability insurance laws to all such employees. Data from Bureau of Labor Statistics, **Employment and Earnings**. Beginning 1968, data not strictly comparable with that for earlier years. Labor-force information for 1968 and thereafter excludes those aged 14–15 and includes certain workers previously classified as self-employed.

² Estimated number of private-industry workers (1) with group accident and sickness insurance (except group credit insurance), (2) under paid sick-leave plans, (3) under union and mutual association plans, and (4) in State-operated temporary disability insurance funds. Beginning 1964, group accident and sickness insurance coverage has been adjusted to exclude those with long-term benefit policies, which usually do not provide short-term benefits. Estimates of private protection based on data from Health Insurance Association of America and from State administrative agencies.

health insurance including cash benefits plans for sickness.² ASO and MPP premiums for short-term sickness plans alone were estimated as \$292 million in 1978.

Sick leave is the other major form of income-maintenance protection for a worker when he cannot work because of illness or accident. Although sickness insurance and sick leave have the same objectives of preventing the stoppage of income during temporary periods of incapacity, they operate in very different fashions. Sick leave generally is paid in full replacement of earnings from the first day of illness, for a specified number of days, usually between 5 and 15 a year, and sometimes unused leave can be accumulated

from year to year. On the other hand, sickness insurance may pay up to 26 weeks of benefits after a waiting period of a week, at some fraction of weekly wages—usually between one-half and two-thirds—subject to a specified maximum amount.

Each type of protection has its advantages and disadvantages. The most significant advantage of sick leave is that it assures little or no drop in income for many workers when they are sick, since most illnesses last only a few days and since sick-leave benefits ordinarily consist of full wages. The chief advantage of sickness insurance is that it gives partial but substantial protection over many weeks and so precludes catastrophic income loss in the event of serious extended illness. Because the two types of plans differ in the kind of

² Source **Book of Health Insurance Data, 1979–1980**, Health Insurance Institute, page 8.

protection offered, however, the extent of wage replacement is not necessarily an adequate measure of their comparative advantages.

In 1978, more than 6 million workers in private industry were covered under exclusive sick-leave plans. Exclusive sick-leave plans are those that provide the only form of compensation provided for this purpose. In contrast, about 9 million workers were covered under supplemental sick-leave plans—that is, plans which paid benefits coordinated with insurance benefits, such as sick leave paid during the waiting period before insurance benefits are payable. Supplemental sick-leave plans can be associated with private insurance plans or with publicly-operated funds in temporary disability-insurance jurisdictions. Altogether, 15 million workers in private industry were covered by some form of sick leave program during 1978. In addition, 13.7 million workers in government employment during 1978 had this form of sickness protection, in most cases in the form of exclusive sick-leave plans.

Three forms of voluntary protection are excluded from the estimates made for this series. First, data for voluntary group insurance coverage exclude persons whose only protection was under credit insurance since this type of protection does not generally stem from an employment relationship. Credit insurance is purchased by lenders to protect themselves against the risk of nonpayment if borrowers become disabled.

Second, no attempt was made to include in either the coverage or benefit data, workers who receive benefits through informal plans. Informal plans, by their nature, do not provide assurance of any definite protection against the hazard of income loss from disability. Moreover, because of the lack of a clear commitment to provide specified benefits, no ready means exists to estimate how many persons might receive such benefits, under what conditions, or in what amounts.

Third, the number of employees and self-employed persons covered by individual insurance policies are also excluded from this series. It would be difficult to eliminate the duplication that results when some persons have more than one policy or hold an individual policy in addition to some form of group protection. Furthermore, individual policies are not necessarily related to participation in the labor force (those that provide flat-rate periodic cash benefits upon proof of hospitalization, for example). Unlike the duplication involved in counting the number of workers with individual policies, the inclusion of benefit amounts paid under individual policies provides meaningful data. These benefits, therefore, are included in the tables.

Replacement of Income Loss

Altogether, voluntary insurance and self-insurance plans, TDI programs, formal sick-leave plans in private

industry, and sick-leave plans in government paid \$11.7 billion in cash benefits to workers disabled for periods up to 6 months during 1978 (table 3). Benefits rose 11 percent over the 1977 total, a faster pace than that recorded for all but 1 other year in the 1970's, and well above the 7-percent growth from 1976 to 1977. A major part of the substantial benefit growth in 1978 can be attributed to the same factors listed above as causing income-loss levels to rise rapidly—specifically, substantial increases in the number of workers, wage levels, sickness rates, and self-employment income. Benefits paid replaced 36 percent of the total income loss incurred by workers during their periods of illness, a rate similar to that since 1970.

Benefit-replacement rates are presented in table 4 for major categories of workers. The rate for all group protection (that is, excluding individual insurance benefits and self-employment income loss included in table 3 data) was 35 percent. A dramatic difference exists in the replacement rates for government workers and workers in private industry. Eighty-four percent of the sickness-income loss of government workers was replaced in 1978, compared with 23 percent for workers in private industry. This disparity is a result of two strong influences. First, most employees of Federal, State, and local governments are under a sick-pay plan. In contrast, only about three-fifths of private industry workers are covered under a plan through their employment. Second, as indicated above, the protection of government workers is for the most part in the form of exclusive sick-leave plans, which tend to produce higher income-replacement rates than insurance benefits, the prevalent form of protection in private industry.

Workers covered by TDI laws in 1978 had a higher degree of wage replacement (27 percent) than workers in non-TDI areas (22 percent), largely because of the greater extent of coverage in the areas with mandatory programs. Replacement rates for workers in each of these groups have fluctuated over a narrow range since 1970.

A summary of the extent of protection provided by type of plan and worker is shown in table 5. Benefits to workers in private industry under private cash-sickness insurance, self-insurance, and sick-leave plans are shown separately, as are individual insurance and government sick-leave benefits. The role of sick leave in relation to total benefits paid under all cash-sickness plans can be obtained by combining the sick leave paid in private industry and government. The \$7.3 billion in combined sick-leave pay during 1978 was a little more than three-fifths of total benefit payments. The share of sickness benefits in 1978 represented by each category in table 5 is indicated in the tabulation on the following page.

There was a substantial range in the pace of growth of benefits in 1978 among the various types of sickness-

Type of plan	Percentage	
	Distribution	Change, 1977-78
Total	100	11
Individual insurance.....	10	29
Group benefits.....	90	10
Private industry benefits		
Private insurance and self-insurance.....	20	3
Public-operated funds.....	5	5
Sick leave.....	24	17
Government sick leave	39	10

benefit plans. Benefits through individual insurance totaled \$1.2 billion and were 29 percent above their level in 1977. The smallest rate of increase was for benefits paid by privately operated group insurance plans (3 percent). Group insurance benefits may currently be in a period of slow growth as some employers switch from conventional insurance to ASO and MPP plans, self-insuring most of the risk. In any event, private insurance benefits grew at a very slow pace in both 1977 and 1978.

Insurance payments made by publicly-operated funds also recorded a rather low rate of increase in 1978 (4.7 percent). The cumulative increase in public-fund benefits from 1970 to 1978 was only 48 percent, about one-half of that consolidated increase in benefits paid by all types of plans over that span. The greatest growth in payments from 1970 was in benefits paid through sick-leave plans, especially in private industry where payments from 1970 to 1978 rose by 159 percent.

Benefit Experience By Payment Type

Temporary Disability Insurance

Benefits paid under TDI laws in 1978 amounted to \$1.1 billion (table 6), an increase of 8 percent over 1977, and a considerably larger increase than the 1 percent rise from 1976 to 1977. Nevertheless, TDI benefits in 1978 continued to represent a smaller proportion of all cash-sickness benefits paid under employment-related plans. TDI payments accounted

Table 3.—Extent of protection against income loss, 1948-78

[Amounts in millions]

Year	Income loss and protection			Income loss not protected	Net cost of providing insurance ⁴
	Income loss ¹	Protection provided ^{2,3}	Protection as percent of loss		
1948.....	\$4,582	\$761	16.6	\$3,821	\$277
1949.....	4,445	848	19.1	3,597	287
1950.....	4,816	942	19.6	3,874	307
1951.....	5,494	1,153	21.0	4,341	311
1952.....	5,834	1,304	22.4	4,530	322
1953.....	5,163	1,413	22.9	4,750	428
1954.....	6,114	1,478	24.2	4,636	453
1955.....	6,565	1,620	24.7	4,945	450
1956.....	7,052	1,806	25.6	5,246	413
1957.....	7,386	1,958	26.5	5,428	482
1958.....	7,477	2,093	28.0	5,384	519
1959.....	7,749	2,236	28.9	5,513	548
1960.....	8,591	2,430	28.3	6,161	542
1961.....	8,664	2,561	29.6	6,103	592
1962.....	9,653	2,776	28.8	6,877	621
1963.....	10,213	2,997	29.3	7,216	597
1964.....	10,296	3,101	30.1	7,195	642
1965.....	11,333	3,349	29.6	7,984	708
1966.....	12,268	3,637	29.6	8,631	815
1967.....	12,838	3,898	30.4	8,940	887
1968.....	14,585	5,622	31.7	9,963	1,014
1969.....	15,307	5,104	33.3	10,203	1,214
1970.....	16,757	5,888	35.1	10,869	1,160
1971.....	17,146	6,137	35.8	11,009	1,386
1972.....	19,507	6,874	35.2	12,633	1,556
1973.....	21,059	7,461	35.4	13,598	1,740
1974.....	21,804	8,232	37.8	13,572	1,774
1975.....	23,595	9,002	38.2	14,592	2,232
1976.....	26,447	9,819	37.1	16,628	2,234
1977.....	28,223	10,546	37.4	17,677	2,452
1978.....	32,898	11,729	35.7	21,169	3,459

¹ From table 1.

² Total benefits, including sick leave.

³ Beginning 1973, includes benefits for the 6th month of disability under the old-age, survivors, and disability insurance program.

⁴ Includes retention costs (for contingency reserves, taxes, commissions,

acquisition, claims settlement, and underwriting gains) of private insurance companies (from table 7) and administrative expenses for publicly operated plans and for supervision of the operation of private plans. Excludes costs of operating sick-leave plans; data not available.

Table 4.—Group protection in relation to wage and salary loss, 1948–78
[Amounts in millions]

Year	Wage and salary workers														
	Private industry												Government		
	Total			Total			Covered by temporary disability insurance laws			Not covered by temporary disability insurance laws					
	Income loss	Protection provided		Income loss	Protection provided		Income loss	Protection provided		Income loss	Protection provided		Income loss	Protection provided	
		Amount ¹	Percent of income loss		Amount	Percent of income loss		Amount	Percent of income loss		Amount	Percent of income loss		Amount	Percent of income loss
1948.....	\$3,632	\$620	17.1	\$3,199	\$361	11.3	\$391	\$79	20.2	\$2,890	\$282	10.1	\$432	\$259	60.0
1949.....	3,602	698	19.4	3,127	398	12.7	483	105	21.7	2,644	293	11.1	475	300	63.2
1950.....	3,921	789	20.1	3,415	474	13.9	712	141	19.8	2,703	333	12.3	506	315	62.3
1951.....	4,495	996	22.2	3,902	606	15.5	1,059	209	19.7	2,843	397	14.0	593	390	65.8
1952.....	4,832	1,127	23.3	4,172	674	16.2	1,132	239	21.1	3,040	435	14.3	660	453	68.6
1953.....	5,199	1,204	23.2	4,508	722	16.0	1,213	269	22.2	3,295	453	13.7	691	481	69.6
1954.....	5,162	1,248	24.2	4,445	747	16.8	1,212	276	22.8	3,233	471	14.6	717	500	69.7
1955.....	5,574	1,370	24.6	4,807	825	17.2	1,299	290	22.3	3,508	535	15.3	767	545	71.1
1956.....	6,035	1,528	25.3	5,204	937	18.0	1,430	316	22.1	3,774	621	16.5	831	591	71.1
1957.....	6,336	1,651	26.1	5,443	1,024	18.8	1,512	360	23.8	3,931	664	16.9	893	626	70.1
1958.....	6,371	1,740	27.3	5,391	1,044	19.4	1,507	382	25.3	3,884	662	17.0	980	696	71.0
1959.....	6,680	1,847	27.6	5,670	1,123	19.8	1,530	411	26.0	4,090	712	17.4	1,010	724	71.7
1960.....	7,462	2,037	27.3	6,299	1,211	19.2	1,773	435	24.5	4,526	776	17.1	1,163	826	71.0
1961.....	7,527	2,135	28.4	6,294	1,241	19.7	1,770	465	26.3	4,524	776	17.2	1,233	894	72.5
1962.....	8,426	2,358	28.0	7,034	1,355	13.3	1,983	495	25.0	5,051	860	17.0	1,392	1,003	72.1
1963.....	8,956	2,550	28.5	7,443	1,445	19.4	2,084	529	25.4	5,359	916	17.1	1,513	1,105	73.0
1964.....	9,065	2,617	28.9	7,520	1,485	19.7	2,085	537	25.8	5,435	948	17.4	1,545	1,133	73.3
1965.....	9,971	2,866	28.7	8,261	1,602	19.4	2,244	558	24.9	6,017	1,044	17.4	1,710	1,264	73.9
1966.....	10,833	3,124	28.8	8,961	1,735	19.4	2,408	581	24.1	6,553	1,154	17.6	1,872	1,389	74.2
1967.....	11,401	3,371	29.6	9,457	1,834	19.4	2,529	616	24.4	6,928	1,218	17.6	1,944	1,536	79.0
1968.....	13,032	4,013	30.8	10,756	2,247	20.9	2,852	699	24.5	7,904	1,548	19.6	2,276	1,766	77.6
1969.....	13,742	4,469	32.5	11,359	2,551	22.5	3,025	799	26.4	8,334	1,752	21.0	2,388	1,918	80.3
1970.....	15,161	5,194	34.3	12,408	2,953	23.8	3,261	880	27.0	9,147	2,073	22.7	2,753	2,242	81.4
1971.....	15,550	5,406	34.8	12,594	3,030	24.1	3,273	900	27.5	9,321	2,130	22.9	2,956	2,376	80.4
1972.....	17,641	6,102	34.6	14,302	3,390	23.7	3,653	969	26.5	10,649	2,421	22.7	3,339	2,712	81.2
1973.....	18,881	6,666	35.3	15,322	3,650	23.8	3,881	1,066	27.5	11,441	2,584	22.6	3,559	2,906	81.7
1974.....	19,852	7,351	37.2	16,085	4,144	25.8	4,026	1,154	28.7	12,059	2,990	24.8	3,767	3,107	82.5
1975.....	21,565	8,030	37.2	17,306	4,328	25.0	4,270	1,239	29.0	13,036	3,089	23.7	4,259	3,542	83.2
1976.....	24,320	8,938	36.8	19,655	4,900	24.9	4,771	1,348	28.3	14,884	3,552	23.9	4,665	3,868	82.9
1977.....	25,933	9,606	37.0	21,055	5,282	25.1	5,242	1,435	27.4	15,813	3,847	24.3	4,878	4,134	84.7
1978.....	30,146	10,519	34.9	24,730	5,774	23.3	5,892	1,575	26.7	18,838	4,199	22.3	5,416	4,565	84.3

¹ Beginning 1973, includes benefits for the 6th month of disability payable under the old-age, survivors, and disability insurance program (not shown separately).

for 18 percent of all group benefits in 1960, 14 percent in 1970, and 10 percent in 1978. This pattern does not reflect an appreciable decrease in TDI payments relative to income loss among workers covered under these programs, but is due to the growing role of sick leave in providing income maintenance for sickness in non-TDI areas. The proportion of workers under sick-leave plans has grown steadily both in private industry and in State and local government employment.

Because sick-leave plans are so dissimilar in their income replacement objectives from insurance programs, it is more relevant to examine the role of TDI programs with respect to other insurance benefit programs. This relationship has been variable over the years, depending on changes in statutory coverage and benefit provisions and on the effects of economic conditions on growth in voluntary insurance coverage in

areas without TDI laws. Benefits paid under the temporary disability insurance laws accounted for as much as 48 percent of insurance payments for short-term sickness nationally in 1963, but the proportion has since fallen in an irregular manner to 36 percent in 1978.

Benefits in TDI jurisdictions account for a higher proportion of the national total than do corresponding income-loss amounts primarily because of the almost complete coverage of workers in TDI areas. During 1978, sickness-income loss among workers in TDI jurisdictions was just 24 percent of the corresponding income loss for private industry workers nationally. This ratio has been fairly stable over the years (declining just 4 points from a 28-percent high in the early 1960's).

Relatively few TDI program changes went into effect

Table 5.—Benefits provided as protection against income loss, summary data, 1948–78

[In millions]

Year	Total ¹	Benefits provided through individual insurance	Group benefits provided as protection against wage and salary loss					Sick leave for government employees
			Total ¹	Workers in private employment			Sick leave	
				Total	Private cash sickness insurance and self-insurance ²	Publicly operated cash sickness funds		
1948	\$761.4	\$141.0	\$620.4	\$361.3	\$145.8	\$57.1	\$158.4	\$259.1
1949	848.2	150.0	698.3	398.3	172.0	62.1	164.2	299.9
1950	941.8	153.0	788.8	473.7	230.8	63.1	179.8	315.1
1951	1,152.9	157.0	995.9	605.8	343.8	60.9	201.1	390.1
1952	1,303.9	177.0	1,126.9	674.1	382.1	74.5	217.5	452.8
1953	1,412.7	209.0	1,203.7	722.4	397.2	90.5	234.7	481.3
1954	1,477.6	230.0	1,247.6	747.3	399.1	103.1	245.1	500.3
1955	1,619.6	250.0	1,369.6	824.9	442.4	109.4	273.1	544.7
1956	1,805.7	278.0	1,527.7	936.9	524.5	113.8	298.6	590.8
1957	1,957.9	307.2	1,650.7	1,024.3	567.2	127.2	329.9	626.4
1958	2,093.2	353.4	1,739.8	1,043.5	555.7	141.4	346.4	696.3
1959	2,236.3	389.6	1,846.7	1,122.9	600.5	163.7	358.7	723.8
1960	2,429.6	392.8	2,036.8	1,210.6	638.4	172.1	400.1	826.2
1961	2,560.7	425.9	2,134.8	1,241.0	625.7	195.2	420.1	893.8
1962	2,776.3	418.5	2,357.8	1,355.0	670.7	212.0	472.3	1,002.8
1963	2,997.3	447.2	2,550.1	1,444.9	675.4	243.9	525.6	1,105.2
1964	3,101.3	483.9	2,617.4	1,484.8	715.7	264.4	504.7	1,132.6
1965	3,349.0	482.6	2,866.4	1,602.3	767.1	269.1	566.1	1,264.1
1966	3,636.8	512.9	3,123.9	1,735.1	843.2	273.2	618.7	1,388.8
1967	3,898.3	527.4	3,370.9	1,834.4	869.3	284.7	680.4	1,536.5
1968	4,622.9	609.1	4,012.8	2,246.9	1,123.7	320.2	803.0	1,765.9
1969	5,104.2	635.4	4,468.8	2,550.7	1,246.7	373.7	930.3	1,918.1
1970	5,888.1	693.7	5,194.4	2,952.5	1,475.9	410.6	1,066.0	2,241.9
1971	6,137.2	730.9	5,406.3	3,030.1	1,489.0	410.9	1,130.2	2,376.2
1972	6,873.8	772.0	6,101.8	3,390.1	1,614.4	412.0	1,363.7	2,711.7
1973	7,460.8	795.0	6,665.8	3,650.3	1,735.8	445.9	1,468.6	2,905.5
1974	8,231.7	851.0	7,380.7	4,143.5	2,024.4	485.3	1,633.8	3,107.2
1975	9,002.5	973.0	8,029.5	4,327.5	2,010.6	538.3	1,778.6	3,542.0
1976	9,819.4	881.0	8,938.4	4,900.4	2,267.3	580.9	2,052.2	3,868.0
1977	10,546.0	940.0	9,606.0	5,282.5	2,344.0	581.8	2,356.7	4,133.5
1978	11,728.9	1,210.0	10,518.9	5,773.6	2,403.1	609.1	2,761.4	4,565.3

¹ Beginning 1973, includes benefits for the 6th month of disability payable under the old-age, survivors, and disability insurance program (not shown separately).

² Includes a small but undetermined amount of group disability insurance benefits paid to government workers and to self-employed persons through farm, trade, or professional associations.

in 1978 as a result of legislative activity. In California, the maximum weekly benefit amount was raised to \$146. California also raised the contribution rate for self-employed persons who have elected coverage from 1.25 percent to 1.72 percent of covered earnings. The weekly maximum-benefit amounts in three other TDI jurisdictions rose automatically as earnings of covered workers went up: Hawaii (\$126), New Jersey (\$110), and Rhode Island (\$91). Although statutory-benefit amounts in New York did not rise during 1978, there was a significant legislative change in the New York law that may have been responsible for a large increase in aggregate benefits paid. Effective in August 1977, New York began payments for maternity under TDI for normal pregnancy up to 8 weeks (26 weeks for disabilities due to pregnancies having complications). In contrast to the 8-percent rise in all TDI program benefits from 1977 to 1978, benefits paid under the New York law rose by 14 percent.

Private Insurance

Benefit and premium data for the various types of insurance plans are presented in table 7. In 1978, \$3.6 billion was paid for short-term sickness benefits under voluntary and public (TDI) provisions, including individual insurance. Benefits under private insurance grew by 10 percent from 1977 to 1978, compared with just 4 percent from 1976 to 1977. Most of the growth in voluntary plan benefits was in payments under individual insurance policies. The private insurance payments included \$481 million in benefits paid through insurance and self-insurance plans under TDI laws. These private payments under TDI programs rose at a greater rate (13 percent) in 1978 than did total private payments. Throughout the 1970's, however, insurance benefits under public (TDI) programs grew by 56 percent, compared with 68 percent under the voluntary programs.

Table 6.—Cash benefits under temporary disability insurance laws provided through private plans and through publicly operated funds, 1948–78¹

[In millions]

Year	Total	Type of insurance arrangement		
		Private plans ²		Publicly operated funds ⁴
		Group insurance	Self-insurance ³	
1948.....	\$66.4	\$9.0	\$0.3	\$57.1
1949.....	89.2	22.3	4.8	62.1
1950.....	117.4	41.7	12.6	63.1
1951.....	174.2	81.1	32.2	60.9
1952.....	202.3	92.5	35.3	74.5
1953.....	230.2	102.0	37.7	90.5
1954.....	235.1	96.2	35.8	103.1
1955.....	244.6	97.0	38.2	109.4
1956.....	265.0	109.7	41.5	113.8
1957.....	305.3	129.5	48.6	127.2
1958.....	325.1	132.7	51.0	141.4
1959.....	353.2	135.2	54.3	163.7
1960.....	368.2	138.1	58.0	172.1
1961.....	396.6	141.3	60.1	195.2
1962.....	416.3	143.7	60.6	212.0
1963.....	442.2	130.6	67.6	243.9
1964.....	455.8	123.2	68.2	264.4
1965.....	466.7	124.8	72.8	269.1
1966.....	481.6	130.9	77.5	273.2
1967.....	507.1	139.1	83.3	284.7
1968.....	571.9	154.0	97.7	320.2
1969.....	654.9	171.7	109.5	373.7
1970.....	717.8	183.7	123.5	410.6
1971.....	721.3	184.0	126.4	410.9
1972.....	740.5	183.7	144.8	412.0
1973.....	799.3	193.6	159.9	445.9
1974.....	866.9	199.7	181.9	485.3
1975.....	932.3	203.7	190.3	538.3
1976.....	994.4	200.6	213.0	580.9
1977.....	1,007.3	203.8	221.7	581.8
1978.....	1,089.6	231.5	249.0	609.1

¹ Programs under the Railroad Unemployment Insurance Act and the laws of Rhode Island, California, New Jersey (beginning 1949), and New York (beginning 1950). Data for Hawaii not available. Puerto Rico benefits (\$6.3 million in 1978) excluded for consistency with wage-loss data in table 1 and elsewhere. Excludes hospital benefits in California and hospital, surgical, and medical benefits in New York.

² Under the laws of California, New Jersey, and New York.

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

⁴ 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.

Premiums for private sickness-benefit plans, including estimated equivalent premiums for self-insured plans, came to \$7 billion in 1978. This amount was 23 percent above the 1977 level and represented the largest annual increase in premiums since the series began in 1948. A 30-percent rise in voluntary group-insurance premiums was the major element in the total insurance-premium increase. (The public sector premiums are estimates derived in part from the voluntary-sector data.) The large growth in premiums is most likely a direct effect of inflationary wage trends that enter actuarial projections of costs.

As a result of the exceptionally large growth in premiums, the benefit-to-premium ratio (0.51) was the lowest recorded in the series. It should be kept in mind that the ratio represents several types of insurance in which the relationship of benefits to premiums may vary and so must be examined with caution. In some instances a particular form of insurance may have

undue influence on the totals for a given year because of erratic single-year changes in that form of insurance. Over a longer period, trends tend to be more consistent. For example, benefits and premiums under individual insurance have moved erratically with respect to each other in some years since 1970. For the 1970–78 period as a whole, however, they each increased at a fairly similar rate—68 percent for premiums, 75 percent for benefits.

The relationship of cash-sickness benefits to the income they replace is not necessarily expected to be “one-to-one.” Insurance benefits, in particular, are usually established as a partial income-replacement scheme. To discourage malingering, insurance plans ordinarily undertake to compensate for only a part of the weekly wage or salary loss and cover the first few days or first week of disability only when the disability results from an accident.

Table 8, therefore, presents a comparison between

Table 7.—Premiums and benefit payments for private insurance against income loss, 1948–78¹

[In millions]

Year	Total	Under voluntary provisions			Under public provisions			
		Total	Group insurance ²	Individual insurance ²	Self-insurance ³	Total	Group insurance ²	Self-insurance ⁴
Premiums								
1948	\$558.9	\$545.8	\$162.2	\$350.0	\$33.6	\$13.1	\$12.7	\$0.4
1949	603.6	564.8	177.8	355.0	32.0	38.8	31.9	6.9
1950	685.3	609.4	225.6	360.0	23.8	75.9	58.3	17.6
1951	804.7	660.9	269.4	366.0	25.5	143.8	102.9	40.9
1952	874.0	718.2	286.2	405.4	26.6	155.8	112.8	43.0
1953	1,026.0	839.5	321.5	494.8	23.2	186.5	136.2	50.3
1954	1,074.1	896.0	340.1	534.2	21.7	178.1	129.8	48.3
1955	1,133.9	955.1	386.2	547.8	21.1	178.8	128.3	50.5
1956	1,206.3	1,029.2	418.3	591.2	19.7	177.1	128.5	48.6
1957	1,346.9	1,129.7	453.7	654.4	21.6	217.2	157.9	59.3
1958	1,417.9	1,185.6	449.6	714.6	21.4	232.3	167.8	64.5
1959	1,526.4	1,293.6	484.1	787.8	21.7	232.8	166.1	66.7
1960	1,561.9	1,323.1	516.8	783.0	23.3	238.8	168.2	70.6
1961	1,630.5	1,375.2	516.0	835.9	23.3	255.3	179.1	76.8
1962	1,695.9	1,440.5	556.9	856.5	27.1	255.4	179.6	75.8
1963	1,704.3	1,459.9	560.0	870.0	29.9	244.4	161.0	83.4
1964	1,825.1	1,587.1	620.8	933.0	33.3	238.0	153.2	84.8
1965	1,940.9	1,682.5	710.9	933.1	38.5	258.4	163.0	95.4
1966	2,153.9	1,873.8	810.6	1,018.5	44.7	280.1	175.9	104.2
1967	2,265.8	1,955.2	853.1	1,048.6	53.5	310.6	194.3	116.3
1968	2,727.7	2,385.7	1,131.8	1,198.0	55.9	342.0	209.2	132.8
1969	3,076.7	2,677.3	1,304.5	1,304.5	68.2	399.4	243.9	155.5
1970	3,308.6	2,891.2	1,512.7	1,299.7	78.8	417.4	249.6	167.8
1971	3,583.7	3,140.9	1,597.3	1,454.2	89.4	442.8	262.5	180.3
1972	3,918.7	3,419.4	1,853.8	1,459.0	106.6	499.3	279.2	220.1
1973	4,240.8	3,718.6	1,942.0	1,671.0	105.6	522.2	286.0	236.2
1974	4,618.1	4,101.0	2,119.4	1,871.0	110.6	517.1	270.6	246.5
1975	5,172.3	4,592.1	2,214.2	2,257.0	120.9	580.2	304.8	275.4
1976	5,341.4	4,742.8	2,552.7	2,054.0	136.1	598.6	290.3	308.3
1977	5,690.7	5,029.9	2,833.5	2,044.0	152.4	660.8	316.5	344.3
1978	7,022.3	6,057.4	3,682.1	2,189.0	186.3	964.9	464.9	500.0
Benefit payments								
1948	\$286.8	\$277.5	\$115.0	\$141.0	\$21.5	\$9.3	\$9.0	\$0.3
1949	322.0	294.9	124.7	150.0	20.2	27.1	22.3	4.8
1950	383.8	329.55	161.3	153.0	15.2	54.3	41.7	12.6
1951	500.8	387.5	212.4	157.0	18.1	113.3	81.1	32.2
1952	559.1	431.3	234.6	177.0	19.7	127.8	92.5	35.3
1953	606.2	466.5	241.0	209.0	16.5	139.7	102.0	37.7
1954	629.1	497.1	251.8	230.0	15.3	132.0	96.2	35.2
1955	692.4	557.2	292.0	250.0	15.2	135.2	97.0	38.2
1956	802.5	651.3	357.3	278.0	16.0	151.2	109.7	41.5
1957	874.4	696.3	372.3	307.2	16.8	178.1	129.5	48.6
1958	909.1	725.4	355.9	353.4	16.1	183.7	132.7	51.0
1959	990.1	800.6	394.2	389.6	16.8	189.5	135.2	54.3
1960	1,031.2	835.1	424.1	392.8	18.2	196.1	138.1	58.0
1961	1,051.6	850.2	406.8	425.9	17.5	201.4	141.3	60.1
1962	1,089.2	884.9	445.8	418.5	20.6	204.3	143.7	60.6
1963	1,122.6	924.4	454.2	447.2	23.0	198.2	130.6	67.6
1964	1,199.6	1,008.2	498.9	483.9	25.4	191.4	123.2	68.2
1965	1,249.7	1,052.1	541.6	482.6	27.9	197.6	124.8	72.8
1966	1,356.1	1,147.7	603.2	512.9	31.6	208.4	130.9	77.5
1967	1,396.7	1,174.3	610.5	527.4	36.4	222.4	139.1	83.3
1968	1,732.8	1,481.1	832.9	609.1	39.1	251.7	154.0	97.7
1969	1,882.1	1,600.9	919.9	635.4	45.6	281.2	171.7	109.5
1970	2,169.6	1,862.4	1,113.9	693.4	55.1	307.2	183.7	123.5
1971	2,219.9	1,909.5	1,119.1	730.9	59.5	310.4	184.0	126.4
1972	2,386.4	2,057.9	1,219.3	772.0	66.6	328.5	183.7	144.8
1973	2,530.8	2,177.3	1,314.4	795.0	67.9	353.5	193.6	159.9
1974	2,875.4	2,493.8	1,565.3	851.0	77.5	381.6	199.7	181.9
1975	2,983.6	2,582.7	1,530.4	973.0	79.3	400.9	210.6	190.3
1976	3,148.3	2,734.7	1,764.4	881.0	89.3	413.6	200.6	213.0
1977	3,284.0	2,858.2	1,825.2	940.0	93.3	425.5	203.8	221.7
1978	3,613.1	3,132.6	1,834.5	1,210.0	88.1	480.5	231.5	249.0

¹ Beginning 1960, data include Alaska and Hawaii.

² Data on premiums earned and losses incurred by commercial companies (including fraternal) as provided by the Health Insurance Association of America for the United States, by type of insurance benefits, adjusted to include accidental death and dismemberment provisions in individual policies that insure against income loss to offset understatement arising from the omission of current short-term income-loss insurance in automobile, resident liability, life,

and other policies. For 1956–71 dividends deducted from earned premiums (2–3 percent for group; 1 percent for individual).

³ Company and union-management trust fund, trade-union, and mutual benefit association plans. Excludes unfunded plans, included in table 9.

⁴ Company, union, and union-management plans under California, New Jersey, and New York laws, whether or not funded.

Table 8.—Insurance benefits as percent of estimated potentially insurable and compensable income loss¹ for workers without exclusive formal sick leave, 1948–78

Year	Amount of insurance benefits ² (in millions)	As a percent of income loss—			
		After first 3 days ³		After first 7 days ⁴	
		Total	Two-thirds	Total	Two-thirds
1948	\$343	12.2	18.3	15.5	23.3
1949	384	14.3	21.4	18.2	27.3
1950	447	15.3	22.9	19.5	29.2
1951	562	16.8	25.2	21.4	32.1
1952	634	18.0	27.0	22.9	34.4
1953	697	18.7	28.1	23.9	35.8
1954	733	20.0	30.0	25.5	38.2
1955	802	20.4	30.6	26.0	39.0
1956	917	21.8	32.6	27.7	41.5
1957	1,002	22.8	34.2	29.0	43.5
1958	1,050	23.9	35.9	30.5	45.7
1959	1,154	25.2	37.8	32.1	48.1
1960	1,204	23.9	35.8	30.4	45.6
1961	1,247	24.9	37.3	31.6	47.4
1962	1,301	23.3	34.9	29.6	44.4
1963	1,366	23.3	34.9	29.7	44.5
1964	1,464	24.7	37.1	31.5	47.2
1965	1,519	23.4	35.1	29.8	44.6
1966	1,629	23.2	34.8	29.6	44.3
1967	1,681	23.1	34.7	29.5	44.1
1968	2,053	24.9	37.3	31.7	47.5
1969	2,256	26.3	39.4	33.4	50.1
1970	2,580	27.7	41.6	35.3	52.9
1971	2,631	27.9	41.8	35.5	53.2
1972	2,799	26.3	39.4	33.4	50.1
1973	3,087	26.8	40.2	34.1	51.2
1974	3,491	29.5	44.3	37.6	56.3
1975	3,682	29.2	43.7	37.1	55.7
1976	3,899	27.4	41.1	34.9	52.3
1977	4,056	26.9	40.3	34.2	51.3
1978	4,402	24.9	37.3	31.6	47.4

¹ The portion of income loss that may be considered insurable or compensable under prevailing insurance practices.

² Excludes sick-leave payments.

³ Based on 70 percent of total income loss (from table 1), after exclusion of

income loss of workers covered by exclusive sick-leave (from table 10).

⁴ Based on 55 percent of total income loss (from table 1), after exclusion of income loss of workers covered by exclusive sick-leave plans (from table 10).

the actual amount of insurance benefits (excluding sick leave) paid and the hypothetical amount of income loss that is considered potentially insurable as a means of gauging the adequacy of insurance in replacing wages lost during short-term sickness. A few alternative insurance objectives are assumed, with the benefit provisions of some of the more liberal insurance policies used as guides. The amount of assumed income loss varies according to (1) selection of alternative waiting periods before payments begin and (2) whether all or two-thirds of the gross weekly wage is to be replaced.

Under the assumed objective of two-thirds wage replacement after a 7-day waiting period, 47 percent of the loss was compensated in 1978 under all public and private insurance plans. The rate has declined in each year since 1974, a year in which the replacement level reached its highest point (56 percent) since the beginning of the series. With the assumption of complete income replacement after a waiting period of 3 days, the

most liberal hypothetical objective presented in table 8, the replacement value achieved by insurance benefits was 25 percent in 1978. Since the procedure for estimating the rate of replacement under each of the assumed objectives shown in table 8 was the same except for different fractions of income loss applied, the historical trend is the same for each replacement objective shown. Specifically, 1974 was the year in which the highest replacement rate for each hypothetical rate was reached, and the rate has declined each year since then.

Although no definitive explanation for this phenomenon is available at this writing, the apparent reversal of gradual improvement in replacement rates up to 1974 may be associated with: (a) the substitution of new types of insured plans (ASO and MPP), for which benefit payments are less completely reported than benefits under regular insurance policies; and/or (b) growth of coverage under sick-leave plans, replacing to some extent benefits under insurance-type plans.

Sick Leave

Payments to workers through formal sick-leave plans totaled \$7.3 billion in 1978. This benefit amount was 13 percent above the 1977 level, a higher rate than in 6 of the other 7 years since 1970. Comparison of benefit totals in table 9 with table 7 shows that sick-leave pay has grown faster than other forms of cash-sickness benefits in recent years. The annual rate of growth of

sick-leave benefits since 1970 has been higher in all but one year than that of benefits under all insurance programs combined. This trend, as would be expected, parallels the greater growth in sick-leave plan coverage compared with insurance-plan coverage.

There has been some shifting over the years in the share of sick-leave pay each employment sector has contributed to the total. For many years, Federal Government sick leave has become a smaller proportion

Table 9.—Estimated value of formal paid sick leave in private industry and in Federal, State, and local government employment, 1948–78¹

[In millions]

Year	Total	Workers in private industry ²			Government workers		
		Total	Not covered by temporary disability insurance laws	Covered by temporary disability insurance laws ³	Total	Federal ⁴	State and local ⁵
1948.....	\$418	\$158	\$146	\$12	\$259	\$148	\$111
1949.....	464	164	149	16	300	173	127
1950.....	495	180	156	24	315	172	143
1951.....	591	201	166	35	390	221	169
1952.....	670	213	181	37	453	254	199
1953.....	716	235	196	38	482	262	220
1954.....	745	245	205	40	500	252	248
1955.....	818	273	228	45	545	269	276
1956.....	889	299	248	50	591	280	311
1957.....	956	330	275	55	627	290	337
1958.....	1,043	346	290	57	696	315	381
1959.....	1,082	359	301	58	724	315	408
1960.....	1,226	400	334	66	826	348	478
1961.....	1,314	420	352	68	894	376	518
1962.....	1,475	472	394	79	1,003	414	589
1963.....	1,631	526	439	87	1,105	450	655
1964.....	1,637	505	424	81	1,133	445	687
1965.....	1,830	566	475	91	1,264	488	776
1966.....	2,008	619	519	100	1,389	523	866
1967.....	2,217	680	572	109	1,536	574	962
1968.....	2,569	803	676	128	1,766	642	1,124
1969.....	2,848	930	786	144	1,918	712	1,206
1970.....	3,308	1,066	903	163	2,242	810	1,432
1971.....	3,506	1,130	951	179	2,376	863	1,514
1972.....	4,075	1,364	1,135	228	2,712	925	1,787
1973.....	4,374	1,469	1,201	267	2,906	987	1,918
1974.....	4,741	1,634	1,347	287	3,107	1,076	2,031
1975.....	5,321	1,779	1,472	307	3,542	1,168	2,374
1976.....	5,920	2,052	1,698	354	3,868	1,253	2,615
1977.....	6,490	2,357	1,929	428	4,134	1,343	2,791
1978.....	7,327	2,761	2,276	485	4,565	1,466	3,099

¹ Beginning 1960, data include Alaska and Hawaii. Data adjusted to reflect changes in sickness experience (average number of disability days), as reported in the Health Interview Survey of the Public Health Service after 1958. Beginning 1967, no adjustment made in Federal worker data.

² Sum of estimated value of formal paid sick leave for employees with (1) sick leave but no other group protection and (2) sick leave supplemental to group insurance or other forms of group protection, including publicly operated funds. Under each category, number of employees was adopted from Health Insurance Council, *Annual Survey of Accident and Health Coverage in the United States, 1948–54*, after reducing estimates of exclusive sick-leave coverage in early years by a third to allow for exclusion of informal sick-leave plans and conversion of exclusive protection to supplemental protection under temporary disability insurance laws. Later-year estimates based on nationwide projection of formal paid sick-leave coverage reported for plant and office workers in the community wage surveys of the Bureau of Labor Statistics. 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 6.7 in *The National Income and Product Accounts of the United States, 1929–74 Statistical Tables, 1977*, and in the *Survey of Current Business, National Income Issue* published annually, Department of Commerce, by 255 (estimated workdays in a year).

³ 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.

⁴ Based on studies showing that Federal employees use paid sick leave of 7.7 days on the average for nonoccupational sickness, equivalent to 3 percent of payroll. Payroll data derived by multiplying number of paid civilian full-time employees in all branches of the Federal Government in the United States, by their mean earnings, as reported in *Pay Structure of the Federal Civil Service, Annual Report*, Office of Personnel Management. From 1967 to date, payroll obtained from "Federal Civilian Manpower Statistics," Office of Personnel Management.

⁵ Assumes that number of State and local government employees covered by formal sick-leave plans has increased gradually from 65 percent of the total number employed full-time in 1948 to 96.0 percent currently, and that workers covered by such plans received on the average paid sick leave ranging from 5.2 days in 1948 to 6.3 currently. Number of full-time employees from *Public Employment*, annual reports, Bureau of the Census. Daily wages obtained by dividing average annual earnings per full-time State and local employee as reported in Department of Commerce data (see footnote 2), by 255 (estimated workdays in a year).

of the total sick leave paid, accounting for 35 percent in 1950, 28 percent in 1960, 24 percent in 1970, and 20 percent in 1978.

Both State and local government and private industry sick-leave programs have become more important factors in sickness protection. Two distinct patterns emerge: Sick-leave payments to State and local government employees grew as a proportion of all sick-leave payments, from 27 percent in 1948 to 44 percent in 1968, and have remained stable at about 42-44 percent of the total in most years through 1978. Private industry sick-leave payments accounted for 38 percent of the total in 1948 and gradually diminished to 31 percent during 1964-68. They then began to climb irregularly, reaching 38 percent in 1978. These patterns are a result of changes in the proportion of workers in the various employment sectors and of differential growth in worker earnings levels between employment sectors. For example, Federal employment grew quite moderately relative to that of the private sector and at an even more moderate rate with respect to State and local government as indicated below:

Year	Percentage increase in wage and salary employment		
	Federal	Private industry	State and local government
1950-78.....	44	64	190
1960-78.....	20	47	95
1970-78.....	1	20	27

Furthermore, the Federal sick-leave system has been mature throughout the period of this series, in the sense that almost all Federal workers have been covered by sick leave in each year throughout the period. In contrast, there have been varying patterns of improvement in coverage among State and local government workers and private industry workers over the years. Over the whole 1950-78 period, for example, the Social Security Administration estimates that exclusive and supplemental sick-leave coverage combined in private industry rose from about 1 worker in 10 to more than 2 in 10.

As shown in table 10, about \$5.9 billion was paid in 1978 under exclusive sick-leave plans. The degree of replacement of workers' income by exclusive sick leave was 77 percent in 1978, a rate which has shown little variation over 20 years. This stability is attributable to growing replacement rates among State and local government workers (from 75 percent in 1970 to 80 percent in 1978) offset to some extent by the declining weight of Federal sick-leave payments which provide very high replacement rates (over 90 percent). Total private industry sick-leave payments have grown, but replacement rates are not as high as among programs for public employees.

As a part of the Social Security Administration's continuing efforts to improve this series on cash benefits for short-term sickness, detailed reviews of the literature have been made periodically of different types of such protection. This year, the sick-leave protection available to State and local government workers and the amount of sick leave they use has been reviewed. (See the technical note for a brief description of this review.) As a result, new estimates were made of the extent of coverage and rate of sick-leave usage among such workers. Table 10 includes \$3.1 billion in sick-leave pay to State and local government workers for 1978, and the sick-leave estimates for such workers for this series back to 1970 have been raised by the revision.

Tax Treatment of Benefits

One important aspect of evaluating benefits provided to workers by income maintenance programs such as sickness-benefit plans is how taxes affect the amounts received. For many years, any benefits paid for disability were exempt from income tax. In 1954, restrictions were placed on the tax-exempt status of such benefits, and again in 1964 further restrictions were mandated. Current provisions, enacted as the Tax Reform Act of 1976, eliminated the exemption of sickness benefits (whether through sick leave or from insurance benefits) from income taxes. Two exceptions are: (1) benefits of \$100 per week up to a \$5,200 annual maximum received by permanently and totally disabled retirees under age 65 who also meet certain other requirements, and (2) benefits purchased by the employee.

Thus, nonoccupational short-term sickness benefits are treated differently from benefits provided under workers' compensation programs and under OASDHI that are completely exempt from Federal income tax. Interestingly, under the Federal Revenue Act of 1978, unemployment insurance benefits are taxable in part or in whole depending on income levels for those whose adjusted annual income, plus unemployment insurance, exceeds \$20,000.

Treatment of sickness benefits as wages subject to the Federal Insurance Contributions Act (FICA) is another tax issue of considerable interest. At present, payments on account of sickness made under a plan or system established by an employer, and employer contributions to that plan, are excluded from the social security definition of wages and are therefore not subject to FICA contributions. (Similarly, such benefits are not subject to taxes under the Federal Unemployment Tax Act.) Some workers do receive sick-leave payments, however, under informal arrangements or under programs that in other ways do not qualify for the exemption from FICA. For example, some State and local government sick-leave systems continue to pay an

Table 10.—Estimated value of formal paid sick leave in relation to income loss due to short-term sickness among workers covered by exclusive formal sick-leave plans,¹ 1948–78

[Amounts in millions]

Year	Income loss	Value of sick leave under exclusive plans	Ratio (percent) of sick leave to income loss
1948.....	\$569	\$378	66.4
1949.....	605	417	68.9
1950.....	639	434	67.9
1951.....	726	509	70.1
1952.....	808	578	71.5
1953.....	850	614	72.2
1954.....	879	636	72.4
1955.....	958	694	72.4
1956.....	1,030	748	72.6
1957.....	1,113	804	72.2
1958.....	1,211	879	72.6
1959.....	1,213	910	75.0
1960.....	1,394	1,038	74.5
1961.....	1,495	1,124	75.2
1962.....	1,667	1,254	75.2
1963.....	1,841	1,385	75.9
1964.....	1,845	1,401	75.9
1965.....	2,057	1,566	76.1
1966.....	2,252	1,711	76.0
1967.....	2,257	1,888	76.8
1968.....	2,811	2,178	77.5
1969.....	3,033	2,364	77.9
1970.....	3,448	2,717	78.9
1971.....	3,642	2,873	78.2
1972.....	4,235	3,296	77.4
1973.....	4,605	3,612	78.4
1974.....	4,907	3,855	78.6
1975.....	5,559	4,396	79.1
1976.....	6,112	4,821	78.9
1977.....	6,680	5,226	78.2
1978.....	7,593	5,878	77.4

¹ Sick-leave plans that do not supplement any other form of group protection, including publicly operated plans.

employee's salary during periods of sickness but, because the employer lacks legal authority to make payments on account of sickness, these payments are considered wages for social security purposes.

Further, under an Internal Revenue Service ruling on October 30, 1978 (Number 78-392), to be considered a "plan" for purposes of exemption under FICA, the employer must be able to distinguish between payments under a plan made for periods of sickness from those payments under a plan made for other types of leave. The ruling cited one such instance—a case in which the employer could make the distinction because of a plan requirement that a doctor's certification be provided for payment of sick leave. Other plans presumably would not satisfy the administrative requirements and would be subject to FICA.

The Social Security Administration is studying the feasibility and desirability of taxing and crediting sick pay under social security. A special task force, formed to examine the social security law for complexities and to propose simplifying changes, found that some employers report excluded sick pay because they do not want to take the trouble (including the additional bookkeeping necessary) to exclude these payments from wage reports. Conversely, other employers are making increased use of the sick-pay exclusion to reduce

their social security tax liability. By using the sick-pay exclusion, however, employers also reduce the amount of wages credited to their employees, which may result in lower future benefits under social security for the employees.

Covering all sick pay as wages could solve these problems. This could, however, also create new problems. For example, employers who do not administer their own sick-pay plans—for instance, those who provide their workers with sickness-benefits protection through insurance policies—might have difficulty ensuring that the sick pay was correctly reported and that the social security employer and employee taxes were paid. But, if an exclusion were made for payments made under these plans, some employers could modify their plans to meet the exclusion; other employers who were unable to modify their plans to meet the exclusion would thereby inadvertently receive less favorable treatment under social security. Until such considerations can be resolved, treatment of sick-pay benefits under FICA will continue to be a complex issue for administrative officials and employers alike.

Technical Note

The income-loss estimates used here are designed to reflect the loss of current earnings during the first 6

months of a nonoccupational illness or injury. This definition encompasses almost all the worktime lost because of a temporary disability and the first 6 months lost because of a long-term disability. The estimates include, in addition to actual income loss, the potential loss—that is, income that would have been lost if there were no sick-leave plan to continue wages and salaries during periods of illness. Payments under such plans are counted here as benefits that offset the potential wage loss.

Under this concept, the average annual duration of worktime loss has been estimated at 7 days for wage and salary workers in private industry, 8 days for Federal employees, and 7 days for State and local government workers. These averages have been modified annually, starting with 1959, to reflect the actual year-to-year overall variations in sickness rates as reported by the annual health interview survey of the U.S. Public Health Service. These survey data are used as a measure of year-to-year variations rather than as the measure of average number of income days lost because of several significant conceptual differences between that survey and the Social Security Administration series.

To make the annual adjustment, a rate of sickness among workers is compiled by means of the Public Health Service data. Expressed as an index, with 1958 as the base of 100, the rate derived for 1978 has been computed as 101. In 1977, the rate was 98. This rate has stayed within the 98-105 range for 12 years.

Stability of sickness rates (within a narrow range) was evidenced recently from another relevant source. Rates of absence of wage and salary workers were derived by the Bureau of Labor Statistics from the Current Population Survey. As reported in the **Monthly Labor Review**, "In recent years, rates of absence for U.S. workers have shown no significant trend"³ Interestingly, union workers were noted to show higher

³Daniel E. Taylor, "Absent Workers and Lost Work Hours, May 1978," **Monthly Labor Review**, August 1979.

levels of work hours lost due to sickness, attributed in part to greater availability of paid leave when they were ill. This distinction was particularly observed among manufacturing, transportation, and public utilities industry workers.

As indicated above, this year the Social Security Administration has made a detailed review of the literature to refine its estimates of sick leave paid to State and local government workers. Ordinarily, such a survey would include a review of Federal Government experience. This part of the survey was accomplished recently, and reported upon in the October 1978 **Social Security Bulletin**. Therefore, no further review has been made at this time.

Information was examined for plans pertaining to the following major groups: State government employees, county and township workers, teachers and other educational system employees, and city workers (other than those in school systems). Since the sick-leave provisions and experience of State and local government workers were last reviewed in 1971, there has been a continuing, but slower rate of increase in the scope of sick-leave protection. It is now estimated that the proportion of government workers under sick-leave plans rose from 90 percent in 1969 to 96 percent in 1977. It can be expected, in the light of the trends examined and at these high coverage rates, that future changes will be modest and quite gradual.

Available data on the number of days of paid sick leave allowed under the plans and the extent to which such leave can be accumulated beyond 1 year also indicate some growth in sick-leave usage. Average days of sick leave used per year by State and local government workers showed a slow rate of growth (from 6.1 days in 1969 to 6.3 days in 1977). The combined effect of these modifications of sick-leave coverage and usage was to produce estimated sick-leave payments that, at a \$3.1 billion level in 1978, was about \$300 million higher than it would have been using the previous coverage and usage rates.