Voluntary Insurance Against Sickness: 1948-51 Estimates*

OLUNTARY health insurance, whether measured in number of persons enrolled or in dollars of benefit provided, has expanded markedly in the United States since the end of World War II, and 1951 showed a continuation of this upward trend.

Appraisal of the protection currently provided by voluntary health insurance and analysis of trends in its growth in the 4 years 1948-51, for which data are now available, are complicated by many factors. They include the rise in wages and salaries and in the costs of medical care since 1948; the varying rates of increase in the number of persons with one or another kind of insurance protection; the difficulty of determining each year unduplicated counts of the number of persons with each type of insurance (income loss, hospitalization, surgical, medical) and of interpreting these counts in relation to the variety of insurance policies in force; and the 7 million increase in the civilian population since 1948.

Rather than attempt the difficult or impossible task of assessing voluntary health insurance contracts in terms of the population groups to which they apply, the Social Security Administration has developed an appraisal technique that measures the dollar values of the insurance protection.1 This technique relates estimates of insurance benefit payments to estimates of actual costs of sickness. It therefore avoids the difficulties inherent in attempting to relate elements-such as population, enrollment, and costs — that are changing at different rates, and it also avoids the problems of multiple policyholding and determination of benefits among widely different insurances.

The civilian population meets the costs of medical care-aside from Federal, State, and local taxes to support public medical services mainly through personal expenditures and premium payments for insurance against these costs. In addition, the employed population faces loss of income during periods of illness, and many in this group have private insurance against this additional risk. Taken together, these two private costs of sickness amounted to more than \$14 billion for the population as a whole in 1951, an increase of \$2.5 billion from 1948.

Income Loss Due to Illness

Estimates of income loss due to nonoccupational illness and injury may cover a wide range, depending on the inclusion or exclusion of such items as loss of future earnings due to permanent or extended periods of disability or to premature death, as well as loss of current earnings. In the present series, conservative figures have been developed for each of the 4 years from 1948 through 1951. These estimates reflect only current income loss due to short-term or temporary disability (lasting not more than 6 months), and, for extended or permanent disability, only current income loss in the first 6 months.

Table 1 presents the basic figures used in calculating this limited estimate of income loss due to illness. In the 4 years under review, average wage and salary income rose from \$11.00 per day in 1948 to \$12.76 in 1951. The average income loss per worker has been determined to be seven times this amount, on the assumption that the average time lost from work on account of illness (as defined here) is equivalent to seven working days in a year. On the basis of these figures, the total income loss by all workers for shortterm disability and the first 6 months of long-term disability is estimated to have risen from about \$4,543 million in 1948 to about \$5,449 million in

Two major corrections in these aggregates are necessary to establish appropriate benchmarks against which to measure the extent of income loss insurance-an addition for the net cost of the insurance, and a subtraction for paid sick leave. These items are shown in the fourth and fifth lines of the table. The resulting benchmark figure, net income loss from illness, increased from about \$4,513 million to about \$5,408 million in the 4 years—a 20-percent rise.

The most common forms of voluntary accident and health insurance do not ordinarily provide indemnity

Table 1.—Income loss due to illness, 1 1948-51

[In millions, except average income loss per worker]

Item	1948	1949	1950	1951
Average number of employed workers 2	59	59	60	61
	\$77.00	\$78. 75	\$82. 95	\$89. 32
	\$4,543	\$4, 646	\$4, 977	\$5, 449
	261	270	288	293
	291	298	314	334
Net income loss from illness	4, 513	4, 618	4, 951	5, 408
Potentially insurable income loss ⁶	2, 987	3, 058	3, 274	3, 562

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

^{*} Prepared in the Division of Research and Statistics, Office of the Commissioner.

¹ For estimates for 1948, 1949, and 1950 and an explanation of the methodology, see the Bulletin for January-February, 1950, pp. 16-19; March 1951, pp. 19-20; and December 1951, pp. 20-23.

² Annual average of employed persons from Bureau of the Census, Current Population Reports: Annual Report on the Labor Force, Series P-50, Nos. 13, 19, 21, 40, 50, 64

³ Average wage or salary for 7 workdays in a year.

From table 2.

5 Estimates of the number with paid sick leave from Annual Survey of Accident and Health Coverage

in the United States, each year 1948–51. Estimates for 1948 and 1949 reduced on basis of later data. Assumes that the 8.3–8.4 million persons with paid sick leave received the equivalent of 45 percent of their total in-

come loss due to illness.

⁶ Total income loss reduced by 40 percent (to exclude both the first week of disability and otherwise insurable income loss covered by paid sick leave) and increased by the net cost of current income-loss insurance.

Table 2.-Premiums, benefit payments, and loss ratios for commercial insurance against income loss, 1948-51

[Amounts in millions]

Item	1948	1949	1950	1951			
	Premiums earned 2						
Total Group insurance Individual insurance	\$529 179 350	\$570 215 355	\$647 287 360	\$749 376 373			
	Losses incurred						
Total Group insurance Individual insurance	\$268 127 141	\$300 150 150	\$359 206 153	\$456 298 158			
	Loss ratios (percent)						
TotalGroup insuranceIndividual insurance	50.7 70.9 40.3	52.6 69.8 42.3	55.5 71.8 42.5	60. 9 4 79. 3 4 42. 4			

¹ Basic data from annual issues of Spectator Accie dent-Insurance Register, 1949-52, and Group Insuranc and Group Annuity Coverage, Continental United States, 1948-51, Life Insurance Association of America charts. See the Bulletin, Dec. 1951, table 2, footnotes 1-3, for method of determining income-loss insurance premiums, benefits, and loss ratios.

2 Includes dividends and rate credits, mainly for

Not adjusted for dividends and rate credits. 4 A large proportion of companies had net losses from underwriting accident and health insurance business in 1951.

payments for income loss in the first few days or the first week of disability. The currently insurable portion of income loss is therefore approximately 60 percent of the actual loss. This part of the income loss income lost after a waiting period of 1 week, with the appropriate adjustment for sick leave and for the net cost of insurance-is given in the last line of table 1. The amount rose from about \$2,987 million in 1948 to about \$3,562 million in 1951, an increase of 19 percent.

Insurance Against Income Loss

Commercial insurance carriers and various kinds of nonprofit insurance organizations offer insurance protection against sickness costs through group and individual policies, with income-loss insurance provided almost exclusively by the commercial companies.2 Table 2 shows commer-

cial insurance premium income and benefit payments with respect to income loss for the period 1948-51. The data for group insurance and for individually purchased insurance are given separately. The loss ratios indicate the proportion of the premium dollar returned as income-loss indemnification.

Premiums for group insurance against income loss have more than doubled in the past 4 years, so that by 1951 total premiums earned (\$749 million) were about equally divided between group and individual insurance. The proportionate return on the premium dollar is larger for group insurance than for individual insurance. Consequently, losses incurred by group insurance, which had been lower in amount than those of individual insurance in 1948, were nearly twice the losses incurred by individual insurance in 1951. The loss ratio per dollar of premium earned (without adjustment for dividends and rate credits) for group insurance rose from 71 cents in 1948 and 70 cents in 1949 to 79 cents in 1951.3 There was little change during the same interval in the proportion of the premium dollar returned to holders of individually

written insurance; the loss ratio was 40 percent in 1948 and remained at 42 percent in the three succeeding years.

The difference between premiums earned and losses incurred represents the net cost of income loss insurance, already shown in table 1. This amounted to about 39 percent of premium in 1951, in contrast to about 49 percent in 1948.

Private Expenditures for Medical Care

In 1951, as in the previous years covered by this series, the annual estimates of personal expenditures for medical care prepared by the Department of Commerce provide the basis for the corresponding estimates used in these appraisals of voluntary insurance. One adjustment in the data (in expenditures for physicians' services) and two substitutions (for hospital services and for net costs of medical care insurance) have been made in the Department of Commerce series each year, to arrive at somewhat more precise benchmarks than are possible from the data published earlier in the year by that Department. The data for all 4 years are recapitulated in table 3; they include the minor changes in earlier data made by the Department of Commerce each time it issues the current data.

Private expenditures for medical care have risen from \$7,288 million in 1948 to \$8,816 million in 1951, an

Table 3.—Private expenditures for medical care, 1948-51 1

7/	Α.	mount (i	n millior	ıs)	Percentage distribution				
Item	1948	1949	1950	1951	1948	1949	1950	1951	
Total	\$7, 288	\$7,658	\$8,248	\$8, 816	100.0	100.0	100.0	100.0	
Physicians' services ³ . Hospital services ³ . Dentists' services. Nurses' services Medicines and appliances. Miscellaneous healing and curing pro-	2, 176 1, 663 895 200 1, 822	2, 297 1, 858 931 207 1, 829	2, 416 2, 121 959 225 1, 927	2, 565 2, 283 989 239 2, 111	29. 9 22. 8 12. 3 2. 7 25. 0	30. 0 24. 3 12. 2 2. 7 23. 9	29. 3 25. 7 11. 6 2. 7 23. 4	29. 1 25. 9 11. 2 2. 7 23. 9	
fessionsAdministrative and other net costs of medical care insurance 4	272 256	283 249	297 299	318 307	3.7	3.7	3. 6 3. 6	3. 6 3. 5	
Insurance for hospital services Insurance for physicians' services Student fees for medical care	192 64 4	168 81 4	189 110 4	188 119 4	2. 6 0. 9 (5)	2. 2 1. 0 (5)	2.3 1.3 (5)	2. 1 1. 4 (5)	

¹ Except where otherwise noted, data are from Department of Commerce, National Income and Product of the United States, 1929-1950, Supplement to Survey of Current Business, 1951, table 30, p. 195, and Survey of Current Business, July 1952, table 30, p. 24. Excludes medical care expenditures for the Armed Forces and veterans, and those made by public health and other government agencies.

² The amount of voluntary income-loss insurance not provided by the insurance companies is relatively small and is omitted here; its omission is offset by the inclusion of certain insurance amounts that should but cannot be entirely eliminated.

³ The loss ratio of 79.3 percent for group insurance in 1951 may be unusually high and may not indicate a level to be sustained, since a large proportion of companies had net losses from underwriting accident and health insurance business in that year.

² Addition made each year to figure reported in Survey of Current Business for salaries of physicians employed in prepayment medical service plans.

Computed from data in Hospitals, June of each year 1949–52, See the Bulletin, Dec. 1951, table 1, footnote 3, for method.

4 From table 4.

⁵ Less than 0.05 percent.

increase of \$1,528 million or 21 percent. Of this increase, 4 percent may be attributed to growth of population. leaving 17 percent to represent other increases in the costs of medical care and in the net cost of insurance.

The largest items in the 1951 private outlay for medical services continue to be, as in previous years, the amounts estimated for physicians' services (29 percent of the total), hospital services (26 percent), and medicines and appliances (24 percent). The net cost of medical care insurance has changed little in relation to the totals in the 4 years, remaining at about 3.5 percent; of this, approximately 2.5 percent represents the net cost of hospitalization insurance and 1 percent the net cost of insurance against physicians' services. The percentage distributions also show that the cost of hospital services increased more in the 4-year interval than any other item. The cost of these services rose from \$1,663 million to \$2,283 million—an increase of 37 percent.

Insurance Against Medical Care Costs

Table 4 summarizes the financial operations of voluntary insurance against the costs of medical care for 1948-51. The amount of earned income nearly doubled in the 4-year period, increasing from \$862 million to \$1,660 million. The increase was proportionately larger in relation to physicians' services than to hospital services.

Expenditures for benefits more than doubled, increasing from \$606 million in 1948 to \$1,353 million in 1951, with a larger absolute but a smaller proportionate increase for hospital services than for physicians' services. The loss ratio increased from 70.3 percent in 1948 to 81.5 percent, indicating a substantially larger return of the premiums in the form of benefits in 1951.

The data for 1951 are presented in greater detail in table 5, which shows financial operations by type of insurance carrier or plan. Total income for all types of voluntary insurance against medical care costs reached \$1,660 million during 1951. Earned income for insurance against the costs of hospitalization amounted to \$1,085

Table 4.—Premiums, benefit payments, and loss ratios for voluntary insurance against the costs of medical care, 1948-51 1

[Amounts in millions]

Item	1948	1949	1950	1951			
	Earned income ²						
TotalFor hospital servicesFor physicians' services	\$862 647 215	707	869	\$1,660 1,085 575			
	Expen	diture	s for be	enefits²			
TotalFor hospital services	\$606 455 151		680				
	Los	s ratio	s (perc	ent)			
TotalFor hospital servicesFor physicians' services	70.3 70.3 70.2	76.2	78.3	3 82. 7			

- ¹ Data for 1948-50 summarize detailed presentation
- in earlier articles in this series; data for 1951 from table 5. 1948 estimates revised on the basis of trends.
 ² For commercial insurance "earned income" is "premiums earned" and "expenditures for benefits" is "losses incurred," as shown in table 2.
- ³ A large proportion of commercial insurance companies had net losses from underwriting either their individual or their group accident and health insur ance business, or both, in 1951, and more nonprofit insurance carriers reported an excess of benefit ex-penditures over total carned income in 1951 than in

million and accounted for 65 percent of the total-slightly less than the comparable proportion for 1950 and 10 percent less than in 1948, when it accounted for 75 percent of the total.

Total expenditures for benefits during 1951 were \$1,353 million. Hospitalization benefits accounted for 66 percent of this amount, in comparison with 75 percent in 1948.

Blue Cross plans were the largest single type of insurance carrier in 1951; their benefit payments for hospital care accounted for 50 percent of the hospitalization benefits of \$897 million provided by all types of carriers. Group commercial insurance ranked second in total amount of insurance, first in expenditures for physicians' services, and second in hospitalization insurance. Plans furnishing more or less comprehensive medical care insurance provided more than \$88 million in benefits 4 to their members, about 7 percent of the total.

Commercial group insurance re-

turned 89 percent of policyholders' premiums in the form of medical care benefits in 1951, representing a sharp increase in this loss ratio. Commercial individual insurance showed a loss ratio of 52 percent, the same as in previous years. Blue Cross benefit expenditures were nearly 90 percent of earned income in 1951, an increase over the previous years when the ratio had remained at about 85 percent. The loss ratio for Blue Shield plans (84 percent) also increased about 6 percent in 1951 over the years immediately preceding.

Trends in Insurance Protection

Insurance benefits can now be related to the estimates of income loss due to sickness and of private expenditures for medical care over the 4-year period. The benchmarks and the insurance expenditures for the 4 years are shown in table 6, separately and in various combinations designed to bring out the extent of insurance protection and the trends over the four recent years.

The first two lines of table 6 show that the percentage of income loss met by insurance increased steadily in the 4 years 1948-51. In 1951, however, it was still relatively small-a little more than 8 percent of the total income loss and slightly less than 13 percent of the net income loss assumed to be potentially insurable. Much of the increase in insurance premiums and benefits was the result of an adjustment to the increase in wages and salaries and hence in wage loss due to illness, which rose 20 percent in the period. The net increase in the dollar value of insurance protection over the 4 years was at the most about 4 percent, or approximately 1 percent a year.

Insurance protection against total private expenditures for medical care also increased steadily in the 4 years -from 8.3 percent in 1948 to 15.3 percent in 1951, or about 84 percent in the 4 years. There was a larger expansion in insurance benefits and in percentage of insurance protection in 1951 than in any of the previous 3 years. The total at the end of 1951, however, was still somewhat less than one-sixth of total private expenditures for medical care. While insurance benefits for medical costs ex-

⁴ Includes the benefits of the independent plans offering comprehensive benefits and five Blue Shield plans.

panded by \$747 million, private expenditures for medical care rose by \$1,528 million in the 4 years.

The total losses and costs due to sickness-income loss and medical costs combined-amounted to about \$14.2 billion in 1951. Aggregate insurance benefits were approximately \$1.81 billion, meeting about 13 percent of the total.

Measured against narrower benchmarks, the medical care insurance benefits make somewhat better showings. Insurance benefits applicable physician and hospital costs (slightly overstated by the method of allocation) were equivalent to 26 percent of private expendituresbenefits for physician costs equaling 17 percent and those for hospital costs 36 percent of the respective benchmarks. The latter is the highest percentage in the series and is particularly notable because the annual expansion of insurance protection by 2 percent or 3 percent in each of the years 1948-50 increased to nearly 7 percent in 1951. Insurance against physician costs was also increasing at an accelerating though somewhat lower rate; the increase in 1951 was larger than in the previous years.

By the end of 1951, all voluntary health insurance was meeting about 19 percent of private medical care expenditures that are regarded as potentially insurable. The annual expansion in insurance protection, measured against this benchmark, increased from 2.0-2.5 percent in the preceding years to more than 4 percent between 1950 and 1951. Similarly, at the end of 1951, all voluntary health insurance was compensating for about 17 percent of potentially insurable sickness costs (medical care and income loss combined).

The data in table 6 emphasize why the study of health insurance trends must take account of changes in the losses and costs against which the insurance is directed, as well as changes in the amount of the insurance benefits. The benchmarks have risen each year since the series was started in 1948. As noted earlier, some expansion in both income loss and in private expenditures for medical care results from the growth of the population—4 percent in the 4

Table 5.—Income and expenditures for medical care benefits of voluntary insurance, 1951

[Amounts in millions]

	E	arned incor	ne	Expend	Benefits			
Type of insurance carrier or plan	Total	Total For hospital sicians' services 2 services 3		Total	For hospital services 2	For phy- sicians' services ³	as per- cent of income	
Total	\$1,660.3	\$1,085.4	\$574.9	\$1,352.6	\$896.8	\$455.8	81, 5	
Blue Cross plans 4 5	505, 5	496, 6	8.9	454. 0	446.7	7.3	89.8	
plans 6	6.0	0.2	5, 8	5.0	0.2	4.8	83, 3	
Blue Shield plans 47	179.4	5.5	173.9	151.0	5.0	146.0	84.2	
Independent plans: 8	116.3	45.4	70.9	101.1	42.8	58.3	86.9	
Comprehensive industrial	40.0	17.0	23.0	38.0	16.3	21.7	95.0	
Comprehensive nonindustrial Limited hospitalization and	44.0	10.4	33.6	34.0	9.8	24. 2	77.3	
surgical 9 Private group clinic prepay-	17.8	14.0	3.8	16.8	13.3	3.5	94.4	
mentCommercial insurance: 10	14.5	4.0	10.5	12.3	3.4	8.9	84.8	
Group	468, 6	276.9	191.7	415. 5	250.3	165, 2	11 88, 7	
Individual	329.0	225.0	104.0	172.0	117.0	55.0	u 52.3	
Bituminous-coal plans 12		34.3	17.2	50.0	33. 3	16.7	97.1	
Student health services 13	4.0	1.5	2.5	4.0	1.5	2.5	100.0	

¹ Benefits paid, for nonprofit and other organizations; losses incurred, for commercial

Medical Care and Hospitalization Insurance in 1949 in the United States: 1950 Survey, Bureau Memorandum No. 72, Social Security Administration.

Includes industrial plans with limited benefits.

it remains uncertain whether this expansion was temporary or permanent.

years. In addition, the increases in the benchmarks reflect a rising wage and salary level and a higher price level for medical care, as well as an upward trend in the net cost of the insurance purchased annually. Similarly, but to different degrees, the total benefit payments and the separate payments for each type of insurance reflect both expansion in the insured population and simultaneous adjustments in the benefits to meet the increases in earnings levels or in the costs of medical care. In addition, there was an increase in the proportion of the insurance premiums returned as benefits in 1951 reported by the largest classes of insurance carriers, and this increase tended to raise the ratio of the insurance payments to the benchmarks. Since, however, many of the insurance carriers with unusually high loss ratios in 1951 operated with no net gain from

underwriting, or even with net loss,

These comments suggest some of the cautions to be observed when examining trends in voluntary health insurance protection and appraising its adequacy. Assuming a continued increase in the number of persons with insurance, there will be need for continued care in the appraisal. Aggregate benefits paid by insurance carriers will probably continue to increase in absolute amount, but they may or may not increase as a percentage of losses and costs to be met by insurance. Until much more detailed information becomes available. it will also be uncertain whether the insurance benefits are providing a larger or smaller fraction of the protection needed by those who are enrolled.

The 1951 analysis and the 4-year comparisons demonstrate the continued growth of voluntary health

² Includes some income or expenditures for outpatient services.

³ Includes some income or expenditures for services other than those received from physicians (nurses, dentists, laboratories, etc.).

⁴ Data from Argus Casualty-Surety Chart, 1952.

Allocation of total income and expenditure figures between hospitalization and medical care among plans offering both benefits, based on correspondence with the plans.

⁵ Data applicable to all 81 United States plans, including 3 Blue Cross-Blue Shield plans.
⁶ Data cover 6 plans sponsored by medical societies but not affiliated with Blue Shield; estimated on

basis of enrollment, premiums, and 1949 figures.

7 Data applicable to 66 United States plans, excluding 3 Blue Cross-Blue Shield plans.

^{8 1951} data projected from 1949 on basis of partial resurvey of plans. For 1949 figures and details, see Agnes W. Brewster, Independent Plans Providing

b Basic data from annual issues of Spectator Accident-Insurance Register, 1949-52. See the Bulletin, Dec. 1951, table 2, footnotes 1-3, for method of allocating income and benefits to hospitalization, medical care, and income-loss insurance.

¹¹ A large proportion of companies had net losses

from underwriting accident and health insurance business in 1951,

Distincts in 1891.

12 Data for benefits from Annual Report of the Welfare and Retirement Fund, United Mine Workers of America; income estimates based on reported operat-America; income estimates based on reported operating cost of 3 percent of benefit expenditures. Allocation between hospitalization and medical care based on report by Warren F. Draper, M. D., to the American Public Health Association, Oct. 1952.

13 From table 3. Distribution between hospitalization and readied, each estimated.

tion and medical care estimated.

Table 6.—Income loss, private expenditures for medical care, and insurance benefits through all voluntary insurance carriers, 1948-51

[Amounts in millions]

194		8 2	1949 1950		50 1951		Percentage of sickness costs met by insurance					
Benehmarks 1	Income loss and/or medical care expendi- tures	Volun- tary insur- ance benefits	Income loss and/or medical care expendi- tures	Volun- tary insur- ance benefits	Income loss and/or medical care expendi- tures	Volun- tary insur- ance benefits	Income loss and/or medical care expendi- tures	Volun- tary insur- ance benefits	1948	1949	1950	1951
Income loss only	\$4, 513 2, 987 7, 288	\$268 268 606	\$4, 618 3, 058 7, 658	\$300 300 766	\$4, 951 3, 274 8, 248	\$359 359 992	\$5, 408 3, 562 8, 816	\$456 456 1, 353	5. 9 9. 0 8. 3	6, 5 9, 8 10, 0	7.3 11.0 12.0	8. 4 12. 8 15. 3
loss	11, 801 4, 095	874 606	12, 276 4, 404	1, 066 766	13, 199 4, 836	1, 351 992	14, 224 5, 155	1, 809 1, 353	7.4 14.8	8.7 17.4	10. 2 20. 5	12.7 26.2
income loss. Physicians' services only. Hospital services only 4. Medical care expenditures potentially in-	8,608 2,240 1,855	874 151 455	9, 022 2, 378 2, 026	1,066 228 539	9, 788 2, 527 2, 309	1, 351 312 680	10, 563 2, 684 2, 471	1, 809 456 897	10. 2 ³ 6. 7 24. 5	11. 8 3 9. 6 26. 6	13. 8 3 12. 3 29. 4	17.1 3 17.0 36.3
surable under present forms of voluntary insurance ⁵ Medical care expenditures and income loss	5, 798	606	6, 152	766	6, 630	992	7, 087	1, 353	10.5	12.5	15.0	19. 1
potentially insurable under present forms of voluntary insurance 6	8, 785	874	9, 210	1,066	9, 904	1,351	10,649	1, 809	9, 9	11.6	13. 6	17.0

insurance, measured in dollar volume, and an accelerated increase in the percentage of sickness costs met by

insurance. The data also show, however, that voluntary health insurance is still providing only relatively small proportions of the insurance protection needed against the costs of illness in the United States.

¹ Represents estimated income loss or personal expenditure for medical care (from tables 1 and 3) plus the appropriate addition for net costs of insurance (obtained from tables 2 and 4).

² Revised data for 1948 supersede those in the earlier articles.

³ Slight overstatement because total benefit payments include some payments for services other than those received from physicians (nurses, dentists, laboratories etc.). tories, etc.).

⁴ Both the benchmark and the insurance benefits include some expenditures for

ont-patient services.

5 Includes expenditures for services of physicians, hospitals, dentists, and nurses plus one-third expenditures for drugs and appliances plus net cost of medical care insurance.

6 Adds income loss with 1-week waiting period to items listed in footnote 5.