

Financial Aspects of Medical Care Insurance

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This article is a summary of data developed and presented at greater length in a monograph on Medical Care Insurance.¹ Only the financial aspects are summarized here, and general specifications for the medical care benefits are included only in such detail as seemed necessary to indicate the basis on which the cost estimates were developed. To clarify points that are only briefly covered in this article, the reader is referred to the monograph.

IN ITS ANNUAL REPORTS to Congress, the Social Security Board recommended the expansion of our present social security program to include insurance against the costs of medical care as part of a comprehensive national social insurance system.² It also recommended that the social insurance system include protection against wage or income loss during sickness and prolonged disability. These two measures together, it believed, would close the most serious gaps in our present social security program.

The underlying facts and considerations which persuaded the Board of the need for medical care insurance have been summarized elsewhere.³ Before the Board recommended an insurance program to meet this need, it considered in some detail the scope, specifications, administrative framework, and costs of such a program. The results of some of those studies, carried on over a number of years, are summarized here—especially as they focus on the financial aspects of the program.

The costs of a national program of medical care insurance would depend mainly on three groups of factors: the size and composition of the popula-

tion eligible for benefits; the scope and nature of the benefits; and the rates of payment for services and commodities provided as benefits.

Coverage

It is a basic premise of these studies that, from a financial point of view, it is desirable to set eligibility conditions for medical care insurance so as to include as much of the population of the United States as possible. Comprehensive coverage would operate in the direction of maximum protection at minimum per capita cost. Most of the population could be brought into the insurance system by the two methods proposed by President Truman in his Message⁴ to Congress on a national health program: direct compulsory coverage for workers and their dependents, as in the case of other social insurance systems; and supplementary coverage for other groups through contracts between the insurance system and other public agencies.

If no occupation group were excluded from coverage, some 80 to 90 percent of the population, depending on the precise nature of the eligibility conditions, could acquire protection as gainfully occupied persons or as their dependents. Any definition of a gainfully occupied person would be somewhat arbitrary, but a minimum qualifying income of, say, \$150 or \$200 per annum would include all but those who are only occasionally occupied in gainful employment. An alternative eligibility test of, say, \$50 in each of 6 calendar quarters in the previous 3 years would serve the same purpose, and would also tend to give additional stability to the size of the eligible population. If the self-employed who

have gross or net earnings of, say, \$500 and who report net income of at least some minimum amount were also eligible, approximately all gainfully occupied persons would be covered.

To achieve broad coverage, a "dependent" might be defined as any individual who relies substantially on the gainfully occupied person for support. But such a definition of dependents would involve some difficult administrative decisions. It is possible that, at the outset, dependents should be defined as those classes of persons whose actual dependence for support on the worker may be generally presumed.

Such concepts applied to all gainfully occupied persons, regardless of their occupation, and to their dependents, would result in including nearly 90 percent of the population if employment continued at high levels, and somewhat less than 85 percent under less favorable conditions. If employment coverage were limited by excluding certain occupation groups, these percentages would be lowered.

Supplementary arrangements for coverage, between the insurance system and other agencies, might include persons entitled to other social insurance benefits, beneficiaries of other public retirement systems, the needy, and—if they were not covered directly—State and local government employees (and their dependents).

In arriving at estimates of total costs for the insurance program, some of the possible variations in coverage which are noted here (national, total labor force, limited labor force) are considered separately.

Scope of Benefits

The scope and content of medical and related benefits will determine to a large extent the per capita costs of medical care insurance. The objectives of such an insurance system are to provide, on a social insurance basis, ready access to essential preventive and curative medical services for insured persons and their families and to protect the insured population against the uneven and unpredictable costs of such services. Medical services should be as inclusive as possible, and, although as a practical matter it might be necessary to limit some services at the outset, eventually

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¹ *Medical Care Insurance, A Social Insurance Program for Personal Health Services*, Report from the Bureau of Research and Statistics, Social Security Board, to the Committee on Education and Labor, U. S. Senate. Committee Print No. 5 (79th Cong., 2d sess.), July 8, 1946.

² See also pages 3-7 of this issue.

³ *Need for Medical Care Insurance*, Bureau Memorandum No. 57 (second edition), Report from the Bureau of Research and Statistics, Social Security Board, to the Committee on Education and Labor, U. S. Senate. Committee Print No. 4 (79th Cong., 2d sess.), March 1946.

⁴ See "A National Health Program: Message from the President," *Social Security Bulletin*, December 1945, pp. 7-12.

medical care insurance may be expected to provide as benefits:

1. Physicians' services in the office, home, and hospital:
 - a. General practitioner or family physician services;
 - b. Specialist and consultant services;
2. Essential laboratory and related services for nonhospitalized persons;
3. Hospital and related services;
4. Dental care;
5. Home nursing; and
6. Prescribed medicines, appliances, and so on, for nonhospitalized patients, or at least those items among these commodities which are relatively expensive to the individual patient.

Although it is desirable to make medical and related benefits, which are essential to good health, as complete as possible, it is not feasible to offer unlimited benefits. Shortages and maldistribution of personnel and of hospital and other facilities would compel the acceptance of restrictions at the outset; but such restrictions should be abandoned as soon as practicable. In addition, certain "luxury" services, such as private hospital rooms or special nursing services when they are not essential to adequate medical care, wholly cosmetic dentistry, unnecessary and inexpensive drugs and appliances, need not be offered.

In addition to these direct benefits, there are several "indirect" benefits and costs which must be reckoned with in estimating expenses. For example, provision should be made for augmented support of medical research and education if the insurance system assumes responsibility, as it should, for continued progress in the quality of service rendered to beneficiaries; certain "incentive" payments may be made to encourage practitioners to settle in communities where their services are needed rather than where the professional or economic advantages are greatest; and the expenses of administration should be included.

Rates of Payment for Services

Estimates of the costs of a medical care insurance program will be greatly affected by the rates of payment for services and commodities provided as benefits. In developing cost esti-

mates, it was assumed that rates of payment under the insurance system should approximate, on the average, customary rates for equivalent services and commodities in noninsurance practice. For example, national average rates of payment for service should yield to participating practitioners incomes as high as, or higher than, what they earn on the average in noninsurance practice.

All rates used in these studies are intended to represent national averages. Within a prescribed range, for any such average there could be considerable variations in rates among classes of practitioners or among hospitals in the same locality as well as among localities; rates of payment would be higher for qualified specialists than for nonspecialists; hospitals could be paid according to the cost of providing service. The incomes of individual practitioners would still depend not only on the rates of payment but also on the number of insured persons they serve if they have chosen to be paid on a per capita basis, or on the number of services they furnish if they have chosen fee-for-service; and factors appropriate to salary payments would govern if practitioners have chosen this method of payment.

The estimates included in this summary are related to experience in earlier years, but they have been ad-

justed for conditions prevailing in 1946 and expected to apply to the near future. All costs are cited with respect to "current and prospective price and income levels." Since the data from which these estimates were derived referred to prevailing incomes, rates of payment, and so on, at the price and income levels of the earlier years for which such data are available, adjustments were made to bring the costs up to present levels.⁵ The rates of payment for services and commodities would have to be geared to long-range economic changes, and hence they would have to be subject to occasional or periodic adjustment.

The estimates of total costs have reference to the insurance program which could be established at the outset and to a program such as might be in operation 5, 10, or 15 years later. Limitations of personnel and facilities would tend to create lower costs in the beginning, and provision is made for increased costs as the deficiencies are met and the benefits expanded. These increased costs would be offset somewhat by reductions in need for services as conditions resulting from accumulated neglects are reduced.

⁵ For detailed treatment of this point, consult Chapters VI, IX, X, XI, and XII and Appendix D of *Medical Care Insurance, A Social Insurance Program for Personal Health Services*.

Table 1.—Summary of illustrative per capita costs¹

Item	Initial or early year				195X			
	Per capita costs with item		Percent with item		Per capita costs with item		Percent with item	
	2 (a)	2 (b)	2 (a)	2 (b)	2 (a)	2 (b)	2 (a)	2 (b)
Total.....	\$28.76	\$25.95	100.0	100.0	\$38.93	\$35.20	100.0	100.0
1. Physicians' services ²	14.58	14.58	50.7	56.2	16.18	16.18	41.6	46.0
2. Hospital services:								
(a) Minimum service benefit.....	7.19	-----	25.0	-----	9.35	-----	24.0	-----
(b) Minimum cash benefit.....	-----	4.38	-----	16.9	-----	5.69	-----	16.2
3. Dental care.....	3.00	3.00	10.4	11.6	7.13	7.13	18.3	20.2
4. Home nursing.....	.51	.51	1.8	2.0	1.24	1.24	3.2	3.5
5. Laboratory, medicines, and appliances.....	3.38	3.38	11.8	13.0	4.29	4.29	11.0	12.2
6. Research and education.....	.10	.10	.3	.3	.74	.67	1.9	1.9

¹ Based on analysis which did not contemplate any exclusions from coverage on the basis of income. If population groups were excluded from coverage because of earnings or income in excess of some specified amount, these per capita figures would need to be reduced because they were computed on assumptions intended to yield adequate incomes for doctors, dentists, and hospitals serving all income levels. A fixed contribution rate (a percentage of earnings) paid only by lower-income groups would yield less in total dollar and in per capita amounts than if paid by both upper and lower-income groups. Also, if the insurance system were paying only for services furnished to lower-income groups, the per capita payments from the insurance system should necessarily be lower than if the coverage included all income

groups. Also, if occupational exclusions significantly affected the ratio of dependents to workers, or the age composition of the insured group, the per capita costs might be lower or higher than those used here.

² Per capita costs for the services of physicians are based on estimates which utilized only the numbers and incomes of doctors of medicine. If other practitioners of the healing arts (osteopaths, chiropractors, etc., licensed or permitted to practice by the States) had been included, the numbers of practitioners, the ratios to population, and the per capita costs would have been larger, and correspondingly, total costs estimated from per capita costs would also be larger by a comparatively small proportion of the total costs.

Physicians' Services

Costs of physicians' services would constitute roughly about one-half of all costs under the insurance program, and consequently they represent the largest single item of expense. On a national basis, unlimited access to the general practitioner was assumed for the insurance benefit, although some communities might have to restrict some phase of physicians' services for a limited time because of circumstances peculiar to the community. Some restrictions would presumably have to be imposed upon the use of specialist services; it was assumed that access to the specialist would require referral by the general practitioner or other attending practitioner, except in unusual or special circumstances.

The estimates of payments to physicians were related to average incomes recorded for past years. Variations in physicians' incomes with respect to age of physician, size of community, specialization, and the like, were considered, as well as year-to-year trends in payments for physicians' services compared with per capita income for the population as a whole.⁶

An upward adjustment was made for an expected increase in the use of physicians' working time by comparison with the conditions prevailing in the years for which the basic income data apply. An investigation⁷ of the number of physicians engaged in private practice (prewar and postwar) indicates that the full-time equivalent of the services of 1 general practitioner could be immediately available for about every 1,500 persons, or about 92,000 general practitioners for about 140 million persons, if all physicians participated in the insurance system.

At a future time, 5, 10, or 15 years later, a ratio of 1 general practitioner to about 1,250 persons would seem to be a desirable and an attainable goal. Similarly, it was estimated that the full-time equivalent of about 40,000 specialists could be available immediately for the total population, or about 1 per 3,500 persons.

It was estimated for present purposes that general practitioners should

expect to receive under the insurance system, if their practice is given over wholly to insured persons, about \$11,250 per annum, on the average. For specialists who would meet high standards of certification, the corresponding average figure was about twice as high, or about \$22,500 per annum. For partial specialists, the average would fall between these two figures. These figures were used as the basic *average* annual gross incomes which the insurance system would be expected to pay physicians at current and prospective price and income levels.

These national annual average incomes and ratios to population are equivalent to \$7.40 a year per person for general practitioners and \$6.43 per person for specialists' services. Taken together, these average per capita amounts equaling \$13.83 per person would be the average direct payments to those physicians who furnish medical services to the insured population. These should, of course, be regarded as the gross payments to them, covering their customary expenses of practice as well as supplying their net incomes. The amounts include supplementary mileage or equivalent allowances for practitioners in sparsely settled areas, a contingency operating fund for various miscellaneous professional and other expenses which may be necessary in meeting unusual circumstances, and an item for educational allowances, estimated to equal about 75 cents per capita for general practitioner and specialist services combined. In addition, it is assumed that another 75 cents per capita would be needed for administrative costs for these services.

Thus the total annual costs per person for physicians' services would be about \$14.58. If the total per capita rate (exclusive of administrative costs) is applied to a population of about 140 million, it implies total payments to physicians of nearly \$2.0 billion a year. In later years, when the present ratio of 1 general practitioner for about 1,500 persons may be expected to have improved to about 1 for 1,250 persons, total costs for physicians' services for a population of 140 million would amount to about \$2.3 billion, and aggregate costs for the expected total population in 1960

or 1970 would, of course, be proportionately larger. Since these totals are based on the per capita rates, they would be proportionately less if applied to less than the total population in any year.

Hospital Care

Hospital care, as used here, is intended to cover the ordinary case of acute or semiacute illness, and refers to services furnished to in-patients. (Out-patient care was treated in this study as the equivalent of physicians' services, laboratory services, and so on, and included in those categories.) It would be desirable for the insurance program to offer protection to patients who are chronically ill, but the lack of facilities would probably postpone provision for such care to some time in the future. This postponement does not preclude development of facilities and provision of payments for care of the chronic sick under categorical or general public programs for institutional care.

The exact content of in-patient care cannot be defined precisely for all localities in the United States. It may, however, be described as comprising all care necessary for the health, safety, and recovery of the patient, and including at least:

1. Bed and board;
2. Such medical and related services as are customarily furnished by the hospitals of an area as an accepted part of hospital care;
3. General nursing care, and special nursing care when essential to the patient's welfare;
4. Use of operating and delivery rooms, and provision of anesthesia services;
5. Essential medications, dressings, and other customary supplies;
6. Laboratory, X-ray, and related auxiliary services; and
7. Essential ambulance services.

Either of two basic patterns may be followed in the design of hospitalization benefits: a cash benefit, payable to the insured individual for each day of hospitalization; or a service benefit, payable to the hospital to reimburse it for actual costs incurred in furnishing services to the insured individual.

Available data on the per diem amounts charged by hospitals for

⁶ Total payments to physicians in former years are treated in Chapter VI of the complete monograph.

⁷ *Ibid.*, pp. 35, 40.

their least expensive facilities in various parts of the country and in various types of communities suggest that a nationally uniform (minimum) cash benefit per day of hospitalization should be about \$4-5. Such a benefit might be made payable for a maximum of, say, 30 days, with provision for a reduced benefit up to, say, 60 or 90 days, in accordance with lower costs of furnishing extended care.

Unlike cash benefits, which would probably have to be nationally uniform and hence a minimum amount, service benefits could vary by hospitals or by areas. Data on hospital costs⁸ suggest an *average* rate of payment for service benefits in the range of \$6.50-7.50 per day for, say, the first 21 or 30 days in a period of hospitalization. These average per diem amounts include the higher costs for the first days of a hospital case and the lower costs for later days and apply to the costs for ward or other least expensive facilities.

Total expenditures for hospitalization will also depend on the amount of hospitalization. This is difficult to estimate precisely in the absence of detailed specifications. However, recent and current experience⁹ indicates that in the near future the insurance system would probably be obligated to pay annually for about 1 hospital day per capita (assuming a maximum duration of benefit between

⁸ *Ibid.*, p. 88.

⁹ *Ibid.*, p. 81.

30 and 60 days per annum). Some years later the total rate of general hospitalization might rise to 1.25-1.5 days per capita and require the insurance system to pay for 1.1-1.3 days per capita.

Applying the per diem dollar range of \$6.50-7.50 for the service type of benefit to a rate of 1.0 day of hospitalization per capita for an early year, and to a rate of 1.3 days for a later year, and assuming that the coverage applies to 140 million people, the indexes yield totals of about \$1.0 billion a year for an early year and about \$1.2-1.4 billion a year for a later year. If the type of benefit were minimum cash payments to the insured persons, at \$4-5 per day, the total disbursements from the insurance funds would be less but the supplementary payments from patients to hospitals would be larger than with a service benefit.

A contingency reserve against years in which the income of the insurance system might be less than average need not be very large, because declines in such income are not likely to exceed as much as 10-25 percent a year except in extreme circumstances. With the help of such a reserve, rates of payment to hospitals would not need to be adjusted frequently.

Dental Care

If a program of complete dental care for everyone were to be put into effect, including provision for accumulated dental neglect of the past,

the services of two to five times as many dentists as are now available would be required, the estimate depending on actual demand. Only a limited program, possibly including comprehensive services for children and limited services for adults, would be possible at first, with provision for expansion of services when more personnel became available.

The cost of a dental program to the insurance system would depend not only on the scope of services intended to be offered but also on the extent to which the dental manpower of the Nation would be available to participate in the system. The incomes of dentists, like those of physicians, would depend on the rates of payment for services (general practitioner or specialist) and the size of the practice each can achieve for himself. On the basis of dentists' incomes for earlier years,¹⁰ it seems reasonable to suggest rates of payment for service that would yield national average annual *net* incomes for general dental practitioners of \$6,000, and \$10,500 for qualified dental specialists (approximately equivalent to average gross incomes of \$10,000 and \$17,500 a year, respectively).

A conservative approach to estimating the cost of a dental service program to the insurance system, without more exact knowledge of the initial limitations that would be unavoidable, suggests that a program involving annual insurance expenditures of about \$3 per capita may be practical at the beginning, with an expectation of expansion of service to a later per capita cost of a little more than \$7. For a population of 140 million, these per capita costs amount to a total of about \$0.4 billion for an early year, and about \$1.0 billion for a later year as the scope of services is increased.

Home Nursing Care

Bedside nursing care in the home should be provided both as a service to the sick and for economy in providing care. Many patients (such as convalescents, chronic sick, and mildly ill) can be cared for in the home, rather than in hospitals, if home nursing service is available. Economical and effective use of pro-

¹⁰ *Ibid.*, p. 103.

Table 2.—Summary of illustrative costs for several assumed coverages

Year and scope of benefits	Per capita costs	Total costs (in billions)		
		"National" ¹ (140,000,000 persons)	"Labor force" ² (120,000,000 persons)	"Limited" ³ (100,000,000 persons)
Initial or early year:				
With minimum service hospital benefit.....	\$28.76	\$4.03	\$3.45	\$2.88
With minimum cash hospital benefit.....	25.95	3.63	3.11	2.60
195X:				
With minimum service hospital benefit.....	38.93	5.45	4.67	3.89
With minimum cash hospital benefit.....	35.20	4.93	4.22	3.52

¹ Per capita costs multiplied by 140 million. These figures are useful in comparing the cost estimates with recent or current national income and national expenditures for medical care.

² Per capita costs multiplied by 120 million. These totals are illustrative of the approximate costs if the coverage includes (a) all gainful workers meeting the eligibility requirements suggested, and (b) dependents, rather broadly defined (including wives, children under 18, disabled children and husbands, and dependent parents). This coverage would have included about 83 percent of the population in 1941 and would include about 84-88 percent of the popu-

lation in each of the next few years depending on the level of wages and employment.

³ Per capita costs multiplied by 100 million. This coverage would obtain if some major occupation groups were not included and if dependents were narrowly defined, or if the coverage of the present system of national old-age and survivors insurance were adopted, with some expansion. At this level, coverage would involve about 70 percent of the present population. The eligibility conditions accompanying or resulting in such coverage might have to be somewhat more restrictive (to distinguish eligible from ineligible persons) than was suggested.

professional nurses requires the extensive use of practical nurses, to function under the supervision of professional nurses and physicians.

Since the scope of home nursing benefits would depend to a large extent on the nursing personnel that will prove to be available in postwar years, costs would be determined largely by the supply of nurses and the rates of payment for service.

It is generally agreed that average rates of payment for nurses should be higher than they have been or are. It was assumed in this study¹¹ that the insurance system should expect to pay for nursing services at rates which yield approximately the following average annual incomes for nursing personnel serving insured persons:

Supervisors	\$3, 460
Professional staff	2, 530
Practical nurses	1, 600

Some gradation of income should be provided to take into consideration different degrees of competence and responsibility, and some difference in rates may need to obtain for different types of community. However, variations around the average should not permit unreasonably low minimum incomes.

It has been estimated¹² that minimum standards for a program of bedside nursing care in the home would require a staff of about 14,000 professional and about 28,000 practical nurses, with a supervisory staff of about 4,000-5,000, for a population of 140 million persons. If the full quota of staff for a minimum-standard program were immediately available, the initial annual cost for this phase of the insurance program would be between \$93 and \$106 million a year, at the stated rates of payment. If, however, only about 10,000 professional nurses and an equal number of practical nurses were available at the outset of the program, the initial cost would be about \$47 million annually. A fully comprehensive program, such as might be in operation a decade after the start of the insurance program, might require, according to one estimate, about 70 million visits annually for 140 million persons, and would cost about \$116 million. If

convalescent patients and certain chronic disease patients who are now hospitalized but would be as effectively cared for at home, and others who need but are not receiving either hospital or home nursing care, are provided with home nursing service, the total nursing load might become twice as large, involving a cost of, say, \$232 million.

Without more precise specification of the scope of benefits and more reliable information on the anticipated supply of available nurses, it is difficult to estimate costs for this part of the insurance program. The several alternatives mentioned are illustrative. For the purpose of this study, rounded figures were used, yielding per capita costs for the initial year of about 50 cents and, for a year 5, 10, or 15 years later, of about \$1.25. For a population of 140 million, these per capita figures amount to about \$70 million and \$175 million for the early and later year, respectively.

Laboratory Services, Medicines, and Appliances

The scope of benefits in this classification should be determined on the basis of their role in the provision of high-quality care, importance as preventive measures, expense to the patient, and adaptability to administrative and financial controls. These criteria would probably be the main limiting factors in providing these benefits, since shortages of personnel or commodities are not likely to limit this part of the program.

Laboratory services under the insurance system are intended to include analyses ordinarily performed for purposes of diagnosis, prevention, and therapy; they also include X-ray diagnosis and therapy, radium therapy, and certain types of physical therapy treatments, of demonstrable medical value. In estimating the costs of such services, it should be noted that an increase in demand may be expected when an insurance system is put into effect, and that large proportions of such services are already covered in the cost estimates for hospital care, physicians' services, and so on, and are available through existing State and local health departments.

A review of the fragmentary information available on current expendi-

tures for laboratory and related services for nonhospitalized patients suggests an initial annual budget of about \$150 million, in round numbers, for services of this nature not already provided for through other channels. An increase of 50 percent (up to \$225 million a year) is tentatively suggested for a period 5, 10, or 15 years later.

In estimating the costs of medicines and related supplies, it is suggested that the potential scope of the insurance benefit should be restricted to medicines and related supplies which are prescribed by physicians, dentists, or other practitioners licensed to write prescriptions and which may involve burdensome costs. Payments for medicines and related supplies would cover the professional services of pharmacists as well as the costs of the commodities.

A review of available data suggests that expenditures for medicines and related supplies for nonhospitalized patients might involve an annual expenditure of \$75-150 million a year to meet minimal needs; about \$100 million is tentatively used in the estimates. A higher figure (\$150 million a year) might be justifiable for expenditures in the later years.

The extent to which the insurance system would need to be responsible for orthopedic and prosthetic appliances would depend in large measure on the degree to which similar provisions obtain under other Government programs. Such appliances would include eyeglasses, hearing aids, artificial limbs and members, artificial eyes, and aids to locomotion. In estimating the cost of eyeglasses, it is necessary to include not only the lenses and frames but also the professional services involved in prescribing them.

Since there are many persons who have already developed a need for such appliances, especially eyeglasses, the annual expenditures under the insurance system might have to be larger in the first than in later years. For the purpose of present estimates, intended to be minimal, \$37.5 million a year was used for appliances and \$187.5 million a year for eyeglasses and optometric services, or a combined total of \$225.0 million a year.

An estimated total of about \$475 million for an early year and about

¹¹ *Ibid.*, pp. 116-118.

¹² *Ibid.*, p. 114.

Table 3.—*Illustrative costs, with and without dental and home nursing benefits*

Item	Per capita costs		Total costs (in billions)	
	Initial or early year	195X	Initial or early year (120,000,000 persons)	195X (120,000,000 persons)
All:				
With minimum service hospital benefit.....	\$28.76	\$38.93	\$3.45	\$4.67
With minimum cash hospital benefit.....	25.95	35.20	3.11	4.22
All, exclusive of dental and home nursing benefits:				
With minimum service hospital benefit.....	25.25	30.56	3.03	3.67
With minimum cash hospital benefit.....	22.44	26.83	2.69	3.22

\$600 million for a later year may be suggested for laboratory services, medicines, and appliances to be provided as minimum insurance benefits of these classes to a population of about 140 million.

Research and Education

In accepting broad financial responsibility for a reasonably adequate amount of high quality service, the insurance system might properly supplement the present inadequate financial support for research and education—as a contribution to quality of care and progress in medicine. Such a program of subvention might include:

1. Grants, stipends, or subsidies to the professional participants in the insurance system, to enable and encourage them to attend postgraduate and "refresher" courses, in order to provide opportunity for periodic review of professional studies, for familiarization with modern advances, and for specialization;

2. Grants-in-aid to nonprofit agencies for expansion of professional educational and training resources in fields in which shortage of personnel handicaps the provision of needed services (including medical, dental, and nursing schools) and for training of auxiliary practitioners, assistants, and technicians;

3. Grants-in-aid to support studies, demonstrations, and experiments concerned with clinical aspects of the prevention of disease or physical impairment, diagnosis, and therapy, and with the organization and administration of services.

In order to supplement present expenditures, an initial allocation of from \$5-10 million for the first year of operation for research and an equal amount for education seems to be a

reasonable estimate of an amount that could be used effectively. For the purposes of including these items in the tentative balance sheet of the insurance system, a rule of thumb was used: for an initial or early year of program operation, \$10 million was included for education and research; for a year 5, 10, or 15 years later it was suggested that the amount be 2 percent of the total expenditures for all medical services.

Total Costs

The total costs will depend in part on the scope and the detailed characteristics of the benefits to be provided, and in part on the population to be covered by the system. Although many aspects of these factors have had to be left in alternative forms, and ranges were used for many items, midpoints of the ranges give the per capita costs included for illustrative purposes in table 1. Since some of the benefits are limited at the outset, but are expected to become more comprehensive in the course of time, their costs are expected to increase. Also, personnel and volume of services are expected to expand—even for some which are not specifically limited. The figures are, therefore, shown both for an initial or early year of operation and for a year 5, 10, or 15 years later (195X). The totals, identified as benefit costs, include administrative costs.

The table also shows the percentage distribution of costs by type of benefit, using for hospital care the alternatives of a minimum service benefit and a minimum cash benefit. As the dental care and home nursing programs are expanded, the proportionate costs of other services are decreased. In the initial year, the per capita cost of medical care insurance would

be about \$29 with a hospital service benefit and about \$26 with a hospital cash benefit. In 195X, when benefits would be more comprehensive, these annual per capita costs would be increased by about \$10.

Conversion of these per capita costs into total costs requires an assumption as to the total coverage of the insurance system. Coverage could be national, in which case the figures should be multiplied by 140 million for the present (as is done in table 2), and by a somewhat larger figure for a future year, allowing for an expected population increase. If the coverage is less than total, the per capita figures should be multiplied by some smaller figure. Total estimated costs, derived from the per capita costs, are therefore shown in table 2 for 3 of the many possible coverages, but in each case—for the sake of simplicity in the table—the coverage is arbitrarily kept constant for the early and later years of operation.

Since dental care and home nursing are the benefits most likely to have to be restricted, or possibly financed from general revenues—especially in the early years when they are expanding—per capita costs and total costs are estimated in table 3 both with and without these benefits.

An illustrative coverage of 120 million persons is used, and costs are shown with alternative types of hospital benefits. For the initial years of operation, total costs would range from about \$2.7 billion for benefits excluding dental and home nursing services and using a minimum cash hospital benefit, to about \$3.5 billion for all services, using a minimum hospital service benefit. The corresponding range for 195X is from about \$3.2 billion to about \$4.7 billion.

Insurance Contribution Rate

The rate at which contributions would need to be levied to derive adequate revenues for financing medical care insurance may be estimated by relating that part of the costs which is to be financed from special contributions to the expected base on which such contributions would be applied.

To illustrate the contribution rate that would be needed to finance the total expected disbursements, the following assumptions are made: a full labor-force coverage (120 million per-

sons), and a \$3,600 maximum on the contribution base, resulting in a national total contribution base of about \$100 billion. (This is somewhat less than the contribution base which would obtain under the assumed conditions and with present price and income levels; it was used as representing a reasonable average for the development of contribution rates.) The estimated "initial or early year" disbursements for all benefits (table 3) is \$3.45 billion, assuming the minimum service hospital benefits; and it is \$3.11 billion with minimum cash benefits. These figures are about 3.5 and 3.1 percent, respectively, of the estimated \$100 billion earnings or contribution base. The corresponding contribution rate needed to meet the total costs for a later year would be about 4.7 percent with the minimum service hospital benefit and about 4.2 percent with the minimum cash hospital benefit.

It is useful to see what the corresponding percentages are if it is assumed that some of the costs are to be met from general revenues instead of insurance premiums. Table 3 shows the total costs exclusive of those for dental and home nursing benefits, for example, assuming that these two classes of benefits are financed from general revenues. Using the same contribution base as before, the costs (exclusive of dental and home nursing benefits) would have been approximately 3.0 and 2.7 percent of the contribution base in the initial or early year, depending on the hospital benefit; and about 3.7 and 3.2 percent, respectively, for the costs applicable to 195X.

These rough calculations suggest that if insurance premiums are to pay the whole cost of the system of benefits described in this study, they would need to be either 3.0 or 3.5 percent at the outset, rising to 4.0, 4.5, or 5.0 percent later. If the premiums are to pay for all the benefits exclusive of dental and home nursing, they need to be about 3.0 percent at the outset and about 3.5 or 4.0 percent later. A contingency reserve would make frequent revisions in the premium rates unnecessary.

These contribution rates and the expenditures they cover for medical care would, on the whole, represent a substitute form of expenditure for

disbursements already being made in other ways,¹² chiefly through individual payments. The insurance costs include reductions in some directions and expansions in others as compared with present expenditures. Some individual expenditures beyond those covered by the insurance premiums would still be necessary, particularly in the early years of insurance operation when some benefits would have to be more limited than in later years.

Conclusion

This study suggests that the prospective costs of medical care insurance, with a stated system of assumed specifications, can be estimated closely enough for use in policy discussions. The specific estimates and their composition are tentative and should be regarded as a basis for further study.

¹² *Ibid.*, p. 158.

The insurance costs estimated in this study are less than customary expenditures for medical care. And since they would be distributed wholly or largely in relation to earnings, it is reasonable to assume that they would not represent undue burdens on individuals, and that—on an over-all basis—they would be well within the Nation's resources. Indeed, the opinion may be ventured that we should be able and that we could afford to spend even more than these costs for medical care if necessary. In dollar amounts, or as a percentage of income, the costs of medical care insurance are not large when regarded as a means of obtaining more and better medical care without burdensome costs on individuals, strengthening and stabilizing the financial support of professional personnel, hospitals and other facilities, and promoting research and professional education.

The 1946 Amendments to the Railroad Retirement and Railroad Unemployment Insurance Acts

By Jack M. Elkin*

Summary of Changes

The principal changes made in the old laws, and the dates on which the changes become effective, are as follows:

1. Provision for monthly and lump-sum death benefits similar to and coordinated with those paid under the Social Security Act (January 1, 1947).

2. Liberalization of the conditions for the payment of annuities based on disability for all gainful employment, and introduction of a new type of annuity based on disability merely for the regular occupation (January 1, 1947).

3. Liberalization in general of the conditions under which minimum retirement annuities are payable to workers with low wage records, and increase in the amount of such annuities (January 1, 1947).

4. Lowering of the age requirement from 65 to 60 for full, nondisability annuities in the case of women

THE AMENDMENTS to the Railroad Retirement and Railroad Unemployment Insurance Acts, approved on July 31,¹ not only give railroad workers the most comprehensive system of social insurance in the United States, in terms of risks covered, but provide the first major, if partial, extension of the coverage of old-age and survivors insurance since the Social Security Act Amendments of 1939. For the first time in this country, a major group of industrial workers and their families is covered under a unified Federal program providing protection against the five major hazards of economic insecurity—old age, disability, death, unemployment, and sickness.

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¹Public, No. 572, 79th Congress, 2d session.