SICKNESS INSURANCE AND MEDICAL CARE

by MICHAEL M. DAVIS[1]

IMMEMORIALLY the needs of the destitute and the sick have challenged humanity with the precept, "bear ye one another's burdens." The appeal which sickness makes is not quite the same as the call to succor the poor. For sickness is of its nature a calamity which strikes unforeseen, which anybody may have any year, and which almost everybody does have some year. It is one of the universal risks of life. If the costs of caring for sickness have to be paid as fees to doctors, hospitals, nurses, et cetera, at the time when sickness occurs, the costs fall directly and wholly upon the sick person or his family, who may find it difficult to meet them because they are often unexpected; and even when an illness can itself be foreseen, the amount of its costs can rarely be foretold and may vary from a few dollars to many hundred. Against this risk the experience of humankind has developed four methods of easing the burden, by distributing the blow among a group of people and over a period of time.

Oldest and most emotionalized is the method of charity. A, who loses his income on account of sickness and who must meet the costs of medical care, has his needs met out of the benevolence of B. B may be an individual, a church, or an organized charitable agency. If an institution or agency, B represents, however, the pooling of the contributions of individual charitable givers. If he is an individual he is not necessarily a wealthy philanthropist. A vast amount of charity is given to the sick poor by neighbors who have only a little more means than they. A very large amount is given by physicians themselves. "The poverty of a patient," says the

[1]Director for Medical Services, Julius Rosenwald Fund, Chicago, Illinois.

Principles of Ethics of the American Medical Association, "should command the gratuitous service of a physician." The physician's gift of entirely free service to the needy is one of the important forms of personal benevolence. In any instance the process of charity represents, from the economic standpoint, a redistribution of the costs of sickness, a spreading of the burden from one part of a social group to another, and from the sick to the well.

The "sliding scale" involves the principle of distributing costs, but it is administered by the producers of medical service rather than by the consumers. The physician, the dentist, or the hospital may adjust charges in some relation to the means of the sick person. In so far as the producer can secure comparatively large fees for a given service from a certain number of well-to-do clients, he can the more readily afford to give his services free, or for nominal charges, to those who can pay nothing, or only a little. Obviously, only those physicians who reach the ten or fifteen per cent of the people who constitute the well-to-do and wealthy classes can practice the sliding scale to any considerable extent. The practice of a large proportion of physicians is, however, mainly or entirely among persons of moderate circumstances. Such physicians may and do give charity, but they can do little with the sliding scale principle except slide the scale down. This method has, moreover, the serious limitation that it distributes costs only among sick persons of different economic groups, not among both the sick and the well. The sliding scale is much more applicable to specialist care, surgical operations, and consultations than to the home or office visits of the general practitioner. The increased variety of medical services, due to specialization and other factors, has promoted the extension of the sliding scale, of which much has been heard in recent years.

How widely applicable are the principles of charity and of the sliding scale? The costs of medical care arising among the population with family incomes of less than $2,500 a year (about 80,000,000 people in our last period of prosperity) amount to approximately $2,000,000,000 a year. Any really effective plans for distributing the financial burdens of sickness must be able to deal with figures of this order of magnitude. The total volume of charitable gifts in the United States to organized agencies has probably never exceeded $100,000,000 in any year. Only a part of this is devoted to sickness. The total amount of medical charity given by physicians can be estimated from the studies of the Committee on the Costs of Medical Care as being, in normal times, somewhat less than one-tenth of the total income of all physicians in private practice. This comes to just about the same sum. Thus the distribution of medical costs through charity and the sliding scale, taken together, amounts to only about one-tenth of the $2,000,000,000 annually involved in the care of sickness among the mass of the population.

The third and fourth methods of distributing costs, taxation and insurance, are less personal and more capable of application on a large scale. Consider taxation. By authority of law, the government requires payment from individuals and organizations into a common fund, out of which various services are provided to the community as a whole or to certain individuals. It is important to distinguish two types of taxation. In the first place there is general taxation, usually of property or of income, levied generally with reference to the ability of the agency or individual to pay. The amount to be raised is fixed with reference to the gross governmental budget and not with reference to the value of the services which the individual taxpayer may receive. Another form of taxation is known in the terminology of public finance as

"special assessment." Here the tax is levied upon all the individuals or corporations which receive or may expect to receive certain services or advantages. The amount of the contribution may be equal for all or may be graded in proportion to the amount of benefit received, as in the case of a levy for street improvements. In either case, the tax (assessment) is paid only by those who secure, or are entitled to secure, certain benefits.

The principle of general taxation is now extensively used in this country in meeting certain costs of sickness, as for public health work, mental disease, hospital care, et cetera; but the assessment principle may also become very important, as we shall see. About $600,000,000 has been paid annually in recent years out of tax funds, local, state, or federal, to meet the expense of hospitals and public health work. This is in addition to expenditures for the material relief of families who can not support themselves when the wage-earner is sick. These $600,000,000 represent a redistribution of certain costs of sickness so that they do not fall upon the individual family at the time of illness, but are carried by the community as a whole, distributed in the main so as to fall upon those who have the ability to pay. If we compare this amount with the total annual sickness bill of the whole population, we see that taxation has assumed only a small fraction of it (less than 20 per cent).

The fourth method of distributing the uncertain and uneven burdens of sickness is insurance. The ENCYCLOPEDIA BRITANNICA defines the word, in a statement quoted in Rubinow's SOCIAL INSURANCE (page 3), as "A provision made by a group of persons, each singly in danger of some loss, the incidence of which can not be foreseen, such that when such loss shall occur to any of them it shall be distributed over the whole group."

What are the implications of this definition with respect to sickness? The extent to which the principle of insurance is applicable to sickness and the limitations of the principle in this application can only be determined after a statement of specifications. In the United States, in practice, insurance has as yet been applied to sickness only in slight degree as compared with Europe, while we have made relatively much larger use of taxation. The respective places of taxation and insurance as means of distributing the cost of sickness are likely to be of substantial practical interest in this country during the next few years. The vast extent to which insurance has been applied in the United States to the hazard of death leads us to think of life insurance as the essential or controlling type. It is important to appreciate that the elements which are involved in life insurance may not be the same as those which are significant in other forms. Let us set down, in the first place, four general specifications as to what is involved in the insurance principle:

1. Insurance can only exist when there is a hazard or contingency in which persons have a definite interest, so as to create a substantial reason for insuring against it.

2. The contingency must be capable of at least approximate expression in money terms.

3. The rate of occurrence of the contingency must be predictable for a group of persons within reasonable limits of accuracy.

4. It must not be possible for the contingency to happen to all or to too large a portion of the group at any one period.

A glance over this list indicates at once that the hazard of sickness falls within the scope of these requirements very much as do the hazards of death, fire, or old age. People have an obvious interest in the contingency of sickness and this interest can be approximately measured and at least roughly

expressed in financial terms. The rate of occurrence of sickness is predictable for groups of people within reasonable limits, on the basis of previous experience. While it is conceivable that in an epidemic sickness might occur to a very large proportion of a group at one time, this no longer happens to a serious degree in Western countries. Moreover, the major epidemics, except influenza, are communicable diseases for which public authorities have assumed responsibility. The cost of caring for these will be borne by taxation when necessary.

A decided contrast appears between life insurance and sickness insurance in a financial aspect. The financial basis of sickness insurance might be stated as follows: Payments from the individual members of the group must be accumulated in advance of the occurrence of the contingency against which the members of the group are insured; in order that, as the contingencies occur, payments can be made to cover the risks or to provide the services stated in the contracts, with a margin for working capital and for administrative expenses.

In sickness insurance the current payments into the insurance fund will each year about balance the current outlay of the fund in behalf of the beneficiaries, allowing, of course, for administrative expenses; and there need be only a small accumulation of working capital or reserve for emergencies, which should be currently available and carried over from year to year.

In life insurance, on the other hand, and similarly in old age or invalidity insurance, the insured person pays for a long period, in the typical case, before receiving any return, and the insurer must accumulate from the periodic payments made by or in behalf of the insured persons a fund which will be capitalized and invested. At any given time the in-

surance organization must hold a large fund consisting of this capitalized reserve. In sickness insurance, on the other hand, the annual intake and outgo nearly balance themselves year by year without requiring any substantial reserve. One might say that in sickness insurance we are dealing with currently disposable risks, whereas life insurance, old age pensions, or invalidity insurance must deal with capitalized risks.

One further contrast may be made. In life insurance the obligation of the insurance organization is discharged by the payment of money. In sickness insurance, as administered all over Europe, and in numerous, though relatively small experimental plans in the United States, a large proportion of the insurance fund is expended not in direct money payments to the beneficiaries, but in providing services, i.e., various forms of medical care. As was shown in a preceding paper, the costs of medical care now constitute a larger proportion of the economic burden of sickness than formerly, and are substantially greater than the wage losses due to sickness. Hence the provision of service in the form of medical care to the insured persons has become increasingly important as compared with direct money payments to them. The nature of medical service, involving as it does many complex elements and varying costs, introduces administrative factors into sickness insurance of much greater difficulty than exist in life insurance or old age pensions, where the administrative issues are the comparatively simple ones of money payments.

There are other elements in sickness which require more intimate study before their relations to the principle of insurance can be defined. For this purpose we must sub-divide sickness into three types.

GROUP I. *Acute illness.* The characteristic is that these dis-

eases run a definite course. The designation "self-limiting" may be applied with approximate correctness. Examples of this group are the common infectious diseases, many of the frequently recurring diseases of the respiratory tract—colds, bronchitis, and pneumonia—and a large number of the conditions demanding surgical operations.

GROUP II. *Chronic illness.* The characteristic feature of this group from the present point of view is not so much the duration of the illness as the absence of any defined course or term. A large part of the diseases and disorders of middle and late life, affecting the gastro-intestinal tract, circulatory system, metabolic, mental and nervous conditions, fall into this class.

GROUP III. *Preventable diseases.* Conditions preventable wholly or largely by known methods. Some of these methods have specific reference to particular diseases, e.g., the control of typhoid fever through water supply and other sanitation; the control of smallpox and diphtheria through specific immunization; of rickets through an adequate diet. A group of conditions causing infant mortality, and the important disease, tuberculosis, fall in part into this category, since while not strictly preventable, they can be largely reduced by known medical and educational methods.

Recognizing the limitations of this classification, it may nevertheless help to answer the question: How far is the principle of insurance applicable to sickness?

It is at once apparent that Group I meets the requirements much more fully than Group II. While the duration of economic disability, if any, and the amount of need for medical care will vary among individual cases in diseases of Group I, nevertheless the degree to which the risk is under the individual's control is much less as a rule than in Group II. In the latter, the duration and degree of disability and the amount and duration of medical care are much less easily

definable and much more affected by the patient's desires or temperament—i.e., by those factors which insurance people have been accustomed to describe as the "moral hazard."

Group III, the preventable diseases, are not, properly speaking, insurable risks at all. They are removable risks, not insurable ones. We ought not to have to insure against a risk if by known methods it can be prevented or largely reduced by or in behalf of the individual. Fire-insurance companies can write policies covering theaters or factory buildings which are fire-traps. But it is better public policy to require certain preventive measures (fire-proofing, etc.) to eliminate certain risks and to lessen others greatly. Irrespective of insurance rates, these requirements may be made to prevent burning people up.

During the lifetime of living men, there have been important changes in the relative size of these three sickness groups. Group II, chronic illness, has increased relatively to Group I. Group III, preventable disease, was insignificant sixty years ago. During the last thirty years it has been increasing in absolute and relative importance. Medical, social, and economic factors have combined to produce lower birth rates and death rates, and to give us a population with a substantially smaller proportion of children and young persons than was the case a generation ago. The diseases of Group II which are characteristic of middle life and old age are thus inevitably on the increase.

A rough estimate of the relative costs of Groups I, II, and III, leads to the conclusion that for the entire population the costs of medical care for Group I are somewhat over two billion dollars a year, the costs for Group II somewhat over one billion, while the costs of organized disease prevention are at present only about one-tenth of a billion. From the

economic standpoint, therefore, disease Group I is of major though not of overshadowing importance. With respect to Group III it is the opinion of the leading public health authorities that the effective annual expenditure should be at least two and a half times the present rate, or $250,000,000 a year instead of $100,000,000.

From the point of view of insurance, what issues are raised by these various types of sickness and their several characteristics? It is evident that some of the disease conditions, particularly in Group II, may occur more or less frequently or may be of longer or shorter duration, dependent upon the attitude of the individual patient. In life insurance the occurrence of suicide, in fire insurance the possibility of arson, would, if they happened frequently enough, vitiate the present type of insurance provision against these hazards. If to provide against a risk which the individual faces is of the essential nature of insurance, then from the standpoint of the individual a risk ceases to be a risk when it occurs by the deliberate action of the individual's will. The increased proportion of sickness now falling within Group II involves in psychological terms a larger proportion of sickness, the occurrence and duration of which are influenced by individual volition. The sickness insurance systems which in Europe involve many millions of people and which have been extending to more countries and more people for two generations have had to deal with this problem and the plans now developing in the United States will have to face it likewise.

Another closely related problem arises from the same cause. No administration of any plan of group action against contingencies such as death or sickness is practicable unless the actual occurrence of the contingency can be determined and unless the contingency can be defined or classified with reference to the terms of a pre-existent contract.

The occurrence of death is easily determinable; likewise the occurrence of acute or incapacitating illness. But the occurrence of some "minor" illnesses or the date of termination of some "major" illnesses may be quite difficult to define. The preceding classification again indicates that these difficulties are on the increase. From the standpoint of prevention, and of economy both in money and in human resources, it is important that many "minor" diseases be diagnosed and cared for since they may be the precursors or the early stages of very serious disease. Both the individual and the public have a greater interest than formerly that certain forms of medical service be rendered. To render such service, however, enhances the administrative difficulties of a sickness insurance scheme—difficulties which hardly existed when few illnesses were treated except those of the acute or incapacitating type.

The older European sickness insurance systems have had to face during the last twenty years: (1) Substantial extension of the period of disability due to sickness; (2) higher costs due partly to the prolongation of disability, and partly to more and more thorough medical care; and (3) increased difficulties in controlling the amount and costs of medical care. These difficulties are traceable to at least three factors. The first group of factors are fundamental trends in the science and art of medicine, alterations in the age distribution of the population and consequent changes in the relative prevalence of different types of disease. The second group of factors are the "moral hazards" usually denominated as malingering, sickness neuroses, et cetera, to which the changes just mentioned have given greater opportunity for displaying themselves. The third group of factors is the deliberate extension of the plans through which the costs of sickness are distributed. These deliberately made extensions include of-

fering benefits for a longer period of time, enlargement in the amount and variety of medical care provided, and the inclusion of much larger groups of the population by successive acts of legislation or, quite frequently, by the acts of insured groups themselves, who have voluntarily assessed themselves additional payments in order to provide larger benefits in time of need.

The systems in Europe have been extended despite these difficulties and despite increased costs, even during the general poverty of the post-war period. It would seem that these administrative difficulties and the higher costs have been more than balanced, in the minds of the European peoples and their legislators, by the fact that the *need* for distributing the costs of sickness among a group of people and over a period of time has increased during this same period. This increased need for distributing the costs of sickness has been due to the rising average level and the much greater range of these costs and doubtless also to an increased attention to the maintenance of health.

In dealing with these problems of administering services and of finances, existing systems of "sickness insurance" have developed policies and procedures, an analysis of which will be suggestive for future development. Under the procedures of insurance *per se*, an estimate of gross cost is made on the basis of previously recorded (actuarial) experience showing the incidence and expense of the risks concerned. If certain of these risks become less clearly definable and if the benefits to be provided involve an increasing provision of services rather than money payments, the determination of the "expense of the risks concerned" becomes more difficult; administration of the system likewise. A different procedure is therefore adopted. The wide variations in the amount and cost of desired medical care and the fact that

complete care would obviously cost more than many groups in the population are able or willing to pay, even on a regular periodic basis, leads to a procedure in which the actuarial experience of the past becomes a guide, but not a determinant. Under the new procedure the scope of service to be rendered is limited after consideration both of its content and of its cost so as to keep it within a probable maximum cost which it is believed in advance to be about what the people and agencies concerned will pay. This cost is then prorated among the beneficiaries and in part among other groups or organizations, such as employers or the state.

Such a procedure, involving the budgeting of services and of costs, is essentially the procedure of assessment. When the payments under such a scheme are made compulsory by law, this method of assessment is closely akin to the procedure of taxation. It differs chiefly in that the payments are required, at least in considerable amount, from the persons who are immediately benefited and in that the payments are usually prorated equally among all the persons of this group.

This procedure of assessment is part of a process through which "sickness insurance" systems in European countries are being gradually related more and more closely to systems supported by general taxation for providing certain forms of medical service to certain groups of the population. One example of this is preventive work. Certain types of disease (Group III) have ceased to be insurable in the technical sense of the term. But they have become budgetable either by individual persons or by a group of persons. It is found in practice that a body of people, through the agency of government or other agencies of group payment, will pay for preventive services for their members, whereas relatively few persons are as yet educated sufficiently concerning the

benefits of preventive work to budget individually for these services. Most preventive work, therefore, has been supported by taxation, with a certain tendency to take over a part of the cost into the "sickness insurance" systems (as in some tuberculosis activities abroad) and another significant tendency to relate the administration of medical service under the sickness insurance system more closely to the medical work administered through public health agencies. All this is in the direction of developing a coordinated system of medical services.

Another illustration is hospital care. Although acute illness requiring hospital service meets the theoretical requirements of insurance very well, the high relative costs of hospital work and the great initial capital investment in hospital buildings and equipment, long ago rendered it necessary in Europe that the provision of hospital care for most of the people be supported by group action rather than by fees of individuals. The hospital systems on the continent of Europe are preponderately maintained by taxes. Even in Great Britain this is true of the majority of the general hospital beds, and in the United States of about one-third of such beds. But even in the United States the capital for hospital buildings and equipment has been more than 90 per cent provided as "social capital," that is, by private gifts or tax grants rather than from the fees of individual patients. Along with the extension of sickness insurance in European countries, the hospital system has proceeded primarily as a tax-supported form of medical care. The two systems, however, have entered into relations in that (1) a portion of the cost of hospital care for insured persons is now generally paid by the insurance system, thus taking over a share of the costs from general taxation; (2) a certain though relatively small amount of hospital care has been financed wholly and ad-

ministered directly by local sickness insurance units themselves for their members.

A third illustration is the medical care of the lower economic groups of the population, the chronically unemployed and other indigents. In Western countries this has been provided for either by voluntary charity or by taxation, taxation being everywhere the major reliance. There is also a group of persons, normally larger in numbers, who, while usually employed, earn such low incomes that their periodic payments into an insurance scheme could not be sufficient to meet the costs of adequate medical care without taking so large an amount of their income that their general standard of living would be seriously lowered. Assessments levied upon employers in many countries, and in some countries also from the state, have been utilized as a means of raising the payments made by such persons to the sickness insurance fund enough to cover minimum benefits to this group of the population.

Thus the tax-supported systems of medical care and the systems of medical care supported by "sickness insurance" or by group assessment, have come into closer relationships. The increased emphasis on the provision of medical services has promoted the growth of these relationships and tended, though slowly, towards coordination of these two systems and in some countries in Eastern Europe almost to their administrative unification.

In the United States, what is here called the principle of assessment is likely to be much utilized in designing group payment plans for medical service. In this country most of the people except unemployed persons and others with very low or unstable incomes are now paying considerable sums for medical care each year. The uneven distribution of these payments among the individuals of the group each year con-

stitutes the real burden and is one of the major causes for the limited or inadequate service which many receive. Studies already made have shown that the amounts now expended for medical care by families with incomes of $1,200 a year and above, if pooled through some group payment, would furnish a larger and more accessible volume of medical care than is now usually secured. To assess upon any economic group of the population what on the average its families have been spending annually for medical care, and to use this fund in some organized way so that this group shall secure more and better care would seem reasonable. In a number of sickness insurance plans which have been in successful operation for some time in the United States, expenditures of the order of magnitude of $50 to $100 per family are made by the voluntary self-assessment of the people concerned. In designing more extensive plans, such practical questions as the following will arise: How much medical care can be furnished a family in a given part of the country for say $75 a year? Or, under other conditions, for $60 a year? Or for $100 a year? Such questions lead at once to the consideration of the adequacy of medical service, and of the most important types of medical care. How complete and adequate would be the service? How much general medical service, specialist care, hospital care, dentistry, nursing service, provision of drugs and medicines, ought to be included within a given scheme? How much can be included for a given amount per year? What types should be given priority so that they should be included within the scope of service limited by a restricted financial assessment? What supplementation of payments by employers and for the state must be required in behalf of low-income groups in order that at least a necessary minimum of service shall be provided?

In considering such questions, it must not be thought that

medical care can be measured like yards of cloth, or can be expressed wholly in financial terms. Nor is a poor *quality* of service worth having at all. But there are relations between the scope and kinds of medical service and the price paid for it, and these must be considered, from professional, human, and financial standpoints all together.

At this point, however, the questions of adequacy become involved in the question of the relative economy of medical service when supplied under different methods of organization. What would be the relative costs, for example, of furnishing specialist service, surgical operations, and other relatively expensive forms of personal medical attention under a system requiring payment of fees to individual practitioners as compared with the cost under a system of group practice, utilizing clinics with physicians remunerated either on a fee or a salary basis? How great are the economies of organization? How much of the 40 per cent overhead of the individual private practitioner's office can thus be saved? How much can be saved in the expenses of ancillary tests, appliances, and medicines? How important are the possible disadvantages of clinic organization, the supposed diminution of personal relationships, et cetera?

These financial and professional considerations must all be weighed. They will affect certain forms of medical service much more than others and in different directions. Undoubtedly the divergencies between the costs of service under different methods of furnishing the service are substantial. Foreign as well as American experience indicates that the differences are of the order of 25 to 40 per cent rather than of the order of 10 per cent, and are thus of extreme practical importance in designing and administering programs of medical service for large groups of people.

In summary, the general principle of distributing the costs

of medical care has been effectuated by several methods, of which the most important are taxation, insurance, and the intermediate principle of assessment. Recent trends in the science and art of medicine, in the characteristics of disease, in the constitution of the population and in the costs of medical care have created an increased need for distributing the costs of care, and at the same time greater difficulty in the administration of plans for effecting this distribution. In the United States there has been an increasing use of the principle of taxation. The principle of assessment has been utilized in experimental plans under the name of insurance in the United States to distribute the costs of care for some local groups of people, and has been developed extensively in Europe under the aegis of compulsory sickness insurance systems. The principle of assessment retains the element of direct financial responsibility on the part of the individual beneficiaries, and may be adjusted with flexibility in application to different scopes of service and differing capacities to pay. It is also adapted to non-governmental administration of medical care, such as predominates in all Western countries except Russia.

With the advancing complexity and cost of medical service, the methods through which preventive and curative services are organized and furnished come into the foreground for two reasons. First, because the cost of furnishing service is substantially affected by the method through which care is furnished; and second, because the supply of adequate service and the maintenance of high professional standards are involved in the same problems of organization and administration. Two subjects require continued study in order that there shall be scientific information available for the guidance of the professional and financing groups concerned with these matters. In the first place, competency and adequacy of

service must be defined and made capable of appraisal, through scientific studies from the professional standpoint. In the second place, these professional studies must be paralleled by studies of the economical provision of service; what are the costs of adequate medical care, and what differences exist between the costs of furnishing adequate care under various methods of organization of service? There is little doubt that in the United States important voluntary groups and some state legislatures will, during the next few years, carry through experiments in organized group payment which are likely to have far-reaching results. The time for academic study has passed into a period when there is demand and need for action; but action should be in the mood of experiment and be guided by critical appraisal and research.