

These studies are the result of collaboration by educators representing almost all of the United Nations.

Finally, the valuable publications coming from the League of Nations and, last but not least, the International Labour Organization, must be mentioned. We are lucky to have these two organizations for the duration on this continent and the contributions which they have made to the discussion of reconstruction take, more than has been the case in the

past, cognizance of the conditions in the Americas.

This by no means exhausts the list of organizations which have offered valuable suggestions for post-war action. For example, much important work is being carried on by agencies which have as their major purpose the education and encouragement of an informed public opinion. The value of such work cannot be overestimated. Without public knowledge and use all post-war research becomes futile.

The Effect of Health Insurance on Scientific Medicine

By HUGH CABOT

MUCH of the discussion which has gone on over Health Insurance has been confused and has shed heat rather than light upon the problem. One of the causes of confusion has been a failure to define our terms and hold before ourselves a clear picture of the problem.

It is implicit that the main problem is the reasonably symmetrical distribution of modern scientific medicine to the whole population. But what is modern scientific medicine? It is the medicine which has been able to develop and use the discoveries of science which are applicable to the prevention or management of disease. It owes its existence to organization which has brought the scientist, the laboratory investigator, the clinical investigator and the practising physician into close contact.

The Growth of Scientific Medicine

At an earlier day the pure scientist pursued his abstractions in almost complete isolation. During the same period there grew up what we now call the great voluntary hospitals beginning as adjuncts to the poor house where the almost purely empirical medicine had little traffic with science. But gradually the scientists

and the physicians got together. Hospitals developed laboratories where the application of science to the diagnosis and treatment of disease found opportunity for growth and where the chiefly scientific investigator was brought in contact with his brother who was rather ineffectively treating disease. But this development was not pure accident. The grouping of scientific investigators and physicians under one roof was inevitable from the start. The authorities in charge of these institutions had two problems. They must make the work of their medical staff as effective as possible since, by custom, these gentlemen were not paid and had to earn their living elsewhere. But they also had an economic problem since they were not well-supplied with funds and they had to make their funds work for a living. These principles are important since they lie at the basis of much of the discussion in which we are now engaged. The intimate association of the scientist, the scientific investigator, the clinical investigator and the practicing physician is the only way to keep medical practice reasonably abreast of scientific knowledge and to provide the opportunity for its broad application to the patient. Thus knowledge and its application were steadily brought into a useful conjunction. Here progress was made, standards set and

modern scientific medicine began to come to its own. Here was the article, the wide distribution of which, would enable modern civilization to attain the highest level of bodily existence possible within the limitations of our knowledge. At the same time available funds were used to the best purpose.

The Lag Between Medical Knowledge and its Application in the General Practice of Medicine

In contrast to the development of medical knowledge in laboratory and hospital under organizations forced by economic necessity, the pattern of medical practice has grown up in quite haphazard fashion and still has many of the characteristics of the day when medicine was a pretty empirical business. Medical practice is still based upon individual competitive effort and has failed to keep step with modern economic progress. Almost solely in the so-called learned professions do we find individual competition surviving in an era where, under a capitalist system, grouping, combination and every effort to save waste and promote efficiency is the proven method of progress. Moreover, this method tends to perpetuate the separation between the physician, the laboratory and the consultant. At least in the case of the general practitioner, the use of the laboratory and the consultant operates directly to diminish his income. His patient has, as a rule, only a limited amount of money which he can pay for medical care. If it be paid for laboratory investigation or to essential consultants and specialists just to that extent the income of the general physician is diminished. But this is not the only consequence of the individual competitive method. There is inevitable duplication of offices and expensive equipment.

We must next face the question of whether this pattern of medical practice will bring to the average patient the benefits of scientific medicine. Except for those who are treated in hospitals or have relatively large incomes the answer is emphatically, "No!" The

physician does the best he can with the minimum of laboratory and consultant service but up-to-date medicine can be supplied with difficulty, if at all, to people in the lower income brackets. But this is not the whole story. One of the most important achievements of modern medicine lies in the field of preventive medicine. Most of the great scourges which used to decimate the population are under control and can be prevented where modern medicine and the patient are in close relation. But under the present set-up this is difficult to achieve. Except where the prevention of disease can be carried out wholesale by the departments of public health, as in the control of water supply, milk and food, the barrier of cost stands between the physician and the patient, to say nothing of the difficulties introduced by the tenets of medical ethics which stop the physician from urging upon his patients safety which is available but which he hesitates to suggest since it savors of "drumming up business." Here we stumble upon one of the great barriers to the proper distribution of scientific medicine, namely, cost. The fact of the matter is that the economic anomaly of free competition between individuals has let us down. The physician is separated from necessary equipment and the patient is deprived of his skills because he cannot afford it. We have, almost literally, doctors without tools and patients without the price. This is the penalty levied by modern economic progress against those who defy its principles.

The Effect of Compulsory Health Insurance

The fundamental principle of insurance is that all make some contribution to a fund or pot. This contribution is made regardless of whether the service paid for is required or not. It is notorious that the blighting effect of disease or injury is very unequally distributed. One individual may go for years without requiring the services of the physician, whereas another hapless individual seems to give bread and board to every

migratory bug or succeed in colliding with every available telegraph pole. Under present catch-as—catch-can methods luck levies a very uneven toll. To the rich this may be nothing more than a serious annoyance, but to the poor it means unemployment, tragedy, even death. Under insurance the cost is distributed, the well pay for the sick. Thus the provision of adequate funds should, under modern social and economic conditions, present no great difficulty and in fact it is not here that the most acrimonious discussions have taken place. The difficulties and the disagreements have arisen chiefly over how this pot shall be used.

Effective Use of Funds

Any agency which undertakes to accumulate what will amount to an enormous sum of money, by that act becomes responsible for its prudent and economical use. The present pattern most commonly utilized in the distribution of medical care is wasteful and expensive. But a method of proved efficiency lies ready to our hands. The experience of the great voluntary hospitals has shown that the grouping of the laboratory expert, the clinical investigator, the consultant, the specialist and the general physician is a sound method by which something approaching present knowledge may be made available to the population as a whole and also that it avoids waste. Those who object to the wider application of this method will find difficulty in defending themselves against the charge that they oppose methods of proven soundness in order to perpetuate an amount of individual competitive freedom which is quite out of step with modern economic progress.

It will perhaps be wise to elaborate a little upon the effect of group medicine—for this is, in fact, the basic structure of the hospital—upon medical efficiency and cost. The habit of physicians of maintaining individual, often widely-separated, offices, while at the same time they must frequently avail themselves of the machinery which exists only at

the hospital is a waste of time, strength and money, because there is inevitable duplication and only partial use. An expensive piece of scientific equipment, under sound economic planning, should do a day's work instead of working a few hours. Partial use constitutes a waste which in the aggregate will run to staggering proportions. But the greatest waste in our system of individual competitive practice is in man-power. In the properly organized group, such as the well-managed hospital, the personnel at all levels of age, skill and individual peculiarities can be utilized to good purpose. The minute the youngster grasps his parchment, the hospital—or the group—can put him to work. He needs experience. He needs opportunity. It here lies before him. At the proper rate, depending upon his capacities, he may move steadily forward, acquiring the techniques, skills and disciplines of modern medical practice. Is he a man—or woman—of unusual breadth and soundness? For him the field of the consultant is obviously waiting. Is he a person of normal or less than normal intellectual capacity but has he a first-class pair of hands? Then for him the skills, techniques and experience of the narrow specialist are the obvious goal. Is he one of those rare people who have the God-given capacity to delve in the intricacies of science and make them his servants? Then for him the field of the investigator is obviously the proper berth. Finally, we hear much of the essential importance of the personal relation between patient and physician and of the great advantages of a good bedside manner. But the attributes necessary to obtain and hold the confidence of patients, the ability to relate oneself rapidly to the peculiarities of the individual are not universal attributes. Under present-day methods many a man able to make a great contribution to medical care proves an unsuccessful practitioner because he lacks certain psychological and temperamental qualities which are important in nicely fitting the fact-finding machinery of the labor-

tory to the peculiarities of the human animal. He may go through life largely beating the air when in group practice he could be of enormous value. Furthermore, our present type of organization overlooks the self-evident fact that youth has the driving power and middle-age has, if God is good, the wisdom. For sheer ability to do work and to collect facts, give me the well-trained man between twenty-five and forty. By the same token, to require long, laborious and at least partially-wasted effort of men in middle ages, battling around from one patient to another would be laughable if it were not tragic. These men may have developed wisdom, that distillate of experience and knowledge. They should be allowed to think, to plan, to coordinate rather than tearing themselves to pieces in work which is beyond their physical capacity.

These, briefly, are the possibilities of properly-organized group medicine. They are not imaginary and they work. I submit that any authority charged with the prudent and effective use of large funds will be required to utilize them to their fullest. But, it will be objected, these methods are applicable only to relatively concentrated centres of population and they break down in rural areas. This objection is partially sound and yet it is not, I think, wholly valid. It is true that the great hospital with its laboratories, consultants, specialists and intricate organization cannot be planted and made to work in the Desert of Sahara. But this does not mean that the method is unsound. We shall, of course, have to have individual practitioners widely scattered in a rural population but it does not follow that they have to be isolated. They can and should be part of a great group organization. It is surprising how much modern medicine can be practiced over the telephone. Assuming that the doctor at the crossroads is part of a group, he has at his back the whole machinery of medical science. He can collect his clinical facts

and then, by telephone, consult his brethren at the centre and be advised what further facts are desirable. He can get much of the necessary laboratory study done, for the barrier of cost has been removed. Does his patient require a consultant? Modern transportation is the answer. Does his patient require the skills of the specialist? Again, modern transportation has narrowed the gap and again cost is out. Prudent efficiency will undoubtedly require the establishment of medical centres in sparsely-populated areas, which will be the hub of the medical wheel. Here the necessary laboratory experts will be maintained on salary. Here the necessary consultants will either be maintained or can be obtained. Capital investment will be necessary but if a sound over-all picture of the requirements is available, the machinery of modern transportation and modern medical science will find a solution.

To sum up the argument, the goal of modern scientific medicine is a dual one; to keep all physicians reasonably abreast of advancing knowledge, to utilize their varying capacities to the best advantage and to provide the article which we may call good medical care to the whole community. The funds necessary to do this job can be obtained without too much pain and one may venture the guess that under efficient management something like four per cent of the national income will do a pretty fair job. I have suggested that the general methods developed over years by the modern hospital supply the evidence which will be required by a prudent authority to avoid waste and to utilize man-power. These are the fundamentals which compulsory health insurance must employ. Each great society which we now vaguely call nations will have to make many adjustments depending upon its density of population, stage in civilization and geographical and climatic peculiarities. But these are nothing more than the problems posed in every field by modern science.