The Function of Health Facilities in the Total Medical Care Complex

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THE GENERAL PROBLEM of where health facilities fit into the total medical care complex, some of the major problems we shall have to face in coming years, and some of the attempts currently being made to determine the pattern desirable for future development comprise the substance of my discussion.

Foremost, we must acknowledge several highly significant factors concerning our medical care system. The system, as we see it today, developed in response to a need for health services. This need has been changing, and now it is changing with extreme rapidity and thoroughness. It is no longer an acute disease problem. It is no longer a curative medical problem. It is largely rehabilitation, limitation of disability for the aged, finding causes of disease, and getting people to live in a certain way so that they do not develop chronic diseases in later life.

For these needs, the present medical care system is not well oriented and, obviously, it therefore requires major adaptations. We cannot erase this system. If we had to do it over, I daresay we would end up with something quite different from what we now have. Since it is impossible to do it over, we must look to the system to develop that flexibility of approach and that attention to those needs which will lead to a future program.

This article is based on Dr. James' talk at the annual meeting of the Conference of State and Territorial Hospital and Medical Facilities Survey and Construction Authorities, October 14, 1965, in Chicago. At that time Dr. James was commissioner of health, New York City Department of Health. He is now dean of the Mount Sinai School of Medicine, New York City.

Four Stages of Disease

I must start with epidemiology. It is convenient in discussions such as this to divide the natural history of disease into four stages. By "natural history of disease," I mean what happens with a given disease in a given patient, including the entire progress of the disease, all the many ways it develops in that patient, the period before it develops until long after it has ceased, and its effect on the patient. "Effect" includes all the short-range and long-range effects.

First stage. The first stage of disease is the period before the disease begins, the prepathogenic phase. What is important in this period are the factors which make a person more or less susceptible to a disease—the kind of cigarettes he smokes and the amount, the kind of ice cream he eats and the amount, his hereditary pattern, his occupation, many of his other health habits, whether he is immunized or not, whether he goes for routine medical examinations or not—all of the things that put a person in a higher or lower category with reference to the

risk of getting a specific disease. It is interesting, in our present health programs and present national health status, that we are doing a relatively miserable job of considering these factors.

We cannot rest on our laurels for having conquered typhoid, diphtheria, and smallpox. These are not our problems today. A look at the 20 leading causes of death today reveals that we are able to effect a major impact against only a few. Considering what could be done about them, it is evident that we are not performing all the tasks related to the removal of risk factors. We have a big void in this field in our present medical care structure.

Also, the individual citizen is not much interested in removing risk factors. He feels no pain before the disease begins. He can read many advertisements telling him to avoid this and that, but he has less motivation to do so. He feels that no immediate medical payoff exists to motivate him to change his habits. The individual hospital or department that wishes to enter this field has a wide open territory that has been relatively unexplored.

Second stage. The second stage of disease relates to pathology subject to early detection. It is a period during which the disease process has begun but the patient is not aware of it. However, a disease can be detected by various tests. Here, too, the priority given by citizens is extremely low. People do not feel pain. They do not see the need to take time off from work, to travel long distances, to wait in clinics or the private physician's office to receive this medical care. Some of it is painful. Payoff, again, is far removed from the difficulty of seeking care during this stage of disease.

Surprisingly enough, this low priority for early detection is also the rule for medical care institutions. The hospitals give stage-two medicine short shrift in most cases, and I know no hospital that does as complete a job as possible. In New York City, where we have given a good deal of attention to this, we are now finding less than one-fortieth of our unknown diabetic persons. Less than one-fiftieth of the annual crop of unknown cases of carcinoma of the cervix are being detected. And we are still finding only one out of every two cases of infectious tuberculosis, despite having one of the most extensive and farflung tuberculosis casefinding programs in the country.

Casefinding is a wide-open field—hospitals are filled with patients who have other undetected diseases.

Third stage. Stage three is the clinical phase, when the patient has accepted the fact that he is ill. He goes to the physician and says, "I have pain, I want help." At this stage American medicine has been at its best, because people have always given clinical illness high priority. When they are sick, they demand care. We get into the trap, however, of equating need and demand. Need, as such, requires a more scientific degree of measurement than merely the fact that the patient demands it. But even in stage-three clinical medicine, we have difficulties. We fragment the human being and the human family into many specialties. We send him to one place for mental health, to another place for his liver, and still another for his heart and kidneys.

The accent in the third stage of medicine is on biological cure, and, for most of the chronic diseases which are major causes of death today, we have no biological cure.

Fourth stage. The fourth stage is that in which we have given up hope for biological cure and recognize that the disease is chronic. Here we hope for a different payoff. We have sick care, and we have social care which consists of disability limitation and rehabilitation. Whereas a person may wish to give priority to social care because of his pains and aches, he finds it difficult to elicit an adequate response from treatment institutions. This is the kind of person we are remarkably skillful at keeping out of hospitals. This is the kind of person who ends up in a nursing home, and since the hoped for result is nonmedical, merely social, it is difficult to interest physicians in social care because they can't use their familiar medical techniques.

Now, these four stages of disease can be taken in one package. In my opinion public health, preventive medicine, and medical care are all one. I think that any distinctions we make in these three terms in lectures to students are purely transitional, reflecting the fact that we have not made sufficient medical care progress. If we had a truly adequate medical care program, they would all be the same. In effect,

medical care, public health, and preventive medicine equally include anything anyone can do to interrupt the natural history of disease in favor of the patient. The interruption could be building hospitals, immunization, surgery, or health education. The fact that a physician is not always the best person to perform each aspect has disturbed physicians greatly. I think the goal must be—I know of none other worth taking—meeting the health needs of the nation. I don't see why we should reform this goal because a given profession finds it difficult sometimes to broaden its aspects and responsibilities. I feel that the medical profession will, and I think trends are being developed in this nation which indicate that it can. I think it behooves all, who are in a position to do so, to help out.

The "cut-finger" emergency. Let me tell you a little story. A woman comes to the emergency room of the general hospital at 3 a.m. with a cut finger, bleeding profusely, with a handkerchief wrapped around it. She is seen in a relatively short time by an intern. He washes the finger with antiseptic, drapes the lesion, sutures it, and bandages it. He then tells her to come back in about 7 days to have the stitches removed. In 1965, this is an example of high-quality medical care.

I hope by 1975 this will be used as a classic example of exceedingly poor medical care. If the intern had looked at the woman even casually while she was sitting in the waiting room, he could have seen her reading a magazine, holding it at arm's length with the hand that wasn't cut. So he missed an opportunity—not then but maybe later—to find out that her glasses were no longer helping her because she was suffering from the fourth stage of presbyopia. He could have easily rehabilitated her, perhaps thereby preventing her from cutting her finger again.

Then, if he had done a Papanicolaou smear, he may have discovered carcinoma of the cervix. And so he missed a good opportunity to practice the second stage of medicine for that disease.

Finally, if he had observed the woman further, he would have seen her lighting a cigarette with the butt of another. And so he missed the opportunity of practicing first-stage medicine for several diseases; carcinoma of the lung, coronary heart disease, carcinoma of the larynx, and emphysema.

What did he do? He treated her finger—the third stage of the disease, cut finger. He did nothing about treating a patient who may have been suffering from other stages of a flock of other diseases.

Quality Care

What, then, do we really mean by quality of medical care? We have defined the quality of medical care over and over again in a very limited way by saying it means that physicians giving medical care to an individual patient must possess the appropriate skill. Hence, a practitioner who performs lung surgery should be a competent chest surgeon and a diplomate of the American Board or the equivalent. This is only one of several aspects of quality of medical care. I believe that other aspects are equally important.

First is continuity of care. Ideally, the patient should be treated by the same physician or group of physicians, or at least a continuing medical record should follow that patient throughout his life.

Second would be attention to the total patient rather than just his chief complaints. We have been practicing too much "chief complaint medicine" in the United States. The patient who comes for medical care is a patient at various stages of various diseases, and it is up to us to set up some kind of a regimen for finding them and doing something about them. Incidentally, unless we can develop some such regimen for picking up first-stage and second-stage problems, we are going to miss a great opportunity to do a tremendous amount in the attack on the major chronic diseases.

Parenthetically, some physicians have argued with me that our knowledge of first-stage and second-stage medicine is not that good. We don't have absolute proof that highly saturated fats in the diet raise cholesterol levels and lead to fatal coronary heart disease. We don't have the data to prove beyond all doubt that obese persons have a tendency to get diabetes and that if they lose weight this tendency is reduced. We don't have absolute proof that cigarette smoking causes disease, and so on.

In reply to the doubters, I say that they have been guilty, as have many of us, of double-standard thinking. When a patient comes to the physician in the third stage of a disease, the physician undertakes an enormous amount of effort and medical activity. The scientific knowledge upon which much of this medical activity is based is equally deficient in final proof.

We are not yet certain that dicumarol will prevent coronary heart disease and stroke. The medical care we give coronary patients (oxygen, supportive measures) has not proved tremendously effective. And I will say that case for case, point for point, lesson for lesson, the efforts we can make in the first and second stages of chronic disease can hold their own very well with respect to scientific proof as compared to the things we do in the clinical stage. Of course, the difference is that the patient does not demand services during the early stage, which suggests, perhaps, some ways of engineering such services a little differently.

Returning to the measurement of quality of medical care, another aspect is medical care which should be patient centered and family centered. Family-centered care provides an opportunity to bring a large number of people into medical care. When they are brought in, their first and second and fourth stages of medical problems can be tackled. These problems are not great enough to motivate the patient to seek care, but in this family arrangement, the opportunity arises to provide it.

The last aspect of quality of medical care is one which practically no medical care institution in the country can meet. In the future, a medical care institution will be measured by its ability to serve the unmet medical care needs of its community. In other words, if in the community around a teaching hospital a large number of people need care for any stage of a disease but are not getting it, then the medical care of that institution cannot be rated as being of high quality.

I think Hill-Burton is a community concept all in itself. I think medical care legislation, public health services, all of the things that deal in medicine and health today shall push more and more toward this community concept of medicine. Ideally, medical care institutions would feel the responsibility for patients who live in the area but don't come to them. They should feel this responsibility as strongly as they do toward the patients who do come to them.

Fallacies in the System

A number of things could be called evidences of maladaptations in our present health facility arrangements. The following are but a few of these evidences.

The unadmitted patient. First is the fallacy of the unadmitted patient. Some patients don't go to a hospital because they don't want to. Others don't come because hospitals are remarkably skillful at keeping them out—drug addicts, alcoholics, the aged, and the so-called crock. "Crock" is an interesting term for an uninteresting patient. But what is an uninteresting patient? He is one whose illness is so complex that we are unable to solve it. Therefore, we place the blame on the crock rather than on our failure to help him.

The ambulatory patient. Next is the fallacy of the ambulatory patient. Ninety percent of today's care is given to vertical patients. Yet in a great many institutions the finest physicians perform only on horizontal patients, and they are relieved of the responsibility of participating in ambulatory care.

The emergency patient. The third fallacy deals with the emergency room. This is the fastest growing source of medical care in many areas of our country today. It meets a tremendous social need. Yet the emergency room, while it is capable of treating patients with cut fingers and broken arms, is incapable of taking care of persons with chronic heart disease, chronic diabetes, nephritis, stroke, and so on. However, 30 to 40 percent or less of the patients coming to emergency rooms are true medical emergencies. Most of them require long-term continuous comprehensive fourth-stage medical care.

The undiagnosed patient. Another fallacy is the undiagnosed patient. In episode after episode, a patient goes to a clinic which specializes in one organ and he develops major pathology in some other organ. The clinic which has been responsible for this patient has been so interested in one disease, one organ, that it has not

fulfilled its responsibility for the total patient. Our hospitals are filled with undiagnosed patients, undiagnosed in terms of other stages of other diseases.

Precursors of disease. Lack of treatment of the precursors of disease is another fallacy. If a patient in the medical care system is a heavy smoker, this is a far more serious disease than most of the conditions that might have brought that patient to the hospital in the first place. To what degree do we accept this responsibility? To what degree do we even follow up in this regard?

Hospital competition. The sixth fallacy is a familiar one—the extra staffing of institutions, the competition between hospitals. One person in New York City made the astute observation that there are three places in Lower Manhattan where the medically indigent patient can have open heart surgery, but there is no place where he can have his teeth fixed. We are approaching the time when there will be almost as many cardiac surgeons in New York City as there are patients needing cardiac surgery. There are, of course, definite values to this situation. Maybe it will be the answer to coronary heart disease some day, and I would not in any way cut back on the training of an adequate number of cardiac surgeons.

But there is an equal responsibility to look at total medical needs in the community. If the needs include dental care, then this care should be provided. If each institution duplicates and develops extra staffs, this interferes with its ability to devote its attention and resources to meeting other needs.

Fragmentation. We have fragmentation where integration is needed. One man, aged 76, was told to go to 10 hospital clinics. This old man was far too sick to go to 10 hospital clinics, so he became an uncooperative patient. However, if he hadn't been an uncooperative patient, he would have died, because it was quite beyond his physical capacity to go to a hospital miles away, sit in a waiting room for long periods of time, spend hours in line at the pharmacy for drugs, and go from clinic to clinic. What happens to such patients? They end up in nursing homes.

The nursing home. A nursing home is in itself an enormous fallacy in our medical care system. Here we find patients with diseases so complex and so difficult to solve, that instead of giving them top priority for our best research and medical brains, instead of bringing them into teaching hospitals in large numbers, getting our best scientists to study them and work with them, we do the exact opposite—refuse them admission, get rid of them as quickly as we can, and put them in a nursing home where they get some of the worst medical care of which we are capable.

Concentration on acute cases. The concentration of medical care institutions on the acute and clinical illnesses, again the third stage of medicine, is fine. But, the unmet need in our country today is the chronic illnesses which are not acute and often not clinical.

Denial of staff privileges. A curious fallacy is that of the individual physician who is most interested in comprehensive family medical care. He is the general practitioner. We have so arranged our society of medicine that he is the one person kept at the longest arm's length from our best medical care facilities. In my city, for example, few general practitioners are admitted to the best hospitals. I am not for one instant suggesting that we lower the standards. I am merely pointing out a fallacy of our present arrangements for medical care.

The one person who is interested in integration, who is trying to tackle the first, second, and fourth stages of medicine, is the one kept farthest from the best health facilities in the community.

Dr. Robert Haggerty, professor of pediatrics at the University of Rochester School of Medicine, last summer looked into the practice of general practitioners and found them undertaking an amazing amount of the first, second, and fourth stages of medicine. I don't know whether this is true throughout the nation, but if it is, then perhaps the general practitioner may not lack a future, because he is meeting a problem which may not be met in any other way. And one of the major questions in the future is how to bring this interest of the general practitioner into the best medical facilities we have. I am not saying that the existing general practitioner is the best one to do it, but I am saying he is serving some purpose, which is not integrated with the rest of medicine.

The community hospital. We definitely have a lack of responsibility for community problems. One of my stories in this regard is that when I asked the staff of a local hospital in New York, "How would you like to move more toward being a community hospital?" the director of internal medicine gave me a fishy stare.

The director said, "What do you mean by a community hospital?"

I said, "Well, there is no time to give you a long, prepared talk. I will tell you in just two sentences: There are diabetics in New York City in the area around your hospital. We in the health department will find the diabetics through a detection program and when we find them we will turn them over to you for treatment."

Whereupon he became completely horrified and said, "Well, I have enough diabetics."

I said, "Well, this is what I mean by a community hospital. Let me go one step further. Suppose we say there is a 50,000 population in your hospital area, and, with normal detection yields, suppose we find 1,000 diabetics that need a workup. Maybe we can do this workup on an outpatient basis with doctors who are related to your staff, but who would work in clinics in our own district health center. Then we would find among the 1,000 diabetics 50 with flame hemorrhages of the retina, with neurological disease, and some who do not respond to insulin."

"Oh," he said, his eyes getting big. "I am writing a paper on that. That is just what I want." Well, how does he expect to get these patients unless we can develop some major community programs in his area?

So, it is possible to develop a partnership and let the profession of internal medicine have what it wants, and then use a little bit of its prestige or influence to help the health department or cooperating agency develop its part, and together we have a community program.

We certainly have lack of feedback from the community. I have seen hospitals developing highly specialized programs when communities around them were crying piteously for a totally different kind of program. One hospital, the Gouverneur Hospital in New York, did a small study on the needs of its community and found an enormous need for dental care. Together, we moved in with extra services and developed a dental care program, which has become the most popular program in that institution. Not that popularity is the final answer. However, there was a need, and lack of feedback through the years had allowed this institution to undertake other programs without any concern for dental care. This hospital was ready to build a new cardiac surgical wing and had never before been interested in the real needs of this area.

The teaching hospital. Another fallacy is provided by the teaching program of the teaching hospital. What is the teaching hospital teaching? In Boston, Dr. Kerr L. White demonstrated that 700 of 1,000 adults became ill within 1 month. Of the 700, only 1 was admitted to a teaching hospital. Therefore, medical students were primarily being taught by observation of only 1 of 700 sick persons out of a population of 1,000. This is hardly medical education in terms of what illnesses people have and the current major health problems and needs.

The proprietary hospital also poses a problem in many areas where some of the most highly qualified physicians are weaned away from the teaching hospitals to proprietary institutions, which generally have lower standards for education and training.

Control of hospital admissions. The last fallacy on my list, which could have been much longer, is that of the control of hospital admissions by residents. Few professors will battle the resident on this point. Of course, the resident should have the teaching material he needs, but the present admission policy of teaching hospitals is a fallacy in terms of the health needs of the community.

The Goal

What can we do to reach the goal of universal access to high-quality, comprehensive health and medical care? Ten years from now, perhaps I could say only universal access to medical care, because by then perhaps all of the other adjectives would be understood. But they aren't yet.

This goal is not controversial. Everybody wants everybody to have all the care he needs and wants it to be comprehensive care. How

we reach that goal is what causes all of the bitter arguments.

One step is to improve access by removing barriers. The major barrier, removed partly by Federal Government, is the financial barrier. Medicare is largely a minimal program. It does provide services at minimal cost for a group of people who found it difficult to get this care before.

But there are many more barriers other than economic. There are geographic barriers. There are educational barriers. We have found, for example, when a clinic is open from 9 a.m. to 4 p.m. that it is very difficult to get working people to go to it. That is why they go to emergency rooms at 3 a.m. If you expect mama to come, you must realize that she can't until she gets somebody to watch her children. If you can arrange a family clinic and invite the entire family to such a clinic at 7 p.m., then perhaps they would be more likely to come. Some of the demonstration programs now underway indicate that this is true. When services are arranged to accommodate the patients, the response is much greater.

In the past, we have provided services and then tried to educate people to use them. This is good, but then the unmet need must be studied. If persons are not using the service because their motivation with respect to this pattern of care is not sufficient then we try more education. We have a girl known as a social worker. Once I defined a social worker, at a meeting of about 2,000 of them, as a girl who tries to fit a square patient into a round program, because what the social worker does is try to guide the patient through the maze of existing facilities.

But why don't we try another approach? Why don't we rearrange some of the programs to fit the existing motivations of some patients?

New York City's cervical cancer program illustrates this point. We opened a clinic in one area and mostly Jewish women attended. Very few had cancer of the cervix. We then moved the clinic to the Harlem area. However, most of our patients were still Jewish women—they simply stayed on the subway a little longer to get to the clinic.

Let's face it, in Harlem there is a struggle for existence, and here the need to have a Papanicolaou smear receives very low priority. Eventually, we opened a routine detection service for hospital admissions. All the women in this area, when ill, were admitted to two hospitals. We saved more than 300 lives through this little program alone in just a few years by arranging the service to fit the existing motivations of the patient.

In attempting to reach the long-range goal, we have to go through certain intermediate steps. What intermediate steps should we use? Let's admit first of all that the goal as I have presented it is a good one, that the facilities, the hospitals, are good ones, and that they are operated by sensitive, flexible people who would like to reach that goal some day.

How do we go about effecting improvements? How do we get hospitals to adapt? The hospitals will not ordinarily adapt by themselves—they have to be pushed or they have to be pulled. They can be pushed by some rules and regulations, and that has to be done gently, but firmly.

For example, in New York City, we have said to hospitals, "If you wish to be paid by the government for care of medically indigent patients, you will have to do certain things which provide high-quality medical care. Otherwise, we are very sorry but we can't give you the $36 or $40 per day." Few hospitals in New York would care to lose this source of income. What we need in this country, in my humble opinion, are more programs which offer bonuses to those institutions willing to develop new and progressive demonstration-type programs which will feed back into the institutions and reshape them to meet health problems, present and future, along the lines I have mentioned.

We have used a particular technique in New York City—we have our own little National Institutes of Health. Eight million dollars per year are awarded for research, and a group of scientists organized like the NIH study sections and councils recommend how it should be allocated.

We gave a large amount of money to a study group at Cornell University which conducted a medical care project for a welfare population. As soon as families were admitted to public assistance, they were called in and given a complete medical workup. They were seen in the outpatient department. They were fol-

lowed on the wards. They were seen in nursing homes, and they were part of the regular home-care continuation program. In other words, they were given comprehensive, professionally competent fourth-stage medicine. We couldn't force them to come in, but between one-half and two-thirds did. Why the others did not come in is another problem for later attention.

During the operation of the project, Cornell, for the first time, had to have signs printed in Spanish placed in the waiting room. This was a new population entering the institution and presenting new kinds of needs. Physicians at Cornell were now able to study health needs that existed in their area. Also, from the data on use, the people in this area rarely use home care services. They prefer to go to the clinic with their families to see the physician who is following them on a continuation basis. A study is also being made of the costs of the project.

A similar, but less costly, program was undertaken at St. Vincent's Hospital in New York City. This institution was given a small grant, and its staff approached the feedback and adaptation mechanism a little differently from Cornell's. They started with selected patients in the outpatient department. For some persons they had records, for some they did not. But they put the pieces together from the hospital records and manufactured a family record. Then they invited other family members to come for a medical examination, and thus they created a special family clinic. The program has had an enormous effect on outpatient care at St. Vincent's, and the staff has seen the value of such a program.

One institution is studying emergency room admissions to see to what degree these patients can be placed in a medical care system, doing more with them than merely pushing them through the revolving door and getting them out. This institution is also working with the health department on a number of joint clinics.

Another institution has investigated the prevalence of neuromuscular disorders in an area of New York City to determine what could be done to rehabilitate persons with these disorders. It is also studying whether rehabilitation services for stroke patients early in the course of the disease can prevent the disease from getting worse in terms of the rehabilitation potential.

One hospital opened a small branch clinic in a housing project having 1,500 elderly, medically indigent residents. Two internists who staff this clinic are able to prevent the need for 90 percent of the patients to attend the hospital clinic 4 miles away. This plan offers an enormously greater opportunity to reach aged patients, and it is bringing service to the patient in a most effective way.

A voluntary hospital in New York City is teaming up in a comprehensive program with a city hospital and the departments of health, mental health, and welfare. The director of the hospital is responsible for all of the health, hospital care, welfare medical care, and mental health care for more than 150,000 persons in Lower Manhattan. The attending staff of private physicians are caring for the patients who can afford private care, and the clinics are treating patients who are medically indigent. One of the first things the director found necessary was a number of satellite clinics. Although the number of outpatients tripled within 1½ years, the project still is not reaching enough of the 150,000 people, and the director plans to open branch clinics.

One of the interesting byproducts of the projects in New York City is the development of positions in hospitals for experts in community care, and a large number of hospitals are now doing this. This is of particular interest because in this way the hospitals can recognize their responsibility for the unmet health needs of the community.

Finally, a word about categorical versus general approaches. In the past we have taken the viewpoint of an agency, a facility, or a profession. What we have to do is look from the patient's standpoint. The person who can teach an 11-year-old not to smoke is much more effective in the control of lung cancer than the chest surgeon. I think we are going to live with categorical specialists and categorical approaches for a long time. I think this is good and it is necessary, because we certainly want to know more and more. But on the other hand, at the point where the service reaches the patient, let us learn how to develop the ingenuity to integrate and coordinate our efforts around him.