

Proceedings of the fifth annual symposium on hospital affairs

Conducted by Graduate Program in Hospital Administration, Health Information Foundation, and Graduate School of Business, University of Chicago

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Where
Is
Hospital
Use
Headed

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Table of Contents

1 INTRODUCTION

2 TRENDS IN HOSPITAL USE AND THEIR PUBLIC POLICY IMPLICATIONS

ODIN W. ANDERSON, PH.D., *Director of Research*
Health Information Foundation, University of Chicago, Chicago, Illinois

6 THE PUBLIC'S ATTITUDE TOWARD HOSPITAL USE

RAY E. BROWN, *Vice-President for Administration*
University of Chicago, Chicago, Illinois

13 IMPLICATIONS OF INCREASING HOSPITAL USE FOR PREPAYMENT PLANS

WALTER J. MCNERNEY, *President*
Blue Cross Association, Chicago, Illinois

19 IMPLICATIONS OF CHANGING HOSPITAL USE FOR THE MEDICAL PROFESSION

BEVERLY C. PAYNE, M.D.
Department of Internal Medicine, University of Michigan, Ann Arbor, Michigan

24 DISCUSSION

29 REPORT OF A SURVEY OF HOSPITAL ADMINISTRATOR ATTITUDES TOWARD USE

PAUL B. SHEATSLEY, *Eastern Representative*
National Opinion Research Center, New York, New York

36 RECENT RESEARCH ON HOSPITAL USE

PAUL J. FELDSTEIN, PH.D., *Director*
Division of Economics and Statistics, American Hospital Association, Chicago, Illinois

41 DISCUSSION

43 HOSPITAL PLANNING AND FUTURE HOSPITAL USE

JACK C. HALDEMAN, M.D., *Chief*
Division of Hospital and Medical Facilities, U.S. Public Health Service, Washington, D.C.

48 LABOR AND MANAGEMENT LOOK AT HOSPITAL USE

JEROME POLLACK, *Director*
New York Labor Management Council on Health and Welfare Plans, New York, New York

52 DISCUSSION

Panel on Methods Suggested for Controlling Hospital Use:

55 THROUGH ORGANIZATION OF MEDICAL SERVICES

HERBERT E. KLARMAN, PH.D., *Associate Professor*
School of Hygiene and Public Health, Johns Hopkins University, Baltimore, Maryland

64 THROUGH PREPAYMENT BENEFIT PROVISIONS AND REIMBURSEMENT FORMULAS

WILLIAM S. MCNARY, *Executive Vice-President*
Michigan Hospital Service, Detroit, Michigan

69 THROUGH LIMITING HOSPITAL BED SUPPLY

MILTON I. ROEMER, M.D., *Professor*
School of Public Health, University of California, Los Angeles, California

73 THROUGH MEDICAL-STAFF UTILIZATION COMMITTEES

ROBERT M. SIGMOND, *Executive Director*
Hospital Council of Western Pennsylvania, Pittsburgh, Pennsylvania

81 DISCUSSION

83 CONCLUDING REMARKS BY CHAIRMAN

85 APPENDIX I

92 APPENDIX II

Introduction

The subject of hospital use has been chosen for discussion at this symposium because of its importance in the planning of an orderly hospital and medical-care establishment to meet changing public needs. The program participants have been selected as the most experienced individuals available for discussion of this problem.

Invitations to the symposium were extended to selected graduates of the Graduate Program in Hospital Administration, to officers of national and state hospital associations, to directors of programs in hospital administration from other universities, and, this year, to certain Blue Cross executives.

Hospital use has steadily increased. Cost of a day's hospital service also has increased, but at a much faster rate. These changes can be explained as necessary if medical care for the people of this country is to be improved, but the resultant total increase in public expenditure for hospital care has generated much discussion of the question whether increased use and cost now need to be controlled.

The future of hospital use needs examination. Predictions for the future are needed in order to plan the number of general hospitals and related medical institutions required to care for an increasing population. Wise predictions of future need for hospital beds are vital for hospital planning agencies in this

country. Planning the future hospital plant must take into consideration not only population increase but also changing medical developments, the social factors which affect the public demand for service, and the great shifts in our population. Various regions of this country are changing in population at different rates, but country-wide our rural population is decreasing and our metropolitan areas are growing. The population of central cities remains relatively stable, while the suburban areas are rapidly expanding. Based on population alone, planning for the changing demand for hospitals is complicated, but equally important is the prediction of future demand for hospital care per thousand of population.

Hospital insurance, which now pays more than half the hospital bill, is markedly affected by increasing hospital use. Blue Cross and the insurance companies regularly are finding it necessary to increase premiums as a result not only of increasing cost but also of the increasing ratio of use. Steadily increasing monthly charges for hospital insurance are a source of public concern. Those in the hospital and medical-care field must explain these changes. It is the purpose of this conference to examine all aspects of hospital use in order that the subject may be better understood and that we may arrive at some judgment on where hospital use is headed.

The Fifth Annual National Symposium on Hospital Affairs was sponsored by the Graduate Program in Hospital Administration and the Health Information Foundation of the Graduate School of Business of the University of Chicago and, in some part, was supported by a grant from the W. K. Kellogg Foundation. The Symposium was convened at 9:00 A.M. on December 14, 1962, at International House on the campus of the University. Chairman of the Symposium was George Bugbee, Director, Graduate Program in Hospital Administration and Health Information Foundation, University of Chicago. The subject of the Symposium was "Where Is Hospital Use Headed." Because of the importance of the subject and the interest demonstrated by those attending the Symposium, the following edited transcript has been prepared for distribution.

Trends in Hospital Use and Their Public Policy Implications

ODIN W. ANDERSON, PH.D.

CHAIRMAN: Mr. Odin W. Anderson, the first speaker, will discuss past trends in hospital use and their implications. Odin Anderson, during his entire career, has been concerned with the health field. He took his doctoral degree in sociology, attended the School of Public Health at the University of Michigan, taught in the Medical School of Western Ontario, and since 1952 has been director of research of the Health Information Foundation, which, until May 1, 1962, was located in New York City. Upon the affiliation of the Foundation with the University of Chicago, Mr. Anderson was appointed associate professor of hospital administration in the Graduate School of Business and in the Department of Sociology. He continues as director of research of the Health Information Foundation, an operating unit of the Graduate School of Business.

During the past few years I have heard and read many expressions of concern about the rising cost and use of personal health services, especially hospital services, by representatives of organized labor and other consumer groups, of government regulatory bodies and legislators, and of hospitals and the medical profession.

The overwhelming tone of these expressions of concern is that there is a great deal of wasted hospital care and that if such waste were eliminated, the cost of hospital care would be reduced to an economically tolerable level. Further, it is assumed that hospital insurance has brought us to this crisis state because it is now too easy, compared with pre-insurance days, for people to be referred to hospitals. Implicit in these expressions of concern are the notions that, in some health-service Garden of Eden prior to insurance, there was a perfect equilibrium of use and cost of services, and that insurance is the figurative fruit which can lead us straight to government regulation.

Some sort of over-all view—a theory of use of health services, if you will—is long overdue. We need to get away from blaming anyone for the state of affairs described and to look at the context in which trends and use of services have emerged even as far back as the turn of the century.

It is of interest to note that the term "abuse of

hospital care" has taken on a totally different meaning compared with pre-insurance days. In pre-insurance days, "abuse of hospital care" meant allowing a middle-class person to receive free but needed hospital care when he could afford to pay. Today, "abuse of hospital care" means providing a person with unnecessary hospital care because he has hospital insurance.

I wish to read a few quotations comparing the problems expressed by past and present hospital administrators, not to illustrate that there is nothing new under the sun, but to indicate that certain problems are inherent in the very context in which hospitals are expected to function and that somehow hospitals must continue to rise to these challenges without expecting any final solutions. To do otherwise is to court stagnation. The quotes follow:

In 1903, at the Fifth Annual Conference of the Association of Hospital Superintendents of the United States and Canada (as the American Hospital Association was then called), Mr. George P. Ludlam, superintendent of New York Hospital, observed:

It is, I think, an acknowledged fact that the per-diem cost of patients per capita is constantly increasing. Also, I think it will be admitted that this increase is not wholly due to advances in the market cost of supplies. It is due in large measure to the advance and development of medical and surgical science which has revolutionized old methods and introduced such as are unquestionably more costly. To this fact may be added the other patent one that constant familiarity with these methods engenders a spirit of extravagance which permeates the whole establishment and which it is exceedingly difficult to check or control. I do not mean deliberate, intentional waste. I suspect that does not exist. But the generous, liberal, and even extravagant use of supplies of all kinds leads to precisely the same results in the matter of the cost of maintenance, and this habit is, undoubtedly, prevalent in a controlling degree.¹

In 1912, nine years later, at the Fourteenth Annual Conference of the American Hospital Association, Henry M. Hurd, M.D., secretary of the Board of Trustees of Johns Hopkins Hospital, in his presidential address observed:

The Hospitals of the United States and Canada find themselves without adequate funds for the increased cost of operation because of the growing need of expensive apparatus for the diagnosis and treatment of disease; for the greater cost of all food supplies due to the high cost of liv-

¹ *The National Hospital Record*, VII (December, 1903), 52.

ing; for the increased cost of service in every department; for the increased scope of hospital service; for the need of doing more for the education of nurses and the training and education of physicians and hospital administrators; for more departments, better operating service and better equipped hospital wards; and lastly for ample resources to carry on social service and preventive work.²

And, in 1916, a resolution proposed by the Special Committee on Grading and Classification of Nurses to the American Hospital Association and acted on favorably by the House of Delegates of the American Hospital Association read:

Whether it is wise to look for public funds or private capital to provide hospital accommodation for patients who could be as efficiently and safely cared for at home as in a hospital, and for the same rates or less, given reasonable provision for meeting the needs of the patient at home, is an important and unsettled question relating to hospital and home economics, which has a definite bearing on the organization of nurses, on how many kinds of nurses should be trained, and how they should be trained.³

Finally, forty-six years later, Mr. L. S. Rambeck, administrator of the University Hospital, University of Washington, in a speech given before the Second Western Regional Meeting of Health Insurance Council State Committee Personnel held in San Francisco on September 24, 1962, said:

An . . . element in the rising per diem cost curve is the tremendous impact of research and education on medical practice. Each year a considerable but undeterminable number of people are cared for in doctors' offices who have medical problems that had to be treated within hospitals the preceding year. Research is continually leading to new drug products, new apparatus and new types of service requiring specially trained personnel. All are very costly, but must be available in hospitals for doctors to provide the best possible care to their patients.⁴

In each period there was felt to be considerable cause for concern about the constantly rising hospital costs because of increases in unit price. Apparently, little concern was felt about hospital use as such, except that implied in the resolution in 1916, because there were no visible and large third-party payers like our present voluntary health insurance agencies. Today, both price and use have come under more intensive scrutiny than ever before. Up to now, the health-services establishment has been allowed to evolve and expand with virtually no regulatory controls on price and use. One can, in fact, argue that one of the limitations on expansion has been the extent to which people fail to seek needed care. The

² *Transactions of the American Hospital Association* (1912), pp. 88-89.

³ *Transactions of the American Hospital Association* (1916), pp. 66-67.

⁴ *Health Insurance Viewpoints*, Health Insurance Council (October, 1962), p. 2.

various components of service—hospital, physician, drugs and medicines, dentists, and others—have also evolved and expanded in relation to each other, as reflected in the changing composition of the medical dollar. I am sure there is consensus that the form and substance of the development of our health services establishment have been generally good. We now stand on the threshold of basic decisions regarding price, use, and quality.

We can only hope that these decisions will be based on adequate knowledge and adequate prediction of the consequences. Human history is strewn with unintended consequences. We therefore need to acquire greater comprehension of the meaning of trends in use of services in different situations. My premise is that there is no "proper" use of hospitals in any time and place short of the hospitals' function to save life, which is far beyond the old concept of hospital care.

Recent Trends and Current Patterns

The fact that the use and price of hospital care have gone up dramatically since World War II is, of course, no news to this group, and the causes are self-evident. More pertinent, however, are the great variations in levels of use in different parts of the country, the differences in methods of providing physicians' services in this country, the differences in various countries with substantially the same structure of health services. In all industrial countries, the use of general hospital care has increased considerably since the turn of the century and particularly since World War II. Use appears to have increased gradually since the general hospital began to be a safe and wholesome place to be treated. In 1872, for example, I would estimate that less than 4 persons per 1,000 were admitted to general hospitals in this country.⁵ By 1935, and during a depression, the admission rate was close to 60 per 1,000 population. Today, the admission rate is approximately 130 per 1,000 population. Other services have also increased, particularly physicians' services and the use of drugs and medications. It would seem that the exhortations of health educators have borne fruit, and now we are worried about the increased effective demand. If the increases in use and price (and consequently in expenditure) had not been so rapid it is unlikely that the increases would have attracted so much attention. It would seem, however, that the health-services economy needs to move with the general economy. Unless it does so, it fails to develop.

⁵ *Transactions of the American Medical Association*, XXIV (1873), 314-33.

To refresh our memories, let us review the movement of use and price of general hospital care from 1946 to 1961 as reported in the *Hospitals Guide Issue* of 1962 published by the American Hospital Association. In 1946 the admission rate per 1,000 population in the United States was 98; in 1961 the rate was 128. In 1946 the average length of stay was 9.1 days; in 1961, 7.6 days. In 1946 the per diem expenditures in general hospitals were \$9.39; in 1961, \$34.98. In 1946 the average expenditure for hospital admission was \$85.57; in 1961, \$267.37. By any standards these are dramatic figures and they illustrate a health service which is dynamic, although many fear it is in a serious crisis.

So much for the long-term trends. Now I wish to turn to the great variations in patterns of hospital use in various parts of this continent, among a few countries, and among different methods of providing physicians' services in this country. As I have said, the admission rate to general hospitals in this country is close to 130 per 1,000 population, the rate for those with hospital insurance being appreciably higher than for those without such insurance. In Saskatchewan, with a province-sponsored and universal hospital-insurance plan, the admission rate is around 200 per 1,000 population. In Indiana Blue Cross the admission rate in 1956 was 116. In Great Britain, where under the National Health Service no charges are made to patients for hospital and physicians' services, the admission rate is around 85. In Sweden, with a free hospital service and moderate deductibles for outpatient physicians' services, the admission rate is 130. In New York City the admission rate of under 100 is relatively low compared with the national average.

Group-practice prepayment plans, such as Health Insurance Plan of Greater New York, generally reveal a lower hospital admission rate for their subscribers and dependents than do medical plans operating on a fee-for-service basis. But a very recent study by Trussell and staff at Columbia University makes this generalization even more tenuous than it was before when they showed virtually no differences in the admission rates for the members and dependents of the International Association of Machinists in three different types of health-insurance plans in various parts of the country. The plans under study were the Blue Cross-Blue Shield of New Jersey, the major medical contract for General Electric Company underwritten by Metropolitan Life Insurance Company, and the Kaiser Foundation Health Plan in the San Francisco Bay area.⁶

The Indiana Blue Cross Study referred to could not explain the hospital admission rate found, but it

did throw some light on diagnostic patterns of diseases found in general hospitals today and the expenditures by diagnosis. An inspection of diagnostic categories does not necessarily reveal whether patients should occupy a hospital bed, but for those who feel that patients with upper respiratory conditions should not ordinarily be in a hospital, it is of interest to note that this diagnostic group represented just under 4 per cent of total expenditures for hospital care in a twelve-month period.⁷

Another study compared the diagnostic patterns of hospital patients in the Indiana Blue Cross plan with the patients hospitalized in the Province of Saskatchewan. It will be recalled that the admission rates were 116 and 200 respectively. Monroe Lerner, the researcher, wished to determine whether, with such wide differences in admission rates, the diagnostic patterns would vary considerably. The finding was that both areas had pretty much the same rank-order of diagnoses by admissions, and consequently, that the Saskatchewan admissions were simply higher in all categories than were the Indiana admissions.⁸

Obviously, then, all we know about use of hospitals is that such use varies tremendously in different situations when health services are well advanced, general economic conditions are good, and so on. But we do not know why these variations exist. Clearly, great variations exist in expenditures for hospital care in different situations, but the possibility is present of determining why these variations exist and what they mean for health services for the population.

Observations and Policy Implication

There now appears to be a consensus that something must be done to contain the rising expenditures for hospital services. There is certainly no consensus as to how this should be done. Subsequent papers will deal with some approaches. It appears that the health field is still in a free-wheeling period, but it must be better able to justify its activities than be-

⁶ The School of Public Health and Administrative Medicine, Columbia University, with the co-operation of the National Opinion Research Center of the University of Chicago—*A Report on a Survey Conducted for the Foundation on Employee Health, Medical Care, and Welfare, Inc.* (New York, Foundation on Employee Health, Medical Care, and Welfare, Inc., 1962).

⁷ Monroe Lerner, *Hospital Use and Charges by Diagnostic Category—a Report on the Indiana Study of a Blue Cross Population in 1956*. HIF Research Series No. 13 (New York, Health Information Foundation, 1960).

⁸ Monroe Lerner, *Hospital Use by Diagnosis; a Comparison of Two Experiences*. HIF Research Series No. 19 (New York, Health Information Foundation, 1961).

fore. To do this, it appears that continuing research in all aspects is called for to reduce the margin of error if it can be reduced by research. When price and use reached new highs in recent years, the hospitals and the medical profession came under critical scrutiny and were, in effect, asked to justify these trends. The hospitals and the medical profession were in an indefensible position because even rather elementary data on cost and use were not available to throw light on what was happening. The health-services establishment has a tremendous reservoir of public good will, but more data are now needed to reveal the operation of the services so that intelligent policies can be formulated.

It would appear, then, that if we wish we can now appraise the various methods of financing and organizing services, because there is a range of different methods in operation in this country and we can make comparative studies among countries. I think we are approaching the possibility of determining what effects various methods of organizing and financing services have on how tight or how generous a

health-services system is. If we want a system with a hospital occupancy rate of 95 and an average waiting period of three months, such a system should obviously cost less than one with an occupancy rate of 75 and essentially no waiting period. It seems to me that, at least, we can tidy up the loose ends of the going establishment, clean up the gross aspects. If we go further, we then run directly into consideration of personal convenience, professional prerogatives, and similar matters which may have no inherent relationship to quality but can result in a tighter and less expensive system. In any case, the alternatives can be spelled out more clearly than they have been heretofore.

The quotations I read in the first part of this paper should encourage us to view constant change and expansion as inherent in a dynamic health-services system, and not something to view with undue alarm. As we learn more about the system, hopefully we will be able to help chart its course without stifling it.

The Public's Attitude toward Hospital Use

RAY E. BROWN

CHAIRMAN: Mr. Ray E. Brown is vice-president for administration of the University of Chicago. He is a graduate of the Graduate Program in Hospital Administration of this University. He is a past president of the American Hospital Association and the American College of Hospital Administrators. He was, until May 1 of this year, the director of the Graduate Program in Hospital Administration and superintendent of the University of Chicago Hospitals and Clinics.

Mr. Brown has written extensively on developments in the hospital field. His writings include thoughtful papers on hospital use and cost. He will discuss the public's responsibilities for changing hospital use.

A discussion of public attitudes toward hospital use could be either an indictment or a tribute to the manner in which the public is using its hospitals. But it would be very difficult, not to say impossible, to prove either side. It is easier and, paradoxically, more productive to examine some of the thinking that motivates the public to utilize hospitals in the ways that it does.

This approach is easier because it does not require any value judgments or definitions of overuse or underuse. Such definitions are at best imprecise, and attempts to rate the public on a scale of goodness and badness concerning use of its hospitals are of doubtful value. No one seems able to explain the difference in morality between the O.B. patient lying in bed in the hospital on the third, or even the sixth, *post partum* day and that of the patient lying in bed at home on those same days.

This is not to say that an inability to identify the "extra" day in the hospital, or the immorality in using it, is a sign of ignorance about proper hospital utilization. It is equally difficult to condemn or to defend the length of time the public spends in getting a high-school education or the number of times people insist on having their mail delivered each week. There undoubtedly are reasons why those two services function as they do and reasons why most of the users feel that, under existing circumstances, their level of use is about what it ought to be. This does not mean that everyone agrees that twelve years of

schooling are needed for learning what is taught through high school, or that everything taught in those twelve years has value. It only means that, under the circumstances of contemporary life, twelve grades seem generally to be appropriate.

The foregoing is a very roundabout way of saying that, if we think the public is not using its hospitals correctly, we should quit worrying about changing the public and start worrying about changing the circumstances. People are wonderfully adaptable and usually try to make out as best they can, each individual choosing, in a coercive environment, the pathway he considers best to serve his purposes. He will, of course, work at changing the environment while he is working at living with it. But the individual lives in the here and now and must use the environment on the terms with which it presently confronts him.

The Logical Choice

The most obvious circumstance that might cause the public to increasingly utilize the general hospital is that the medical resources of the community are increasingly located there. It would be odd if the public did not go where the medical hardware and trained personnel are congregated when those resources are needed. Modern medicine depends upon much more in the way of complicated gear and expensive personnel than can be found in the patient's home or in his doctor's office. Even if the patient had not learned this fact from his favorite popular magazine, he could not fail to pick it up in the literature distributed by his local hospital in its latest campaign for funds to be used in providing these very necessary facilities.

In general, the patient not only has to go to the hospital, but he has to stay there in order to have use of the hospital's facilities. The failure of hospitals, medical staffs, and prepayment plans to provide suitable alternatives to staying in the hospital has made it an all-or-none proposition if the patient is to have satisfactory access to the community's medical resources. The failure of the general hospital and of prepayment plans to develop a comprehensive system of care forces the patient to go to bed in the acute facilities. In general, there is no organized outpatient service for the private ambulatory patient, no organized

home-care program that functions as an integral part of the hospital's operations for the pay patient, and few long-term facilities integrated with the services of the general hospital for either the free or the pay patient.

A generation of people who have observed with great admiration, and even greater respect, the highly efficient and closely supervised care rendered in the general hospital has no notion of being caught sick outside the orbit of that care. They have no desire to become lost in the gaps in care that exist once they get past the exit sign of the general hospital. Because there is no co-ordinated system of facilities that embraces each level of care, the patient and his family must look after the co-ordination themselves—by entering and remaining in the general hospital.

But it would be unfair to pass judgment on the general hospital for the failure to develop a co-ordinated system of patient services at all levels and at all locations. Rather, this discussion is an attempt at understanding why the patient does as he does. If there is blame for the lack of alternatives to the general hospital, then all elements of the community must share in it. The problems of long-term care, home care, and ambulatory care are complex and difficult. Perhaps we have not tried hard enough, or perhaps the continued use of acute facilities for all patients is the best answer in a nation whose wealth is great and whose hospital resources are fragmented into small units. The point is: hospitals alone are not to blame, nor should the patient be condemned for looking after his own best interests while all elements are mulling the matter.

A Matter of Security

The fact that the general hospital means security to the public represents another reason why it attracts an increasing number of patients. The light over the emergency-room door is the most trusted and comforting light known to the American public. It spells security because of the array of medical resources and personnel that it represents. People may not talk about emergencies, but the hospital is often our first thought when any family member turns up with an elevated temperature or complains of a vague pain. While it is easy enough to consider hospital overutilization in statistical terms in the impersonal climate of the state insurance commissioner's office, those statistics cannot dispel the anxiety of the individual when he or a member of his family is ill. Thus, the commissioner's utilization figures may not only reflect acute need for medical care; they also may be demonstrating the public's acute need

to know that such care is as near as a nurse's call button.

The patient does not go to the hospital alone but takes with him the anxiety and fears of his family. The decision to enter and remain in the hospital involves not only the patient and his doctor but the other members of the family, who in many instances are more anxious about the patient than the patient is himself. In a way, the hospital takes care of the entire family while it is caring for the medical condition of the patient. The fact that the patient is in the hospital seems to have a powerful psychological effect on the other family members and seems partly to replace their anxieties with a feeling of fatalism. They are prepared to accept the worst if they know the patient is getting the best, and the best to them means the general hospital.

Complex Motivations

The widespread public belief that admission to the general hospital represents the "best" gives a powerful impetus to hospital utilization. This belief creates a number of motivations. In the first place, it exerts a strong social pressure on the patient and his family. If one needs medical care, then one must go to the hospital because this is what one is supposed to do under such circumstances. The obstetrical patient is a simple illustration of this phenomenon of custom. There really are no compelling medical reasons why an uncomplicated delivery has to take place in the hospital. But imagine the neighbor's reactions if a couple elected to have their babies at home or, even worse, if one's own family doctor suggested that the baby be delivered at home. The doctor's medical judgment would probably be less an issue than an elaborate explanation for such "way-out" conduct to one's friends.

This acculturation of the hospital has meant that almost all babies are now born in hospitals. The custom is fairly recent and has been very rapid in its development. As recently as 1935, only 37 per cent of the registered live births in this country occurred in hospitals; by 1959, only twenty-five years later, the proportion had grown to 96 per cent.

The cultural imperatives in hospital utilization are equally important at the other end of the life cycle. It is rapidly becoming a social transgression to die anywhere but in a hospital, and currently, more than one out of every two deaths occurs there. From a strictly medical standpoint, a dying person has no need to be in a hospital, but cultural attitudes

now dictate that the hospital is the most appropriate place for an individual to spend his terminal hours.

The failure to send a sick member of one's family to the hospital can raise more than just the neighbor's eyebrows. Within the individual, it can raise a feeling of guilt for failing to do the best for an ailing loved one. We worry a great deal about what our friends will think of us, but we worry even more about what we think of ourselves, and most individuals will go to extraordinary lengths to avoid blame in their own eyes. This often calls for complex mental maneuvering and rationalization, yet today's hospital has greatly simplified the problem insofar as sickness is concerned. The feeling that we may not have always done our best for those who depend on us is greatly accentuated when they become ill, and at such times we feel a great need to go all out in their behalf. Placing the patient in the hospital serves to help make up for neglects of the past and to assure us that we shall not have to blame ourselves for not doing everything possible in the present hour of need.

The Role of Compassion

Social approval of the hospital as a haven for the sick has solved one of society's most perplexing dilemmas. It has been a very recent solution, however. Primitive man gave little value to a human life and showed little concern for the disabled and infirm. Only as the great religions developed did an ethic of compassion for the sick emerge. This ethic created a distressing dilemma for all but the very poor because it meant that the sick should be taken care of at home. To institutionalize a sick member of one's family showed a callous lack of affection or became an admission that one was too poor to provide ordinary essentials. The home had about as many facilities as a hospital, and one could not justify removing the sick person to an institution and away from his home and the family circle. At about the turn of this century, however, the armamentarium of medicine began outpacing the resources of the private home and thus provided justification for squaring the ethic with the realities of life. Man is a very ambivalent animal, and the illness of another seems to create feelings of both compassion and vexation. In lower animals, compassion is absent, and the feeling is one of strong antagonism toward the wounded and infirm. Civilized man has added compassion but has not eliminated the vexing uneasiness and bewilderment that he feels in the presence of sickness and infirmity. The socially enforced ethic that the sick live with the well probably disturbed the sick as much as it did the well. The sick are strongly inclined to be by themselves and to avoid being set apart while re-

maining within the circle of family life. The fact that the hospital grew into something far superior to the home as a place for the sick provided a socially acceptable answer to a long-standing cultural dilemma, and the response has been a rapidly increasing utilization of the hospital.

Dual Functions

No matter how one may take such a near Freudian assumption, the fact remains that a hospital is as much a social as it is a medical institution. This form of duality applies to all our institutions and agencies and can be illustrated, for example, by the length of time required to finish high school. Our present requirement of twelve years probably has little educational basis and probably represents more a social than an educational decision, involving such factors as the age considered proper for a person to go to work or the age considered appropriate for a person to leave home and go to college. It would be surprising indeed if an institution filling as vital a role as the hospitals and having such tremendous social capabilities were not utilized to envelop the fullest possible range of social needs.

The careless statements sometimes made about the physician's compliance in overutilization of hospitals imply that the doctor is a medical robot concerned only with purely medical decisions. What is frequently overlooked is the fact that a good medical decision is also a social decision. It is an admixture of the medical along with emotional, economic, and varied environmental demands confronting the patient. Sickness does not occur in a social vacuum, nor is the practice of medicine a game of environmental solitaire. Undoubtedly, there is some needless use of hospital days, but it cannot be identified by applying precise medical criteria to a human situation.

The question of how sick is sick enough to require hospital care will increasingly lose its relevance as the public becomes increasingly sophisticated about hospital use. The pertinent question then may become one of the level of sickness that makes it more convenient to go to the hospital than to stay at home. The hospital is regarded as a life-saving institution by the public, but it also represents a major convenience. Chances are that it will be increasingly recognized and utilized as such by a people whose whole culture has emphasized convenience. A nation that gets its meals prepackaged and precooked, that shifts its automobile gears automatically, gets housework done electrically and homework done electronically is quite likely to look for the most convenient means of handling sickness.

Our way of life and our living arrangements make

sickness in the home highly inconvenient. The average modern home has no spare room for the sick individual, and the thin walls of the small rooms it does have magnify the living noises of other members of the family. No matter how adequate the home, sickness is very confining to everyone in the household. They cannot come and go as they wish, nor can they have others in and out of their home. Also, caring for a sick person is a physical task that cannot be turned over to automatic household equipment and a task that wears the energy and patience of even the most devoted soul. It may be asking too much of the average person to expect him to see a moral difference between taking the drudgery out of sickness and of taking it out of all his other responsibilities and activities.

The Welcome Signs

The man on the street must be pretty confused by the argument that he is overstaying his welcome in the hospital. It would be difficult to find another enterprise bearing as many welcome signs. We have made hospital service so attractive and convenient that an unbiased witness could accuse hospitals of tempting the patient to stay longer. Great effort has gone into making the hospital more like home than home itself and in making hospital life so gracious and pleasant that no one should ever want to leave. As soon as he gets off the D.I. list, the patient begins his day with hot coffee and warm food (chosen by himself the day before from a selective menu) as he sits in the air-conditioned comfort of a tastefully decorated semiprivate room. Later, he can look forward to watching his favorite T.V. program. He may get tired of such royal treatment, but it is not likely that he will be lonely. Moreover, in most hospitals there is a chaplain for the religious, a librarian for the literary, and enthusiastic volunteers to listen to those who never get to talk at home.

The public does not have to go to the hospital to find out how excellent the service is. Hospitals are spared the expense of paid advertising, but they are probably the most publicized institutions in our society. Because of the public's interest, hospitals make prize copy for all mass media. They have not been backward in utilizing this favorable climate, and sound public relations in all forms has become a byword everywhere in the hospital organization. More than one and one-half million women have become emissaries of hospitals through such organized groups as hospital volunteers and auxiliaries. And the printed word has not been neglected—Madison Avenue may well envy the beautifully prepared brochures and handsomely illustrated annual reports issued by many hospitals.

This is not to criticize hospitals in their all-out efforts to please patients. The amenities they provide are expected by a public accustomed to the splendor of the modern motel and shopping center. The kindness and concern shown patients are a hospital extra. All the public support and appreciation accorded hospitals is fully merited and deserved, but we should not be surprised to find that the public enthusiastically avails itself of what hospitals have to offer.

A Tacit Approval

Patients and the public generally must approve of the way hospitals are being used since almost every community insists on having a hospital and on continuously expanding existing hospital facilities. Citizens may growl at the latest Blue Cross increase, or over the most recent exposé of how others are overusing hospitals, or the ways in which other communities are overbuilding hospitals, but they continue to respond generously to fund-raising drives in behalf of their own local hospitals. Admittedly, there are many diverse motivations involved in the establishment or expansion of a hospital, but the fact that the end result will be greater use of the facility is known to all. This supports the contention that at bottom the public is not overly concerned about the way its hospitals are being used—or, better stated, the way in which the public itself is using its hospitals. One sure way the public could reduce "overuse" would be to reduce the facilities available for unnecessary use. It would also be a sure and direct way of introducing morality as a recognized factor in the question of hospital utilization. If there were only enough beds for the very sick, then the less sick would be guilty of endangering lives if they occupied hospital beds needed by very sick individuals. A moral burden would then be placed on doctor and patient alike to restrict utilization to the most necessary cases. The public is aware, however unconsciously, that this would be true. By its enthusiastic support of hospital expansion, then, the public indicates some degree of approval for the present manner in which hospitals are being utilized.

Obscured Morality

In the public mind the issue of morality in hospital utilization is obscure and ill defined. If there were no prepayment plans, there would be no moral reservations to prevent an individual from using all the hospital care he could purchase. Taken from this point of view, criticisms are really aimed not at hospital utilization but rather at prepayment utilization.

However, this raises some rather difficult questions—questions that sooner or later may have to be discussed in depth if hospital utilization continues to increase.

Are utilization committees representatives of the hospital, or are they actually representatives of prepayment plans and other underwriters of hospitalization insurance? Are such committees properly a formal arm of the hospital medical staff, or should they be appointed and administered by prepayment plans? Does the hospital have the right to insist that its medical staff create such a committee and undertake the task of examining hospital medical practice quantitatively except where qualitative elements are affected? If hospital medical staffs are to be charged with the responsibility for controlling the utilization of prepayment benefits, will they not have the right to specify the scope and types of benefits and the terms under which those benefits are provided? For instance, if the hospital medical staff decides that hospital utilization under the service-type contract is too difficult to control, would it have a legitimate right to insist that the hospital sign participating agreements only for indemnity-type contracts?

The public has been increasingly encouraged to utilize hospitals through prepayment benefits that are continually extended. Over the years, prepayment plans have added to the number of days of coverage, to the types of conditions covered, and to the services provided within the hospital. These increased benefits, socially desirable and representing a substantial improvement in the quality of prepayment coverage, also represent a substantial invitation for more intensive utilization of hospitals. It is understandable if the public is a little confused over the argument about overuse of benefits at the same time that those benefits are extended to provide for more care.

There is some reason to believe that the public is confused over the entire relationship of hospitals with prepayment. It may be that, in buying protection, the public is not applying the same specifications that the prepayment plans use in selling. In the first place, the public and the prepayment plans may be working from different concepts. Although both see prepayment as a mechanism for spreading the cost of hospitalized illness, they may be seeing the mechanism as working in different dimensions. Prepayment plans see it as a matter of spreading the cost over the population in such a way that the fortunate non-users underwrite the costs of unfortunate users. The public probably sees the mechanism primarily as a means of spreading the individual's own hospital expenditures over a period of time on an instalment

basis. The term "prepayment" would give support to such thinking. The individual's attitude toward utilization, then, is quite different if he believes he is making a claim on a form of "lay-away" plan than it might be if he understood he is making a claim on a mutual-aid arrangement.

There may be similar confusion over the kind of burden that prepayment is supposed to cover. The prepayment plans obviously see coverage as a matter of essential or necessary hospital care, whereas the public may be seeing it as a matter of appropriate or useful hospital care. The difference lies in their concepts of "demand" and "need." This difference is almost wider than words can express and much wider than the public has been able thus far to comprehend. What is at issue, insofar as hospital utilization is concerned, is whether the forces of supply or the forces of demand are to determine hospital utilization. In all other battles of the market place, the demanders call the tune, the consumer is undisputed king. Only in wartime rationing has the public had experience in being controlled in the level of its demands for goods and services by considerations other than price. But the public position with respect to hospital utilization is that the demanders must be controlled by the suppliers. This position may very well prove to be untenable both to suppliers and to the public and may call for radical modification of the prepayment contract and the prepayment concept. The difference between what a consumer wants and what he ought to have must be at great variance before the dramatic and drastic step of divorcing him from the decision process is likely to be successful.

Prepayment a Catalyst

The public apparently sees prepayment, not as a limiting factor, but rather as a contributing factor to its demand for hospital utilization. It has been willing to let prepayment plans determine the package of benefits, but there is real evidence that the public never intended that prepayment plans should determine the types and scope of utilization of hospital care. The public not only has grasped at every increased benefit that prepayment has offered in its basic contract but has also turned to other coverage for additional protection. Major medical insurance, as a supplement to the coverage provided by basic contracts of prepayment, has proved to be the hottest item ever offered by the insurance industry. By the middle of 1962, major medical as written by insurance companies, to extend the coverage over the corridor provided by the basic prepayment plan, protected more than 36 million people, or one out of every five persons in the civilian population. Only a

decade earlier, no more than 108,000 persons had this additional form of coverage. Further evidence of the unwillingness of the public to be hemmed in by the benefits of its prepayment contract is seen in the great number of families with multiple contracts. And nation-wide surveys have shown conclusively that, on the average, families with medical and hospital coverage spend more of their own money for those services each year than do families without such coverage.

Clearly, the increasing spread of prepayment and insurance, in both depth and breadth, has encouraged the public's increased utilization of hospitals. It would be amazing if this were not the case. The purpose of prepayment and insurance is to remove, as much as possible, the financial inhibitions to utilization. Strictly from a merchandising point of view, the prepayment mechanism should considerably increase sales of hospital care. One needs only to imagine how much the sale of such items as automobiles and television sets would increase if the financial arrangements for them were set up and sold by third parties *before* the products were put on the market by manufacturers or producers. The very sale of the financing arrangements for hospitalization represents a form of advertising of the values of hospital care and a stimulus to the demand for such care.

The fact that the service is available upon demand, and paid for, is the important factor, however. The consumer does not have to face the hard choice of foregoing some other desired purchase in order to get hospital care. This is perhaps the only instance in our economy where the individual can have his cake and eat it, too. Under prepayment, there is no direct relationship between financial penalty and use of hospital care. Increased use will ultimately push up monthly prepayment costs, but the immediate effect is insignificant compared to the total transaction involved in a single hospital admission. In terms of the individual, the increased cost of his prepayment will be paid by the month in a future time period, but he can have the service now. Actually, the effect is increasingly less direct as his employer more commonly picks up the tab for half, or all, of the prepayment costs. The arrangement, of itself, does not necessarily encourage greater hospital utilization. It may do that, too, but the point is that prepayment eliminates factors from the decision process that would undoubtedly restrain even the most clear-cut, appropriate use of hospitals. Said another way, prepayment substantially shaves the difference between what the individual might "need" to do with his resources and what he "has" to do with them.

Ethics versus Economics

The substantial removal of economic considerations in the use of hospital care has given the public a strange posture in the market place. Actually, the public is being asked to substitute ethical for economic considerations in measuring the utility of a desired service. This is a unique position for the individual and one contrary to all his traditions and training. Price has been his traditional measure of utility of a product or service, and it may be asking too much of him to insist that he become moral concerning this one service—especially if he does not agree that an ethical issue exists or does not agree on the criteria for an ethical decision.

To a large extent, the cards are stacked against ethics as a control of utilization. The individual's feeling of guilt over use of prepayment probably could never be as strong as his feeling of guilt over failure to do the best by a sick member of his family, or the feeling of guilt over condemning his wife to the burden of taking care of his invalid father at home, or of subjecting the stroke patient to the feeling of being discarded in a medically barren nursing home. In any such battle of ethics it will take more than a matter of character-training or a process of self-examination to throw the battle in favor of decreased utilization.

The fact that there are many reasons why hospital care is attractive and desirable to the public should not represent a dismal outlook to prepayment or to anyone concerned. From a consumer standpoint, hospital care is extraordinary, and there are stronger natural deterrents to its overuse than almost any other commodity. It is a service in which the consumer becomes an active participant and, in the process, finds that some heavy demands are made upon him. Hospital life is regimented life, and it is lived in a strange and disquieting environment.

Despite all medical and social factors favoring an increased public demand for hospital care, the increase in utilization during the last sixteen years has not been considerable. During the period 1946 through 1961, the average number of days of general hospital care utilized per 100 members of the total population increased only 10.5 per cent, rising from 88.8 days in 1946 to 98.1 days in 1961. There will undoubtedly be further increases in utilization as the medical and social forces which affect utilization become stronger, but the prospect should not cause

hospitals and prepayment to panic. The important question is: What role does the public want hospitals to play?

No voluntary system of public service ever went down the drain because of overserving the public or because of cost. Nor has government ever been credited with doing things more efficiently or more economically. The public demands that government take over only when it is frustrated in its efforts to secure what it considers adequate service. The dan-

ger to hospitals and prepayment lies in their getting at cross-purposes with the public over the definition of adequacy of utilization and in their failure to provide suitable alternatives for what they consider inappropriate uses of the general hospital. One can safely predict that the question of hospital utilization will be answered, not by enforcement of precise medical criteria adopted by hospitals and prepayment, but rather by the usual interplay of social forces that bring some resolution to all social questions.

Implications of Increasing Hospital Use for Prepayment Plans

WALTER J. McNERNEY

CHAIRMAN: Mr. Walter J. McNerney is president of the Blue Cross Association, an assignment of great national importance to the hospital field. The question of future trends in hospital use is of major consequence for Blue Cross plans.

Mr. McNerney is a graduate of the Program in Hospital Administration of the University of Minnesota. He was, for a number of years, a member of the faculty of the Program in Hospital Administration at the University of Pittsburgh. He was the organizer and the first director of the Graduate Program in Hospital Administration at the University of Michigan.

The Blue Cross Plan in Michigan is one of the largest and most important in the country. It has been a leader in providing good coverage against the cost of hospital care for the citizens of Michigan. Increasing hospital use and cost led to rapidly increasing charges. Public concern over subscription-rate increases generated much criticism and discussion. This pressure resulted in the organization of a most intensive study of hospital cost and use and of health-insurance agency operations. The study was directed by Mr. McNerney with other members of the faculty in hospital administration at the University of Michigan. It has just been published by the American Hospital Association in two volumes titled *Hospital and Medical Economics: A Study of Population, Services, Costs, Methods of Payment, and Controls*.

Mr. McNerney will discuss the implications of increasing hospital use for prepayment plans.

Use of the hospital by the Blue Cross population has been increasing over the years. For example, between 1947 and 1961, the admission rate increased from 105 per 1,000 population to 142 per 1,000 population, an average of 2.5 per cent per year. Average length of stay went from 7.8 days in 1947 to 7.2 days in 1952 and to 7.75 days in 1961. The product of the admission rate and average length of stay per admission (inpatient days per 1,000 members) increased from 825 in 1947 to 1,103 in 1961, an average of 2.4 per cent per year. Outpatient cases paid increased from 38 per 1,000 members in 1947 to 61 per 1,000 members in 1961. Some of these increases may have been due to broader scope of benefits, in addition to increased utilization per member.

Breakdown by Blue Cross Plan

In 1961 five U.S. Plans had admission rates of 200 or over. These were Cheyenne, Wyoming, 219; Jackson, Mississippi, 214; Bluefield, West Virginia, 212; Columbus, Georgia, 211; Baton Rouge, Louisiana, 200. At the opposite extreme, nine U.S. Plans had admission rates of less than 130 per 1,000 members. These were New York, 111; Columbus, Ohio, and Allentown, Pennsylvania, 119; Providence, Rhode Island, 120; Washington, D.C., 121; Newark, New Jersey, 122; Baltimore, Maryland, and Rochester, New York, 123; and Harrisburg, Pennsylvania, 125. The average admission rate for all Plans was 142, the range from 111 to 219.

Average length of stay varied widely. Six U.S. Plans had average length of inpatient stay of 9.00 days or longer. These were Allentown, Pennsylvania, 9.13; Richmond, Virginia, 9.08; Harrisburg, Pennsylvania, 9.05; Chicago, Illinois, 9.04; Albany, New York, 9.02; and Philadelphia, Pennsylvania, 9.00. Short stays (less than 6.00 days) were recorded by eleven Plans. These were Seattle, Washington, 4.94; Boise, Idaho, 5.03; Baton Rouge, Louisiana, 5.05; Great Falls, Montana, 5.27; Salt Lake City, Utah, 5.57; Jackson, Mississippi, 5.61; Portland, Oregon, 5.64; Columbus, Georgia, 5.66; Atlanta, Georgia, and Albuquerque, New Mexico, 5.69; and Cheyenne, Wyoming, 5.86.

By definition, patient days per 1,000 population also varied considerably. The highest figures were for Albany, New York, 1,456 days per 1,000 members and Youngstown, Ohio, 1,416 days per 1,000. The lowest experiences were about half the above figures (720 days per 1,000 for Seattle, Washington; 722 for Salt Lake City, Utah; 744 for Boise, Idaho; and 782 for Portland, Oregon). The four Canadian Plans averaged 1,186. Is hospital medical care this flexible intrinsically?

Utilization by Region

Wide variation in hospital utilization can also be seen by region of the country. Tables 1, 2, and 3 show the relation of availability of hospital beds to their utilization.

Table 1 shows that, between regions, length of stay is a more direct influence on the variation in total utilization than is the frequency of admissions,

with the one exception of the Northern Plains area. Data by state within each of these regions show that both admissions and stay fluctuate widely, although how much of the difference in the admission rates is caused by people residing in one state and using hospital facilities in another is not known. An important point to remember is that the length-of-stay figures are average, and are weighted by many different

TABLE 1

NUMBER OF HOSPITAL BEDS AND BLUE CROSS ADMISSIONS PER THOUSAND POPULATION, AVERAGE LENGTH OF STAY, AND TOTAL NUMBER OF DAYS OF CARE

Region	Beds	Admissions	Stay	Days
4. Northern Plains . . .	4.27	147	7.66	1,129
1. Northeast	3.93	126	8.83	1,110
2. Middle West	3.51	129	7.87	1,017
3. South and Southeast	3.13	126	6.62	832
5. West and Southwest	3.09	121	6.56	794
Total U.S.	3.56	128	7.61	974

TABLE 2

DAYS OF HOSPITAL CARE PER THOUSAND POPULATION AND VARIOUS DEMOGRAPHIC FACTORS FOR THE TOTAL POPULATION, 1960, BY REGION

Region	Days	Per Cent Aged 65 or Over	Per Capita Income	Per Cent in Metropolitan Areas	Per Cent with Hospital Coverage
4. Northern Plains . .	1,129	10.7	\$2,016	45	73
1. Northeast	1,110	9.7	2,490	77	83
2. Middle West	1,017	9.2	2,365	70	84
3. South and Southeast	832	8.5	1,561	42	58
5. West and Southwest	794	8.5	2,267	69	62
Total U.S.	974	9.3	\$2,166	63	73

factors. If differences caused by age, sex, and some other factors are ignored, the types of illnesses hospitalized will affect significantly the average length of stay. Consequently, medical practice influences this "average" in two ways: by the length of time a person remains in the hospital for a given diagnosis and by the types of conditions for which hospitalization is deemed necessary.

Many social, economic, and medical factors enter into the variations in utilization. Some of these are age, income, population concentration, and the degree of prepayment or insurance. Table 2 compares these factors to total days per thousand population

by region. The only factor that "lines up" in the anticipated fashion is the per cent of patients aged sixty-five or over, although the three high-usage regions also have the highest per cents of population protected against the costs of hospitalization. To define the effect that these and other factors have upon utilization will require statistical studies in depth, using such techniques as multivariate analysis. Also, the areas studied in this report are too broad to give much more than general indications.

Table 3 relates Blue Cross utilization data to data for the total population, even though these are not directly comparable. How much of the variation is caused by the difference between the nature of the total population and the nature of the Blue Cross

TABLE 3

HOSPITAL UTILIZATION RATES OF BLUE CROSS MEMBERS AND OF TOTAL POPULATION, 1960, BY REGION

Region	Per Cent of Population in Blue Cross	Admissions per Thousand		Days per Thousand		Average Length of Stay (Days)	
		Total	Blue Cross	Total	Blue Cross	Total	Blue Cross
1. Northeast . .	49	126	126	1,110	1,025	8.83	8.11
2. Middle West	39	129	141	1,017	1,164	7.87	8.23
4. Northern Plains	27	147	164	1,129	1,194	7.66	7.27
3. South and Southeast . .	18	126	154	832	995	6.62	6.47
5. West and Southwest . .	13	121	146	794	881	6.56	6.04
Total U.S.	31	128	139	974	1,060	7.61	7.63

"population" and how much results from removal of an economic barrier is unknown. One further point needs to be made here: "total population" figures do not include admissions to short-term federal hospitals, inclusion of which would tend to decrease the difference between the total and Blue Cross.

Blue Cross Plan certificates in the Middle West generally provide a greater number of benefit days than do those in other areas, usually 120 compared to an average of about 70 for the other regions. This difference probably accounts in part for the finding that the Middle West is the only region in which Blue Cross exceeds the total population on average length of stay.

For each area except the Northeast, Blue Cross total days used are greater when compared to total population days. Primarily, this is the result of a higher admission rate for Blue Cross members, with the largest differences being in the regions having the lowest percentage of the population enrolled in Blue

Cross. Why should this be? Particularly when the data presented in Table 1 are considered, which indicate that length of stay is a more significant influence on the variation in total utilization than is frequency of admission. Comparison of Blue Cross utilization between Plans and with the total population requires not only analysis of the demographic and medical factors of each but also an understanding of the variations caused by benefit differences, administrative practices of the Plans, and the impact of the Plan on the public, hospitals, and doctors it serves.

Unpublished Data

RATE-MAKING REFLECTIONS

The function of premium determination is to arrive at the charge to be made to a subscriber or group of subscribers for a defined time period. Such calculations must take into account the historical and the anticipated trends in utilization of care, costs of care, and the influence of benefit pattern on these. Blue Cross Plans, being essentially local service organizations, have routinely reflected local trends to a much greater degree than other forms of health insurance have done.

In the calculation of a multi-Plan rate by Blue Cross, applying to an account spread over several states, the influence of benefit pattern is removed as far as possible, since the rate must apply to a constant benefit. Therefore, the result is largely a calculation of the influence of utilization and hospital charges on the cost of prepayment to subscribers. Trend factors used must reflect the changing patterns of incidence, primarily the admission rate and the average number of days of care per 1,000 subscribers, which were discussed earlier. Of course, expense of administration or other non-benefit expenses are removed from such calculations.

The resulting variation between Plan areas in premiums intended to cover provision of a single benefit pattern for the same maximum period of days over an identical time period are interesting. The effect of utilization of benefits is now combined with the local cost level of hospital care. Whether rates for one-person or family contracts are considered, the range in premium rate is approximately 100 per cent; that is, the highest local rate is approximately twice the lowest local rate so calculated. Some dramatic switches occur between "high" and "low" Plans previously rated by utilization measures, because now local cost is also involved. For one-person contracts, the lowest premiums currently result in Watertown, New York, and in Oklahoma Plan areas, while the highest are in Colorado. For family contracts, the lowest current premiums result in Bluefield, West Virginia, a Plan

which is among the highest in terms of admission rate, while the highest current premiums are in North Dakota.

It can be seen from pure premium calculation that by far the largest influence on annual rate increases is price of services (per diem cost or charges) followed by increases in admission rates and days per case in that order.

MEDICAL, SURGICAL, AND OBSTETRICAL BREAKDOWNS

Another body of data which has not been published relates to the obstetrical, surgical, and medical utilization of a large proportion, but not all, of the United States Plans. The number of Plans and the per cent of enrolment represented by them has been increasing (always over 50 per cent and now over 80 per cent). Briefly, these data show that, between 1950 and 1960, while the admission rates for the total of all Blue Cross Plans had steadily increased, this increase has been primarily for medical cases, from 37.0 admissions per 1,000 members in 1950 to 56.8 admissions in 1960 (plus 54 per cent). Surgical cases increased very slowly (56.1 in 1950 to 59.5 in 1960, or 6.1 per cent). Obstetrical cases increased from 23.4 in 1950 to 25.2 in 1952, but between 1956 and 1960 admissions of these cases dropped from 24.5 per 1,000 to 22.1. For all Blue Cross Plans, average length of stay decreased from 7.18 in 1953, but after 1956 average length of stay grows to 7.52 in 1960. The same pattern was evident for the Plans studied in this analysis (7.34 in 1950 to 7.27 in 1952, and a subsequent rise from 7.34 in 1956 to 7.91 in 1960). Both medical and surgical average length of stay showed little change from 1950 to 1952, but both rose markedly after 1956. However, obstetrical length of stay declined steadily from 1950 to 1960 from 6.71 days to 4.74 (down 29.4 per cent).

Inpatient days per 1,000 members increased for all Blue Cross Plans from 866 in 1950 to 1,050 in 1960 (plus 21 per cent). The experience in the Plans studied was virtually identical. Medical days increased from 309 in 1950 to 366 in 1952, and from 432 in 1956 to 504 in 1960 (plus 63 per cent).

Surgical rates per 1,000 members remain virtually unchanged from 1950 to 1952 at about 380 to 390 per thousand, but they jumped from 416 in 1956 to 452 in 1960 (an overall increase of 18.9 per cent). Obstetrical days decreased from 157 in 1950 and from 122 in 1956 to 105 in 1960 (down 33 per cent).

INDIANA EXPERIENCE

Monroe Lerner, associate director of research and planning of the Blue Cross Association, and Harry

Hineman, director of the Actuarial Division, Mutual Hospital Insurance, Inc., Indianapolis, Indiana, collected data from the Indiana Blue Cross representing their 1961 claims experience. These data are useful for a number of reasons, the most important being that they represent a comprehensive experience in which the age and the sex of the enrolled population are accurately known. It has been possible, therefore, for Messrs. Lerner and Hineman to draw a number of conclusions about the trend of Blue Cross utilization that go deeper than the aggregate data available for the entire Blue Cross experience. Another useful aspect of the Indiana data is that they can be compared with the 1956 experience of the same organization, so that a five-year trend can be observed. The main conclusions on the basis of work to date are:

1. As was apparently common to all Blue Cross Plans throughout the country, the admission rate in the Indiana Blue Cross experience rose between 1956 and 1961, from 115.5 per 1,000 to 130.1 per 1,000. But part of this rise was due to the changing age and sex composition of the enrolled population; when these factors are held constant by the method of age adjustment, the rise is only 127.1. Over this five-year period the percentage increase in unadjusted rates is 12.6, but in adjusted rates it is 10.0. However, these statistics need to be qualified as follows: the 1961 experience included a fairly large number of persons who paid direct while the 1956 experience included a much smaller number of such subscribers and dependents. If this group is excluded from the 1961 data, the new admission rate is 127.5, still a considerable increase. To judge from these data, the admission rate has been rising on the basis of something like 2.5 admissions per 1,000 annually in the course of the last five years. This agrees roughly with the experience of all U.S. Blue Cross Plans, because the admission rate in 1955 for all U.S. Plans was 129.5 and in 1960 it was 140.0, an increase of approximately two admissions per 1,000 annually.

2. In terms of age, the admission rate increased for the age group 20-34 from 159.0 to 188.4; 35-49, from 112.6 to 130.3, and 50-64, from 138.7 to 153.9. In each case, it makes relatively little difference whether the entire experience was used in 1961 or whether the direct-pay group was excluded. For the age group 0-19, there was a decline from 77.8 to 75.0 admissions per 1,000. For the age group 65 and over, there was a slight decline, from 220.4 in 1956 to 211.0 in 1961; but if the direct-pay group is excluded, there was an increase instead of a decrease, to 259.4.

Further analysis of these data is proceeding in terms of the components of the changes, including

such factors as sex composition of the population, patient status on discharge, and disease class and diagnostic category.

3. Average length of stay in this experience rose from 7.3 days in 1956 to 8.1 days in 1961. Again, this rise accords roughly with the experience for all U.S. Plans, in which the average length of stay rose from 7.3 in 1955 to 7.5 days in 1960. However, when the Indiana data are adjusted to the 1956 age and sex composition, it turns out that there actually was a decrease in length of stay from 7.3 to 7.1, but if only group accounts are used, the change was a slight rise from 7.3 to 7.6.

4. The annual hospital bill in 1956 was \$19.22 per insured person. This was an overall average relating to the entire insured population whether or not they used any services. The corresponding figure in 1961 was \$33.49, which represented a 74 per cent increase over the five-year period, a rise of approximately 15 per cent annually. If only group accounts are used in 1961, the corresponding figure was \$31.34 per person. This represents an increase of 63 per cent, almost 13 per cent annually. These results are closer to our pure premium data. In any event, it is obvious that the major component of this rise is not the change in utilization but rather the increase in charges. Thus, the "cost per day" in 1956 was \$22.91, but the corresponding 1961 figure was \$31.80 (or if only group accounts are used, \$32.14), an increase of 40 per cent in charges.

Implications of Increased Use to Blue Cross

Having sketched very broadly the facts on increasing admission rates, average lengths of stay, and utilization rates, let us consider the implications of these increases to Blue Cross.

First, let us look at the data themselves. We have been examining national data. Several Plans have gone into more depth than this, and, in fact, more data are available nationally.

Despite the rapid strides in data collection that have been made within Blue Cross over the years, there is still room for improvement in the uniformity among Plans and the depth of both exposure and utilization data. As far as exposure is concerned, we need more refined breakdowns by age, sex, and other demographic factors and by social or economic characteristics of the population. These are needed for better evaluation of changes in utilization. Regarding utilization, we need more information on diagnosis, duplicate admissions, physicians' characteristics, hospital characteristics, availability of beds and physicians, attitudes toward health, etc., to shed further light, when combined with better exposure

data, on some of the beginning reasons for some of the increases. In addition to utilization and exposure, we also have aggregate data on expenditures for medical care, at least for hospital service. Here, also, we need and are exploring further breakdowns by characteristics of the population or by many of the other important variables.

It is understandable why collection and analysis of data lag behind other operational developments. Plans grew very rapidly and had to meet everyday demands. Some felt it was too expensive to keep extensive data. Some failed to see the significance of these data to long-range planning or to technical problems. A similar, if not worse, situation exists within commercial-insurance companies. For any large number of their constituency, they are unable to make definitive remarks on either exposure or utilization.

We need also more special data, that is, data that are collected for a specific purpose and are skilfully interpreted. Through the screening of routine data, we should and shall be getting into special studies that employ sampling and modern analytical techniques and that bear on such questions as: Why do utilization rates vary by Plan markedly? Are patient needs on a range of two to one as expressed in utilization rates across the country? What, more precisely, is the relation between available beds and utilization? Are the differences that I have shown by broad regions due to different components within these regions—age, sex, education, per capita income, population per doctor, etc.?

Why does the Blue Cross population have a larger utilization factor than the population as a whole in several areas? Is the large increase in the pure premium, which is mainly attributable to the per diem cost of hospital care, justifiable in terms of effective use of the hospital? Can we demonstrate to our constituency that this increase is an increase in needed service and that the facilities are being used efficiently seven days a week for those who do need them. Medical patients are largely responsible for increased utilization. Is this a convenience factor for the older population using the hospital? Are they going into the hospital because there are no other institutions to use?

Beyond these factors, the data that I mentioned suggest such questions as: What is the relation of benefit structure to utilization? What is the impact of patterns of medical practice? Why do people come to Blue Cross? Why do they leave it? What is characteristic of those who join or leave? What is characteristic of high and low users and of such groups as the aged, non-white, and rural?

Before any of these questions can be answered, a few things must be done. Routine data must be broadened and made more uniform. We must have more co-ordinative leadership among Plans, so that the vast repository of useful data developed can be pulled together and used. We must face up to the fact that simple four-way tables and many of the old techniques of relating one variable to another are no longer precise enough; that we must adopt the newer techniques, such as multivariant analysis, must use sampling to save time and energy of staff, and must learn how to exploit instrumentation for the sake of speed and accuracy. Very importantly, we cannot avoid the inevitable conclusion that, without a qualitative evaluation, at a certain point all the quantitative differences that we might uncover are meaningless. Qualitative evaluation means getting directly to the question of how effectively the hospital is being used. Many people are looking over our shoulders in prepayment who are insulated from hospitals by Blue Cross and who want to know the answers to the questions I have raised.

Further development of data collection along the lines suggested above will provide us with a hard basis for establishing future policy, a firmer basis for better internal administration, and a broader basis from which to add knowledge to the fields of medical care, health, and social science.

Blue Cross started in the 1930's accelerated by widespread economic despondency. It grew and survived in those early years because of imaginative leadership at key points but also by virtue of the fact that there was little competition, little regulatory authority, and a wide-open market. During the 1940's, it burgeoned because of the cost-plus contracts, the wage freeze, and the agreement by the courts that fringe benefits in health were a legitimate part of collective bargaining. During the 1950's like many corporations, it hit the turning point in the so-called growth curve and struck a plateau.

We have maintained about 33 per cent of the population for the past several years. In order to get off this plateau, in order to move upward, we shall have to ask many of the questions I have cited and prepare to chart our course in the directions indicated by the answers.

Data collection presents these implications to Blue Cross. How about the broader implications of these figures that I have so briefly cited?

Faced with growing admission rates, faced with rising length of stay, with growing utilization rates

and higher and more ambulatory benefits in use, faced with rising per diem cost, Blue Cross must, in essence, take constructive steps to assure subscribers that their money is well spent. Gradually, these steps are being taken. Let me just touch on a few. Gradually, Blue Cross is beginning to participate actively in community planning in part by relating payment to bed need. Gradually, you are beginning to see more auditing of claims with some reference points established and questions arising out of extremes relative to those points. You are seeing more qualitative judgments being made, very crudely at first. For example, reference may be made to Joint Commission on Accreditation status in reference to payment. You will see further broadening of benefits in an effort to take the pressure off the doctor and the patient as far as use of only the general hospital is concerned. You will see more careful review of costs, their calculation, and their equity among hospitals. And you will see more Plans sponsoring experimentation with built-in evaluations. Some Plans may get into centralized technical assistance.

It is significant to note that, moving into the post-acute area of nursing homes, Blue Cross laid down criteria of what is a proper nursing home; differentiated between medical, nursing, and domiciliary care; and then said, "For these we will pay cost; for the others, we will pay less or not at all."

A discernible shift is beginning to take place toward direct controls of utilization on the part of Blue Cross and hospitals. This shift is necessary and desirable. A major misconception within the voluntary movement is that deductibles, co-insurance, and indemnity (which, in effect, place the decisions of the types I have talked about on the sick individual) have a favorable control effect on a community-wide basis. The fact that they are purported to and often do, give an aura of control is probably one of the greatest dangers that we face. Their only justification, applied to hospital care, and the motive power behind their existence in some of our Plans, is that they do reduce the rate and make the package more

attractive to some employers—which employers, I think, are often ducking their community responsibilities.

If Blue Cross, faced with rising costs, lies back passively and simply writes out a check for charges, there is a strong risk that the rate cycle will so accelerate or the percentage of rate increase will become so high that (1) the insurance commissioner representing the state, (2) major employers, or (3) major unions will bring even stronger pressures on Blue Cross. Blue Cross cannot let this happen perpetually, if for no other reason than to protect hospitals from themselves.

It is also desirable that Blue Cross shift into this new posture because it is designed to do so. Blue Cross was formed as a non-profit agency to do for the community what it needed, that is, to cover all risks and to have a conscience about how hospital and medical care are rendered, not just to act as a dispassionate processor of claims.

Blue Cross Association

In closing, I should like to say that recently the Blue Cross Association has been fortunate enough to have obtained the services of able research personnel. These men now are laying down the framework within which some of the moves described will be made. They are working on more uniform, meaningful statistics among Plans. They are beginning to develop a clearing house for sharing research experiences among Plans. They are beginning to work on a research bulletin that should create a greater sense of awareness in many of these areas. They are tooling up for a periodic report to the public, and they are preparing for original research where it is indicated.

These data, I am sure, will make our administrative machinery better internally, and they should stimulate further growth of our intellectual leadership and creativity. We are strong enough to face the facts and, I hope, to pursue change as it is indicated by new information, even if it leads to the point of the organization of service per se.

Implications of Changing Hospital Use for the Medical Profession

BEVERLY C. PAYNE, M.D.

CHAIRMAN: Patients are admitted to hospitals on the order of physicians. No examination of the subject of hospital use can omit a discussion of medical practice as it affects the number of patients admitted to the hospital, the services they receive, and the length of time that they remain as patients.

The Michigan study conducted by Walter McNerney and his associates developed an ingenious method to explore the problem of hospital use. The method required extensive consultation with expert panels of physicians. Mr. McNerney was successful in interesting Dr. Beverly Payne in becoming a member of the study staff responsible for this aspect.

Dr. Payne is a practicing internist in Ann Arbor, Michigan. He is a member of the faculty of the Medical School of the University of Michigan. He will discuss his investigations and their implications for changing hospital use from the standpoint of the physician.

We recognize that there are many reasons for the obvious variation in hospital utilization patterns. I would like to develop some of the variables that I consider most significant, recognizing that in most instances the variation, once identified, can only be accepted. There are, however, significant variables which are capable of control. These I would like to consider further and describe how one hospital staff is identifying and modifying hospital practices.

The most important factors affecting hospital utilization are the diagnostic pattern of the hospitalized population, the age and sex of the patients, the source of payment, the character of the hospital staff, the size of the hospital, the teaching responsibilities of the hospital, and the physician and his customary manner of practice. Let me demonstrate how these factors operate to influence utilization patterns.

The average length of stay in non-federal, short-term general hospitals in 1958 was 7.4 days. This average figure masks a tremendous variation of stay in individual diagnoses, ranging from 1.7 days in tonsillectomy to 27.5 days in fracture of the neck of the femur.

When divided between operative and non-operative classification, the average length of stay for

men is found to be half a day longer when operated than when not operated. Women, on the other hand, have an average length of stay of one day less if not operated. This difference is primarily related to the preponderance of non-operative deliveries.

Eighty-nine per cent of hospital patients are under age sixty-five; only 11 per cent are over sixty-five years of age. However, this group of patients over sixty-five is admitted more frequently, stays longer, and utilizes a greater number of laboratory and diagnostic radiologic procedures than do younger age groups.

Females are more often hospitalized than males. The peak frequency of admissions of females is from age fifteen to forty-four years, the childbearing era, while males are more frequently admitted from age twenty-five to sixty-four. Once they get into the hospital, men stay longer than women. This difference occurs in practically all diagnostic categories whether operated or not operated.

The average length of stay varies with the source of payment. The major difference appears to relate to welfare patients. The average length of stay for welfare cases was 10.5 days as opposed to a stay of 7.0 days when the patient paid his own bill or 7.4 days when Blue Cross was responsible. When the patient alone pays the hospital bill, he is found to understay three times oftener than when a third party participates in payment of the bill.

There is a differential in utilization of X-ray and laboratory facilities according to source of payment. The patient who has a third party to help pay for the hospital bill will utilize twice as many diagnostic X-ray units as does the patient who pays the whole bill himself and will use a third more laboratory units. This difference, however, is not related to the degree of participation by the third party in paying the bill. In other words, the amount of patient participation in paying his bill begins to affect the services rendered only when he pays the whole bill.

The characteristics of the hospital itself and the medical staff also influence the utilization patterns. Average length of stay increases from 6.0 days in hospitals with under 50 beds to 9.6 days in hospitals of over 500 beds. The average total charges are greater in larger hospitals, and the greatest proportion of welfare cases are also found there. Laboratory

and diagnostic X-ray units increase twofold from the under-50-bed to the over-500-bed hospital. Significantly, the highest number of laboratory and diagnostic X-ray units were utilized in caring for welfare patients.

An interesting observation relates to the educational function of the hospital. There is a straight-line increase in length of stay, units of laboratory and diagnostic X-ray studies, and total hospital bill from the hospitals with no intern or resident to hospitals with internship, residency, and undergraduate medicine-teaching program. Congruent with this is the fact that hospital staffs with a low percentage of specialists generally have shorter average length of stay, less utilization of laboratory and X-ray, and lower total hospital bills than do hospitals in which over 75 per cent of the staff are specialists.

The importance of the physician in relation to utilization of the hospital completely overshadows all the previous remarks. His role is central, and, because of this controlling influence, the remainder of this paper considers the manner in which he influences utilization.

Perhaps the most striking variation in hospital utilization is found in the most frequently occurring condition, namely, uncomplicated deliveries. The average length of stay for uncomplicated deliveries is four days when cared for by general practitioners and six days when cared for by board-certified obstetricians. Obviously, there is a divergence of philosophy of maternal care. There is the same divergence, but not always so clearly demonstrated, in other diagnoses. For all diagnoses (10,696 cases), the pattern is the same, the average length of stay is 8.3 days for the full-time board specialist and 6.2 days for the general practitioner. The pattern of utilization remains the same for the specialist regardless of the size of hospital or the proportion of specialists on the hospital staff. The pattern for the general practitioner is not uniform and exhibits conformity with the specialist pattern in large hospitals or on hospital staffs made up largely (over 75 per cent) of specialists. The specialist utilizes twice the units of diagnostic X-rays and one and one-half times the units of laboratory procedures utilized by the general practitioner.

When judged on appropriateness of length of stay, general practitioners tend to discharge patients inappropriately early (8.6 per cent of cases) more often than do specialists, and specialists tend to delay discharge inappropriately (14 per cent of cases) more often than do general practitioners. The explanation for this difference is not readily apparent, and none of the various hypotheses tested could explain this

variable. This finding does, however, introduce the subject of measurement of appropriate hospital utilization. This concept is not identical with efficient, but with effective, hospital care.

We would define "effective hospital utilization" as that which admits the greatest number of patients who need admission and discharges them after the briefest hospital stays consistent with their needs, rendering to them all the services they need during hospitalization but no more.

In developing the methodology for the retrospective Michigan Study of Medical and Hospital Economics, we found the central problem related to the yardstick to be used in such a measurement. Because of various objections, we discarded panel opinions of individual charts, individual judgment by physicians, or statistical analysis of length of stay in favor of pre-established criteria for effective hospital utilization in eighteen distinct diagnoses. These diagnoses represented 47 per cent of the discharges from Michigan hospitals in 1958 and 38 per cent of the days of care.

The criteria were developed in the following manner: The study by the University of Michigan invited panels of physicians to develop written criteria for care of patients with each of eighteen diagnoses to be studied in depth. These criteria were developed by specialists familiar with the disease entity both as teachers and as practitioners. The pattern of criteria development in each case was related to indications for admission, procedures required by the diagnoses, procedures consistent with care of each diagnosis, the expected length of stay (if this could be identified), complications affecting length of stay, and discharge criteria.

A retrospective case study was then done on discharged cases in forty-seven Michigan hospitals. The eighteen diagnoses studied covered surgical, medical, obstetric and gynecologic, orthopedic, urologic, and pediatric care. The data I have developed in previous paragraphs came from this study. I do not intend to review the results of the effectiveness study but merely to acknowledge that from this experience the procedures and program of the Audit Committee at St. Joseph Mercy Hospital in Ann Arbor have been derived.

In the course of evaluation of the effectiveness of hospital utilization, it became apparent that we could utilize this same technique with minor modifications in measuring the standards or quality of medical care. This has been done at St. Joseph Mercy Hospital in Ann Arbor for the diagnoses of cholecystitis, acute myocardial infarction, and urinary-tract infection. The results of such studies have been

revealing and have led to executive committee action of a constructive nature.

The following criteria were developed by a staff committee for treatment of urinary-tract infection:

- I. Indications for admission. The patient presenting symptoms apparently due to urinary-tract infection is admitted to hospital when:
 - A. The patient has not responded to office treatment, and planned procedures, cystoscopy, and retrograde pyelograms require hospitalization.
 - B. Infection is recurrent and usual outpatient diagnostic examinations are unsatisfactory for diagnosis.
 - C. The patient is acutely ill on presentation as indicated by:
 1. Presence of sepsis (fever, sweat, prostration, chills).
 2. Severe symptoms related to urination, severity measured by need for narcotics to control symptoms.
 - D. Obstruction is present, as well as infection of urinary tract.
 - E. Admission is for preplanned therapy with Kan-trex, polymyxin, or neomycin.
- II. Indications for office treatment. The patient should not be admitted to the hospital, in general, when none of the above indications are present. It is important to note the following:
 - A. The patient who is uncomfortable but not septic and can pass urine should be treated as an outpatient.
 - B. The initial episode of urinary-tract infection does not usually require admission to the hospital.
 - C. Hematuria, infection, mild temperature elevation, or mild pain alone do not necessarily justify admission unless planned procedures, cystoscopy, and retrograde pyelography require hospitalization.
- III. Hospital procedures indicated for the acutely ill patient.
 - A. Urinalysis with stained sediment or quantitative urine culture.
 - B. Urine culture with sensitivity prior to institution of inpatient therapy.
 - C. I.V. pyelogram within forty-eight hours.
 - D. Rectal and/or pelvic examination during present illness.
 - E. Medication: institution of antibacterial therapy within twelve hours of admission, without waiting for culture report.
- IV. Hospital procedures indicated for resistant or recurrent infection.
 - A. Urinalysis with stain sediment.
 - B. Culture and sensitivity in presence of active infection.
 - C. Cystoscopy and retrograde pyelogram. This is to be accomplished within forty-eight hours, or certainly within seventy-two hours.
 - D. Tuberculin skin test and/or urine for acid-fast stain for tubercle bacilli.
- V. Probable length of stay in uncomplicated cases.
 - A. Diagnostic admission—completed in seventy-two hours.

CHANGING HOSPITAL USE FOR THE MEDICAL PROFESSION

- B. Therapeutic admission—as determined by discharge criteria.
- VI. Indications for discharge.
 - A. Lack of sepsis.
 - B. No obstruction requiring treatment demonstrable.
 - C. No complication requiring specific treatment.
 - D. Temperature normal for 24–48 hours.

Using a standardized sampling technique, a sample of discharges from the previous year were chosen for study. The committee of five physicians, representing the major departments of the staff, then abstracted on a prepared work sheet the pertinent information required to judge the appropriateness of care rendered (Table 1). A judgment or evaluation was then recorded for each case with respect to the admission, length of stay, and deficiencies in care as measured by the standards or criteria developed.

The first such study required about sixty hours of committee effort—five members meeting for twelve hours, usually in two-hour sessions at weekly intervals, until all the cases had been evaluated. The chairman then tabulated, correlated, and interpreted the assembled data. The report was reviewed by the whole committee and forwarded to the executive committee. The report was then given at a regular general staff meeting. Subsequent reports on the urinary-tract infection study were given at smaller meetings of the department staff in order to allow free discussion, criticism, and recommendations for action.

It is to be noted that the concept of this audit committee is educational. It does not identify individual physicians. It is not a local representative of Blue Cross or other insurance carrier, nor does the report reach any but the hospital family staff and administration.

It is expected that after the staff members have been thoroughly acquainted with the criteria, subsequent reviews of the same diagnoses will demonstrate change in the present pattern of care within the hospital. Hopefully, we expect there will be fewer inappropriate admissions, less overstay or understay, and fewer of the deficiencies identified in the initial study.

The Michigan study established, by physician-interview technique, that extra-medical factors affected hospital use in 19 per cent of the cases. The interview was unsuccessful in establishing a reason for inappropriate stay or admission in 68 per cent of the cases. Of the so-called extra-medical factors, the most frequent was "the physician's usual practice in such

cases." It is probable that a large portion of the undetermined causes for inappropriate stay and admission was also "the physician's usual practice in such cases." The interviews showed clearly that physicians are unaware of their colleagues' pattern of care. It is never the topic of staff or private discussion, and nothing directly is ever taught in this context in medical school and little in postgraduate study.

the training and experience of the individual physician and have not been subject to communication, either written or spoken, with his fellows. I would identify them as remotely established reasons—seldom, if ever, re-examined—for continuing a comfortable and safe pattern of practice.

It is becoming generally agreed that some form of control of hospital utilization is necessary. We submit

TABLE 1
WORK SHEET FOR URINARY TRACT INFECTION

Record Number			Date of Admission	
Age			Date of Discharge	
Sex			Days of Stay	
PRIMARY DIAGNOSIS				
SECONDARY DIAGNOSIS				
1. Urinalysis	done		not done	date
2. Stain sediment	done		not done	date
3. I.V. pyelogram	done		not done	date
4. Cystoscopy	done		not done	date
5. Retrograde pyelogram	done		not done	date
6. Rectal exam	done		not done	date
7. Pelvic exam	done		not done	date
8. Temperature: at admission—		24 ^h before discharge		at discharge
9. Culture & sensitivities	done		not done	date
10. Tuberculin skin test	done		not done	
Acid-fast stain of urine	yes		no	
11. Obstruction	present		not present	
12. If obstruction present	requires treatment		no treatment	
13. Complications	present		not present	
14. Refer	done		not done	date
15. Urinary tract pain	required narcotics		no narcotics required	
THERAPY				
16. Sulfa drug	started		Polymyxin	started
Tetracycline	started		Neomycin	started
Mandelamine	started		Penicillin	started
Kantrex	started		Other antibiotics	started
surgical				
17. Antibiotics prior to admission	yes		no	not known
EVALUATION				
Admission	Diagnostic	indicated	not indicated	
	Therapeutic	indicated	not indicated	
PROCEDURES				
	Adequate	_____		
	Deficient	_____		
LENGTH OF STAY				
	Diagnostic	1. understay _____ days		
		2. overstay _____ days		
		3. appropriate _____		
	Therapeutic	1. understay _____ days		
		2. overstay _____ days		
		3. appropriate _____		

Therefore, the usual practice of a physician may be entirely a personal attitude, may represent regional attitudes or cultural or national trends. Thus, it is not presently known why there is a difference in stay for acute myocardial infarction between Ontario, Canada, and Michigan just across the river. In Ontario the average length of stay is 6 weeks; in Michigan, 19 days or about 3 weeks. In England the average length of obstetrical hospital stay is 10 days; in Michigan, 4.8 days. I feel that there are reasons completely apart from economics, manner of payment for care, or bed availability that explain these differences. These reasons are rooted deep in

that control must not interfere with adequate individual patient care. It should not arbitrarily restrict hospital beds to create an artificial scarcity. It should not create artificial economic barriers to prompt and adequate care. It should be concerned with underutilization of the hospital as well as overutilization. It must recognize the interdependence of the quality of care and the economic aspect of health care. It should make use of the traditional concern of the physician for the adequacy of care for all patients. Using the techniques described here, physicians are uniquely capable of making objective evaluation of the quality or standards of care within the hospital.

They must jealously guard this responsibility. Physicians are also better equipped to measure objectively the effectiveness of hospital utilization in an atmosphere free of compulsion, reprisals, or outside interference. Physicians are responsible for the care of all patients in the hospital, regardless of whether the patients pay their own bills, commercial insurance pays the bill, welfare agencies pay the bill, or Blue Cross pays the bill. The work of the audit com-

CHANGING HOSPITAL USE FOR THE MEDICAL PROFESSION

mittee should be subject to review by responsible agencies but not to stifling direction from outside influences. We feel that review of hospital utilization is an intramural task to be performed with self-evaluating motives. It may also be hoped that eventually a major share of the burden can be done with the help of mechanical computers.

Discussion

QUESTION: You stated that 40 per cent of the hospital admissions fell within the diagnoses. How can you spread the balance of admissions in days, in cases which are not single diagnoses, in cases which are likely to be diagnostic in which it is argued utilization is more likely to occur?

CHAIRMAN: About 40 per cent of the patients admitted fell within the eighteen diagnoses. The question is: Do you think the misuse, over or under, would be greater where there was a less simple, less clear-cut situation than in these diagnoses?

DR. PAYNE: Maybe I can answer the question in three parts.

If we extended our experience to other diagnoses, I think we might find a greater number or a greater degree of inappropriate admissions, because the diagnoses we chose were those which one usually finds in a hospital. They are not the cases which are usually found solely in office practice.

Second, can you extend this to other diagnoses? It is quite possible, and quite practical, to develop criteria for admission, for length of stay, in other diagnoses. In fact, it is really almost imperative to do so.

A committee of any kind, regardless of the members' genuine interest or their background, cannot possibly study hospital charts of discharged patients and make judgments about whether a particular patient should have been in the hospital in the first place, or whether he should have stayed as long as he did, unless they have agreed in advance upon what they consider optimum care within their hospital. Otherwise, their judgments will vary from one case to the next.

They might even vary from day to day, depending upon individual physician's experiences of the day before. The physician is not like a Univac machine. He can't give equal weight to his experiences of ten years ago and the experiences of only a week ago. Consequently, it is important that this concept of the establishment of criteria by physicians for specific diagnoses give authority to the activities of the utilization committee.

QUESTION: Dr. Payne, would you comment upon the characteristics of either the hospitals or the physicians in which you found inappropriate usage?

DR. PAYNE: In general, overstay was identified in the study as occurring most frequently in large

hospitals; that is, in hospitals with over five hundred beds; in hospitals which accepted a large responsibility for teaching nursing students, interns, and resident programs. Most overstay occurred in those hospitals that had medical students present.

It was also found that the character of the staff influenced the stay to some degree. That is, there was more overstay and less understay in hospitals that were highly specialized. The degree of overstay is relatively small, so that you can't accept this statement as a gross difference in the stays between the two types of hospitals. The most "efficient" (if I can use that word with quotation marks about it) hospital is a very small hospital with a general practitioner staff in a rural, remote area. There the stay is very brief and the admission rate is relatively low, although there the problem of understay becomes a major factor.

Such variation does not represent good care when we measure it in terms of the effectiveness of hospital use. I think those aspects are what you had reference to—the size of the hospital, the organization of the staff, and the educational program which the hospital enters upon—as influencing the length of stay.

QUESTION: Doctor, do you think the study has stimulated the formation of utilization committees in your hospitals? If so, are they using your criteria?

DR. PAYNE: The concept of establishment of criteria in advance of hospital-utilization studies is quite new. It is not even recognized except by those persons who are already familiar with this study.

I have been eager to get this concept accepted. I have talked to my own County Medical Society and to the State Society of Internal Medicine, presenting papers which outline the usefulness of this particular approach. I have seen to it, since I am the chairman of the utilization committee in my own hospital, that this technique is used in my own hospital. Indeed, I was reporting the statistics from St. Joseph Mercy Hospital, in part. We have done three studies which parallel those done throughout the state: one in acute myocardial infarction, one in cholelithiasis, one in cholecystitis, and the other in urinary-tract infection. Our experience is close to, if not identical with, that found throughout the state.

I find my staff accepts this particular concept of a hospital utilization committee, because it has twofold significance. One, which I think is most

important: if you are going to get physicians to accept a role in measuring utilization, it must not be dissociated from measurement of the quality of care. Historically, physicians accept as their primary concern the quality of care rendered within their hospital. This is something that physicians get touchy about. This is something that they feel is their responsibility. Not only is it their responsibility in their own view, but the public has come to expect them to assume this responsibility. So that, if the utilization committee acts in two roles—one of measuring the quality of care given within the hospital and simultaneously measuring overstay or understay, which in a broad sense will reflect quality of care—physicians will be interested. The utilization committees with which I am most familiar have been quite receptive to this particular approach.

QUESTION: Would Blue Cross be in the position that was outlined if hospital administrators were doing an adequate job? And is it the judgment of the speaker that hospital administrators cannot carry out this function?

MR. McNERNEY: If ever a hospital administrator were, within his own institution, to accept the job of chief executive officer versus some lesser concept of the job and were to promote the type of program that Dr. Payne is talking about, were to attend to management in its fullest flower, then I think half the problem would be licked. If that same administrator were to conceive of his hospital as part of an area—an area which had to be effective as well as an individual institution that had to be effective—then another major segment of the problem would be solved. In the first instance, too many administrators have a secondary image of their role. Hopefully, programs in hospital administration and current leaders in the field will bear hard on this issue. In the second instance, there is implied some sort of centralized effort that provides discipline and inspiration, given the willingness of the individual administrators to begin with.

In this regard, you are talking about a hospital council, a state hospital association, or some other group that fans out over an area, such as Blue Cross, in its partnership with hospitals. Unfortunately, we lack councils in many places. Too many hospital associations are weak, lacking in staff and budget. Consequently, Blue Cross has tended to move into those areas that I talked about.

QUESTION: Do you think, then, that direct control, which you referred to as being necessary, will influence the utilization pattern?

MR. McNERNEY: The fact that underuse has been measured, as well as overuse, is significant, because

these are offsetting factors economically. If we are to assume that this study, based on criteria, is valid and is applicable to areas other than Michigan, then I would say that moving in some of the directions that I have talked about won't produce a major change—of 20, 30, 40 per cent—in the productivity of the hospital system.

Two points after that. First, giving the public overt evidence that you are gauging utilization and that you do have some cognizance of, and ideas about, what is going on is a major necessity. It is not enough to feel within yourself that things are all right. There must be increasing evidence of performance to give to people who ask discerning questions, such as an industry that pays \$130 million a year in fringe benefits in this area. Second, nowhere have we talked about the organization of medical practice. We find large disparities, not measured by criteria, to be sure, but specific with respect to diagnoses, between areas where there is a tightly organized, highly integrated medical situation with prepayment and areas where such a situation does not exist. It is possible that, if some movements are made in this direction, the productivity of the system will be increased.

QUESTION: I want to ask both Dr. Payne and Mr. McNERNEY a question. It seems from Dr. Payne's remarks that the greatest overutilization and overstay may be caused by customary medical practice by doctors. What, then, in the new posture of Blue Cross can be done to bring the doctors more into the Blue Cross Association so that these two groups—the hospitals and Blue Cross—can meet this problem, in view of the fact that many of the plans do not have ample representation of doctors on their boards?

DR. PAYNE: There is no doubt that the physician is centrally involved in all the decisions. It is his decision which determines the length of stay in all cases. In this instance you are referring to cases in which he considered the length of stay to be in accord with his usual practice.

One of the useful educational aspects of the utilization committee is to indicate to each of the physicians on the staff that their old patterns of behavior need re-examination occasionally, that they need to know what the other members of their staff consider good care. They need to know that, for their peers, the usual length of stay in appendectomies may be four days instead of the customary seven.

The burden of overstay—and understay, for that matter—is only a few days beyond that considered

optimum or appropriate. In the study I refer to, overstay was largely confined to two, maybe three days longer than the usual stay. Understay likewise was virtually confined to two days under the criteria given.

The knowledge about overstay and understay is not accepted as punitive so far as physicians are concerned. It is helpful for them to know what their peers are doing, and, without doing more than identifying the facts, they can re-evaluate their own criteria of care and, accepting the judgment of their peers, change their usual behavior in caring for these diagnoses.

MR. McNERNEY: I think we should acknowledge the fact that the criteria were permissively established in the first place, so that to be outside of them was certain to be of some significance.

Getting to your question, I will tell you what I don't have faith in, and then come to another point. I think the practice of running around to state and county medical societies and to individual hospitals, exhorting physicians to accept their social and economic responsibilities in the name of impending doom, is too often unproductive. What we should be talking about more is how to put into the hands of physicians an administrative vehicle that will enable them to measure more precisely what they are doing and, through the process of measuring, give them an interest in what the implications are. Then, as Dr. Payne said, emphasize the qualitative aspects as well.

What is the role of the hospital administrator in this regard? As the manager of the hospital, he is obligated to help physicians develop and use new analytic techniques, such as criteria evaluation, in addition to case studies and statistical studies. What is the role of Blue Cross? Obviously, Blue Cross has a heavy stake, if for no other reason than survival, in encouraging hospitals to incorporate these types of measurements.

How could we encourage it? Maybe we should start looking at our claims data with reference to certain norms; let's say that in a normal delivery any stay of less than three days or over seven days, on an average, is worthy of question. When we see this criterion controlling the hospital and maybe even controlling the doctors within the hospital, we can go to the hospital, in cases of overstay and understay, and say, "Here is what is shown. What are your answers?"

I don't have the faith that this attitude is going to grow spontaneously in every hospital, and quickly. I think we in Blue Cross must provoke, incite, and give incentive to this type of development.

CHAIRMAN: Do you see any danger in that?

MR. McNERNEY: Yes, the danger is that hospital administration will be so weak it will lie down and won't react.

CHAIRMAN: Let's say they fight back. Is there any danger in too tight a control on the profession?

MR. McNERNEY: I don't think so. If the administrator of the hospital and the people connected with Blue Cross can act in even fairly good wisdom, development of too strict control is not a likelihood. To be practical about it, the ability to push the establishment of criteria to an extremely tight situation is highly problematical.

QUESTION: It seems to me this is overlooking a little bit the patient's preference. In our own situation we find many cases where the doctor discharged the patient. The patient doesn't want to go home for some reason. I don't see that this is entirely the fault of the profession. It seems to me the patient is involved here.

MR. McNERNEY: Dr. Payne and I have discussed this many times. Why can't the doctor accept the responsibility for standing up to situations like this? It is cited that other doctors might give in and capture the patient, that firmness might jeopardize the doctor-patient relationship, or that it is expecting too much of a human being to care for a busy practice and be attendant to these things, too.

I feel, that given the reasons, given some ammunition as to the effect that going home has on the use of the hospital as a community institution, on the cost of prepayment, and the rest of it, the physician will increasingly face up to economic as well as clinical decisions. The hospital administrator, also given ammunition like this (that is, criterional), can take a stand with some confidence that what he is doing is not jeopardizing the situation, and I think do so effectively.

We get back to the importance of getting your facts first. Get some measure of what your problem is. Come down out of this ethereal business of, "Well, we think this is too long," or "We have a lot of this in the house." Sample specific cases which can be related to specific criteria, and build your educational programs on these. You won't cut out all faulty use, but I think you will make a heavy inroad.

DR. PAYNE: I have an answer to this, too. In our experience, the factor of patient resistance has been measured, and it is relatively small. Everyone hears about the patient who won't go home even when the physician has identified him as ready for discharge. This happens to all physicians, but the frequency with which it happens is so small that it sticks in our memory as something unique. In our situation, patient limitation amounted to only 9 per cent of the overstays.

MR. RAY BROWN: I think Mr. McNerney was not answering the question that was raised. If a doctor writes a discharge for the patient (and this happens in my experience as a hospital administrator more often than I believe you are indicating), then the patient is actually discharged. The doctor says the patient can go home. Then the hospital must try to get the patient to go home.

I am sure the University of Chicago is no different from most other hospitals across the country, and at any one time we have two or three patients who have been discharged by the doctor and could leave the hospital if we could work out arrangements to get the family to take the patient home. This, I think, is the problem that was raised. Until some better avenue of approach is created, maybe it is cheaper just to do as we are doing, for the doctor and the hospital are not going to be able to solve this problem by themselves. Somebody has to find mechanisms or ways to convince the patient that the plans for him to leave the hospital are best, because you don't just push a patient out of the hospital.

We say only doctors admit and discharge patients, but the patient and his family have something to say, too. I don't know of a hospital that ever put a patient out before he was ready to leave. You just don't go in and bodily push him out on the street. If the patient doesn't want to go home, he is going to stay in the hospital despite all the doctor and hospital can do in some instances.

MR. McNERNEY: How often does that happen?

MR. BROWN: Well, if you mean, "When would you be ready to put a patient out?" Not very often. But there is a constant number of patients to whom the doctor has already said, "I would like to discharge you from the hospital," and I imagine that in almost every hospital at all times there are one or two such patients.

MR. McNERNEY: In how many of these cases do we find that there is no alternative facility to use—either that the home is inadequate—or that there is no nursing home, no postacute facilities, or some lesser facilities? In how many of those cases is this true? Is the main reason indolence on the part of the patient or lack of available facilities?

MR. BROWN: There is a whole gamut of psychological reasons, the fright of the patient in leaving the secure hospital situation, and the lack of facilities for further care. I am sure that in many cases a day or two of overstay results from such factors. Once in a while a patient just wants to stay on for two or three weeks; you simply have no way to get the patient out of the hospital.

Now, nobody knows all the psychological factors and all the physical factors that enter into these sit-

uations. Everybody is so busy with the patients who need to be in the hospital that you just don't follow up these unwilling persons. If you have a social service department, you tell them to get to work on the situation.

MR. McNERNEY: I will say this: Until the hospital administrator knows the average load presented by patients of this type and until he has some idea of how the problem breaks down into lack of alternative facilities, inertia within his own shop, lack of communication, psychological factors (which to me provide a legitimate reason if the difficulty is deep enough), etc., how can he deal with it? In the first instance, the solution is the creation of post-acute facilities, hopefully tied into the general hospital. In the second, there may be need for better communication among the nursing floors, the business office, social service, and what have you. In the third instance, there is need for the medical staff to come to some conclusion about what is the legitimate impact of a patient's anxiety and depression on use of the general hospital. Until you spell out those targets, you cannot get constructive solutions. I see no reason for standing here and speculating on what to do until I know the answers to these things, and can take rifle shots at them rather than shotgun blasts.

QUESTION: Is it true, as I have suspected for some time, that one consequence of better utilization is going to mean further increases in cost? I am thinking about such things as taking Saturday and Sunday off (and most patients stay through Saturday and Sunday), not doing many things in the evenings and nights, closing the laboratory at five o'clock or whatever they do. If we are really going to enhance utilization, we need to be prepared for increased per diem costs and some increase in premium cost.

MR. McNERNEY: Mr. Fitzpatrick was an integral part of this study. We had length of stay by day of admission, didn't we, Tom? And Trussell showed in his study some relation between day of admission and length of stay. What did we come up with in that regard?

MR. THOMAS B. FITZPATRICK: The data were not very good. They looked suggestive only. Looking at all cases in relation to the day of the week on which patients were admitted and were discharged, we found that some sort of bulge came on Monday and Tuesday, which might have indicated delay over the weekend. But these did not correlate with the times the physician was aware of hospital delay as a reason for overstay. We didn't get much of that in the interview, as Dr. Payne said.

CHAIRMAN: Isn't this the quandary? Would it cost more to operate fully over the weekend than you will reduce in length of stay? Isn't that what you are asking?

QUESTION: Yes. A patient comes in at four o'clock in the afternoon. If you keep your laboratory running full blast until ten o'clock at night, if you provide physical therapy on Sunday, soon one finds one's self in a quandary. Somebody says: "Let's leave the lab open full blast until ten o'clock at night. You will cut down the overall stay of these patients and, therefore, reduce the cost." But people are evaluating the hospital, not on the cost per 100,000 population, but on dollars per patient day. This cost per patient day seems to be one of the barriers to maximum use, and all that X-ray equipment stands there unused all day Saturday and Sunday.

MR. McNERNEY: I don't know what the answer is. If you have to pay overtime for certain of this staffing, which is usually the major component of cost that would be involved, what its long-term effect would be on the cost for a given population, I don't know. I suppose that the biggest problem is the mores, the folkway of how we operate in this country. Many people have envisioned themselves as working a more tolerable work week than they used to. I think, however, a worthy experiment is needed because per diem cost is a larger factor in Blue Cross rate increases than is admission rate or stay.

QUESTION: I would like to ask Dr. Payne whether this utilization quandary does not have two sides, not only length of stay and understay, but also overutilization or underutilization of resources in the hospital, such as facilities.

DR. PAYNE: We tried to measure this factor and found that, with the criteria we had, it was impossible to come up with an answer. However, people face this problem as they think about the patient who won't leave the hospital after he is discharged. It turns out to be an infinitesimal part of the problem.

It would be very difficult, as we found out, to decide that a procedure done on the patient while he was in the hospital was unnecessary, because the physician's judgment in obtaining a particular test may be determined by things that turn out not to be so. In other words, he gets an X-ray of the upper GI tract because the patient has epigastric pain, but the patient doesn't have an ulcer. So X-raying was an "unnecessary procedure." The patient didn't have diabetes when the physician checked the blood sugar, so the check was an "unnecessary procedure." You get lost very quickly when you try to identify

procedures as being unnecessary because, so far as we are concerned (maybe I should say so far as I am concerned) nothing is unnecessary if the patient is in the hospital legitimately and the studies do not unnecessarily prolong his stay. Any procedure that the physician thinks is necessary for this patient's well-being, for his health, is as well done in the hospital as out of the hospital. The fact that he is in the hospital for some other reason only makes it more convenient for him to have this particular thing done. Overutilization or underutilization of hospital resources would be a very difficult thing to measure on a research basis. We found that it was impossible with the criteria we had.

We measured the admissions of patients and discharges according to the day of the week that they occurred, and found there was no discernible effect on the length of stay. That is, patients discharged on Sunday were no more likely to be overstay than patients discharged on Monday, Tuesday, or any other day.

MR. McNERNEY: One thing Dr. Payne said earlier had to do with having the patient make some decision when he got to the point of paying his bill, that is, the desirability of deductibles, and so on. These studies also showed that when the patient paid his bill entirely, there was twice as likely to be understay as overstay and that when someone else paid the bill for him, there was twice as likely to be overstay as understay. The real point (and this is important) is that the results of fiscal manipulation of the situation in terms of the individual patient, which I call "fiscal gadgetry," run from the potential good of keeping utilization down to a corollary potential harm of creating underuse. Deductibles of \$100 and \$200, 20 per cent co-insurance, and indemnity are attractive to the employer, who is paying more and more of the premiums (up to 100 per cent), because such arrangements keep his cost down. This saving is particularly important in the middle-sized industries, where there is a high degree of competition and fringe-benefit differences can be critical. These arrangements are attractive in that sense, but let's not delude ourselves (those of us who are in the hospital and health field and are worried about proper use of the hospital, qualitatively as well as quantitatively). The real solution, I think, is the service contract, which leaves hospitals with much less of a bad-debt problem, and which implies professional controls exerted by you in administration and by those of us who are your partners and are being provocative at the right places and the right times.

Report of a Survey of Hospital Administrator Attitudes toward Use

PAUL B. SHEATSLEY

CHAIRMAN: Hospital use is a matter of concern to hospital administrators, and they have varying opinions on the question whether present levels of use are proper. The Health Information Foundation has for years worked with the National Opinion Research Center of the University of Chicago in studying use by the public of different types of medical care, including hospital service, as well as the cost to the public and the effect of health-insurance coverage. The Health Information Foundation, since it is now affiliated with the University of Chicago, is in a position to work even more effectively with the National Opinion Research Center. However, joint studies have been facilitated by the location in New York of a branch office of the National Opinion Research Center under the direction of Mr. Paul B. Sheatsley.

Mr. Sheatsley has long experience in survey research. He has been in charge of a very detailed survey of hospital use in Massachusetts. He will report today on a survey of the attitudes of Massachusetts hospital administrators on this subject.

I should perhaps preface this report by explaining that the title assigned to it implies somewhat more than I fear I can deliver. I suppose we *have* made a survey of hospital administrator attitudes toward use, inasmuch as interviewers talked with a number of such administrators about the problems we are concerned with here. But I must warn you that our sample is restricted to only 49 administrators, all in the state of Massachusetts, and that these represent predominantly the larger hospitals in the state. For example, over half of the 140 general and special short-stay hospitals in Massachusetts have fewer than 100 non-maternity beds, but such hospitals represent only 28 per cent of our sample. Conversely, more than a fourth of the administrators we interviewed were associated with large hospitals of more than 250 non-maternity beds, while such hospitals actually represent only 12 per cent of the total.

These interviews with administrators are what you might call a by-product of our larger study of how hospitals are used today. As most of you know, this study was made possible by a grant from the Health

Information Foundation to the National Opinion Research Center in 1959. Its purpose was to study an across-the-board sample of non-obstetrical hospital admissions, by means of lengthy personal interviews with the patient or a responsible relative after discharge, with the doctor who first recommended hospitalization, and with the doctor responsible for the patient's hospital discharge. The main objective of these interviews, as Odin Anderson once put it, was to "reconstruct the chain of events and decisions which led to the patient's admission and discharge." Our aim was to supply the insistent need for information on the present role and function of the hospital and for systematic data on the factors affecting hospitalization decisions. Thus, we asked patients about the onset of their illness or condition, the medical care received prior to hospitalization, the point at which hospitalization was decided on, and the various factors—especially non-medical factors, such as attitudes, home conditions, job or family responsibilities, financial considerations—which may have encouraged or deterred resort to the hospital. From doctors we got roughly comparable information about the case from the physician's point of view. And in the course of interviews with both doctors and patients, we asked some general questions about their attitudes toward hospital utilization in general.

Our sample of patients was drawn from hospital discharge sheets, and for this purpose we drew a sample of 50 of the 140 general and special short-stay hospitals in Massachusetts. These fifty hospitals were drawn with probability proportionate to size, so that all the largest hospitals in the state fell into the sample automatically, while only three or four of the smallest hospitals were selected to represent many others of their size. Each of the fifty hospitals was visited twice over a twelve-month period from June, 1960, through May, 1961, and samples were drawn from the previous month's discharges. My colleague, Elizabeth Lyman, and I visited each of the fifty hospitals the first time around, in order to make the acquaintance of the administrator, to explain our purposes and methods and answer any questions about them, and to examine the nature of the hospital's discharge records. Almost all the administra-

tors took a lively interest in what we were doing, and many of them obviously had valuable opinions of their own. In consequence, it occurred to us that, on our second visit to each hospital, it would be helpful to our understanding of the general problem of hospital utilization if we spent thirty or forty minutes interviewing the administrator about his own attitudes and experience.

Since our sample was small and, as I have said, not representative of all administrators, because it gives greater weight to the larger hospitals, we saw these interviews primarily as background information which might help our own understanding and perhaps provide some quotable material for our final report, rather than as data to be tabulated and analyzed by our usual statistical methods. Thus, the questions we asked were primarily open-ended. The interviewers had only a question guide to follow rather than a printed questionnaire, and they recorded all responses verbatim. The interviews were conducted by the top people on our staff in Massachusetts, the field supervisors who were responsible for the sampling of discharge records on our second visit. In almost every case one of these field supervisors had originally accompanied Miss Lyman or me on our first visit, so that they were already known to the administrators. Because the interview was only semistructured and because it was in the hands of an experienced interviewer skilled in probing and in recording verbatim, there was ample opportunity for reflection and for spontaneous comment. These characteristics gave richness and depth to many of the interviews, but they also made for a lack of precision and of strict comparability of answers. Thus, not every administrator answered every question in the same terms, and much material of only marginal relevance was recorded.

The over-all impression one receives from reading the protocols is that these administrators are much aware of the increasing utilization of hospitals in recent years, of an increase in the technical complexity of medical care, and of the problems created by steeply rising costs. One detects a groping for an answer to the financial problems of hospital management. There is evidence of a reluctance to see the government take a larger role in hospital management and, at the same time, a tendency to look for aid from this source. The problem of overutilization of hospitals does not appear to loom large in the minds of these administrators. Only one mentioned it as a "major problem" for hospitals in the future. There is acknowledgment that some overutilization occurs, but its importance to the administrator appears minimal.

Although, as I have said, the purpose of these in-

terviews was to serve as background data rather than as materials for a survey report, we did code and tabulate the data, and I have prepared a summary of the results (Table 1).

Our opening question was: "During the last fifteen years or so—since the end of World War II—would you say that the public's attitudes and behavior with respect to the use of hospitals have changed a great deal, a little, or hardly at all?" As the tabulations indicate, thirty-five of the forty-nine administrators felt that the public's attitudes and behavior had changed a great deal, and not one of them answered "hardly at all." Nine "vague" responses represent statements of change of one kind or another but were not specific as to the magnitude of the change.

If any change was perceived, interviewers were instructed to probe by asking: "In what way have they changed? What accounts for this change? Any other ways they have changed?" As may be seen under "Changes mentioned," by far the most commonly reported change was greater utilization on the part of the public. All but six of the forty-nine administrators mentioned greater utilization spontaneously. I should emphasize that none of these listed changes were suggested to the respondents. All responses were *volunteered* by the administrators in reply to neutral probing.

Two reasons for greater utilization were each cited by a majority of the administrators interviewed: first, the large role now played by insurance and other third-party payments, as compared with fifteen years ago; and, second, a change in the public's attitudes toward hospitals in the direction of greater awareness, more confidence, and less fear. A third frequently mentioned reason for greater hospital utilization today was the increasing complexity and sophistication of medical practice, as exemplified by greater use of laboratories, X-ray procedures, supervised drug therapy, etc. Other reasons, less often mentioned, were better public relations by the hospitals, increased use of the emergency room, more awareness of preventive medicine, legislation for government support of welfare hospital care, an increase in the number of patients who have no one at home to take care of them, better living standards, the reluctance of some families to tolerate sickness in the home, and a reluctance on the part of some doctors to make house calls.

It is clear that, as administrators look back over the last fifteen years, greater utilization of their facilities is the single most striking change which occurs to them. For example, only four of the group mentioned shorter stays. Only two other changes in the public's attitudes or behavior are referred to by more than one administrator. Thirteen of the forty-nine

TABLE 1

DISTRIBUTION OF REPLIES OF FORTY-NINE HOSPITAL ADMINISTRATORS IN MASSACHUSETTS
TO QUESTIONS ABOUT HOSPITAL UTILIZATION

Question and Answer	Number of Replies	Question and Answer	Number of Replies
1. During the last 15 years, the public's attitudes and behavior with respect to the use of hospitals has changed:		a) Changes mentioned:	
Great deal	35	Expansion of hospital programs	15
Little	5	Emphasis on preventive medicine	12
Hardly at all	0	Hospital less isolated from community	10
Vague	9	Hospital has become the medical center of the community	10
a) Changes mentioned:		Increase in emergency-room and outpatient care	7
Greater utilization	43	Emphasis on health education	6
People more demanding of hospitals	13	Advancement of medicine	4
People worried about, or critical of, hospital costs	7	Hospitals used more for diagnostic purposes	4
Shorter stays	4	New medicines	3
Other changes	3	Increased emphasis on rehabilitation	3
b) Reasons given for greater utilization:		Increased emphasis on training medical and nursing personnel	3
Insurance, third-party payments	30	Patients make better progress	2
People better educated about hospitals, more confidence, less fear	29	Shorter stays	2
Changes in practice of medicine—laboratories, X-ray, supervised drug therapy	14	Improvement in hospital public relations	2
Better public relations	6	Other changes	13
Increased use of emergency room	6	4 and 5. Unnecessary hospitalizations occur:	
People more aware of preventive medicine	5	Quite often	2
Legislation for care of welfare patients	4	Only occasionally	19
No one to care for patient	4	Hardly ever	12
More money, higher standard of living	3	Vague	16
Family doesn't want sick person around	2	a) Reasons given for unnecessary hospitalizations:	
Doctor doesn't want to make house calls	2	Insurance	21
Other reasons	6	No one to care for patient	13
2. During the last 15 years, doctors' attitudes and behavior with respect to the use of hospitals have changed:		Convenience of doctor	11
Great deal	19	Patient insistence	5
Little	9	Doctor's selfish economic reasons	5
Hardly at all	1	People who should have gone to a nursing home	2
Vague	20	Patient wants to escape from unpleasant home situation	2
a) Changes mentioned:		Inferior doctors	2
Greater utilization	32	Other reasons	7
Doctors more skilled, better trained, more specialized	11	6. Things done at this hospital to discourage unnecessary hospitalization or surgery:	
Doctors more demanding of hospitals	7	Tissue committee	28
Doctors subject to more controls by the hospital on quality of medical care	6	Shortage of beds	13
Doctors more interested in financial rewards	3	Medical-records committee	13
Doctors devoting more time to education of hospital personnel	2	Utilization committee	10
Shorter stays	2	Active pathologist(s)	8
Doctors less demanding of hospitals	2	Supervision by chiefs of service	8
Doctors give less emphasis to bedside manner	2	High fees discourage it	2
Other changes	3	Supervision by nurses	2
b) Reasons given for greater utilization:		No problem or small problem	2
Superiority of hospital facilities and equipment	21	Other	4
More convenient for doctor	12	7. Other things administrator would like to do about unnecessary hospitalizations if he were in position to:	
Patient economically able to come to hospital	11	Nothing	36
New drugs, modern care require supervision by trained personnel	6	Tighter staff control	3
More people without care at home	3	Find places for chronic cases upon discharge	2
Patient insistence on hospitalization	3	Other	8
Specialization has brought the need to have the patient in a place where several doctors have access to him	2	8. People fail to get hospital care when they really should:	
Increased use of emergency room	2	Quite often	2
Advances in surgery	2	Only occasionally	10
Other reasons	2	Hardly ever	21
3. During the last 15 years, do you feel that the hospital's role or function in the community has changed in any way?		Vague	16
Yes	44	a) Reasons given for failure to get hospital care:	
No	4	Financial reasons	14
Vague	1	Neglect, ignorance	8
		Shortage of beds	8
		Fear of the hospital	6
		Patient refusal to be treated	3
		Other	3
		9. What could be done to see that these people get the hospital care they need?	
		Education of the public	10

TABLE 1—Continued

Question and Answer	Number of Replies	Question and Answer	Number of Replies
It's up to the doctor, social worker, visiting nurse	7	Very often	7
More information to the public about assistance programs	5	Only sometimes	21
More beds	4	Hardly ever	13
Improvement of health-insurance plans	4	Vague or omitted	8
President Kennedy's program for the aged	3	16. How much thought do you give to problems concerning overuse or underuse of hospital facilities?	
National health insurance	2	Great deal	21
Other	6	Only occasionally	10
10. Some patients stay in the hospital longer than really necessary from a medical standpoint:		Hardly ever	8
Quite often	5	Vague	10
Only occasionally	28	17. Relations with Blue Cross are	
Hardly ever	9	Entirely satisfactory	14
Vague	7	Fairly satisfactory	34
a) Reasons given for longer than necessary stays:		Unsatisfactory	1
Lack of proper care at home	20	a) Things like:	
Lack of availability of nursing-home care	10	Better relations than "before"	5
Insurance	7	Blue Cross is fair, willing to make adjustments	5
Psychological reasons	6	Payments come on time	2
Inconvenient for patient's family to get him	4	Use of the sight draft	2
Patient waiting to be transferred to another hospital	4	Other	1
Doctor profits from long stays	3	b) Things disliked	
Reluctance to go to a nursing home	3	Reimbursement formula	26
Community provides no facilities intermediate between hospital and nursing home	3	Slowness in payments	5
Convenience of the doctor	2	Time and labor it takes to process figures for Blue Cross	4
Patients kept because illness at home	2	Blue Cross writes contracts without consulting the hospital	2
Patients whose families refuse responsibility to take care of them	2	Other	9
Other	8	18. Problems foreseen for hospitals over the next ten years:	
11. Patients leave the hospital sooner than they really should:		Increased costs, financing	28
Quite often	0	Additional buildings, more beds, equipment, modernizing plants	22
Only occasionally	17	Staffing	21
Hardly ever	27	Care of the aged, chronically ill	15
Vague	5	Salaries	12
a) Reasons for leaving sooner than should:		Keeping up with scientific development	7
Financial reasons	18	Subsidization of schools of nursing and/or other educational programs	6
Annoyed at the hospital	16	More medical schools and doctors	4
Needed at home	16	Socialized medicine	4
Patient just wants to get home	6	Increased governmental involvement	4
Patient wants to get back to work	4	Change toward ambulatory care	4
Psychological reasons	4	Increasing concern with home care and/or rehabilitation	3
Lack of space	4	Public assistance payments must cover the cost of welfare patients	3
Lack of understanding of condition	3	Educating the public	3
Fear of the hospital	2	Getting doctors to take an interest in hospital operation	2
Other	3	Adapting time-saving and cost-reducing mechanisms for hospital use	2
12. In deciding whether to admit or discharge a patient, doctors take the patient's home environment into account:		Finding ways to economize in hospital operation	2
Very often	21	Government taking so many registered nurses into service and doing nothing about schooling for future nursing	2
Only sometimes	17	Unionization of hospitals	2
Hardly ever	2	Other	21
Vague	9	a) What might be done to prepare for problems?	
13. Doctors take the patient's ability to afford the hospital costs into account:		Improvement in public relations, education of the public	8
Very often	11	Reducing duplication in health facilities	6
Only sometimes	18	Additional federal funds	6
Hardly ever	7	Training of more hospital personnel	6
Vague	13	Bulk purchasing by unrelated hospitals	3
14. The availability of space is a consideration:		Endowments, public subscription	3
Very often	14	Wider and more complete insurance coverage	3
Only sometimes	14	Other	8
Hardly ever	13		
Vague	8		
15. The doctor takes his own schedule or convenience into account:			

respondents, about a quarter of them, note that people are more demanding of hospitals today—a change they usually attribute to better education on medical care. And seven of the forty-nine say that patients are now more worried or critical about the high costs of utilization.

Our second question posed the same issue with respect to *doctors*: “To what extent have *their* attitudes and practices changed with respect to use of the hospital during the last fifteen years?” Again, we note from the table an overwhelming perception of change; only one administrator says the attitudes and behavior of doctors have changed “hardly at all.” And again, by far the most commonly reported type of change is greater utilization.

No single reason for this greater utilization by doctors is advanced by as many as half the administrators, but twenty-one of the group focus their response on the superiority of the hospital's facilities and equipment in the modern practice of medicine as compared with its position fifteen years ago. Next most important, in the eyes of these administrators, is the greater convenience of the hospital to the doctor; he can attend more patients by using the hospital than he can by making a round of house calls. And cited almost as often as the doctor's convenience is the better economic health of the patient today. Whether because of insurance, government programs, or higher income, he is better able to afford hospital care today, and the doctors accordingly hospitalize more often than they used to.

Interviewers next asked these administrators to state whether they feel that the hospital's role or function in the community has changed in any way over the past fifteen years or so, and, if so, in what way and why. Again, the overwhelming majority do perceive some change. In fact, as a group, they see a great many changes; there is little consensus upon any one change in particular. There are, however, four types of change, each of which was mentioned by at least ten respondents. Most often cited was the expansion of hospital programs, such as home-care programs, services to family agencies, psychiatric treatment, chronic-care programs, new clinics, etc. all working to produce a change in the hospital's role or function in the community. A second change in the hospital's role which was frequently noted was attributed to the greater emphasis on preventive medicine today. The other two major changes were a decreased isolation of the hospital from the community and a trend toward the hospital as a community medical center. Some of the feelings of these administrators' views on the changing role of the

hospital can be communicated by quoting some of the replies:

This hospital is changed in that it has assumed more responsibility for the total needs of the community than before. It helps other agencies like the cancer fund, heart fund, etc. We are the leaders in social work agencies.

It's gradually becoming more of a community health center. The day is coming when it's looked upon for any form of consultation. Medical office buildings are being built on hospital premises, and all forms of health facilities are now around the general hospital. The larger city is becoming less important as a medical center. The community hospital is increasing its prestige as far as the community is concerned.

The public is looking to the hospital as a center of health activity, not only from the standpoint of medicine and surgery, but also in preventive medicine, community health activity, and physical therapy. For instance, how to use an injured hand, education on how to care for a baby, psychiatric handling of emotional disturbances.

The subject of possible overutilization of hospitals today was introduced by the interviewer as follows: “People sometimes say that hospitals are used too freely these days and that many patients who are admitted to hospitals could be treated just as well at home or in the doctor's office. How do you feel about this?” After recording the administrator's spontaneous reply, the interviewer asked, “Would you say that unnecessary hospitalizations, either medical or surgical, occur quite often, only occasionally, or hardly ever?” and then, “What accounts for this when it does happen?”

The great majority of the administrators freely admit that unnecessary hospitalizations occur (only twelve say it happens “hardly ever”), but few of them seem to regard it as much of a problem. Only two of the forty-nine say that it happens “quite often,” and the most usual kind of reply was to grant some measure of truth to the charge but to explain that the proportion of such cases is very small and is probably offset by greater convenience and better utilization of professional time and facilities. The administrator of one large hospital said:

Consider a patient who needs a whole string of lab tests in the hospital rather than spread over weeks outside the hospital. The question should not be posed in terms of necessity of hospitalization. Actually, the problem is one of underuse rather than overuse, of finding new ways of using the hospital. Most clinical facilities are used like schoolhouses from four to six hours a day. Maybe they should be used sixteen hours. Our problem is to develop new kinds of utilization.

When asked, however, to account for the overutilization that does occur, twenty-one of the forty-

nine administrators pointed their finger at insurance. The following answer is representative of this viewpoint:

I agree with that. The fact that Blue Cross and other forms of insurance provide for payment for services in the hospital and not if the patient is not hospitalized. I have seen many instances where admissions were on what could be called a fictitious basis, to get a GI series or other diagnostic procedure, and the Blue Cross pays. The doctor handles the case as if the patient was acutely ill and must be hospitalized, whereas, if he were not, it could be handled on an outpatient basis. An economic motive. The patient says he pays for Blue Cross and wants some return. And the attitudes of the doctors, where they will be paid for procedures for a hospitalized patient by Blue Shield but won't be paid if the patient is handled as an office patient.

It should be noted, however, that the two other main reasons given for unnecessary hospitalization refer to the greater convenience of the hospital and to cases in which adequate home care is not available. Examples of these responses follow:

In many cases they are people who live alone or who cannot get proper care if left in their homes; the mother has too many other children to care for, or the husband cannot be trusted to provide nursing care to his wife. It's perhaps not *necessary* that they be hospitalized, but there are darned good reasons for doing so.

Question 6 asked: "What sort of things are done here at this hospital to discourage unnecessary hospitalization or surgery?" I shall not dwell upon the replies, which are summarized in the table.

The responses to question 7 are quite interesting. Here the administrator was asked: "Are there any other things you would *like* to do here, in this connection—if you were in a position to?" I find it striking that thirty-six of the forty-nine administrators, just about three out of every four, answered "No." I might mention that one of the eight miscellaneous answers to this question came from an administrator who said that, for his part, he would like to increase admissions.

To balance the emphasis lent to the interview by these questions, the interviewer next said: "We've been talking about the problem of *overuse* of hospitals. How about the reverse—that people *fail* to get hospital care when they really should? Would you say this happens quite often, only occasionally, or hardly ever?" As the table indicates, administrators tend to see this as even less of a problem than overuse. Again, only two of the forty-nine say that underuse occurs "quite often." Although hospital costs are mentioned more often than patient attitudes as reasons for failure to get needed hospital care, it is interesting that, in reply to the question, "What could be done to see that these people get the hospital care

they need?" more emphasis is placed upon education, information, and persuasion than upon insurance, government aid, or other plans to ease the financial burden.

There is somewhat more willingness to grant that patients sometimes stay in the hospital longer than is really necessary from a medical standpoint. Five of the forty-nine say this happens "quite often," and only nine say that it "hardly ever" happens. Abuse of insurance benefits and the convenience or profit of the doctor are rarely mentioned as reasons for unnecessarily prolonged hospital stays. Rather, the emphasis is on the absence of adequate facilities for care outside the hospital. Here is a typical reply:

Occasionally. It has to do with the inability of handling of the patient at home or in a proper nursing home. This is occasioned again by the unavailability of nurses to carry on correct treatment at home, by the expensiveness of it, by the need for more medical supervision and follow-up which takes the doctor out on home visits, and by just plain inability of the home situation to handle the patient physically or psychologically.

In effect, the administrators seem to be saying that people sometimes stay in the hospital longer than necessary from a medical standpoint, but, because they cannot get adequate medical care elsewhere, it is necessary for them to prolong their stays.

To the contrasting question, which asked, "And how about patients who leave the hospital *sooner* than they really should? How often does this happen?" the majority of administrators answered "hardly ever" and not a single one felt it occurred frequently.

Our next four questions inquired into the administrator's perceptions of the doctor's concern for non-medical factors in the decision to hospitalize. The first of these four questions asked: "How often do you think doctors take the patient's home environment into account, in deciding whether to admit or discharge a patient here? Is this a consideration very often, or only sometimes, or hardly ever?" The next questions asked about "the patient's ability to afford the hospital costs," then about "the availability of space in this hospital," and finally about "the doctor's own schedule or convenience." In each case the administrator was asked: "Is this something the doctors take into account very often, or only sometimes, or hardly ever, in deciding whether to admit or discharge a patient?" These four questions, by the way, were included in our interviews with the doctors themselves, and interpretation of the administrators' replies would be greatly facilitated if we had the comparative results. Unfortunately, the doctors' answers are not yet ready for tabulation and analysis.

In reply to all four questions, a majority of the administrators indicated their belief that these non-medical factors are at least sometimes taken into consideration by the physician in deciding whether or not to hospitalize the patient. Only two of the forty-nine administrators, for example, say the doctor "hardly ever" takes the patient's home environment into account, and only seven say that he "hardly ever" considers the patient's ability to afford the hospital costs in deciding whether or not to hospitalize. Clearly, in the eyes of these administrators, hospitalization is not determined by medical factors alone but is a product also of social, financial, and situational factors. Whether the doctors themselves answer in similar terms will have to await the further progress of our major study.

The remainder of our questions I shall touch on only briefly. As I said at the outset, these interviews were not designed for tabulation, and some of the audience may feel I have been taking liberties with the data when I say in one case that "only nine of the administrators" answer a certain way, while in another instance I have stressed the fact that "as many as nine" gave a particular answer, especially when fairly large numbers are sometimes classified as "vague." In my interpretive remarks, however, I have relied more on the "feel" I have for the opinions of these men and women, after reading their interviews, than on the actual figures presented here. I would like to say, therefore, that, in my opinion, the fact that "only twenty-one" (or less than half) of the administrators say they give a great deal of thought to "problems like these—concerning the overuse or underuse of hospital facilities"—is more important than the fact that as many as twenty-one gave this answer. Such questions surely seem within the natural domain of the hospital administrator, and I, for one, would not have been surprised if all forty-nine had said they thought about them a great deal. I

regard the relatively low response to this question as another indication that the problem of overutilization of hospitals does not loom large in the minds of the administrators. And I think this view is confirmed when one looks at the answers to our final question. When asked, "And lastly, what are some of the major problems you see for hospitals in the future—say, over the next ten years?" the major concerns are with housekeeping problems, such as financing, plant, salaries, staffing, and the like.

Although I have emphasized the methodological weaknesses as a survey of these informal talks we had with forty-nine hospital administrators in Massachusetts, I think the general tenor of the findings is really quite clear, and I am inclined to doubt that a larger and more formal inquiry would emerge with vastly different conclusions. The administrator certainly detects fundamental changes within the last fifteen years in the role and function of the hospital in the community, and he foresees continuing changes in the future. The course of hospital admissions is up, and he is doing his best to cope with the trend. In his eyes, the hospital is no longer regarded as an isolated service for the seriously ill and the dying but rather is seen as a medical center serving the total community with the most efficient and accessible means of medical care. He readily grants that many of the people whom the hospital serves could also be served outside the hospital—in their homes or in the offices of physicians—but this does not greatly concern him. The issue to him, as I read these interviews, is not one of medical necessity but of efficient and accessible community service. As one of our respondents put it, when we asked him about "unnecessary hospitalizations": "I don't like those words at all. I don't believe *anyone* comes into a hospital unnecessarily. They're all there for *some good reason*."

Recent Research on Hospital Use

PAUL J. FELDSTEIN, Ph.D.

CHAIRMAN: Recently a number of studies in this country and abroad have examined the problems of hospital use. Some of these studies, such as that conducted by the University of Michigan, are contributing important information to increase our understanding of this subject.

Mr. Paul J. Feldstein, who is director of the Division of Economics and Statistics of the American Hospital Association, received his doctoral degree in economics at the University of Chicago as a Kellogg Fellow. The Graduate Program in Hospital Administration awards such fellowships to doctoral students in a given discipline who are studying the hospital and medical-care field. Mr. Feldstein's dissertation as titled "An Empirical Investigation of the Marginal Costs of Hospital Services." His paper outlines recent research on hospital use.

Any attempt to cover, in the allotted time, all the current research on the subject of hospital use would be very difficult. Therefore, for the purposes of discussion, I have categorized this research into three major problem areas and will discuss briefly the general approaches that researchers have taken, the assumptions underlying each approach, and some of the more interesting examples of research using each approach. I have classified the three problem areas on hospital utilization as: (1) studies that attempt to define "proper" use of hospitals, (2) studies that try to determine the factors affecting use, and (3) studies that attempt to predict what hospital use will be in the years to come.

Not all research falls neatly into any one of these three problem areas. Some studies are interrelated, starting off in one area and naturally leading into another. The purpose of this somewhat arbitrary classification, however, is to indicate the problems that hospital researchers face and attempt to solve.

I. Studies Related to "Proper" Use of Hospitals

A. ASSUMPTIONS UNDERLYING STUDIES OF "PROPER" USE

Let us start with studies related to proper use of hospitals. The rising cost of hospital care has led to great concern with the question whether hospitals are being used effectively. The fundamental assump-

tion underlying studies of proper use is that the basis of utilization should be the medical need for hospital care. People in the field realize that the demand for hospital care, which is actual use, is not necessarily the same as medical need. The researchers in these studies believe that it is possible to distinguish between need and demand and that criteria can be established to provide a scientific basis for determining the proper amount of hospital use. They believe that, if unnecessary use can be reduced, then the alarming rise in the cost of hospital care may be halted.

B. ATTEMPTS TO DEFINE "PROPER" UTILIZATION

Researchers in this area have used two approaches to define proper use.

1. *The subjective approach.*—The first approach is subjective and may be referred to as the "peer judgment" approach. This approach establishes the level of proper use by asking physicians to judge each admission or length of stay as necessary or unnecessary. An example of this approach is the recent study of the teamsters in the New York City area by Dr. Trussell.¹

In this study a group of specialists was assembled and asked to evaluate patient records and determine whether they would have handled the particular cases in the same fashion. Based on their own concepts of medical practice, these doctors judged whether the hospitalization was necessary or unnecessary. Twelve per cent of the admissions in this study were deemed unjustifiable on the basis of a review of the patients' charts.

Another example of the peer-judgment approach was a study of admissions in an English hospital.² Dr. Robert F. L. Logan made quarterly rounds with the consultants in charge of wards, discussed each case with them, and made his own judgments as to whether the patients needed to be in the hospital or not. He concluded that many did not. In each case, an assessment was made of the *clinical* necessity for

¹ Ray E. Trussell, *The Quantity, Quality and Costs of Medical and Hospital Care Secured by a Sample of Teamster Families in the New York Area* (New York: Columbia University, School of Public Health and Administrative Medicine, 1961).

² Dr. Robert F. L. Logan and Gordon Forsyth, *The Demand for Medical Care: A Study of the Case-Load in the Barrow and Furness Group of Hospitals* (London: Oxford University Press, 1960).

admission. Among the general medicine patients, approximately 50 per cent definitely required hospitalization. For surgery patients, the percentage was higher, approximately 80 per cent.

2. *Establishing criteria of proper use.*—The other method for judging "proper" use is to establish objective criteria by diagnosis for each admission and length of stay. If a patient's length of stay exceeds, or is less than, the length of stay established by objective criteria for his particular diagnosis, then this is considered "ineffective" use. This approach differs from the previous method in that objective criteria are used for judging the cases rather than relying on an individual, subjective evaluation of each case.

An example of this type of study was the one conducted by the Bureau of Hospital Administration of the University of Michigan.³ In this study seven panels of physicians developed the criteria for hospital admission, services required, and length of stay for an uncomplicated hospitalization for eighteen diagnoses. These criteria were applied to 5,750 cases. A few of the findings of this study are reported below.

Unnecessary admissions did not appear to constitute a problem of great importance in the 18 diagnoses studied; only 2.5 per cent of the admissions were judged inappropriate. When the five diagnoses classified as 100 per cent necessary (for example, delivery, prematurity) were excluded, the proportion of inappropriate admissions under the remaining 13 diagnoses was 4.3 per cent.

A second finding, based on objective criteria, related to underuse of diagnostic and treatment procedures. Approximately 30 per cent of the patients did not receive services established by expert consensus as required for their condition. Overuse of such procedures could not be measured because the criteria were not sufficiently specific for this purpose.

A third finding concerned length of stay. Inappropriate length of stay was found in about 20 per cent of the cases.

C. EVALUATION OF THIS STUDY APPROACH

Let us evaluate some of these studies on proper use. One objective of studies on proper use is to allow the setting-up of limits to hospital use by diagnostic category, which may then be adopted by hospital utilization committees. These limits of proper use can be used for deciding which patient records should be further investigated for ineffective use of the hospital.

The attempts to set up standards for proper use suggest that, once criteria are developed, they will be

³ Walter J. McNerney *et al.*, *Hospital and Medical Economics*, University of Michigan's Bureau of Hospital Administration (Chicago: American Hospital Association, 1962).

adopted by hospitals throughout the country. There are several limitations to this approach. For example, eventually criteria will have to be developed for all diagnoses, and for some diseases it is very difficult to establish criteria. We know that medical opinion differs, not only on length of stay, but on the necessity for admission in the first place. In addition, adoption and application of criteria could lead to a static situation if the criteria were not constantly revised to keep up with the advances in medical science. Also, the appropriate criteria for a specific hospital should take into account the total range of medical care available within a community. The range of proper use will differ among communities with fewer or greater numbers of facilities and services.

If these studies do not go further than merely saying that stated per cents of the admissions were necessary or unnecessary or that so many patients stayed too long for a particular diagnosis, then they do not add greatly to our knowledge. Studies attempting to define proper use must not only tell us something about the range of medical care in the community but should also attempt to uncover the reasons for overuse or underuse. Only with this added knowledge can a proper decision be made on what is proper use in an area.

II. Studies on Factors Affecting Hospital Use

Studies in the second major area of research attempt to determine those factors affecting hospital use. All the studies that have attempted to define proper use on clinical grounds alone have concluded that there is indeed some inappropriate use of hospitals. A logical extension of these studies, therefore, is to ask: "What are the extra-medical reasons for overutilization and underutilization and to what degree do these influence hospital use?" For example, "What is the effect of hospital insurance on use?" "What is the effect of availability of convalescent homes on use?"

A. ASSUMPTIONS UNDERLYING STUDIES ON FACTORS AFFECTING HOSPITAL USE

The answers to these questions are important. For if researchers can identify the extra-medical factors influencing hospital use, we shall be in a position to advise the policy-makers as to the values of alternative methods of organizing and financing medical care.

Obviously, in studies of factors affecting use, it is not so important to develop a list of the many factors which may influence demand as it is to learn the

weights or the relative importance of each factor. For only by learning the relative importance of these factors can proper mechanisms be developed for translating need into demand and, conversely, to reduce the demand that is not expressive of need.

B. EXAMPLES OF STUDIES USING THIS APPROACH

1. *Massachusetts study*.—An example of this approach is a study by the Health Information Foundation and the National Opinion Research Center,⁴ which is soon to be published. In this study a survey was conducted of a representative sample of discharges from Massachusetts hospitals in an attempt to reconstruct, through personal interviews with both patients and physicians, the chain of events and decisions that led to admission and discharge. Among the non-medical factors investigated, particular emphasis was placed on such things as home environment, patient or family pressure for hospitalization, and the availability of insurance. It was believed that, before any meaningful statements can be made concerning "improper" use of hospitals, more information is required concerning the ways in which hospitals are actually used today and the needs which they serve. This is what the study plans to reveal.

2. *Michigan study*.—In the Michigan study mentioned earlier, variations in hospital use were examined in order to associate "improper" use with extra-medical factors, such as characteristics of the patients (e.g., whether they have insurance coverage), characteristics of the doctor (e.g., specialty status of the physician), and the characteristics of the hospital (e.g., size).

Extra-medical factors were found to be of such importance in influencing hospital use that they were reported in 80 per cent of the understays and 54 per cent of the overstays.

Not surprising was the finding that source of payment is related to hospital use. Patients who paid most or all of their bills themselves had fewer readmissions. Again, when the patient was the source of payment, understay was far more common than overstay (16.7 per cent versus 6.3 per cent). When payment came from any other source, such as a welfare organization or workmen's compensation, the reverse held true; overstay was twice as common as understay (11.8 per cent versus 5.6 per cent). Also, patients with some third-party coverage generally used more ancillary facilities than did patients who paid their own bills.

Another extra-medical factor investigated in the

⁴ *Survey of a Representative Sample of Hospital Discharges in Massachusetts* (Chicago: Health Information Foundation and the National Opinion Research Center, 1962 [unpublished]).

Michigan study was the availability of care outside the hospital, such as nursing homes, home-care programs, and visiting-nurse programs. The findings are again consistent with general expectations. When care outside the hospital was available, there was a tendency toward shorter lengths of stay.

These are just a few of the study's findings. This report is recommended reading both for its findings and for the provocative approaches it used.

3. *Home-care study by Associated Hospital Service of New York*.—Another study bringing out a conclusion similar to that found in the Michigan study was an experiment undertaken by the Associated Hospital Service of New York. Home-care services were provided, and specific observation was made of the effects that the provision of home care has on hospital use.

The researchers concluded that this program has shortened hospital stay and reduced the costs of illness. For the first 500 completed home-care cases, they judged that 40 per cent of home-care days were in lieu of in-hospital days. The remaining 60 per cent of the total home-care days were needed to give proper patient care, including preventive and rehabilitative measures, to patients who would not have entered a hospital. Surveys conducted before the home-care program was started showed that approximately 30 per cent of the patients in hospitals had had at least two admissions within the previous twelve months, while the patients on home care had only an 8 per cent readmission rate in eighteen months.

C. EVALUATION OF THIS STUDY TECHNIQUE

Under the second major topic of my talk—studies on factors affecting use—I have tried to describe how some studies attempted to isolate extra-medical factors. Let me repeat, because I believe this is important, that it is necessary not only to identify the factors that affect use but also to learn the relative weights of these factors. For only then will it be possible to change hospital use, either increasing or decreasing it, by changing the factors which affect use. By separating out the effects of the individual factors, these studies also provide a basis for predicting hospital use, which I will soon discuss.

There are also some limitations to these studies. Since they attempt to separate out the effects of each factor, they are necessarily complex and therefore expensive. The personal-interview technique, which is effective for determining reasons for hospitalization, is also a costly technique. Furthermore, care must be taken that the accuracy of the results are not reduced because of both sampling and non-sampling errors.

The directions for future research in this area should be: (1) to determine the underlying reasons for variations in use between different regions of the country and the factors that reduce or inhibit use; (2) to set up imaginative studies on the different ways of organizing medical care in an area and their effects on utilization; and (3) to determine the financing mechanisms which will enable need to be translated into demand for each level of medical care.

III. Studies on Predicting Hospital Use

The third and final category of research that I want to discuss is the prediction of hospital use. All of us recognize how important it is to be able to predict accurately the demand for hospital care.

A. ASSUMPTIONS UNDERLYING STUDIES ATTEMPTING TO PREDICT HOSPITAL USE

Studies predicting future levels of hospital care start with certain preconceptions or assumptions. These assumptions are necessary in order to develop a methodology for prediction.

The first assumption is that the planning of hospital facilities should be based upon expected use rather than on a recommended level of use. This does not deny the proposition that we ought to strive for certain social goals in the use of hospital beds. However, if we predict on recommended levels rather than on expected levels, the beds provided may remain empty.

The second assumption is simply the belief that the amount of hospital care is predictable. We know, for example, that certain trends in medical care are expected to continue, such as the decline in the number of persons with tuberculosis, while there will be an increase in demand for medical-surgical beds.

The third assumption is that trends in the population distribution will continue to influence hospital care. For example, the changing age distribution means that we shall have to provide different forms of medical care for the aged, such as long-term units and home-care programs.⁵

B. EXAMPLES OF STUDIES ATTEMPTING TO PREDICT HOSPITAL USE

Examples of studies concerned with predicting hospital use were the two English studies: one at Barrow-Furness;² the other, Tees-side.⁶ These two studies attempted to predict future use by using the existing utilization rates in each area together with changes in the hospitals' waiting list. This method,

⁵ *Home Care Following Hospitalization* (New York: Associated Hospital Service of New York, 1962).

⁶ A. D. Airth and D. J. Newell, *The Demand for Hospital Beds, Results of an Enquiry on Tees-side* (Newcastle on Tyne: King's College, 1961).

combining the utilization rate with changes in the waiting list for admission, was used to estimate the demand for each medical specialty for the group of hospitals serving the areas. However, when the researchers in these studies used existing utilization rates without considering other factors that might affect utilization in the future, they implicitly assumed that the factors that have affected past utilization will act in the same manner to affect future use. In other words, no attempt was made to separate out factors that may change the pattern of future use.

1. *Method of prediction suggested by the Public Health Service.*—Related to this approach, but somewhat more flexible, is the method suggested by the Joint Committee of the American Hospital Association and the Public Health Service in their booklet on *Areawide Planning*.⁷ This method, which also uses present utilization rates in making projections, is now being tested and evaluated by several hospital planning councils. It has an advantage over the previous method in that changes in two very important factors, age and sex, are incorporated in the analysis. Projections are made of age and sex distributions in the area, and utilization rates are then calculated separately for each age-sex category.

2. *Multivariate analysis.*—Some other studies have attempted to go even further than this by using a multivariate type of analysis. These studies, examples of which were conducted by Grover Wirick as part of the Michigan Study³ and by Gerald Rosenthal, of Harvard University,⁸ attempt to incorporate other factors besides the age and sex variables, such as health-insurance coverage, family income, marital status, race, and degree of urbanization. Studies of this type attempt to derive the relative weights for each of these factors. They try to answer questions such as: How important is a certain factor in affecting hospital use? If a factor increases by, say, 10 per cent, by how much will hospital use increase?

To arrive at a prediction of overall use, projections are first made for each of the factors, such as the per cent of the population covered by health insurance, the age distribution, family income, etc. Then, based on the relative weights or importance of each factor, they are added together to give an estimate of what over-all use will be.

⁷ *Areawide Planning Manual for Hospitals and Related Health Facilities* (Washington: Public Health Service, United States Department of Health, Education, and Welfare, August, 1962).

⁸ Gerald Rosenthal, *Hospital Utilization in the United States* (unpublished doctoral dissertation, Harvard University, June, 1962).

C. EVALUATION OF THESE STUDY APPROACHES

Thus, there is a progression in the studies which attempt to predict use. The first two methods, which use present utilization rates, are relatively simple to apply on a community level. The multivariate approach, while more complex, has some theoretical advantages. It attaches relative weights to the factors affecting use. It thus gives an indication of how demand for hospital care will be influenced if any one factor is changed, either purposefully, as when the per cent of the population covered by health insurance is increased, or through natural changes, as when the age distribution of the population shifts. This approach also enables the hospital planner to revise his estimates of future use if he can anticipate the possible changes in any of the important factors.

As promising as the multivariate approach appears, the results currently obtained by this approach have not been as accurate as merely projecting present utilization rates. More accurate measures must be found, and the multivariate technique must be perfected before it will be suitable for use on a community level. Nevertheless, it is a promising approach.

It is important in these studies that the researchers utilize knowledge gained from other studies. For these statistical studies rarely discover anything new; they usually substantiate the observations of knowledgeable people. For example, a main contribution of empirical research is to show not whether hospital insurance is a factor affecting use but to what extent it is an influence. Studies that come up with conclusions radically different from the common belief should be further investigated to determine whether the findings are really true or whether the data are at fault.

IV. Summary and Conclusions

Let me briefly summarize what I have talked about today. First, the group of studies on "proper" use have taken two approaches. One approach meas-

ures utilization above and below some "average" level but does not define the "average." The other approach, represented by more elaborate or objective studies, uses criteria to determine the "proper" level of use. Studies on "proper" use should take into account non-medical factors. Deviations from what is "proper" may be the result of many factors, such as availability or non-availability of alternative facilities to care for the hospital patient.

In the second group of studies, attempts have been made to identify the non-medical factors that affect utilization. These studies are very important. More studies of this nature should be undertaken in regions of the country where variations in use are significant. By comparing areas which have different factors leading to different patterns of use, we can better understand the relation of each factor to hospital use.

In the last set of studies, I briefly reviewed some of the methods used for predicting hospital use. The success of these studies depends, to a large degree, on our learning more about factors affecting use.

Before I close, I should like to mention one area in which little research has been conducted and in which imaginative study is particularly needed. This is the area of unmet need—cases of people who are ill but do not enter the hospital. Estimates for this group obviously cannot be made from hospital data because the patients who need hospitalization but do not receive it do not appear on the hospital record. I mention this separately because, to date, few studies have been conducted that provide us with any reasonably adequate estimates of unmet need.

Decisions affecting the provision of health care are being made every day, and, in the near future, decisions with effects of even greater magnitude will doubtless be made. It would be unfortunate if unwise decisions were taken because of inadequate information available to the policy-makers. Researchers must, therefore, accept the responsibility, not only of collecting and interpreting data, but also of communicating their findings in a meaningful manner.

Discussion

QUESTION: I must preface this question by asking about a statistical fact that I recorded this morning, and I want to know whether it is accurate. The statement was made, I think from the Michigan study, that the admission rate of medical patients increased by 54 per cent but that the admission rate for surgical patients increased by 6 per cent. Is that correct? To me, these two figures indicate a need for an investigation in the medical area. I can understand a 6 per cent increase in admission rate for surgical patients because of the complexity of surgical procedures and the new developments. I am rather interested that the admission rate of surgical patients should be so far below the medical admissions, particularly when so many persons have suspected that we have a very large increase in the amount of unnecessary surgery that is being done.

Has anyone made an analysis of the medical admissions to a hospital in 1945 and compared the results with a similar analysis of the medical admissions to the same hospital in 1960? Is the difference explained by the types of medical patients, by the types of diagnoses, that are being admitted? Is the difference perhaps related to a new type of care, or is it related to the so-called extra-medical reasons that may have a direct connection with these types of diagnoses?

CHAIRMAN: If I understood what Mr. McNerney was saying, he was talking about the factors affecting their premium—net premium, pure premium. I think he arrived at a figure of 50 per cent, which was an increase in patient days. In other words, you had the effect of both increased admissions and length of stay. So that we are talking about the fact that days of care increased 50 per cent in the medical category and a smaller percentage in surgery.

Cecil Shepps, at Beth Israel Hospital made comparison of all admissions in a twenty-year interval. I think he found no great differences by diagnoses. What he found was a tremendous difference in age, a much older population group. If you consider all the chronic illnesses, that is one explanation.

MR. THOMAS B. FITZPATRICK: These figures, I wanted to remind you, are Blue Cross admission rates—a fact which makes a great deal of difference. I don't know the explanation for them, but it is possible that over ten years, 54 per cent does reflect substantially the change from pure surgical coverage to

surgical-medical coverage. That would be one simple explanation of it. I have not seen the figures. They do not come from the Michigan study.

CHAIRMAN: These are for Blue Cross. I do know one thing. One of the bulletins that was developed by the staff at the Health Information Foundation showed something like a 50 per cent reduction in the incidence of appendectomies, for instance. The two reasons for the highest incidence of admissions, you recall, were tonsillectomies and then appendectomies. I think they still tend to be the leading surgical procedures, but, as a rate in the population, both are down about half from what they were twenty years ago. Consequently, you have a big reduction in admissions for surgery. Does anybody else have any comments on the point brought up?

QUESTION: I think that, during the same period, Blue Cross covered some psychiatric admissions.

CHAIRMAN: Coverage has certainly been expanded for mental illness, and that would be in the medical category.

QUESTION: We have done some work in circulatory and medical respiratory cases and found only a small relationship to age. Talking with many physicians and public health authorities, we found them at a complete loss to account for it. The most commonly cited reason is this thing Mr. Fitzpatrick speaks of, namely, Blue Shield developments and greater hospital care. However, this is not substantiated.

QUESTION: Mr. Feldstein said nothing about studies of the use of hospitals in the light of availability of doctors. Haven't some studies been made on this?

CHAIRMAN: There have been some efforts, I think, by Roemer. I believe Mr. Durbin has been plowing through the figures some. I don't know of any beyond those. Do you know, Dr. Anderson, of studies of use related to physician population?

MR. ODIN ANDERSON: No.

CHAIRMAN: Am I right, Mr. Durbin, in saying that, using the national figures by state and the multivariant approach, you found that the number of physicians in a state did not greatly affect hospital use. Do you want to comment on it?

MR. RICHARD L. DURBIN: We went through a lot of gyrations and came up with the conclusion that the supply of physicians might have a positive effect if the supply increased over a certain percentage.

Hospitalization or admission and stay might then be decreased. In other words, if you increase the supply of physicians in a community, you might decrease the use of hospitals, measured both by admission rate and by length of stay.

MR. LAWRENCE A. HILL: We haven't done too much scientifically on this; but in thirty-four surveys patterned after the Michigan study, our findings

pretty much substantiate Mr. Durbin's. That is, the effect of too few doctors is simply to put patients in the hospital because they are easier to get to. As the number of physicians increases, there is less pressure, and the doctors do more in the office. At least this would seem to be the case. However, our findings have not been consistent enough to enable us to draw hard and fast conclusions.

Hospital Planning and Future Hospital Use

JACK C. HALDEMAN, M.D.

CHAIRMAN: The Hill-Burton Hospital Survey and Construction Act has had a substantial effect since its initiation in 1946 in providing better hospital facilities country-wide. An important aspect of the act is that, in addition to providing financial grants through the states, all states are required to develop a hospital plan for service to all the people.

The Division of Hospital and Medical Facilities of the Public Health Service not only is concerned with supervising financial grants but has, from the first, realized that, in keeping with the intent of the law, grants could only be made after good hospital planning at the state level. To facilitate good planning, the federal administrative agency has served as a coordinating agency for the exchange of experience between the states and national and state hospital associations. Fundamental to this planning is a determination of future trends in hospital use.

Dr. Jack C. Haldeman, director of the Division of Hospital and Medical Facilities of the Public Health Service, has been responsible for stimulating increased emphasis on hospital planning, particularly in metropolitan areas where the problem is presently acute. He has also taken leadership in focusing attention on the need for hospital beds to care for patients of various types.

Dr. Haldeman will discuss hospital planning related to future hospital use and requirements for beds for different grades of care.

I suppose that it is an historical fact that our yesterdays have a strong relationship to our tomorrows. This is impressed on me each morning when I pass the National Archives Building in Washington on my way to work and read Shakespeare's poetic inscription, "What is past is prologue." This familiar saying is particularly applicable to those of us who are trying to think of where we are going in the hospital field in the years ahead.

Those of us interested in hospital planning must look back and re-examine the traditional development of our hospitals and other health facilities, and we may also inquire into the philosophy of the era which saw these facilities come into being. Has our philosophy changed? If so, how can we best develop a pattern of facilities that will conform to our new

philosophy as it relates to the roles which have been assumed by the various facilities and, indeed, the whole health community?

In examining the origin of our present system, we find that our early hospitals were developed as convenient institutions to house the destitute or persons needing public assistance. Our mental institutions were originally conceived as asylums to offer protection to the community from the danger of exposing the issue to society. In neither instance was the primary concern the treatment and care of the physically or mentally ill. Not until comparatively recent years have our health facilities assumed the treatment of disease as their primary role.

Because of historical development, the separation of services and the pattern of facilities from which these services were administered continued to follow separate paths. In general, four types of facilities emerged: short-term or acute hospitals; hospitals for the chronically ill, such as the tuberculous; mental institutions; and nursing homes, some of which provide skilled nursing care. As a rule, these facilities were completely independent of one another; they were usually scattered in different locations; and the patterns of financing their operating costs varied.

Because individual hospitals have been operated as if each were an island unto itself, numerous problems have developed. First of all, the quality of comprehensive care has suffered in many instances. For example, a mental institution which is focused primarily on the treatment of mental illness frequently does not have an adequate staff to care for certain physical ills of these mental patients. Again, a short-term general hospital may not have an adequate staff to provide rehabilitation services.

Over the past three or four years, the Public Health Service, in co-operation with the American Hospital Association and other voluntary agencies, has sponsored a series of *ad hoc* committees. The primary charge given these groups has been to develop principles for the planning of various types of health facilities as well as area-wide planning of hospitals and related health facilities. The one common thread running through the discussions of all these groups is the need for co-ordinated planning of health facili-

ties of all types in order to incorporate sufficient flexibility to cope with the changing needs brought about by development in medical research, the shifts in our population, the general trend toward longer life and new methods of paying for care.

Tremendous changes have taken place in the health-facility field in the past fifteen years, and equally dramatic changes are going to take place, I believe, in the next fifteen years.

In order to make long-term plans for the best use of health facilities of the future, some crystal-ball-gazing would seem to be in order. We must ask some questions:

What will the patient of the future be like, and what will be his needs? To what extent will barriers to efficient co-ordination of health services be removed? What will be our financial resources for health care in 1975? What will be our health facility need in 1975? What will the hospital of the future be like? I am aware that making long-range predictions is a precarious business, but I believe that certain trends of the past fifteen years can be used as a basis for making "guesstimates."

What will the patient of the future be like, and what will be his needs?

I recently heard Phil Bonnet make the prediction that by 1975 there would be a further substantial decline in the proportion of acute illness seen in the hospital and that the totally dependent patient would be rather uncommon. He said that this decline would be accentuated if there were a major breakthrough in the treatment of cancer.

If his prediction is accurate—and I think it is—the hospital of the future will be caring largely for ambulatory patients, both inpatients and outpatients. Emphasis will be on early diagnosis and health maintenance, and more preventive activities, especially health education, and less definitive medical treatment will be carried out. In short, the hospital will become a medical health-service center, strongly oriented to providing the various levels of care needed by patients with chronic illness.

To what extent will barriers to efficient co-ordination of health services be removed?

Political, economic, and social factors which have evolved as a result of past attitudes toward health care constitute major barriers to efficient co-ordination of health services. Most of these factors involve legal and administrative considerations, financing, and social acceptance. Of these factors, our method of financing health care is probably the most critical.

I believe that the next fifteen or twenty years will

see major progress in the removal of these barriers. One reason hospitals today are reluctant to establish long-term care and rehabilitation units is the inability to finance the costs of maintenance and operation of efficient care units. This situation, I believe, will change.

The percentage of individuals who can afford to pay for high-quality care from private resources is increasing, and additional federal legislation which will further remove the financial barrier for health care of the aged seems likely to pass. The effect, as far as removing the financial barrier is concerned, will be the same, whether the federal legislation involves a means test or utilizes the social security mechanism, provided the payments for care are adequate.

Barriers to financing the care of the mentally ill in community hospitals are being removed. Last year more mental patients were admitted to these hospitals than were admitted to state mental hospitals. More prepayment plans are extending coverage for the mentally ill. Fourteen states have passed legislation providing for state financial assistance for community mental-health programs, and I predict that, by 1975, most states will have done so.

What will be our financial resources for health care in 1975?

First, I would like to predict that our nation is going to put more and not less of our resources into health care. The social priority which we give health services will increase in the future as it has in the past, as the basic needs for food, shelter, and clothing are met for increasing numbers of our people.

In the fiscal year 1929, the total expenditure for health and medical care in the United States, including health-facility construction and medical research, totaled only \$3.6 billion and accounted for about 3.6 per cent of the gross national product. In 1961, all such health expenditures totaled \$29 billion, and, what is more significant in my opinion, this figure represents 5.7 per cent of the gross national product. In other words, Americans are now devoting almost 60 per cent more of their resources to health and medical care than they did in 1929.

Assuming that the same rate of increase will prevail through 1975, the share of the gross national product going for health and medical care could reach slightly more than 7 per cent. In terms of dollars, health expenditures in 1975 will exceed \$70 billion, assuming that the annual growth rate in the gross national product reaches and maintains a rate of 4.5 per cent.

Of course, hospital expense per patient will also in-

crease if the trends of the past fifteen years continue, but I believe, even with increased costs, \$70 billion in 1975 will purchase much more health care than \$29 billion did last year. I would hope, however, that, by 1975, the percentage of our health dollar devoted to community health services designed to maintain health and reduce the need for institutional care will be larger than it is now. I do not believe that we are pricing ourselves out of the health-care field.

What will be the health-facility needs in 1975?

I must confess that here my crystal ball has let me down. Much more research into the factors affecting the use of health facilities will need to be done before I shall be willing to predict the future with any degree of confidence.

Numerous studies have shown that a significant percentage of patients occupying short-term beds could, from a medical standpoint, be adequately cared for in outpatient departments or long-term care facilities. Others could be cared for in their own homes or in foster homes if community health services, such as home-care programs or home-maker services, were more universally available.

It should logically follow that the provision of more nursing-home beds in a community should decrease the need for short-term hospital beds. This may not always be true, however. A recent analysis of Hill-Burton state plans showed that, in the group of states having the highest number of long-term-care beds per 1,000 of the aged population, there was also a correspondingly high ratio of short-term beds.

An investigation into the characteristics of the hospital inpatient population should be an integral part of area-wide planning prior to the estimating of hospital and nursing-home needs for the target years being considered. Such a study made by the area-wide planning agency in Rochester, New York, disclosed that between 15 and 20 per cent of hospital patients did not require hospitalization for medical reasons. As a result of this study, plans for the use of approximately \$13 million of funds available for capital construction were radically changed. The number of new short-term beds previously programed was drastically reduced. Three long-term-care units for general hospitals were substituted, and the remainder of the funds were used for renovation and replacement of beds in obsolete facilities. I think the activities of these area-wide planning agencies in the next decade are going to have a real impact on bed use.

The availability of home-care programs can reduce the need for institutional beds. The total cost to the community, however, may not be reduced, al-

though the quality of over-all care should be improved. A study by the District of Columbia Health Department showed that a home-care program can empty hospital beds but that the cost to the department for the care of medically indigent was not reduced, since patients were kept on the home-care program for substantial periods of time.

Data from current Hill-Burton state plans give some clue to our future needs for long-term beds. The five states with the highest ratio of long-term beds are, by and large, those states with the highest public assistance payments. If the country as a whole is to be brought up to the level of these five states in efficient nursing-home beds, we would require an estimated 500,000 additional long-term beds. If we project to 1975 the need for long-term beds based on the level of care that now exists in five of our states, we would find that 700,000 additional long-term beds will be needed.

The analysis of data from Hill-Burton state plans concerning general hospitals shows the same variation that Mr. McNerney mentioned in regard to use of Blue Cross payments. I must confess that I am at a loss to explain why, for instance, Indiana has only 2.7 acceptable short-term hospital beds, when a neighbor, Missouri, has 4.4 beds per thousand; or why Idaho has 2.6 beds per thousand, while Montana, right next door, has a ratio of 4.6 acceptable hospital beds.

Although the number of acceptable general-hospital beds increased by 63 per cent between 1948 and 1962, approximately half of this gain was essential to maintain the 1948 level of general beds per 1,000 population. During these 15 years, the nation's population has expanded about 30 per cent.

Nationally, the ratio of acceptable beds has been increased from 2.8 beds per 1,000 in 1948 to 3.5 beds per 1,000 in 1962, but not in all states has there been a net increase in the number of beds. Thirteen states today have fewer beds per thousand than they had in 1948. The increase in beds has been terrifically spotty. The greatest increase in the number of beds is in the southeastern states, which were the farthest behind, but they still have an average number of beds less than that of any other section of the country.

In the Far West region, a significant increase in available beds was offset by a rapid increase in population. The only region experiencing a loss in acceptable beds per 1,000 population was New England, reflecting, to a great extent, identification there of non-acceptable obsolete facilities; in 1948, 9.5 per

cent of the total existing beds were non-acceptable as compared with 15.3 per cent in 1962.

Wide variations are also found among the states in days of care in all general hospitals, both long-term and short-term combined. A low of 669 days per 1,000 persons was reported in Mississippi, compared with 1,630 days per 1,000 persons in Delaware. Alaska and the District of Columbia are excluded because of unique situations with regard to populations served.

Even wider variations are found in the nursing field. Here the number of days of care goes from a low of 70 per 1,000 population in North Carolina to a high of 1,568 in the state of Washington. When days of general-hospital care and nursing-home care are combined, the range is from 827 days per 1,000 in Alabama to 2,640 in Massachusetts.

When plans are being made to meet the needs for health facilities in any community or area, recognition must be given to the interrelationships among all types of facilities, services, and programs. Therefore, in determining future needs for general-hospital beds, equal attention must be given to the needs of nursing homes, chronic and mental hospitals, rehabilitation centers, outpatient departments, and out-of-hospital-care programs. Conversely, planning for such institutions and services cannot be effective without considering the expanding role of the general hospital in many areas of care.

A good example of this expanding role of the general hospital is the increasing use of outpatient departments. In 1958, hospital outpatient visits were reported to total 62 million. The number estimated for the current fiscal year is about 90 million, an increase of 45 per cent since 1958. Emergency visits increased nearly 100 per cent and now constitute over 30 per cent of the total outpatient visits. Assuming that the same rates of increase will continue, outpatient visits in 1975 could total between 275 million and 300 million, or an increase from about 485 visits per 1,000 population in 1962 to about 1,200 visits per 1,000 population in 1975.

Contemporary hospitals have satisfactory organizational patterns for caring for both indigent and non-indigent inpatients, but they need much more efficient methods of caring for the increasing proportion of outpatients who can pay for their own services.

As medicine increases in complexity, medical practice becomes more closely organized around the hospital as a service agency. By 1975, if indeed it is not true now, I believe that the diagnostic services traditionally available in a hospital will be an indispensable prerequisite for the office practice of medicine.

Provision of office space within the medical-center complex for all physicians who desire it would seem to be a partial answer to the need for better methods of providing diagnostic services without substantially disturbing the traditional physician-patient relationships.

More needs to be known about the effect of increased use of outpatient services on the need for general-hospital beds. For years I made the statement that the extension of Blue Cross coverage to outpatient care would reduce the utilization of hospital beds. Preliminary studies of plans that have extended benefits to outpatient care suggest that the reverse effect is true.

Another area where the quality of care needs to be improved is the emergency department. Area-wide planning groups are suggesting that the number of hospitals in metropolitan areas providing these services should be reduced and that the remaining hospitals should be planned so that the work load will justify staffing with the specialties required for the highest level of medical care.

Perhaps the greatest break with tradition in the health-facility field during the next 15 or 20 years will be in the mental-health field. Community mental-health facilities will gradually replace the large traditional state institutions and will become the foci for future mental-health activities. These smaller facilities, located close to the patients' homes, should provide preventive, early diagnostic, outpatient, and inpatient care, including transitional and rehabilitative services. I would predict that the number of inpatient beds for mental patients can be reduced by 50 per cent by 1975. This estimate is predicated on the assumption that the progressive concept of "tailoring the facility to meet the medical and nursing needs of the patient" will be applied, that mental facilities will no longer be the dumping ground for the senile aged, and that barriers to financing the construction and operation of community mental-health centers are substantially removed. Such centers should be integral parts of medical-center complexes so that the most efficient use can be made of facilities and scarce professional personnel as the character of our institutional population changes.

A similar trend is predicted in the case of facilities for the care of the mentally retarded. Community-oriented centers providing a broad spectrum of services, including educational, will replace the larger state institutions. Area-wide planning agencies must not exclude this area from their considerations.

I am greatly concerned that at meetings such as this, where we are talking about hospital planning and use, about 95 per cent of the conversation re-

volves around the general hospital, the short-term hospital. I do wish that, when we are thinking of planning health facilities, we could instinctively think of the total spectrum of health facilities.

Specialized hospitals for the care of the tuberculous will continue to close or to be converted to other uses. The surgeon general's *ad hoc* committee on the planning of facilities for the care of tuberculosis has expressed concern over the poor physical condition of many of the remaining plants. The committee feels that many of these should be closed and not put to any use. In those instances where patients cannot be transferred to other tuberculosis hospitals, the committee recommends that the patient should be cared for in newly constructed units associated with general hospitals.

The committee feels that the tuberculosis problem will probably be with us for years but that the care of the tuberculous patient should be integrated into the main stream of health care provided in medical-service centers.

As for rehabilitation facilities, the financial barriers for care of the disabled in rehabilitation centers should be further removed by 1975 and comprehensive services should be more universally available. The number of such centers has doubled in the last ten years, but they are still serving only a relatively small proportion of people needing those services.

What will the hospital of the future be like?

I would like to think of the hospital of the future as a progressive-patient-care hospital in its broadest sense. Progressive patient care not only has important implications for individual hospitals but, in its broadest sense, encourages the development of a co-ordinated pattern of services and facilities on a community-wide basis. The concept has special application to what has evolved as one of the ultimate goals of area-wide planning of health facilities—the establishment on a common site of a medical-service center which would offer a wide spectrum of services and facilities for both the inpatient and the outpatient. This center would include a hospital offering various levels of care for short-term as well as long-term patients, housing for the aged, a health-service center containing offices for both official and voluntary health agencies, facilities for private physicians' offices, and perhaps a motel for ambulatory patients as well as visitors to inpatients.

The development of such centers would result in

better utilization of scarce professional and technical personnel and would permit a more flexible use of facilities as medical advances result in changes in the character of our institutional population. This center would serve as a focal point for community health services. In many respects, the emphasis of the regional medical-service center would differ from that of today's conventional general hospital. For instance, I would hope that the medical center would become as interested in caring for the ambulatory patient as it now is in caring for the bed patient; as interested in caring for long-term-care patients, including tuberculous and mentally ill, as it now is in caring for the short-term patient; as readily available for assisting the physician in the care of his patient in the home as it now is in assisting the physician in the care of his patient in the hospital; as interested in providing continuity of care for patients in paramedical institutions as it now is in providing continuity of care within the walls of its own building; and as dedicated to providing preventive services and the teaching of health care as it now is to treating the ill.

Obviously, all hospitals cannot provide the total spectrum of services I have described, but all can incorporate the philosophical concept into their programs. To the extent possible, I would like to see the smaller hospitals operated as satellites of medical-service centers, in order that we may truly have a co-ordinated hospital system in this country.

I would hope that the health facilities of the future would be built in accordance with recommendations developed by area-wide planning agencies. As you know, many communities in the country are developing area-wide planning agencies which are made up of top-echelon community leadership. These agencies are planning for the broad spectrum of facilities and services needed in the community. Their planning is on a continuous basis. With a full-time staff, implementation has been built into the planning process. Such planning will have a real impact on hospital use and, in fact, has already had a large influence in many communities.

A friend of mine once remarked: "After all is said and done, there is more said than done." It is my sincere hope that this will not be the case in the planning of health facilities. On the contrary, I share the optimism of those who firmly believe that much will be accomplished in this field in the next fifteen years.

Labor and Management Look at Hospital Use

JEROME POLLACK

CHAIRMAN: The channeling of large sums of money by the public into health insurance has created a new climate for the discussion of hospital problems. Industry and labor have bargained to meet the increased cost of hospital insurance, and that bargaining has often raised the question whether increased costs are necessary. Labor particularly has raised these questions when Blue Cross rate changes have been before public officials for approval.

The United Auto Workers has given leadership in bargaining for adequate health-insurance benefits. Their members represent a major portion of the subscribers enrolled in the Blue Cross Plan in Michigan. Several speakers on this panel are basing their discussions on broad experience in Michigan. Mr. Jerome Pollack for a number of years was an official of the United Auto Workers and was concerned with health and welfare benefits. He has been invited many times to address audiences of physicians and hospital administrators. He has been an excellent representative of labor, critical where he thought criticism was warranted, but so knowledgeable about the problems of hospital and medical care that his comments have been listened to with respect.

Mr. Pollack has just been appointed to the faculty of the School of Public Health and Administrative Medicine of Columbia University. He is also to serve as the director of the New York Labor-Management Council on Health and Welfare Plans, a new, independent agency organized by industry and labor as an outgrowth of their concern over increased use and cost of health insurance. Mr. Pollack will discuss hospital use from the standpoint of his experience and his new assignment.

In the past few years, prepayment has advanced from an additional aid to become the primary source of financing non-governmental hospital care in the United States. Since 1956, more than half of all private expenditures for hospital care have come through prepayment. This year, the two-thirds level was reached. Barring unforeseen circumstances, in a few additional years, all but a residue of perhaps one-fifth or even less will come from what, for lack of better terminology, is still called third-party payment.

Most third-party payments come from the contributions of labor and management. Of the 123 million people covered by hospitalization insurance at the end of 1960, 103 million—40 million employees and 63 million dependents—were covered through arrangements arising out of employment. Of the \$3.4 billion paid as hospitalization benefits that year, \$2.4 billion came from benefit plans based on the employee relationship. Prepayment has grown overwhelmingly on the financial base of the employee benefit plan.

Labor and Management Find Advantages in Health-Care Plans

Labor and management have found common advantages in allocating wages for health benefits. Through such benefits, unions have been able to obtain wage increases in a highly desirable form. Employers have accepted health benefits as a worthy way of spending wages to promote better health, morale, and economic security. Wage-earners and their unions have sought to remove the economic barriers to health care. The higher-income strata, faced with growing concern over the cost of major illness, have exercised a unique initiative in pressing for health insurance addressed to their needs. Thus, a desire for health insurance has come from virtually all categories of employees. Although a minority of insured employees belong to unions, labor has pursued collective bargaining for health benefits with great vigor. It has been active as well as vocal in pressing for benefit improvements, occasionally initiating programs of its own. Benefit precedents set in collective bargaining are often applied to other employees. Collective bargaining has, therefore, exerted an influence extending far beyond the number of employees directly in its jurisdiction.

Position of the Hospital vis-à-vis Labor and Management

The hospital thus finds itself in a markedly closer association with labor and management. The core of hospital financing has shifted from episodic payments by patients to periodic payments made largely by companies and employees.

These payments have become crucial to the voluntary hospital. Virtually all the financial support for the more intensive use, growth, and development

of hospital care has come from prepayment and from the contributions of management and labor.

Beyond providing a new source of financing, labor and management have assumed functions that elsewhere had to be discharged by government. The ability of American labor and management to decide on benefits and initiate contributions has made it possible for voluntary prepayment plans to grow large and effective enough to survive. The existence of a voluntary system of financing hospital care has probably depended more on the nourishment it has received from labor and management than on any other single factor.

Labor and management are new to the roles they now play in hospital financing. Often they are unaware of the impact they exert in purchasing care on so large a scale. Responsibilities have fallen on people primarily devoted to other pursuits, to whom health benefits are still a supplement to wages. There may be considerable apprehension over what labor and management want and what they are likely to do. Nevertheless, to ignore their attitudes is to neglect the financial underpinnings of the hospitals' economy.

Concern about Rising Costs

Labor and management are *both* concerned about the rising cost of hospital care. They have seen hospitalization repeatedly lead all items on the consumer price index, and they have had to finance increases in premiums exceeding even the rise in the index. With some upgrading of benefits, per capita premiums have increased about 10 per cent a year. Wages have not risen commensurately. To finance, out of a wage allocation, a benefit whose cost increases more rapidly than wages poses a financial strain which few groups anticipated, which at best is not easily accommodated, and which the prevalent methods of financing are not well designed to meet.

Even if the justification for increased cost were totally unassailable, the unremitting succession of increases would be accommodated only with some difficulty. However, the justification received by employers and employees in support of the increased contributions they are required to make is generally inadequate and often faulty. The discourse between hospitals, their prepayment plans, and the public is almost never well conducted. Many hospitals, physicians, and prepayment plans find it unpleasant to have to account for their finances to management and abhorrent to have to report to labor. There is no evidence of an adequate recognition of the role that labor and management play today in the hospitals' economy.

At public hearings over the cost of prepayment, labor has often led the criticism. Management may act with greater restraint, but it listens attentively to such proceedings. It draws its own conclusions from the incidence of rate increases and from evidence that emerges in inspecting the claims for benefits. These have left management with a conviction that not enough is being done to assure that only warranted elements of cost are passed on to the payer. The lack of confidence of many companies in existing efforts to control cost is expressed in a widespread unwillingness to commit themselves to fully paid service benefits. Many adhere to cash limits because they believe that to extend the money benefits would invite needlessly higher charges.

Utilization is the ubiquitous element in the increasing expenditures for hospital care. Per diem costs are rising rapidly, but there is little consensus or clarity on what can be done about them. Rising utilization is the multiplier to the cost of care. It has more than offset the reduction in the length of stay. To the extent that it includes faulty or needless elements, it would seem to offer a possible partial offset against increasing cost.

For a time, increased utilization was accepted as desirable. One of the primary aims of prepayment was to remove economic impediments to care. An increase in use was thus to be expected. Labor, in particular, would be most reluctant to resurrect any barriers to care.

All sides originally recognized that prepayment would stimulate the use of hospitals. Stimulation was critically necessary when occupancy rates were threateningly low. But having demonstrated a remarkable capacity to stimulate occupancy, there was no reason to suppose that the incentives exerted by prepayment would stop at the right place.

By a logic that was never too carefully scrutinized, hospitalization was regarded not only as worthy of insurance in itself but as a way to police other health benefits and make them more insurable. Making benefits contingent on hospitalization naturally augmented the incentives for hospital admission. Labor and management are aware at first hand of admissions that occur principally for the purpose of obtaining benefits not otherwise available. They have seen evidence of tests ordered, of procedures performed, of days of stay, and of whole admissions whose justification, to put it charitably, is questionable.

A number of professional studies have quantified unnecessary utilization. Measures, originally crude, are now increasingly refined. The methodology may

differ, but the results reveal a considerable elevation of the utilization of hospital care.

Labor and management, moreover, have seen the comparative differences in utilization associated with different types of prepayment. Highest utilization usually occurs among Blue Cross subscribers, lower among the privately insured, and lowest among those with direct-service plans providing ambulatory benefits. The evidence is not entirely conclusive, nor is the course of remedial action clear, but the implications are noted.

Prepayment has stimulated some faulty utilization. If an elevated utilization is a consequence of prepayment, a remedy may also be found by proceeding further into prepayment and by controls exerted in medical practice.

Faulty utilization would not have received so much notoriety, nor would it have been dealt with so superficially as it has been, but for a common belief that it could be very simply corrected. Co-insurance and deductible clauses were in vogue, and it was believed that they held the answer to faulty utilization. They had considerable appeal to many in management but were resisted by labor as withdrawing from prepayment in a way that would be most burdensome to people of low income without solving the underlying problem.

Labor, Management, and Physicians Look at Prepayment

Although labor and management have found common ground in prepayment, they do not see entirely eye to eye. As distinctively different kinds of agencies, responding to differing traditions, interests, and outlook, it would be too much to expect their aims to coincide. Initially, it took legislation to require employers to bargain over health insurance. Ever since, there have been continuing efforts by labor to enlarge company contributions toward improved and increased benefits, while management has sought to limit its obligations at the bargaining table by setting limits to benefits toward which the company is required to contribute. The general progression has been to initiate company contributions, first for employees, then for dependents; first toward modest, and then toward improved, benefits.

In face of increasing cost, labor has tended to press for complete company payments, not only for greater relief against rate increases, but in the hope of eliminating such increases or at least to keep them from being directly imposed on the employees. The growing trend toward requiring companies to pay the entire cost has provoked some uneasiness on the part of management and runs contrary to management's

preference for contributory financing. There are some indications that management might reciprocate by resisting benefit improvements. It is doubtful, however, whether such attitudes will reverse the broad movement toward a deeper involvement in health care. Labor and management will continue to negotiate over health care, and they will spend more money on benefits. Their common interest is co-contributors and co-beneficiaries, once their economic settlements are achieved, will bring them closer together in perception and in opinion.

Neither labor nor management has concluded that prepayment has gone as far as it can. Their ability to pay has been taxed, and their willingness to pay has been tried, but not exhausted. However, they hold the instruments used to provide health benefits in less than complete confidence. A brief but accurate firsthand sampling of such opinions follows.

One prominent industrialist speaking of the increasing cost of the health benefits provided to the employees of his company remarked: "We don't want to hold back benefits. We know that they will continue to grow. But we are being ground between the unions' demands for more, the bottomless capacity of the health system to absorb more, while insurance plans are indulgent and don't police enough."

When union people speak with equal candor, they say that prepayment plans are negligent in controlling abuses, that their members are being disadvantaged under indemnity plans, that payers often do not fare too well in negotiations over service plans, and that they do not have an adequate voice in influencing the policy of prepayment plans to get equity for consumers.

To complete the poll, I have asked many physicians to indicate how much they believe could be saved by more diligent controls without impairing care. The doctors advance varying estimates, which generally cluster around 25 per cent of the amount that is now being spent for prepayment plans.

On all sides, there are questions, reservations, and doubts over whether prepayment will be able to respond to these problems or whether it has lost the dynamic qualities it displayed when the survival of hospitals was at stake and the threat of legislation was imminent.

Organization of a Joint Labor-Management Council

In the past, labor and management generally limited their attention to the selection of benefits. As rate increases became more common, their attention fell first on the more conspicuous issues, although these were often actually unimportant. Now it is increasingly clear that, if something effective and con-

structive is to be done, attention will have to be re-directed from the peripheral to the central issues and that a vehicle will have to be created to advance the consumers' interest much more effectively.

Accordingly, earlier this year a group of prominent labor and management leaders in New York formed the New York Labor-Management Council of Health and Welfare Plans. They were joined by hospital administrators and physicians who wanted to participate. A tripartite agency was thus formed. The council, a new venture in labor, management, and professional co-operation, will study the major issues in health and welfare plans. It will identify and study problems, attempt to formulate policies around which agreement can be reached, and press for action.

The utilization of hospitals is obviously of considerable interest to such an agency. The council will not attempt to add to the considerable research already done on this subject. However, it is pulling together all the available studies and will seek to make its contribution in evaluating and implementing them. The council will undertake a firsthand examination of some of the devices used to control utilization. It will, for example, visit utilization committees and find out what they do, how often they meet, the standards they apply, and what they accomplish. The council will probably make public its assessment of what is being done and advance rec-

ommendations on what further steps should be taken, including the apparent need for a better definition of the use to which the hospital bed should be put in today's medical care.

An organization which brings together the primary parties involved in financing health care and which pursues their common problems with vigor, objectivity, and understanding would help meet a major deficiency in the voluntary system. That system now lacks purchasers who are sufficiently informed and who invest the time to acquire the competence needed in dealing with the problems of medical economics on a parity with the purveyors of health care. Inadequate consumer participation is as grave a weakness as inadequate physician and hospital participation. There is some danger that the voluntary system may not be able to reconcile, in the public good, the many opposing and conflicting interests engaging in it. The new organization can help professionalize the new purchasers of health care, making them more knowledgeable and more effective in advancing the consumer interest. The influence of a well-informed consumer, whose intrinsic interest is in good care and in good methods of financing, can only be constructive.

Discussion

QUESTION: I assume that the 25 per cent savings that these doctors talk about are on other doctors' patients. Is that right?

MR. POLLACK: I am as skeptical about the figure as you, but I report it accurately. This is a judgment, if not a statistic, that expresses the opinions and observations of physicians who certainly see much of practice—their own and that of other physicians and hospitals. It is significant that they believe that so much waste exists. It could be an acknowledgment of their own practice.

QUESTION: Dr. Haldeman moved very quickly over a point in connection with his opinions on home-care programs. I am not sure exactly what point he made. I wish he would elaborate on it.

DR. HALDEMAN: The assertion is frequently made that organized home-care programs will cut hospital costs. I think that is probably true, but the point I wanted to make is that such programs do not necessarily cut down on the total cost of health care to the community. I am thoroughly in favor of home care, just as I am thoroughly in favor of every element of progressive patient care, but I don't think we ought to try to sell it as a method of saving money. An organized home-care program might save the hospital some money, but somebody has to pay for the home-care program. For instance, the District of Columbia study found that patients stayed on home care for a very long period of time. It is true that they weren't on the hospital budget, but they were certainly on the health-department budget.

QUESTION: Would you feel, doctor, that a substantial home-care program would really do the job in the area or in the state or in the nation? It might have significant impact, total impact eventually, on the need for additional general-hospital beds, which in our judgment is perhaps the greatest hope for home care.

DR. HALDEMAN: I would hope that is true. I think it is a little like one or two other statements of my early beliefs about what would happen. I think we need more evidence before we make too positive a statement on what its impact will be. However, I am certainly in favor of the development of organized home-care programs.

QUESTION: Dr. Haldeman, in your discussion of acceptable hospital beds, you pointed to the disparity in acceptable hospital beds in different regions

of the country. I wonder whether part of this disparity might be attributable to the definition of what is acceptable.

DR. HALDEMAN: I had an analysis made of the total number of beds, not taking into consideration those that are unacceptable. In the country, there are about five-tenths of a bed per thousand which the state Hill-Burton agencies have said are unacceptable, but the same disparity still obtains. For instance, Indiana instead of having 2.7 beds has 3.3. Missouri has 4.4 acceptable beds, but the total ran over 5 beds. So the disparity exists even when we compare total number of beds.

QUESTION: Dr. Haldeman, what was the figure that you predicted in outpatient department visits per 1,000? Was it 485?

DR. HALDEMAN: It currently runs in the neighborhood of 485, and it would be in excess of 1,200 visits per 1,000 population in 1975 if this same increase continues.

QUESTION: This leads me then to a question for Mr. Pollack to consider. Do you believe that third-party payers have a responsibility for paying other than inpatient costs, such as outpatient services for surgery and so on?

MR. POLLACK: Prepayment should be extended into outpatient surgery and other ambulatory services. These services can combine to become a significant economic burden whose risk needs to be shared. Financing of them through prepayment would provide better economic support for these segments of care as it has for hospitalization and surgery. There is every indication that such an extension of prepayment is occurring. In a few years, physicians' services will probably be no less insured than hospital services are today. However, care outside the hospital is much more difficult to prepay. Greater controls are needed in insuring segments of care less susceptible to controls.

QUESTION: I wanted to ask a question of Dr. Haldeman and perhaps Mr. Pollack also. There have been two or three court cases recently concerning the extension of medical and health benefits as part of pension and profit-sharing payments. As you know, under the existing pension and profit-sharing laws, medical, health, disability benefits, and the like are considered separately. Now in some test cases the courts have held that if a company wanted to con-

tinue their medical and health disability plans for retirees, this extension would be considered to have the same tax shelter as do pension and profit-sharing plans.

Does Dr. Haldeman have any information as to the possibility that the laws would be so amended? And Mr. Pollack, would labor and management go along with that concept of paying the bills after retirement with pensions and profit-sharing benefits?

DR. HALDEMAN: I really can't answer that question. Perhaps Mr. Pollack or somebody else in the room can.

MR. POLLACK: I have personally negotiated several arrangements to continue medical benefits after retirement and have thoroughly explored the issues with management.

By and large, I don't think that any substantial advantages will result from a change in the tax law. The problem is much deeper. Employers considering retiree coverage visualize an increasing number of retirees and dependents for whom they would have to pay increasingly costly benefits for an indefinite period. Through Blue Cross plans with community rating, they pay the same amount for the retired and unretired, but coverage of the aged contributes appreciably to increased premiums. Under experience-rated plans, the employers face directly augmented increases in cost.

Beyond some advanced funding, I do not see any great advantages in putting the retiree health benefits under pension plans. Pensions pay dollar benefits; it would be difficult to provide hospital-service benefits on an actuarially sound basis. Indemnity benefits, even if initially satisfactory, are bound to become progressively inadequate.

Pension benefits, moreover, are generally proportionate to the length of service with the employer. If health benefits were similarly prorated, they would be inadequate for employees retiring with less than a full term of service. On the other hand, to provide uniform benefits would unduly burden the last employer.

A system of financing is needed that can spread the cost and accumulate reserves over the worker's entire career. The answer lies in this direction rather than in tax incentives.

QUESTION: What are you going to do in the medical area? Is somebody working on this problem? The hospital is said to be a device that is going to control hospital utilization, and this implies that the hospital can do something about it. I am not sure that other avenues should not be explored.

MR. POLLACK: We are contemplating the whole spectrum of health care. The New York Labor-Man-

agement Council on Health and Welfare Plans is studying medical fees, medical prepayment, and medical practice. I believe that a composite approach needs to be taken, which certainly cannot be confined to the hospital even in controlling hospital utilization. If the consumer had greater opportunity to participate in planning and policy formulation and greater confidence in the mechanisms being used, he might be able to educate his constituency and support greater controls through health and welfare plans.

QUESTION: Mr. Pollack, it is obvious that the physician is deeply and personally involved in some of the things you pointed out. How do you plan to move toward involving the physician as a controlling factor in many of these problems?

MR. POLLACK: Physicians are becoming increasingly concerned with the cost of health care. They have much at stake and are anxious to avert blame for increased cost which is descending on the profession. They are beginning to establish utilization committees under their own prepayment plans and to enlist physician participation in controlling utilization.

However, such utilization committees are just getting started in medical prepayment, and they have a long way to go before they can function fully with well-articulated control programs. So far, they haven't accomplished very much, and utilization continues to surge ahead. I would assume that such efforts will be further developed.

QUESTION: But, in general, the only direct angle that you see is the hospitals?

CHAIRMAN: Aren't we confronted here with trying to develop a force? You can conceive of applying force through the hospital structure. But what other force have you, except government, that can be applied? If you are talking about home and office care, what structure is there unless practice is reorganized? Some people lean rather strongly in that direction.

MR. POLLACK: One of the early efforts of the New York Labor-Management Council is to study the United Medical Service (Blue Shield) Plan in New York. Most of the Plan's subscribers are enrolled under an admittedly obsolete contract, and the Plan has been unable to discontinue this contract. The Plan and its public have not arrived at a satisfactory solution. The council is establishing a fifteen-man committee—five appointed by the five county medical societies, five representing labor, and five representing management—to study the situation and see whether a better solution can be developed. If better answers are devised, efforts will be made to get them

accepted. This could create a new force that will be heeded. The council itself is a voluntary, non-governmental agency that could become a force by which consumers, hospitals, and physicians might agree on necessary changes and support their adoption, in the medical as well as in the hospital field.

QUESTION: Mr. Pollack, many others today talked about utilization. I am getting a bit confused about admission rates under various types. It has been suggested, as many of us at Health Insurance Plan have concluded, that capitation would produce a reduced admission rate. I think, with you and Trussell and others, that the evidence gets rather flabby. I realize this is outside Dr. Roemer's topic tomorrow, but maybe he might comment on this in relation to the Densen study at this time.

DR. MILTON ROEMER: I can comment very simply on what the findings in Saskatchewan are, namely that if prepayment covers home and office care, utilization is higher rather than lower. Findings have been turned up in some limited Blue Cross experiments, with outpatient benefits, which indicate that the net effect has been to increase, rather than decrease, the hospital-admission rate. I think the only explanation is that some unnecessary admissions are prevented by providing outpatient benefits but that this result is compensated for by the finding of new cases that are hospitalized.

CHAIRMAN: Two publications have reported decreases in admission rates. A third study by Densen concerns a union with self-insured hospitalization benefits, which uses the Health Insurance Plan and a panel of physicians on the fee-for-service basis. Neither this study nor Trussell's investigation showed reduced use for the closed panel group practice.

These are variations in use which do not confirm what was originally thought: that closed panel group practice, prepayment, or coverage of home and office care would reduce length of hospital stay. That is somewhat in question now, is it not, Mr. Pollack?

MR. POLLACK: Yes, I am well aware of these studies, but they upset only some inadequately explored statistical inferences. There is no lack of direct evidence that people are admitted to hospitals in order to collect benefits to which they would not otherwise be entitled. When ambulatory benefits are

available, such admissions become unnecessary. However, other factors are also operating that will reduce utilization under limited plans and increase it for the more comprehensive programs. As our measures are refined, they will reveal overutilization as well as underutilization, but they will probably not refute well-known and well-observed facts.

QUESTION: I am interested in some of the possible effects of the fact that labor and management have such a grave concern about the use of hospital facilities. You mentioned some 103 million people involved in a labor-management group. Will the influence or the concern of labor-management be broad enough to give consideration to persons who are not involved with labor and management or those who are on the other side? Perhaps what I am meaning is: With the selected risks that labor-management represents, will consideration be given to the needs of those who are of the less selected risk?

MR. POLLACK: That is a good question. As yet, it remains unanswered. Companies and unions are concerned foremost with their own constituencies. Some have insisted that their cost be based on their own group experience. Others have supported community rating, which helps insure the less select risks. Among the measures now supported by labor and management that help cover the less select risks, I may mention conversion rights on termination of coverage in a group, provision for individual enrolment, extension of insurance for the unemployed and for the aged.

There is a considerable awareness on the part of labor and management of the need for such provisions, but I don't know how to quantify the exact state of its development.

MR. MILO ANDERSON: I think that when the welfare people and labor and management look to the hospitals, they are convinced, having looked at the figures and having had experience in running a few hospitals, that there is not much to be saved there. More importantly, they believe that the physician, as a member of the medical staff, can do and will do more to police the quantity and quality of physician services through an organized medical staff than they are likely to do in a medical society or a Blue Cross Board.

Controlling Hospital Use through Organization of Medical Services

HERBERT E. KLARMAN, Ph.D.

CHAIRMAN: There has been much discussion about whether special forms of organization of medical practice will affect hospital use. Some research has indicated that the use of hospitals by subscribers to closed panel group practice prepayment is quite different from such use by other subscribers receiving hospital and medical care under more usual patterns of organization. These studies, clearly showing differences in use, have not been sufficiently extensive to identify clearly all factors which have caused the differences. A variety of hypotheses have been advanced to explain the differences, but it is evident that additional research is needed.

Mr. Herbert E. Klarman, who received his doctoral degree in economics from Columbia University, was first involved in investigations in the health field when he, with other members of the Department of Economics at Columbia, assumed responsibility for a hospital survey in New York State during the late 1940's.

Mr. Klarman, following the New York survey, joined the staff of the Hospital Council of Greater New York, the hospital planning agency for that city. For more than ten years, he has been concerned with the collection of data necessary for hospital planning in that city, which contains within its borders so substantial a portion of the population and the hospital beds in this country.

Mr. Klarman has, within the year, joined the faculty of the School of Public Health of Johns Hopkins University. He will present the first of four papers examining possibilities for the control of hospital use. Mr. Klarman will discuss this subject from the standpoint of the organization of medical services.

A generation ago students of medical care were sure that the American people were not getting enough hospital care. Today the concern is that hospital use in this country may be excessive. Whether this difference marks merely a change in attitudes¹,²

¹ Osler L. Peterson, "Quantity and Quality of Medical Care and Health" (Paper delivered before American Sociological Association, Washington, D.C., August 29, 1962), p. 1.

² Gordon Forsyth and Robert F. L. Logan, *The Demand for Medical Care* (London, 1960), p. 20.

or a change in the real conditions of hospital use³ is unknown. Yet it is surely characteristic of the present that we all search for means to limit the use of hospitals, which have become so costly.

The question is whether ways have been found to reduce hospital use without impairing the public's health. One suggestion frequently encountered is that the low rate of hospital use reported by various prepaid group practice plans be extended to more people. Specifically, this paper examines the literature on the subject of prepaid group practice in relation to hospital use, reviews the findings of several studies, and appraises alternative explanations for the apparent differences in hospital use among populations.

It will help our understanding to view the matter chronologically. Approximately five time intervals may be discerned.

The Data

The 1940's.—Substantial data on the use of hospitals by persons with health insurance first appeared in the 1940's. Initially the insured population had a higher admission rate than the population as a whole (Table 1). Later a reversal occurred (attributable, in part, to the expansion of military hospitals). In the late 1940's it required ingenious reasoning to reconcile available data with the common-sense expectation that, in a population of given age and sex characteristics, the insured probably had the higher admission rate.⁴

1950.—The President's Commission on the Health Needs of the Nation compiled a great deal of material, including data on hospital use. The commission remarked about the shorter duration of hospital stay by insured persons, especially members of prepaid group practice plans. It said nothing about the admission rates of the latter plans, which were also low (Table 2). Instead, it remarked on the closeness of the admission rates of the Blue Cross plans and the population as a whole.⁵

³ Josephine J. Williams, Ray E. Trussell, and Jack Elinson, *Family Medical Care under Three Types of Health Insurance* (New York, 1962), pp. 148-49.

⁴ Herbert E. Klarman, "Economic Aspects of Hospital Care," *Journal of Business*, XXIV (January, 1951), 12.

⁵ President's Commission on the Health Needs of the Nation, *Building America's Health* (Washington, 1952), II, 230.

1951-57.—During this period the Health Information Foundation (HIF), jointly with the National Opinion Research Center (NORC), conducted the first of their household surveys that inquired into the use of medical services and expenditures for medical care in the presence of health insurance. With respect to hospital use, the survey found a much higher admission rate for the insured than for the uninsured.

TABLE 1
RATES OF HOSPITAL USE FOR PERSONS IN BLUE CROSS PLANS AND FOR U.S. POPULATION, 1940-46*

Year and Population	Admissions per 1,000	Average Length of Stay (Days)	Patient Days per 1,000
1940:			
Blue Cross	105	8.1	910
U.S. population	74	13.7	1,019
1941:			
Blue Cross	107	7.6	810
U.S. population	85	13.4	1,133
1942:			
Blue Cross	108	7.8	830
U.S. population†	91	13.3	1,216
1943:			
Blue Cross	106	7.6	802
U.S. population†	112	13.9	1,556
1944:			
Blue Cross	103	7.3	749
U.S. population†	118	14.3	1,696
1945:			
Blue Cross	107	8.1	862
U.S. population†	120	16.5	1,987
1946:			
Blue Cross	111	8.3	923
U.S. population	106	13.4	1,412

* Sources: For Blue Cross Plans: Louis S. Reed, *Blue Cross and Medical Service Plans* (Washington, D.C., 1947). For U.S. population: U.S. Department of Health, Education, and Welfare, *Trends* (Washington, D.C., 1962), p. 29.

† Military hospitals are included.

Although there was some offset in the behavior of average duration of the patient's stay, the net result was that the insured used 30 per cent more hospital days than did the uninsured (Table 3, Study No. 1). A study under the same sponsorship confirmed the findings for insured persons in a northern city (Table 3, Study No. 2).

A household survey in New York City under the auspices of the Health Insurance Plan of Greater New York (HIP) yielded different results, however. This time the uninsured were reported to have both a higher admission rate and a longer duration of stay than the insured. The rates for subscribers to HIP (a prepaid group practice plan that provides comprehensive physicians' services outside and inside the hospital, does not charge for services, and pays its physicians out of capitation) were intermediate between the insured and the uninsured populations of the city as a whole (Table 3, Study No. 3).

A study in Windsor, Ontario, reported higher hospital use than in the United States, but the relationships between insured and uninsured in the two countries were in the same direction (Table 3, Study No. 4). Finally, a study by HIF-NORC in 1958 repeated the findings of the 1953 study; this time the differences between insured and uninsured were smaller (Table 3, Study No. 5).

1957-61.—The findings of the HIP study for the population of New York City were obviously unreliable, since they fell considerably below the hospital-use figures reported by the city's hospitals (the admission rates were 74 and 105 per 1,000, respectively, after appropriate adjustments).⁶ Although HIP was barred by law from providing insurance for hospital care, the organization was interested in pursuing research on the volume of hospital services used by its subscribers. Having found the household-survey method unsatisfactory, it proceeded to employ a more foolproof method, one not subject to sampling variations and the bias of non-response. The procedure was to compare the hospitalization records of

TABLE 2
RATES OF HOSPITAL USE, GROUP PRACTICE PLANS, BLUE CROSS PLANS, AND U.S. POPULATION, 1950*

Prepayment Plan or Population Group	Admissions per 1,000	Average Length of Stay (Days)	Patient Days per 1,000
Permanente (Kaiser) Health Plan	104	6.6	685
Group Health Association, Washington, D.C.	89	6.4	568
Group Health Cooperative, Seattle, Washington	80	6.2	500
Labor Health Institute, St. Louis, Missouri	70	7.0	490
Blue Cross Plans	122	7.4	888
U.S. population	110	10.6	1,165
Blue Cross Plan, Washington, D.C.	120	6.1	735

* Sources: For Group Health Association and Blue Cross Plan, Washington, D.C.: Agnes W. Brewster, "Group Health Association's Use of Community Hospitals," in *Proceedings, Tenth Annual Group Health Institute of the Group Health Association of America* (Chicago, 1960), p. 119. For U.S. population: U.S. Department of Health, Education, and Welfare, *Trends* (Washington, D.C., 1962), p. 29. For all others: President's Commission on the Health Needs of the Nation, *Building America's Health* (Washington, D.C., 1952), III, 278.

two groups: one consisting of HIP members and the other of a matched group of persons with the same type of hospital-care insurance but with a different form of medical-care insurance.

In the first study (Table 4, Study No. 1), Blue Cross members of HIP were compared with Blue

⁶ Committee for the Special Research Project in the Health Insurance Plan of Greater New York, *Health and Medical Care in New York City* (Cambridge, Massachusetts, 1957), p. 147.

TABLE 3

RATES OF HOSPITAL USE BY INSURED AND UNINSURED POPULATION, AS REVEALED
BY FIVE HOUSEHOLD SURVEYS, 1951-58

PREPAYMENT PLAN OR POPULATION GROUP	ADMISSION RATE PER 1,000	AVERAGE LENGTH OF STAY (DAYS)	PATIENT DAYS PER 1,000	SPONSOR OF STUDY	SENIOR AUTHOR	YEAR	
						Data Gathered	Study Published
1.* U.S., all persons	120	7.4	900	HIF	Anderson	1953	1956 (1954)
U.S., insured	140	7.0	1,000				
U.S., uninsured	90	8.3	700				
2.† Birmingham, Blue Cross and Blue Shield	120	6.3†	750	HIF	Anderson	1953	1957
Boston, Blue Cross and Blue Shield	140	8.3‡	1,160				
Aetna (Boston)	130	7.8‡	1,020				
3.§ New York City, all persons	67	11.6	780‡	HIP	Committee	1951	1957
New York City, insured	62	8.6	540‡				
New York City, uninsured	75	14.0	1,050‡				
Health Insurance Plan	74	10.6	780‡				
4. Windsor Medical Service	186	8.6	1,595	University of Michigan	Darsky	1954	1958
Windsor, other insured	192	8.6	1,650				
Windsor, uninsured	65	11.7‡	762				
5.‡ U.S., all persons	120	7.7	940	HIF	Anderson	1958	1963
U.S., insured	130	7.3	950				
U.S., uninsured	100	8.7	910				

* Odin W. Anderson and Jacob J. Feldman, *Family Medical Costs and Voluntary Health Insurance: A Nationwide Survey* (New York, 1956), pp. 180, 185, 187. These data were first made available in 1954.

† Odin W. Anderson, *Voluntary Health Insurance in Two Cities* (Cambridge, Massachusetts, 1957), pp. 22-23.

‡ Calculated by the present writer.

§ Committee for Research in the Health Insurance Plan of Greater New York, *Health and Medical Care in New York City* (Cambridge, Massachusetts, 1957), pp. 147, 149, 160, 163.

|| Benjamin J. Darsky, Nathan Sinai, and Solomon J. Axelrod, *Comprehensive Medical Services under Voluntary Health Insurance* (Cambridge, Massachusetts, 1958), pp. 106-7.

‡ Health Information Foundation, unpublished data from "1958 Nationwide Survey" (mimeographed), Tables E-IV-b, E-IV-b3, E-IV-b4.

TABLE 4

RATES OF HOSPITAL USE BY INSURED POPULATIONS, AS REVEALED BY
SIX STUDIES OF MATCHED POPULATIONS, 1955-58

Prepayment Plan or Population Group	Admission Rate per 1,000	Average Length of Stay (Days)	Patient Days per 1,000	Sponsor of Study	Year of Data	Source of Data
1.* HIP-Blue Cross	77	7.6	588	HIP	1955	Blue Cross
Blue Shield-Blue Cross	96	7.2	688			
2.† HIP-Blue Cross	63‡	6.5‡	410‡	HIF	1957	Household survey
Group Health Insurance-Blue Cross	110‡	8.0‡	870‡			
3.§ HIP-Blue Cross	70	10.4	744	HIP	1957	Blue Cross
Group Health Insurance-Blue Cross	88	10.8	955			
4. Kaiser Foundation	90‡	6.3‡	570‡	Steelworkers	1958	Insurance plans
Blue Cross-Blue Shield	135	7.6	1,032			
Commercial insurance	150	7.8	1,167			
5.** HIP-District 65	64‡	8.3‡	535‡	HIP	1958	District 65
District 65	64‡	8.4‡	534‡			
6.†† New Jersey Blue Cross-Blue Shield	76	7.6‡‡	580	Columbia University	1958	Household survey
General Electric major medical	71	8.6‡‡	610			
Kaiser Foundation	79	7.7‡‡	610			

* Paul M. Densen, Eve Balamuth, and Sam Shapiro, *Prepaid Medical Care and Hospital Utilization* (Chicago, 1958), p. 34.

† Odin W. Anderson and Paul B. Sheatsley, *Comprehensive Medical Insurance* ("Health Information Foundation Research Series," 9 (New York, 1959)), p. 36.

‡ Adjusted for age and sex composition.

§ Paul M. Densen, Ellen W. Jones, Eve Balamuth, and Sam Shapiro, "Prepaid Medical Care and Hospital Utilization in a Dual Choice Situation," *American Journal of Public Health*, L (November, 1960), 1725.

|| I. S. Falk and Joseph Senturia, *Medical Care Program for Steelworkers and Their Families* (Pittsburgh, 1960), p. 89.

‡ Excluding group with large proportion of retirees.

** Paul M. Densen, Sam Shapiro, Ellen W. Jones, and Irving Baldinger, "Prepaid Medical Care and Hospital Utilization: Comparison of a Group Practice and a Self-insurance Situation," *Hospitals*, XXXVI (November 16, 1962), 65-67.

†† Josephine J. Williams, Ray E. Trussell, and Jack Elinson, *Family Medical Care under Three Types of Health Insurance* (New York, 1962), p. 152.

‡‡ Calculated by the present writer.

Cross members of Blue Shield (whose medical-care insurance was limited to the hospital). In the second study (Table 4, Study No. 3), Blue Cross members of HIP were compared with Blue Cross members of Group Health Insurance (GHI). (Members of GHI are insured for medical care outside the hospital, as well as inside. Services are performed by solo practitioners who are paid fee for service, as under Blue Shield.)

During this period HIF and NORC conducted a household survey of members of three trade unions in New York City who subscribed to HIP and GHI under conditions of dual choice (Table 4, Study No. 2). Falk conducted a survey of hospital use by steelworkers who were insured in different parts of the country by Blue Cross-Blue Shield, commercial insurance, and the Kaiser Foundation Health Plan (Table 4, Study No. 4).

All four surveys had one finding in common: subscribers to prepaid group practice plans consistently showed the lowest hospital use, owing chiefly to differences in the admission rate. The difference in hospital use between HIP and other insured populations has sometimes been expressed as a saving of 20 per cent.^{7, 8}

1962.—In January, 1962, HIP completed its third study, which compared hospital use by two groups of members of District 65 of the Retail, Wholesale, and Department Store Union (Table 4, Study No. 5). One group had medical-care insurance with HIP and the other had it with the union's self-insured fund. This fund pays solo physicians at fee for service. All members of the union are covered by the self-insured fund for hospital care. Unlike its two predecessors, this study found no difference in hospital use between the members of HIP and the other insured group.

In November, 1962, Columbia University published its study in which hospital use, among other things, was compared for three union groups in several parts of the country with different forms of comprehensive health insurance (Table 4, Study No. 6). Again, no significant difference in hospital use was found.

Proposed Explanations

Before discussion the two 1962 studies, let us try to recapture the state of opinion that prevailed before their appearance. As of the end of 1961, there seemed to be little doubt that subscribers to prepaid group

⁷ Donald B. Straus, "Statement on Hospital Costs" (Prepared for Conference on Cost and Quality of Hospital Care in Greater New York, April 4, 1961), p. 1.

⁸ Anne Ramsey Somers, "Comprehensive Prepayment Plans as a Mechanism for Meeting Health Needs," *The Annals, CCCXXXVII* (September, 1961), 85.

practice plans experienced lower hospital use than other insured populations. The question was: How did this difference come about?

It should first be noted that the reports on the HIP studies were written with care and made no claims that group practice was a superior organization for rendering medical service. Densen and associates considered a number of possible explanations for their findings and reached no firm conclusions.

Range of insurance benefits.—The first study seemed to support the common-sense expectation that hospital use would be higher when health insurance benefits were limited to care in the hospital. Not only did the findings show a difference in hospital use between HIP and Blue Shield, but, within the Blue Shield group, patients with both surgical and medical coverage in the hospital had a higher admission rate for non-surgical conditions than patients whose Blue Shield coverage was limited to surgical benefits.⁹ The second study seemed to rule out the extent of medical-care coverage as the responsible factor.¹⁰ The findings of the study of HIP and GHI conducted independently by the Health Information Foundation supported this conclusion. The HIF study was also interpreted to indicate that the mechanism of dual choice was not a factor in hospital use.¹¹

Services for ambulatory patients.—Availability of services for ambulatory patients was mentioned in each of the two HIP reports, but emphases differed. In the first report the emphasis was on the absence of financial pressures to hospitalize HIP subscribers for diagnostic services when medical services outside the hospital were insured.¹² In the second report the emphasis was on the availability of facilities and consultation in the group medical center, which reduced the need to hospitalize patients for diagnostic purposes.¹³

Access to hospital beds.—In both studies the question of access to hospital beds was considered. Each time, a reason was given for discounting the importance of this factor, as I will explain later.

Possible failure to diagnose or treat illness.—Both studies raised the question whether low hospital use may not signify a failure to diagnose or treat medical

⁹ Paul M. Densen, Eve Balamuth, and Sam Shapiro, *Prepaid Medical Care and Hospital Utilization* (Chicago, 1958), p. 32.

¹⁰ Paul M. Densen, Ellen W. Jones, Eve Balamuth, and Sam Shapiro, "Prepaid Medical Care and Hospital Utilization in a Dual Choice Situation," *American Journal of Public Health, L* (November, 1960), 1720.

¹¹ *Ibid.*, pp. 1721-22.

¹² Densen, Balamuth, and Shapiro, *loc. cit.*

¹³ Densen, Jones, Balamuth, and Shapiro, *op. cit.*, p. 1724.

conditions when they existed.^{14, 15} Admittedly, this possibility could not be ruled out in the absence of evidence on the health status of patients. However, Densen and associates thought that failure to diagnose or treat such a variety of conditions was difficult to believe.¹⁶ The low rate of tonsillectomy operations in HIP was cited as an example of conservative medical philosophy and practice, which prevailed when there were no financial incentives to the contrary.¹⁷

Method of paying physicians.—In the second study, though not explicitly in the first, there was speculation that the method of paying physicians may contribute to the observed difference in hospital use.¹⁸ It may be that physicians who are paid fee for service are more likely to hospitalize patients than physicians paid a salary by the medical group out of capitation payments received from HIP.

Comments on Proposed Explanations

Range of insurance benefits.—It would seem almost self-evident that medical-care benefits outside the hospital would tend to reduce hospital use. Although the evidence on hospital use by steelworkers following the expansion of their outpatient benefits does not support this conclusion, neither does the evidence contradict the conclusion.¹⁹ In any case, it is reasonable to suppose that the differential effect of medical-care insurance on hospital use would be lessened if hospital admissions for diagnostic purposes were controlled by other means. In New York City the Associated Hospital Service has long exercised careful scrutiny over claims that may possibly represent diagnostic admissions. In their concern for the financial position of Blue Cross, the hospitals have cooperated. These facts are consistent with the finding that the difference in admission rates between HIP and Blue Shield is somewhat greater than the difference between HIP and GHI—17 per cent versus 12 per cent, after adjustment.²⁰

Services for ambulatory patients.—Provision of medical services to ambulatory patients has received a great deal of attention. In his study of the steelworkers, Falk pointed to the presence of large and well-equipped clinics at the Kaiser Foundation Health

Plan, which reduced the need to send patients to the hospital.²¹ Roemer and Shain observed that the solo practitioner is unable to perform all necessary services in his office. By admitting a patient to the hospital, he can sometimes obtain help without losing the patient;²² in group practice such help can be obtained without hospitalization.

Roemer has, however, challenged the view that provision of prepaid preventive services to ambulatory patients will reduce hospital use. He expects increased contacts between patients and physicians to lead to the detection and treatment of more disease.²³ For some of these conditions, hospitalization will be needed.

Access to hospital beds.—Several students have referred to the lack of hospital staff privileges for some HIP physicians.^{24, 25} In the first HIP study, Densen and associates argued that, if lack of access to hospital beds were a factor in lower hospital use, it would be reflected in uniform, across-the-board differences in admission rates for the several diagnostic categories, not in varying differences.²⁶ In the second paper, the authors introduced data showing that a higher proportion of general practitioners in HIP than in the city as a whole had hospital staff appointments.²⁷ Subsequently Shapiro stated that travel distance was probably not a factor in producing the observed differences.²⁸

Upon reflection, it appears that the first argument establishes too severe a criterion of proof. As for the second argument, data pertaining to specialists would probably be more relevant. It is public knowledge that some well-qualified specialists with HIP medical groups lack hospital staff appointments.²⁹ Perhaps most relevant would be data on hospital use by patients of the several HIP medical groups in relation

²¹ I. S. Falk and Joseph Senturia, *Medical Care Program for Steelworkers and Their Families* (Pittsburgh, 1960), p. 93.

²² Milton I. Roemer and Max Shain, *Hospital Utilization under Insurance* (Chicago, 1959), pp. 29-30.

²³ Milton I. Roemer, "The Influence of Prepaid Physicians' Service on Hospital Utilization," *Hospitals* (October 16, 1958 [reprint]), pp. 48-52.

²⁴ *Ibid.*

²⁵ Odin W. Anderson and Paul B. Sheatsley, *Comprehensive Medical Insurance* ("Health Information Foundation Research Series," 9 [New York, 1959]), p. 66.

²⁶ Densen, Balamuth, and Shapiro, *op. cit.*, p. 33.

²⁷ Densen, Jones, Balamuth, and Shapiro, *op. cit.*, p. 1723.

²⁸ Sam Shapiro, in U.S. Public Health Service, *Research in Hospital Use: Progress and Problems* (Washington, 1962 [draft]), p. 26.

²⁹ Edward T. Chase, "The Politics of Medicine," *Harper's*, (October, 1960 [special supplement]), p. 126.

¹⁴ *Ibid.*

¹⁵ Densen, Balamuth, and Shapiro, *op. cit.*, p. 33.

¹⁶ Densen, Jones, Balamuth, and Shapiro, *op. cit.*, p. 1724.

¹⁷ Densen, Balamuth, and Shapiro, *op. cit.*, p. 33.

¹⁸ Densen, Jones, Balamuth, and Shapiro, *op. cit.*, p. 1725.

¹⁹ William H. Ford, Hospital Service Association of Western Pennsylvania, letter of October 29, 1962.

²⁰ Paul M. Densen, Sam Shapiro, Ellen W. Jones, and Irving Baldinger, "Prepaid Medical Care and Hospital Utilization," *Hospitals*, XXXVI (November 16, 1962), 68.

to the known opportunities of their physicians to admit them to a hospital.

The data on the steelworkers show similar differences between subscribers to the Kaiser Foundation Health Plan and members of other insurance plans. The Kaiser Health Plan has its own hospitals, ruling out physicians' staff appointments as a factor. However, the ratio of beds in the system per 1,000 population is low. The hospitals operate at a high rate of occupancy for their size class,³⁰ and sometimes the admission of non-subscriber patients may compete with the admission of subscribers.

Possible failure to diagnose or treat illness.—The ultimate criterion of the quality of care is the health of the patient. In the HIP reports, the position taken on the implications of low hospital use is essentially agnostic^{31, 32} and further research is recommended. Attention should, however, be invited to the companion HIP studies on perinatal mortality, which indicate that at least one group of HIP subscribers receives care of good quality.³³ More recently, reporting on the qualifications of surgeons, Trussell and van Dyke have shown that a high proportion of operations on HIP subscribers is performed by certified diplomates (84 per cent) and by other full-time specialists (11 per cent).³⁴ These figures are much higher than for any of the other insurance plans studied.

As previously noted, the HIP studies show lower rates for tonsillectomy under prepaid group practice. The incidence of tonsillectomy in this country has been declining, but it is still twice as high as in England.³⁵ Roemer associates the difference between the rates reported by prepaid group practice plans and other insurance plans with the absence or presence of fee-for-service payments to physicians.³⁶ The desirability of the operation on medical grounds has been questioned by many,^{37, 38, 39} and a low rate is re-

garded as the outcome of conservative medical practice. From a later study it appears that the out-of-pocket cost to the patient cannot account for the observed difference in tonsillectomies between prepaid group practice and other forms of comprehensive medical insurance.⁴⁰

Method of paying physicians.—Roemer directed his criticism of the first HIP report mainly at its failure to deal with the method of paying physicians.⁴¹ After analyzing hospital-use data for the province of Saskatchewan, he concluded that, in the absence of group practice, the fee-for-service method of paying physicians results in a higher use of hospitals than the salaried or capitation form of paying physicians. He added that this is especially true in surgery. Roemer has also noted that in Europe, where hospital doctors receive a salary, there is no need for hospital tissue committees to inquire into unnecessary surgery.⁴² There are, nevertheless, reports of patients in hospitals in England who do not belong there for medical reasons.⁴³

Other Possible Explanations and Comments

Control by physician.—Other observers have similarly pointed to the important role played by the physician. Brewster has noted the controls over hospital admission exercised by the physicians of the Group Health Association.⁴⁴ In the group practice setting, it has been said, the doctor, not the patient, controls the use of hospitals.⁴⁵ The specialty status of physicians has also been cited as a possible explanatory factor for differences in hospital use.⁴⁶ It is not clear, however, whether the crucial person is the specialist or the general practitioner.

Central role for specialist.—In a comparison of medical care in three countries, Peterson expresses approval of the control over hospital use exercised in England and Sweden by full-time specialists. Admission to the hospital should be selective, and the act of selection is best performed by a physician who is not biased by the possibility of earning a fee. In

³⁰ Kaiser Foundation, "Annual Report on Hospital Utilization Statistics for 1961, Northern California Region." Unpublished data from Arthur Weissman.

³¹ Densen, Jones, Balamuth, and Shapiro, *op. cit.*, p. 1724.

³² Densen, Balamuth, and Shapiro, *op. cit.*, p. 33.

³³ Sam Shapiro, Harold Jacobziner, Paul M. Densen, and Louis Weiner, "Further Observations on Prematurity and Perinatal Mortality in a General Population and in the Population of a Prepaid Group Practice Medical Care Plan" (paper read before the American Public Health Association, October 20, 1959).

³⁴ Ray E. Trussell and Frank van Dyke, *Prepayment for Medical Care and Dental Care in New York State* (Albany, New York, 1962), p. 200.

³⁵ Peterson, *op. cit.*, p. 8.

³⁶ Roemer, *loc. cit.*

³⁷ Peterson, *op. cit.*, p. 8.

³⁸ Forsyth and Logan, *op. cit.*, p. 68.

³⁹ Leslie Falk, "Handbook for Group Health Association of America" (typewritten draft), p. 17.

⁴⁰ Williams, Trussell, and Elinson, *op. cit.*, p. 155.

⁴¹ Roemer, *loc. cit.*

⁴² Milton I. Roemer, "On Paying the Doctor and the Implications of Different Methods," *Journal of Health and Human Behavior*, III (Spring, 1962), 4-13.

⁴³ Forsyth and Logan, *op. cit.*, p. 83.

⁴⁴ Agnes W. Brewster, "Group Health Association's Use of Community Hospitals," *Proceedings, Tenth Annual Group Health Institute of the Group Health Association of America* (Chicago, 1960), pp. 117-21.

⁴⁵ Straus, *op. cit.*, p. 3.

⁴⁶ U.S. Public Health Service, *Research in Hospital Use: Progress and Problems* (Washington, 1962 [draft]), p. 25.

Sweden the hospital-admission rate is the same as in the United States and the duration of stay is longer, but this is offset by a lower use of physicians' services. More important, control of the nursing unit by one person permits a high rate of hospital occupancy and a low ratio of personnel to patients (40 per cent below the rate in the United States), thereby reducing the cost of hospital care.⁴⁷

Central role for general practitioner.—In an English study, Forsyth and Logan state that it is the general practitioner who determines the case load of hospitals. It is possible to do with fewer hospital beds if the general practitioner, who is supposed to be the cardinal figure in the National Health Service, is willing to provide home care. To fulfil this goal, the general practitioner cannot remain outside the hospital but must be brought into it.⁴⁸ However, it is not clear what steps to take in order to bring down hospital use to the ratio of 2.3–2.5 beds per 1,000 population. Forsyth and Logan were unable to find any discernible relationship between the volume of hospital use by a general practitioner's list and certain variables, such as the size of his list, location of his practice, frequency and cost of prescribing, or use of hospital laboratory and X-ray diagnostic services.⁴⁹

Duration of patient stay.—Because the average durations of patient stay reported in the HIP studies were close, they escaped adequate notice. In fact, an equal average stay for two insured populations is likely to signify a difference in stay (shorter for HIP) for patients in a given diagnostic category, since one of the plans (Blue Shield or GHI) admits to the hospital relatively larger numbers of patients in the short-stay diagnostic categories than does the other plan.⁵⁰

The question arises why HIP patients should have shorter hospital stays. One factor may be their greater use of proprietary hospitals,⁵¹ which have shorter stays for almost every diagnostic category.⁵² Another possibility is that HIP patients may be discharged earlier because they have had a complete work-up in the group center prior to hospital admission. If so, the preoperative stay of surgical patients would be shorter for HIP than for the other groups, while the postoperative stays would be equal. At this time we have no data concerning these questions.

⁴⁷ Peterson, *op. cit.*, pp. 6, 7, 9, 10.

⁴⁸ Forsyth and Logan, *op. cit.*, pp. 25, 89, 104, 107–8.

⁴⁹ *Ibid.*, pp. 90–91.

⁵⁰ Densen, Balamuth, and Shapiro, *op. cit.*, p. 28.

⁵¹ Trussell and van Dyke, *loc. cit.*

⁵² Ray E. Trussell and Frank van Dyke, *Prepayment for Hospital Care in New York State* (Albany, New York, 1960), p. 226.

The closer look at length of stay has yielded an extra dividend. The hospital-use rates reported for the matched groups may be valid, but they need not be representative of the larger populations from which they are drawn. Based on data developed for the Hospital Council's study of hospital care in New York City,⁵³ the estimates of hospital use by all HIP and Blue Shield subscribers to Blue Cross exceed the figures reported in the first HIP study for the matched samples, as follows: admission rate, 5 per cent; length of stay, 25 per cent; and patient days, 33 per cent.

Summary.—It seems that in the period 1958–61 the proposition gained increasing acceptance that prepaid group practice plans had lower hospital use than other insurance plans. (The Rockefeller Panel Report endorsed prepaid group practice, giving among other reasons the incentive to minimize hospital admissions.⁵⁴) Whether the difference was associated with differences in accessibility of hospital beds was a moot question. Range of medical-care benefits seems to have been ruled out as a factor. However, it was not known whether the important factor was the organization of the medical group and the operation of group practice facilities or the salaried form of payment for physicians. In either case, there was a question of possible failure to diagnose and treat existing illness.

Two Recent Reports

The two studies that appeared in 1962 occasioned surprise, for they raised anew questions that had apparently been settled concerning the differential effect of prepaid group practice on hospital use.

The third HIP Study.—In January, 1962, the third HIP study appeared. This compared two groups in a labor union, one of them receiving physicians' services from HIP and the other from solo practitioners paid fee for service. For hospital care, both groups are covered by the union's self-insurance fund. The study found that the two groups had identical admission rates, durations of stay, and, therefore, hospital days.

It will be recalled that, in the first HIP study, the two matched groups differed in the extent of insurance for physicians' services, in the form of organization under which they received such services, and in the method of paying physicians. In the second study, the range of physician benefits was the same, but the

⁵³ Herbert E. Klarman, *Hospital Care in New York City* (New York, 1963), pp. 37, 133, 420, 422.

⁵⁴ Rockefeller Panel Reports, *Prospects for America* (New York, 1961), p. 314.

other two differences continued. A new element in this study was dual choice—the opportunity afforded to subscribers periodically to transfer from one insurance plan to another. In the third study, the two differences and dual choice persisted. The new element, which is offered by Densen and associates as the chief explanatory factor, is self-insurance for hospital care, coupled with an active union program of expenditures control and education of members.⁵⁵

One finding of the third study is that HIP had the higher proportion of non-white members. The meaning of this fact could not be interpreted.⁵⁶ In light of a recent report that in New York City non-whites use more hospital care than the rest of the population,⁵⁷ the rate of hospital use by white members of HIP may be slightly lower than for their counterparts in the self-insured fund.

tric plan. The difference for children is most likely a result of differences in admission rates for tonsillectomy. The difference for adults may possibly reflect the deterrent effect of a deductible provision.⁵⁸

This study's findings on hospital use are said to be similar to those that would obtain if the hospitalization rates of the National Health Survey were applied to the age and sex composition of the populations studied.⁵⁹ This conclusion is valid for hospital admissions but not for hospital days. When the hospitalization rates of the National Health Survey⁶⁰ are applied to the populations studied, the calculated admission rate is 76 per 1,000, compared with 72 per 1,000 in the study. The difference is not statistically significant. For hospital days, however, the calculated rate is 767 per 1,000, compared with 610 per 1,000 in the study, and this difference is significant.

TABLE 5
RATES OF HOSPITAL USE FOR GROUP PRACTICE PLANS, BLUE CROSS PLANS,
AND U.S. POPULATION, 1960-61

Year	Prepayment Plan or Population Group	Admissions per 1,000	Average Length of Stay (Days)	Patient Days per 1,000
1960*	Kaiser Health Plan	97	6.2	601
1961†	Group Health Association, Washington, D.C.	89	7.3	652
1960‡	Group Health Cooperative, Seattle, Washington	92	5.9	544
1961-62§	Labor Health Institute, St. Louis, Missouri	103	7.1	730
1960	Blue Cross Plans, U.S.	139	7.6	1,060
1960#	U.S. population	136	9.3	1,265

* Letter from Arthur Weissman, November 5, 1962.

† Group Health Association, *GHA News*, XXV (March, 1962), 15.

‡ Group Health Cooperative of Puget Sound, *1960 Annual Report* (Seattle, Wash., 1961), Table 33 (calculated).

§ St. Louis Labor Health Institute, *1962 Annual Report* (St. Louis, Mo., 1962), pp. 17, 9.

|| Blue Cross Association, *Statistical Bulletin*, 4B (May 9, 1962); amended by 4D (May 21, 1962).

U.S. Department of Health, Education, and Welfare, *Trends* (Washington, D.C., 1962), p. 29.

The Columbia University Study.—The study by Columbia University published in November, 1962, found almost identical hospital use among machinists and similar union members who subscribe to three comprehensive health-insurance plans in several parts of the country with well-known regional differences in patterns of hospitalization. The plans involved are Blue Cross-Blue Shield of New Jersey, the General Electric Company major-medical plan in two sections of the country (three cities), and the Kaiser Foundation Health Plan in California.

Some differences in hospital use were found by age groups. Lower use by children in the Kaiser Plan is balanced by lower use by adults in the General Elec-

In order to reconcile hospital-use data from a household survey with data compiled from hospital records, at least two adjustments are required. One adjusts for a tendency by households to underreport hospital use. The other adjusts for the exclusion of persons who died during the survey year, some of whom used hospital care. The combined adjustment factor is estimated, on the basis of National Health Survey studies, at approximately 20 per cent, both for admissions and for hospital days.^{61, 62} In this light,

⁵⁵ Williams, Trussell, and Elinson, *op. cit.*, pp. 154, 157.

⁵⁶ *Ibid.*, p. 181.

⁶⁰ U.S. National Health Survey, *Health Statistics: Hospitalization, Patients Discharged from Short-Stay Hospitals, United States, July 1957-June 1958* (Series B-7; Washington, 1958), p. 32.

⁶¹ U.S. National Health Survey, *Health Statistics: Reporting of Hospitalization in the Health Interview Survey* (Series D-No. 4; Washington, D.C., 1961), p. 8.

⁶² U.S. National Health Survey, *Health Statistics: Hospital Utilization in the Last Year of Life* (Series D-No. 3; Washington, D.C., 1961), p. 26.

⁵⁵ Densen, Shapiro, Jones, and Baldinger, *op. cit.*, p. 63.

⁵⁶ *Ibid.*, p. 68.

⁵⁷ Herbert E. Klarman, "Characteristics of Patients in Short-Term Hospitals in New York City," *Journal of Health and Human Behavior*, III (Spring, 1962), 49.

the findings of the third HIP study, which do not require any adjustment for these reasons, are very low indeed.

Other prepaid group practice plans have continued to report low hospital use (Table 5). This is true whether a plan owns its hospitals or buys care for its members from community hospitals. A declining trend was reported for one plan, where stringent efforts have been exerted to control hospital use.⁶³ This is consistent with the chief explanation proposed in the third HIP study. Self-insurance, which was formerly advocated as a source of savings in administrative and other retention costs of insurance,⁶⁴ may now be seen as a restraining influence on hospital use.

Summary

HIP and similar prepaid group practice plans have reported low hospital use by their members. Use of hospitals by HIP is found to be lower than that by Blue Shield or by the Group Health Insurance plan. It is not lower, however, than the use by District 65. Another prepaid group practice plan, the Kaiser Foundation Health Plan, has reported low hospital use for its subscribers. Steelworkers insured under Blue Cross-Blue Shield, commercial insurance, and the Kaiser Health Plan report the lowest hospital use under the Kaiser Plan. However, a study of machinists and similar union members has found no differ-

ence in hospital use among subscribers to the Kaiser Health Plan and two other comprehensive health-insurance plans, Blue Cross-Blue Shield of New Jersey and General Electric major medical, which provide medical services through private practitioners paid fee for service. The last finding is contrary to the Saskatchewan experience.

Many reasons have been offered to explain the reported differences in hospital use between insured groups. Among the explanations currently coming to the fore are the exercise of controls. These take various forms and may be carried out by salaried physicians; by subscribers confronted with financial deterrents, such as deductibles; or by self-insured plans, in which the members actively co-operate; or they may be imposed by the lack or the inaccessibility of hospital beds. The organizational framework of group practice may constitute a source of control over hospital use, as well as a vehicle for providing ambulatory services.

Two studies of matched populations published in 1962, one reporting on hospitalization records and the other on a household survey, have yielded unexpected findings and raise new questions. They point to a need for more large-scale research in the field of hospital use. In future research increased attention should be directed to the data on duration of patient stay.

⁶³ Brewster, *op. cit.*

⁶⁴ Donald Rubin, "Self-insured Welfare Plans," *I.U.D. Digest*, VII (Summer, 1962), 101.

Controlling Hospital Use through Prepayment Benefit Provisions and Reimbursement Formulas

WILLIAM S. McNARY

CHAIRMAN: The next paper, concerned with suggestions for control of hospital use, will be presented by one of the deans of the Blue Cross field, Mr. William S. McNary, the director of the Michigan Blue Cross Plan. Mr. McNary entered the Blue Cross field in Colorado as director of one of the first Blue Cross plans. His earlier experience in hospital administration has given him an understanding of hospitals. He has for many years been the director of the Michigan Blue Cross Plan, one of the largest and best administered in the country.

Mr. McNary will discuss prepayment benefit provisions and reimbursement formulas in controlling hospital use.

My topic, "Controlling Hospital Use," breaks into two specific and very different parts: (1) control of use through reimbursement formulas and (2) control of use through prepayment benefit provisions.

Control through Reimbursement Formulas

A great deal of thought has been given to reimbursement formulas by Blue Cross and, I am sure, by other agencies. I think it is a misconception to suppose that hospital use can be controlled through a reimbursement formula. As a practical matter, it cannot. A reimbursement formula may be used to limit payments; to put a ceiling on and/or a floor under payments. It may be used, perhaps, to penalize the hospital for poor administration. Hopefully, it may be used to provide incentives for efficient operation, although this purpose has been so difficult that it has so far defied practical implementation.

I cannot pretend to know of all, or of any substantial portion, of the efforts by all third-party payers to control use of hospital beds and facilities through reimbursement formulas. I do know that we in Michigan Blue Cross have devoted seemingly endless hours to discussion of ways and means of using our reimbursement formula to provide some incentives for hospital management or doctors to shorten the length of stay or to reduce the number of ancillary services used. To date, our brainstorming sessions have produced a big fat zero. Quite obviously, the third

major area of attack—elimination or reduction of unnecessary admissions—does not lend itself to any such approach.

A reimbursement formula, within narrow limits, may make it more desirable or less desirable to care for a short-stay patient or a long-stay patient. A formula may be designed to try to measure (and to reward or to penalize) the efficiency of a hospital's management, but it cannot even do this equitably unless allowances are made for, or special consideration is given to, the fortuitous events which can and do occur to increase a hospital's per diem cost or to change the community from a bed-shortage status to a bed-surplus status.

Suppose, for example, a reasonable ceiling is placed on per diem cost increases. This ceiling may be determined by costs of other hospitals similar in size, geography, and facilities. However, if a given hospital that has enjoyed full utilization and perhaps has had a waiting list for elective surgical cases suddenly finds itself only 60 per cent occupied, how can per diem costs be prevented from shooting up? For years, the census in this hospital may have been relatively stable and subject only to seasonal fluctuations. Then a couple of leading surgeons on the staff die or move away or become incapacitated. Or a nearby industrial plant, which has fed hundreds of patients to the hospital annually, closes or moves away entirely.

These and many other lesser occurrences can and do upset the best-laid plans of hospital boards and the most carefully computed hospital budgets. A third-party reimbursement formula is equitable and workable only so long as it is flexible enough to protect both the individual hospital and the third party from real hardship even under extreme circumstances.

The reimbursement formula is a creature of hospitals and their Blue Cross Plans. It has been adopted by, and adapted to, certain government programs, beginning with Emergency Maternity and Infant Care. But, to my knowledge, it has not been used to control use, and it cannot properly be so used.

While on this subject, I want to say that I have studied many Blue Cross hospital-payment formulas.

Philadelphia, for example, has seven hospital-payment contracts. Every Plan has a different contract. They may be similar in character, but every one is different from every other. I know of no formula that is perfect or even nearly perfect. But I am convinced that methods must be found through payment devices, or otherwise, to encourage hospital economies, to reward good administration, and to prevent waste and unnecessary use of prepaid benefits.

Hospital administrators and hospital trustees, in a spirit of enlightened self-interest, must concern themselves with the public's concern over prepayment costs for hospital care. We in Blue Cross are running scared on this issue.

Control through Prepayment Benefit Provisions

At first glance, it looks as if it would not be difficult, through judicious use of deductibles, co-operative payments, limited indemnities, co-insurance, group practice incentives, and increased use of outpatient facilities, to put reasonable obstacles in the way of unneeded hospitalization without penalizing the patient who needs care. I will attempt to discuss these methods separately, or in such combination as seems necessary. For the moment, I will limit my discussion to benefit provisions of the Blue Cross hospital contract.

Group Practice

The distinguished speaker who preceded me has dealt at some length with the control of use through the mechanics of group practice. While I did not know, as I prepared this talk, what Mr. Klarman would say, I do have some understanding, albeit rather superficial, of the workings of the Kaiser Health Plan, Health Insurance Plan, Group Health Association, Community Health Association, and other group practice operations.

Group practice is probably better equipped to establish control over unnecessary use of hospital beds than is possible under solo practice in standard community hospitals. It would appear to me, however, that it may be necessary, if such control is to be effective, to have one agency in control over both the doctors and the hospitals.

What we have heard today indicates that there may be built-in reasons why group practice programs may create demand which raises costs still higher. The Densen study in New York City and even the Kaiser experience, a factual report which I have not seen until today, might be much different from, and much closer to, standard Blue Cross-Blue Shield experience if the exposed populations were identical or at least more nearly the same.

The Community Health Association utilization in Detroit, which has not matured and on which I have seen only meager reports, does not seem to follow the New York City pattern. In New York City, I believe, a comparatively small number of groups are enrolled, with little or no individual option. That is, all members of a given group belong to HIP, not to HIP or Blue Shield as the individual may choose. In Detroit, on the other hand, where individual selection is the rule, CHA groups are also Blue Cross-Blue Shield groups. To date, a different and a higher pattern of utilization of inpatient care is found for CHA than is reported for HIP. This is true even though there appears to be a high degree of central authority by CHA over both the hospital care and the medical care.

In California, I am told, when groups have both Kaiser and Blue Cross-Blue Shield available on an individual option, it is necessary for Blue Cross-Blue Shield to charge higher rates than are charged to groups without such an option. What effect such option has on Kaiser's rates I have no way of knowing. It is at least possible to speculate that both plans may be affected adversely.

I note with interest Mr. Klarman's statement that dual choice does not seem to be a factor in utilization. As far as I know, the effect of dual choice has not been established either way.

The CHA dual-choice approach seems to me sensible and practical in an era when we are experimenting to find the best way to provide better care to more people at rates which the people themselves are able and willing to pay. It is probable also that it is the only approach possible for a group practice plan with limited hospital facilities.

Broad Outpatient Benefits

Students of prepayment and health insurance have stated over and over that one important method of controlling unnecessary use of hospital beds is to provide broad outpatient benefits. I am in basic agreement with this philosophy. However, we should not be misled into the belief that the provision of broad outpatient benefits will automatically bring savings in inpatient-care costs. At least, there is nothing in our Michigan experience to support this view. Let us look at what has happened there.

Prior to 1957, outpatient benefits under Michigan Blue Cross were limited to care of emergencies during the first twenty-four or forty-eight hours after the incident. Outpatient charges were relatively static and accounted in 1956 for 1.11 per cent of total bene-

fit costs. The number and total cost of outpatient services as a per cent of total had increased steadily, but very slowly, year after year, from a small fraction of 1 per cent to the 1.11 per cent in 1956.

Presumably, the increase might have continued at about the same rate if the benefits had remained the same. However, on October 1, 1957, Michigan Blue Cross liberalized all its contracts to provide essentially all the benefits of its inpatient program on an outpatient basis. Repeated visits for chronic conditions are still excluded, and drugs are furnished only in case other contract benefits are provided. At the same time, Michigan Blue Shield added benefits for diagnostic X-ray and laboratory in hospital outpatient departments and in doctors' offices and also provided benefits for all surgery in or out of the hospital. During the succeeding five years, our outpatient load and Blue Shield's, too, increased markedly each year. We had estimated that Blue Cross cost would increase to about 2.5 per cent of total benefits, and it is now at that figure. Presumably, it will exceed 2.5 per cent in 1963.

We made this liberalization for three reasons: (1) to provide more services more cheaply, (2) to cut down unnecessary inpatient care, and (3) to eliminate criticism by doctors and members that, because we did not provide necessary benefits, many patients would be hospitalized just to obtain benefits to which they believed themselves entitled.

While we have reservations about some phases of our present outpatient program, we believe that it is basically sound, and that each of our objectives has been achieved to some degree.

Let us look, however, at our inpatient utilization. In the five years before 1957, that is, from 1952 to 1956, inclusive, admissions per 1,000 members increased from 142 to 150, with a further increase to 155 in 1957. In the five years following 1957, admissions per 1,000 members increased further from 155 to a projected 164 for 1962. This is an increase of 5.6 per cent for the first five years and 5.8 per cent for the later five years.

Days per 1,000 members increased in 1952-56, inclusive, from 1,033 to 1,110. In 1958-62, inclusive, days per 1,000 members increased from 1,182 to 1,400. This shows a frightening increase of almost 18.5 per cent in the last five years, in contrast to an increase of less than 7.5 per cent in the 1952-56 period.

During the same five-year period, outpatient visits per 1,000 members increased from 23 to 45 before 1957 and from 50 to 124 after the liberalization.

Even though we are convinced that the outpatient liberalization has prevented many unnecessary hos-

pital admissions, we have no data to prove any savings whatever. On the contrary, over-all utilization has increased even faster than before. It is some consolation to speculate that the admission rate might have increased even more without the outpatient liberalization. It is also comforting to know that we are providing more needed services in a more economical way.

Deductibles, Co-insurance, Co-operative Payments, Etc.

Many Blue Cross Plans have varying specific indemnities, usually on room and on maternity care. In Michigan we have tried all but the last named. We can make some generalizations about these devices.

1. These devices shift part of the cost of hospitalization from the total population covered (or from the total group under experience rating) to the individual who must pay the difference at the time of service.

2. If the amount of the deductible or co-operative payment is modest, there is no discernible effect on utilization, and the saving in the monthly rate is not enough to be really attractive either to groups or to individuals.

3. A straight co-insurance provision of 20 or 25 per cent on basic coverage, which may be termed "modest" for an average hospital bill of \$300, frequently results in severe hardship to members and to hospitals, who are left holding the sack for large sums when bills total from \$1,000 to \$5,000 or more, as so often happens today.

4. Most people today think of Blue Cross as a service benefit organization. To the extent that any of these devices cause financial hardship on the member, the Blue Cross service image is distorted or even destroyed. I believe that Blue Cross faces this very real danger in making the decision to offer indemnity contracts, which inevitably result in disillusioned Blue Cross subscribers.

5. The only real saving in hospital use that these devices can bring about is the prevention of hospital care of members or policy-holders.

6. No plan or insurance company has yet demonstrated that great savings can be made except by requiring a substantial payment by the patient. This requirement means cutting back on needed care as well as on unneeded care. To the extent that needed care is reduced, a disservice is done to the public.

These generalizations are mine, and they may be subject to all kinds of argument. They are, nonetheless, based on the following facts.

1. From 1955 through 1958, we offered a combination deductible-co-operative contract, which was soundly conceived. It was priced about 15 per cent

below our comprehensive plan and was first offered on an individual-option basis. Some 49,000 of our 3,500,000 members chose it. In 1958, when this number dropped to 12,000, we discontinued the plan.

Our financial experience with this scheme was not good. We lost money on the contract. Whether loss would have occurred with enrolment of a representative cross-section of population is hard to say. We think it would have been about the same as our other contracts. Our members just were not interested in the deductible-co-operative program.

2. For several years, Michigan Blue Cross has offered a so-called Economy Plan, which uses the co-operative principle by providing a daily room allowance of \$14.00 (now \$15.00) instead of semiprivate or ward accommodation in full. Ancillary services are provided in full. The average member hospitalized under this contract will pay from \$5.00 to \$10.00 per day toward his daily service charge. So far, we have enrolled about 13,000 members. The utilization has been in line with our full coverage contract. There is no indication that the co-operative payment requirement has restricted utilization. Obviously, the co-operative feature has had little appeal to our members.

3. In 1958, we made a study of deductible programs offered by other Blue Cross Plans. It showed, to our satisfaction at least, that no Blue Cross data supported the thesis that the use of a reasonable deductible brings about lower utilization. The only Plan reporting widespread approval of its new \$25.00 deductible program advised that the \$25.00 deductible plan provided better and more liberal benefits than did the program previously available, although the deductible plan cost more than the program it replaced. The only proved effect of a deductible provision offered by any Plan was a reduction in the monthly rate by the actuarial value of the dollars paid by the patient at the time of service.

4. Blue Cross Plans have been experimenting with a wide variety of deductible and co-insurance provisions for years. These experiments continue almost everywhere, including Michigan, where we now have a \$50.00-deductible plan. I hope that the most effective pattern and the one most acceptable to the public will be found. I even hope that some plan will prove that a modest deductible or co-insurance provision does bring about reduced use. But I doubt that this will happen. Most people do not want lesser benefits for less money. They want more benefits for less money, or more benefits for the same money, or more benefits even if they cost more money.

Most people prefer to pay more for the same benefits than to get short-changed when they need care.

But the people will not continue to budget more of their income for the same benefits without increasing resistance. This is our number one dilemma, because there seems to be no end in sight to increased hospital costs and use. This is a prime reason why we must continue to experiment with ways to control use intelligently.

Effect of Certain Benefit Provisions

There seems to be little doubt that a liberal Blue Shield contract is conducive to increased use of Blue Cross benefits—both inpatient and outpatient. (When I say Blue Shield, I include any contract of medical-surgical coverage.)

The Blue Shield benefit which most obviously affects Blue Cross inpatient use is the provision of a benefit for inpatient medical care. No doubt, the average length of stay of our medical cases would be shortened, perhaps dramatically, if there were no Blue Shield benefit for these cases. I do not suggest that this curtailment would be wise or in the public interest; I simply point out an obvious effect.

Parenthetically, I probably would have to propose that the same thing would be true of surgical benefits. But wouldn't this apply also to Blue Cross? If there were no Blue Cross or hospital insurance, we would undoubtedly have a great surplus of hospital beds and a crisis in hospital financing. So, perhaps, this line of reasoning is fruitless.

On the outpatient side, of course, we must acknowledge that, unless there are Blue Shield benefits to go along with Blue Cross benefits, there would be little expectation of any reduction of inpatient care through liberal Blue Cross outpatient benefits.

There is one area of use control which does not appear in the program. Perhaps it belongs in benefit provisions, although it is not yet, so far as I know, a "contract" benefit of any Plan or insurance policy. I am talking about home care. Our experience to date indicates that a sound program of home care can be provided by Blue Cross, not only without added cost to members, but, hopefully, with some overall savings in payment to general hospitals. Even more important, a well-conceived home-care program financed through prepayment could make unnecessary a great deal of the construction of new general hospitals.

Our Michigan Blue Cross Home Care Program is now nearing the end of its third year of operation. Nearly 2,000 cases have been accepted for home care. Costs have averaged less than \$4.00 per day, and the average length of care is about 55 days. Visiting-Nurse Service (including half-payment for home

aides when needed), physical therapy, drugs, and laboratory requirements are provided. Patient reaction is favorable in 98 per cent of the cases. With few exceptions, the doctors also approve. And Blue Cross, after making proper allowance for the probability that the hospital bed vacated by a home-care patient will be filled with another Blue Cross patient, still comes out at least even. Actually, our estimates are so conservative that we are reasonably sure we make an actual over-all saving.

We have employed skilled staff to extent the program state wide. We believe that this is one liberalization, and the only one discovered to date, that will pay for itself.

In my opinion, our hopes for cost control through benefit provisions lie chiefly in the expansion of home care, but only time and much additional experience will determine if this is so. I firmly believe that the

area to be covered by the next speaker (control of bed supply) is probably the most productive in control of hospital use.

Summary

In summary, market and cost pressures demand further experimentation in all areas. I do not like the comparison of medical-care coverage with automobile-collision insurance. Automobile insurance for personal liability and property damage does not provide for deductible or co-insurance, and these coverages are much more comparable to health-care protection than is collision insurance. However, since our costs and our rates have increased so dramatically in the last fifteen years, and threaten to continue to increase at the same or a greater rate, prudence requires us to do everything possible to find ways to keep costs to a reasonable figure.

Controlling Hospital Use through Limiting Hospital Bed Supply

MILTON I. ROEMER, M.D.

CHAIRMAN: The third paper on methods of control of hospital use will be presented by Dr. Milton I. Roemer. Dr. Roemer has had a long experience in the health field. He was a member of the staff of the United States Department of Agriculture during the 1930's and was concerned with medical care for the rural population. He has been director of the Provincial Hospital Service Plan in Saskatchewan. He has recently been a member of the faculty of the Sloan Institute of Hospital Administration at Cornell University. He is currently a member of the faculty of the School of Public Health of the University of California and will be concerned with research and teaching in the field of hospital and medical-care administration.

Dr. Roemer has extensively examined the relationship between the number of beds available to the public in an area and the resulting effect on use of hospitals. He will discuss the possibility of controlling hospital use by controlling the number of available beds.

An equilibrium prevails, in my view, between the demand for, and supply of, hospital beds in an area. As in a chemical or physical equilibrium, the forces operate in both directions, and they determine the hospital-utilization rate.

It is quite obvious that hospitals of a given bed capacity are built in response to some form of effective demand. I do not speak of need, but rather demand, for hospital care, backed up by purchasing power from private pockets, insurance, philanthropy, or government. Sometimes there may be only recognized need, with expectation of future financial support for the costs of care.

Once the hospital beds are supplied, however, they help to determine the level of demand for their use. The potential reservoir of medical need in a community is large and indeterminate. The availability of a given supply of hospital beds helps, therefore, to define the level at which this need is recognized and hence the level at which it is translated into a demand for hospital care.

The operation of this equilibrium depends on many factors. It depends on free access to the hospital beds without economic impediments—a condition largely created in the United States by the health-insurance

movement and in most other countries by governmental financing of hospitals. It depends on an ample supply of doctors for diagnosis of illness and the people's easy access to doctors—a condition approached in the United States and Europe, though not in the underdeveloped countries. It depends on an educated population who seek medical care in time of illness—a situation found at an accelerating tempo in America.

Influence of Wealth on Supply and Utilization of Beds

We know that the supply of hospital beds in different nations around the world is largely related to per capita wealth. The same is true among different states in the United States and even different counties within a state. Certainly, this fact suggests that the building of beds is determined by the affluence of a region. The financial capacity to use the beds, moreover, is bound to correspond in an area to the local ability to build them, but this parallelism may be far from perfect. Thus, beds may be built in a community where a low effective demand (due to poverty, ignorance, or reduction in population) means that they will not be used. Likewise, there may be periods of lag, when high effective demand is not immediately met by new bed construction (as in England today) and there are waiting lists of patients seeking hospital admission.

On a nation-wide basis in the United States, however, the striking fact is the degree to which hospital utilization, measured by days of care in general hospitals per 1,000 persons per year, corresponds with the supply of beds. One might question the double influence of an equilibrium in this relationship if there were not a substantially constant finding for occupancy rates. Thus, the hospitals in states with low bed supplies are *not* appreciably more crowded than are the hospitals in states with high bed supplies, as one would expect if the need for hospitalization were the decisive determinant of bed utilization. On the contrary, the occupancy levels of general hospitals are about the same in states of high bed supply as in states of low bed supply. Substantially the same relationships apply to the hospital bed supply, utilization, and occupancy level in the counties of one state (New York) that was investigated.

In one semirural county that we studied, almost optimal conditions were presented for an examination of the influence of bed supply on hospital utilization. After years of "getting along" with a bed supply of 2.8 general beds per 1,000 population, the supply was suddenly increased to 3.8 per 1,000. At the old level, the hospital was not overcrowded, having an occupancy of 78 per cent. With the increase in bed supply, however, there was an abrupt rise in the admission rate of the study hospital and no compensatory decline in the admissions rates of other nearby hospitals. At the same time, the average length of stay for 40 out of 53 diagnoses increased. Examination of records of Blue Cross members alone showed that their utilization rate in the study hospital rose by 38 per cent in response to the 42 per cent rise in the hospital's bed capacity.

Effect of Government Financing on Bed Supply

The influence of bed supply on hospital utilization seems to be taken for granted in countries with hospital systems that are fully, or almost fully, financed by public funds, whether raised by general revenues or social insurance. In the Canadian provinces, it has long been recognized that adding a new hospital bed would mean that its use would have to be financed. This would be the case whether a new hospital was to be built, a new wing added to a hospital, or a two-bed semiprivate room was to have a third bed added to it. As a result, all changes in hospital-bed capacity require governmental approval. Essentially the same arrangements prevail in Europe. Not that an eagle eye is focused on every hospital room every day, but the money allocated to operate a hospital depends on the number of beds it is authorized to maintain. No new hospital which public funds will have to maintain may be built without governmental approval. In the British National Health Service, limitation on the construction of new hospitals has been, perhaps, the major administrative control over the rising costs of hospital care.

Despite these limitations, Canada and most European countries, as well as Soviet Russia, have more general-hospital beds than we have in the United States in proportion to population. They tend to be occupied, moreover, at higher levels—90 per cent compared with our 80 per cent. Comprehension of these two facts is important, I believe, because it demonstrates that vesting government with powers over hospital bed supply has not resulted in lesser, but rather in greater, supplies of beds than in our own laissez faire hospital economy.

While over-all days of hospital utilization in Canada and Europe tend to be greater than in the United

States, admission rates in Europe are lower. They are accompanied by longer average duration of stay, which accounts for the higher aggregate days of utilization. There are many reasons for these differences, but I think one of the most important is the system of medical-staff organization of hospitals in Europe (indeed, all other continents) compared with North America. In Europe, admission to the hospital depends on the decision of a hospital-based doctor, not the community doctor who sees a patient in the home or office or "surgery" or polyclinic. As a result, only the most serious cases are admitted, cases that could not be treated on an ambulatory basis; and they are kept for longer periods of time. Even for the same diagnosis, however, European hospitals keep a patient longer than do American hospitals because, among other things, the hospital doctor will usually not see the discharged patient again. Since the hospital doctor is usually engaged on a salary, he has no economic incentive for or against hospital admission and retention.

Optimal Use of Beds

The restraint or discipline exerted on hospital admissions by hospital doctors in Europe is seldom matched in the United States, outside of exceptional teaching institutions. In our country, *if there is a bed available* in the average general hospital and the physician wants to admit a patient, he can usually do so. Indeed, the hospital administrator is usually not too happy unless doctors fill the empty beds with patients who will yield the income necessary to keep the institution solvent. This would seem to be corroborated by the finding of Mr. Sheatsley's study in Massachusetts that hospital administrators are generally not concerned about a problem of overutilization. Committees on admissions or utilization have typically been organized only in those hospitals facing the pressures of high occupancy and waiting lists. Eventually, the continued pressures tend to lead to plans for new hospital construction.

With hospital insurance eliminating financial embarrassment to patients, one cannot blame doctors for wanting to practice medicine in hospitals as much as possible. I am not condoning unnecessary surgery, which is another problem. But the ability to do a good diagnosis and render effective therapy is nearly always greater in the hospital. Practicing in the hospital also saves the doctor's time; there is striking evidence of higher rates of hospital admission in states of lower physician supply, where each doctor is busier.

The decision of the doctor, therefore, to hospitalize or not to hospitalize a patient is inevitably influenced

by the availability of a bed which his patient may enter without a charge, or even with a charge that is bearable. Even if a formal admission procedure must be hurdled, such as a medical-staff committee or an admissions clerk with a tough set of priority rules, the patient is likely to be admitted if there is a bed, simply because the hospital usually needs the income. If scientific advances reduce the absolute need for hospital admission of some diagnoses—like pneumonia or mastoiditis or diabetic coma or poliomyelitis—there is a long and expanding list of other conditions to justify the use of the beds—all sorts of elective gynecological surgery, gastrointestinal diagnostic work-ups, stabilization of peptic-ulcer diets, minor surgery, psychoneuroses, rehabilitation of arthritics, and so on.

A great variety of positive measures can be taken, and are being taken, in hospitals to assure the *optimal* use of the beds available. Certainly, admission-scrutinizing procedures are sound. Organized home-care programs are good for chronic patients and can save bed-days for acute cases. Prepayment of outpatient benefits can eliminate some unnecessary diagnostic or minor surgical admissions, although the evidence suggests a more than compensatory rise in the *other* admissions resulting from improved case-finding. New support of this interpretation has just been offered in Mr. McNary's paper presenting findings on Blue Cross experience with outpatient benefits in Michigan. All these measures can promote the wiser use of beds and may even help to discourage unsound plant expansion.

None of these steps, however, has been shown to reduce the utilization of hospitals below the level corresponding to a given bed supply, so long as patients are insured or use of the beds is financed by public funds. We must, in my view, simply face the fact that social financing of hospital care, whether it is through law or voluntary group action, requires social control over the supply of beds in a community, region, state, and nation. Otherwise, it is futile to complain about rising utilization and the rising costs associated with it.

Control over Utilization

In the period before widespread hospitalization insurance, we were living in a hospital market controlled largely by price. Many people who needed hospitalization did not get it because they could not pay the price. Others were not hospitalized because the beds were not there (especially in rural counties) and their doctors did not expect to use them. Technology, of course, has changed the whole meaning of hospitalization. I am not very old, and yet I was born

at home and my tonsils were taken out in a doctor's office. Today, these two medical events represent the two commonest causes of hospital admission. In Saskatchewan one of the most frequent causes for hospitalization has been multiple tooth extractions. Then there are all the diagnostic investigations, like cardiopulmonary work-ups, which can often be done better in a hospital. These are short-stay cases, and at the other end of the range are the long-stay cases (now occupying 25 per cent of American general-hospital beds on the average day) which might or might not be served adequately in a nursing home or an organized home-care program.

The answer, it seems to me, is some equitable system for control over the supply and location of beds in every state. This was, after all, the conception in back of the "master plans" required in the Hill-Burton Act, except that the enforcement applies only to the minority of hospital-construction projects that are aided by federal grants. Similar but comprehensive authority of approval could be exercised by state public health agencies, on which, as in the Hill-Burton administration, there would be proper representation of the hospitals themselves, the health professions, and the general public. The program might be framed in terms of "franchise-granting" power, as Mr. Ray Brown has suggested, or in other appropriate ways. In large and populous states, some of this authority might be delegated to regional hospital councils below the level of the state government.

The two largest states in the nation, New York and California, have been exploring such arrangements through regional hospital councils, set up by law but empowered only to study the problem and make suggestions. Similar non-mandatory influences are exerted by voluntary regional hospital councils in metropolitan centers like Pittsburgh and Chicago, the force in back of these being largely the guidance offered to industrial corporations on their donations for hospital-construction purposes. I am not sure of the batting average of these voluntary councils with respect to gaining support for favored construction projects and discouraging support for unfavored programs, although I have been told it is well under 100 per cent. In my own region of Southern California, voluntary planning efforts have certainly been unsuccessful, and some ten million people are served largely by a potpourri of small, unaccredited proprietary hospitals. The aggregate bed supply in these hospitals is not high, but their inadequacies in meeting modern standards of patient care, professional education, re-

search, and preventive service are a vast departure from the American ideal.

Fears of governmental restriction over free hospital development are, of course, widespread, but our own studies have shown little foundation for these fears in actual hospital experience with governmental authorities. Apprehensions seem to come rather from a priori ideologies. The governmental programs in operation have actually strengthened the voluntary hospital system through some thirty distinct activities for support of the care of certain beneficiaries; promotion of technical standards; and provision of funds for construction, training, and research. Governmental authority over hospital bed supply and location would, in my view, have a similar vitalizing effect on the voluntary hospital system, because of the help it would give the system as a whole to meet needs more reasonably. At the same time, it would place a ceiling over that share of hospital costs which is contributed by the utilization rate. (One should

keep in mind that by far the larger factor in the rising community costs of hospital service in the last two or three decades has been the rise in per diem costs rather than the utilization rate.)

Most of the states recognize the public interest in the level of hospitalization-insurance premiums, as is indicated by the passage of regulations empowering the insurance commissioner to approve those rates. By implication, hospitals are thus regarded as public utilities, meeting essential social needs and, therefore, subject to public regulation. So long as vast collectivities of people, either through insurance or through tax funds, are meeting the great bulk of hospital-operating costs, it would seem to follow that some effective control over those costs should be exercised through the planning authority of government. A critical component of such planning would be supervision over the supply and the location of hospital beds in a state or region.

Controlling Hospital Use through Medical-Staff Utilization Committees

ROBERT M. SIGMOND

CHAIRMAN: The medical profession, as has been stated, has major responsibility for ordering hospital care. Throughout the nation, the profession exhibits great interest in avoiding unnecessary use. This interest has led to the establishment in many hospitals of medical-staff utilization committees who review the experience of persons admitted to the hospital with the purpose of avoiding unnecessary hospital use.

The Pittsburgh area has had many experiences similar to those in Michigan. There has been extensive controversy over Blue Cross rates in Pittsburgh and much pressure for evaluating and controlling hospital use.

Mr. Robert M. Sigmond, following experience in hospital administration, worked with Mr. Rufus Rorem in the Philadelphia Hospital Council. He became a member of the staff of the Commission on the Financing of Hospital Care, which carried on an extensive study, initiated because of the hospital field's concern with increasing cost and use.

Mr. Sigmond, after his work with the Commission on the Financing of Hospital Care, became the director of the Hospital Council of Western Pennsylvania, giving that organization leadership which has made it the center of the hospitals' concern about the problems of increased hospital use and cost in that area.

Mr. Sigmond will discuss the possibilities of control of hospital use through medical-staff utilization committees.

Care in a short-term general hospital is the most costly form of service that a physician prescribes with any great frequency for his patients. Accordingly, control of inpatient hospital bed utilization is one of the most important approaches to control of total health-care costs.

The Role of the Utilization Committee in Control of Inpatient Utilization

In Western Pennsylvania medical and hospital leaders have developed a comprehensive program designed to control inpatient utilization without adversely affecting the quality or availability of service. This program has two major subdivisions, reflecting

the two separate but interrelated aspects of the total utilization problem.

The first subdivision consists of specific activities designed to *reduce* the rate of inpatient utilization by *the population* (patient days per thousands population) to the lowest level consistent with high quality of care. This phase of the program consists of such activities as: (1) promotion of improved and expanded ambulatory services at hospitals; (2) promotion of use of organized home-care programs, of visiting-nurse services in the home, and of high-quality nursing homes; (3) provision of prepaid benefits for ambulatory, home-care, visiting-nurse, and nursing-home services; (4) cautious experimentation with "deductibles" in prepayment programs as a means of discouraging inpatient utilization; (5) programs of withholding prepaid benefits for "unnecessary" utilization; and (6) establishment of utilization committees made up of members of hospital medical staffs, for the purpose of educating physicians about their key role in determining rates of utilization.

The second subdivision of the comprehensive utilization control program consists of activities designed to *increase* the rate of inpatient utilization of the beds (the occupancy rate) by reduction of the number of staffed beds to the lowest level consistent with high quality and ready availability of care. That is, for any given rate of inpatient utilization per thousand population, the hospitals should attempt to provide the minimum number of staffed beds and thus hold down unit costs. This phase of the program consists of such activities as (1) co-ordinated planning by the hospitals through the Hospital Planning Association and (2) research and demonstration projects on methods of increasing occupancy by reducing census fluctuation and by closing beds. These activities are designed to promote a greater degree of interchangeability of use of beds both within and between hospitals.

I might comment that we have become convinced that effective control of utilization requires companion actions with respect to both types of utilization rates, utilization in relation to population and utilization in relation to beds, and that concentration on utilization in relation to population will have little

result unless there is an attempt to increase the utilization in relation to beds. The latter, of course, means cutting the number of beds. I think this is the primary job of hospital management.

In this paper I have been asked to discuss one special phase of this comprehensive utilization-control program: the effort to educate medical staffs about their impact on utilization rates by means of medical staff utilization committees. In my opinion this is the central activity in our rather complex utilization-control program and merits the special attention given it at this symposium.

Underlying Concepts of the Hospital Utilization Committee

Sometimes we speak loosely of hospital-bed utilization by the population, giving the impression that patients utilize the beds. In fact, physicians utilize the beds; patients lie in them. A patient cannot even have the privilege of lying in a hospital bed unless ordered to by a physician, who has the extremely valuable privilege of giving this order. Patients can, of course, bring pressure on physicians to admit them to hospital beds, but the decision rests with the physician. Similarly with discharge, the physician makes the decisions that determine the end of the bed-utilization episode. Patients can, of course, discharge themselves against the physician's advice, but this right is rarely exercised. Patients can also bring pressure on physicians to delay discharge, but, again, the decision rests with the physician. The patient plays a part in the utilization experience only insofar as he influences the physician. The physician's judgment is the crucial factor.

Approaches to utilization control must involve direct or indirect efforts to influence the physician's judgment and decision on admission and discharge. The utilization-committee concept is based on the assumption that a most important method of influencing the physician's judgment is to help him understand what factors actually influence his judgment and that of his colleagues.

The simple fact is that most physicians do not yet know very much about their utilization practices. Medical practice has many dimensions, each with a wide range of variation among physicians. Of these, utilization is one of the newest dimensions. Today, it is still largely the unknown dimension. Ask the members of a hospital's medical staff who is the fastest in the operating room. They will know. They will know who are the best diagnosticians. They will know which have the best bedside manner. But ask which doctors tend to keep patients in the hospital the

longest, and they will either plead ignorance or make uninformed guesses.

In one hospital in Pennsylvania, a detailed analysis was made of all the cholecystectomy cases for one year. This analysis revealed that four surgeons were responsible for 90 per cent of the cases. After adjustment for ages of patients and for the complicated cases, the data revealed that there was one "short-stay," two "medium-stay," and one "long-stay" cholecystectomy surgeons. This finding was reported to each of them separately, and each was asked to guess who was the "short-stay" surgeon. Only one guessed right, because each nominated himself. Each man thought that he was discharging as soon as conditions indicated, and none thought that his colleagues would be rash enough to discharge sooner. They did not know about their own utilization practices. They had not thought about this dimension of their medical practice. After analyzing the data, the utilization committee knew more about the utilization of these surgeons than the surgeons themselves knew.

There is a sequel to this little story. A year later, when the same data were collected on the next year's cases, the average stay for cholecystectomy cases had dropped. The average stay had dropped for each of the four men, even including the "short-stay" surgeon. The decline occurred despite the fact that none of them, including the "long-stay" surgeon, had been subjected to criticism. It had been emphasized that the data were collected for study purposes only, and not to judge the men nor to set standards.

This little story illustrates, I think, the purposes of a medical-staff utilization committee: to help educate physicians with respect to an unknown but important dimension of medical practice and to help them become more aware of their impact on utilization rates.

A Guide to the Utilization Committee

In early 1959 Western Pennsylvania medical societies first began to urge the establishment of hospital utilization committees. Shortly thereafter, a number of hospital administrators and chiefs of staff requested guidance with respect to the nature of these committees and their duties. As a result, a pamphlet entitled *Guide to the Establishment and Functioning of a Medical Staff Utilization Committee* was prepared, under the co-sponsorship of the Tenth Council District of the Pennsylvania Medical Society and the Hospital Council of Western Pennsylvania, and was published by the local Blue Cross plan.¹ This pam-

¹ *Guide to the Establishment and Functioning of a Medical Staff Utilization Committee* (Pittsburgh: Hospital Service Association of Western Pennsylvania [Blue Cross]). Available upon request.

phlet discusses the purpose of a utilization committee, its organization, relationships with the medical staff and hospital, and method of operation. This pamphlet is available, and I recommend it to the attention of anyone interested in utilization committees [the *Guide* is reproduced as Appendix I to these proceedings].

The *Guide's* definition of the purpose of the utilization committee is, however, worth quoting in full:

A Utilization Committee is established within the medical staff of a hospital to assure that all of the inpatient service given is necessary and could not be provided as effectively in the home, office, hospital outpatient department or some other more appropriate, available facility. The Utilization Committee analyzes and identifies factors that may contribute to unnecessary or ineffective use of inpatient services and facilities, and makes recommendations designed to minimize ineffective utilization.

The Utilization Committee is a fact-finding, educational instrument of the medical staff without authority directly to effect changes in procedures or lessen the responsibility and privileges of other medical staff committees or individual members of the medical staff. It operates to strengthen the responsibility and authority of existing medical staff and administrative structure by making practical recommendations to the appropriate body for consideration and action.

The *Guide* suggests that the utilization committee functions primarily by review and evaluation of charts of discharged patients. It emphasizes that the committee will function most effectively if its review work is limited to specific types of cases, such as long-stay cases, short-stay cases, cases questioned by prepayment plans, or cases in a specific diagnostic or operative category. Use of the professional activity study and of check-list forms that may be completed largely by medical record room personnel is recommended to reduce the volume of routine work by physicians serving on utilization committees. The *Guide* includes specific suggestions with respect to records and reports and to procedures for follow-up and development of recommendations designed to improve bed utilization. Attention is directed to possibilities for improvement in administrative practices that may be interfering with effective bed utilization.

What a Utilization Committee Is Not

Better understanding of the utilization committee concept may result from a brief discussion of some common misconceptions.

A. *Utilization committees are not police bodies with power to ferret out and censure a few "guilty" physicians.*—Utilization committees have no disciplinary powers, their records are not incorporated in the patient chart, and their deliberations do not become a matter of official record. Often the data they review

are coded, not even identified by name, and in many instances subsequently destroyed. The primary objective of the utilization committee is educational—for each and every member of the hospital staff. Control of utilization is not considered to be a problem of identifying and dealing with a few bad actors on the staff who indulge in flagrant abuse. The fact is that conscientious utilization committees invariably find that almost all physicians are, at some time or another, involved in some aspect of ineffective utilization. A day or even a half-day of delay in the discharge of most cases, or even of most cases of one category, such as obstetrical, can have a much greater impact on utilization rates than will the occasional case with ten or twenty days of excessive stay or a case of unnecessary admission.

B. *Utilization committees are not scientific research bodies attempting to measure the precise magnitude of overutilization and underutilization.*—The primary objective of the utilization committee is to improve, not to measure, utilization practice. Fact-finding and measurement are important aspects of utilization committee work, as they are in any educational or administrative activity, but precise research standards do not apply to the work of the utilization committee any more than to the work of other active medical-staff committees concerned with improving standards of medical practice. (Utilization committees can have salutary effects on utilization without being able to define or measure optimum utilization, in the same way that tissue, medical records, and other medical-staff committees in the absence of precise methodology for measuring or even defining quality of care, appear to have positive effects on quality.)

C. *Utilization committees are not agencies of Blue Cross.*—In Western Pennsylvania the utilization committees function within the framework of the medical staff of the individual hospital, and they are concerned with utilization in *all* types of cases. Accordingly, they scrutinize "free," self-pay, and commercial-insurance cases, as well as those covered by Blue Cross.

As the partner of community hospitals and as their financing mechanism, Blue Cross has a great interest in the overall problem of utilization control, as well as its narrower interest in claims review of Blue Cross cases.

Closely related to the work of the utilization committee within each hospital is that of the Blue Cross Claims Review Committee, which functions on a regional basis. During its auditing process, Blue Cross

frequently identifies two classes of cases: those in which hospitalization appears to be unnecessary within the terms of the subscriber contract and those in which the length of stay appears to be excessive. All these cases are first referred for review to the utilization committee of the hospital involved, which reports its findings to a meeting of the area-wide Blue Cross Claims Review Committee made up of representatives of local-hospital medical staffs. Blue Cross has accepted the decisions of this Claims Review Committee without question on payment or withholding of claims. These Claims Review Committees also decide whether "admonition" letters will be sent by the Medical Society, not by Blue Cross, to physicians about cases in which length of stay appears to be excessive. This Blue Cross claims review work has undoubtedly served to increase interest and enthusiasm on the part of utilization-committee members because they have come to see that Blue Cross is willing to listen to their judgment in professional matters. For some hospital utilization committees, review of cases referred by Blue Cross is the major activity, or even the only activity. Such committees are not functioning effectively, and it is not surprising that staff members of these hospitals think of the activity as "Blue Cross work."

Ideally, the work of hospital utilization committees and of Blue Cross claims review complement each other. A well-functioning hospital utilization committee reduces the volume of the work of the Blue Cross claims review staff and of the Claims Review Committee. Participation in Blue Cross claims review work helps members of hospital utilization committees to exchange experience with their counterparts in other hospitals and assures participation of physicians in professional decisions that heretofore were made exclusively by Blue Cross staff.

D. *Hospital utilization committees are not "whitewash" groups.*—Some experts concerned with research in hospital use appear to believe that utilization committees are "whitewash" groups. They believe that utilization committees not only are "ineffective vehicles for measuring" but in addition are "whitewash committees, by their very nature."² This sharp criticism appears to be based on a misunderstanding of the basic function of utilization committees, which is educational. Significantly, these critics also apply the same criticisms to hospital medical-staff tissue committees, appearing to assume that the primary task of both committees is disciplinary.

The fact is that, in Western Pennsylvania, these

² "Research in Hospital Use: Progress and Problems" (draft of a Conference Report [United States Public Health Service], 1962).

committees do not function to whitewash the problem. Like the tissue committees, utilization committees do not publish their findings or publicize their activities. They apply neither whitewash nor tar and feathers. Their very existence presumes that there is a problem which needs correction. These committees require a great deal of work from their members, who would not need to work so hard if the objective were simply to "whitewash." That utilization committees do not yet function in the most effective manner is undeniable. Most are less than three years old, and the whole idea is not much older. Improvement in functioning is clearly indicated. Criticism of their present effectiveness is constructive; to call them a hoax is not.

E. *Utilization committees are not the whole answer to the utilization problem.*—Utilization committees, by themselves, cannot assure the most effective utilization of inpatient facilities. As indicated above, they are but one part of a comprehensive program in Western Pennsylvania. But they are an important, possibly the most important, part of the program.

No one has yet suggested that medical practice would be improved if the attending physician lost the right to make the decisions which determine hospital utilization by his patients. To my knowledge, no one seriously believes that, in the immediate future, it will be possible or desirable to develop precise standards of utilization applicable to every case and enforceable by administrative procedure.

If, however, it is agreed that these decisions properly belong to the attending physician, then is utilization to be controlled only by indirect influences on his behavior? Should he not be encouraged to become directly involved? Shouldn't his self-control be encouraged? And shouldn't this be knowledgeable self-control? If standards (of greater or lesser degree of precision) are to be developed and applied, are not those standards most likely to be practical and acceptable if tested and developed within utilization committees of medical practitioners?

Why Physicians Bother with Utilization Committees

Many observers cannot believe that private practitioners will give the time and energy required for utilization-committee work. In Western Pennsylvania, they do. Why do they bother?

Medical Society leadership has recognized that many community groups, in addition to physicians, have a valid interest in ensuring effective utilization of inpatient facilities and services: the patient; labor unions and management sponsoring employee health-benefit plans; prepayment agencies, such as Blue Cross and Blue Shield; government agencies with

regulatory responsibilities, such as the insurance commission; and hospital officials. Western Pennsylvania physicians saw clearly that these groups were beginning to act to protect their own interests and that such action was having an impact on the daily practice of physicians. Physicians were concerned about the possible effects on the quality of their care as well as on their professional independence and financial position. Extensive discussions convinced them that "the medical profession has a basic role in ensuring proper and effective utilization."

A quotation from a recent Medical Society document illustrates the current thinking of top medical leadership in Western Pennsylvania:

The medical societies and hospital groups in the greater Pittsburgh area have recognized the public burden of continuously rising costs of health care. Practical steps to eliminate inefficiency in the provision of service must be taken. Accordingly, they have pioneered a program to protect the public, industry, and all health care plans against misuse, at the same time preserving proper standards of quality.

More and more groups are focusing on inpatient hospital utilization as a key to control of health costs, and are developing proposals designed to control utilization. Some management and insurance groups propose co-insurance and deductibles as an answer. Others propose prepaid comprehensive care through group medical practice, with financial incentive to the physician to avoid hospitalization, as the answer. Some prepayment programs attempt to control utilization by withholding benefits from beneficiaries who "enjoy unnecessary utilization." Each of these proposals involves a different effect on traditional relationships among patients, physicians and hospitals.

In this situation, the program which has been evolving during the past few years under the leadership of the medical societies and hospital groups in Western Pennsylvania appears to offer a promising approach to control of inpatient utilization. This program is modeled on the successful effort of surgeons to control unnecessary surgery by creation of special review committees within the medical staff structure of each hospital.

This approach to the control of utilization recognizes the medical profession's central role in ensuring effective utilization of hospital facilities. It is the physician who decides upon admission of a patient, who orders tests, drugs, procedures or treatments, and who decides when the patient should be discharged. The program is based on the conviction that unnecessary inpatient hospital use can best be controlled by encouraging physicians on a hospital staff to review each other's utilization experience in a systematic way and to subject their utilization practice to the same kind of frank critical appraisal that is applied to other aspects of their work. Under this program, unnecessary utilization can be controlled without undermining the quality of care or existing patient-physician relationships.³

Continuing implementation of this type of approach requires dedicated, even inspired, leadership,

³ J. Everett McClenahan, M.D., "A Medical Society Prescribes a Remedy," *Trustee*, XV, No. 9 (September, 1962), 1-6.

within the ranks of organized medicine. Fortunately, Western Pennsylvania has been blessed with such leadership.

How Utilization Committees Have Functioned in Western Pennsylvania, 1960-61

The *Guide to the Establishment and Functioning of a Medical Staff Utilization Committee* sets forth specific suggestions about the organization and method of operation of utilization committees. But the Introduction clearly states that "this guide is not a set of specific rules but rather a suggested outline for each hospital medical staff in developing its own program. In instituting its Utilization Committee activity, each medical staff may wish to adapt the various suggestions made in this guide to its own structure and traditions" (1: 3). There has been no effort to impose uniformity, and each committee has followed its own star.

The initial suggestion that the medical staff of each hospital establish a utilization committee was made in the fall of 1959. To determine progress, questionnaires were distributed to the hospitals in early 1960, at the end of 1960, and at the end of 1961. After returns on each of the questionnaires were in, there was a general meeting of utilization-committee chairmen and hospital administrators to discuss problems and progress. Highlights from the information gathered by these questionnaires indicate how the committees have functioned during the first two years.

The questionnaires were sent to thirty-eight community general hospitals in the Tenth Councilor District of the Pennsylvania Medical Society, which includes Pittsburgh and Allegheny County and surrounding counties. The number of hospitals returning useable questionnaires increased from twenty-six for the first questionnaire to thirty-four for the second, and thirty-six for the third. The questionnaires were not identical; some items were contained on but one questionnaire, some on two, and some on all three.

A. *Size of committees.*—The number of members on utilization committees ranged up to twenty-one; the average membership was seven. This conforms closely with the recommendation of the *Guide*—five to fifteen.

B. *Number of committee meetings.*—Of the thirty-six hospitals, twenty-three reported monthly meetings. Three met every other month, six met quarterly, and four met on no regular basis.

C. *Method of operation.*—The primary activity of utilization committees was reported to be chart review. Some committees also reviewed admissions

daily, or "emergency" admissions, or "long-stay" cases still in the hospital, but all reviewed charts of discharged patients.

D. *Proportion of total cases reviewed.*—The thirty-six responding hospitals care for approximately 300,000 inpatients annually. The proportion of these cases reviewed has steadily declined: 18 per cent during the first three months of 1960, 11 per cent for the last nine months of 1960, and 6 per cent for 1961.

During the earlier periods, there was wide variation among hospitals in the proportion of charts reviewed. A number of hospitals were reviewing half of all the charts or even more, and some others were reviewing less than 1 per cent. More recently, there has been less variation among the hospitals. In 1961, a majority of the hospitals reviewed between 2 and 6 per cent of all the cases. About 50 cases were reviewed at the average committee meeting.

E. *Types of charts reviewed.*—Cases referred by Blue Cross involving questionable admission or questionable length of stay were being reviewed by all the reporting committees. In early 1961, 39 per cent of the committees were limiting their chart review to these Blue Cross cases; subsequent reports indicated that the proportion of the committees with this type of partial program was reduced to 23 per cent.

At the other extreme, in early 1960, 31 per cent of the committees were reviewing all cases or cases selected at random. Subsequently, the proportion of committees with an unspecialized approach was reduced to 23 per cent.

The trend has been toward selection of a specific type of case to be reviewed at a specific meeting of the committee. Most commonly, long-stay cases were given concentrated attention, typically cases staying thirty days or more. Other categories which have received special attention were "emergency" admissions, short-stay cases (one- or two-day stays), selected diagnoses, cases in which the discharge diagnosis differed from the admitting diagnosis.

F. *Proportion of cases classified as "questionable."*—The number of committees that kept data on the number of "questionable" cases has steadily increased from eight in the first survey to thirty-two in the third survey. Among those reporting, the proportion of cases reviewed which were classified as questionable was 10 per cent in the first survey, 5 per cent in the second survey, and 7 per cent in the third survey.

As would be expected, those hospitals limiting their work to cases referred by Blue Cross had the highest proportion of "questionable" cases. Those reviewing the largest number of cases, especially those reviewing cases selected at random (of which

there were a few), had the lowest proportion of "questionable" cases.

G. *Disposition of "questionable" cases.*—Utilization committees in most hospitals reported that they act to bring "questionable" cases to the attention of the attending physician on an informal, confidential basis, usually with a request for additional information not shown on the chart. A few committees ask the attending physician to add an explanatory note to the chart. A few committees reported that "questionable" cases, unidentified by name of attending physician, have been used as illustrative material in educational programs at medical-staff meetings.

Four utilization committees of the thirty-six tended to be more officious. In two instances, the "questionable" cases are referred to the executive committee, and, in one instance, to the medical director. One hospital reported that names of attending physicians with unexplained "questionable" cases are posted on the bulletin board in the staff room. This approach is not recommended in the *Guide*.

Results of Utilization Committee Activity in Western Pennsylvania, 1960-61

In the questionnaire completed at the end of 1960, committee chairmen were asked to state whether, in their opinions, committee activity had resulted in reduction in length of stay, in admissions, or in use of ancillary services. Seventy-five per cent reported that reduction in "excessive stays" had been achieved; 32 per cent cited reduction in "unnecessary admissions"; and 19 per cent cited reduction in use of ancillary services.

The questionnaire completed at the end of 1961 asked only about length of stay. This time, 78 per cent of the chairmen reported that their committee's activity appeared to have resulted in reduction of stays.

A number of chairmen also reported specific changes or improvement in hospital procedures resulting from utilization review. Most frequently cited was improvement in hospital charting. Other specific changes reported by one or more committee chairmen included:

1. Development of more equitable and efficient admission and discharge procedures.
2. Installation of the program of the Professional Activities Study.
3. Better liaison between medical staff and the social service department on disposition of long-stay cases.
4. Rescheduling of "dental" cases to "dead" time in the operating room.
5. Installation of a routine laboratory unit in the admission area.
6. Institution of a 24-hour procedure on discharge notices, found to be applicable to 80 per cent of cases.
7. Advance in the discharge hour.

8. Increased emphasis on use of outpatient diagnostic facilities for preoperative work-up.
9. Requirement that the final diagnosis be placed on the chart before the patient leaves the floor for discharge.
10. Use of a special form placed on the patient's chart after some specific length of stay (such as fourteen, twenty-one, or thirty days), on which the attending physician is asked to explain briefly the reasons why the patient must remain in the hospital.

Other comments made by committee chairmen on results of committee activity included:

1. Increased interest of medical-staff members in working with the administration on various problems, and improved liaison between medical staff and administration.
2. Stimulated work on newly discovered problems involving hospital procedures such as week-end laboratory coverage, operating-room scheduling, and delays in tissue reports.
3. Focused need to avoid delay in completing consultations.
4. Increased co-operation with respect to discharge hour.
5. Stimulus to discharge or transfer to appropriate facilities of long-stay cases.
6. Elimination of questionable emergency admissions.

In general, committee chairmen believed that, in addition to improvement in utilization practices, the committee had important side effects, such as improvements in medical staff, in administrative liaison, in charting, and in understanding of utilization and Blue Cross problems. A few chairmen also cited improvement in quality of care; reduction in hospital costs; and, in one case, elimination of the need for a new wing to the hospital.

Suggestions for Effective Utilization Committees

During the spring of 1962, thirty-six utilization committee chairmen participated in a series of informal dinner meetings, each attended by from six to eight chairmen. At these meetings, a number of suggestions were made as to how utilization committees might be helped to function most effectively.

A. *The need for top level support.*—Utilization committee chairmen were unanimous in the opinion that the utilization committee requires the unqualified support of the medical staff's executive committee and the hospital administrator. All chairmen with effective committees reported that they enjoyed the enthusiastic backing of the executive committee.

B. *Key role of committee chairmen.*—The chairman of the utilization committee should be a physician who enjoys the respect and confidence of the medical practitioners. A number of younger chairmen suggested that those who have been in practice for only a few years have difficulty in obtaining full co-operation of the staff. There was also general agreement that the committee functions best when the chairman is a clinician. Although several excellent com-

mittees are headed by an anesthesiologist, pathologist, or radiologist, these appeared to be unusual cases.

C. *Flexibility of structure.*—Chairmen of committees felt that, because of differences in sizes and types of staff and other factors, stereotyped structure was not desirable. Smaller hospitals, for example, reported success in combining several committees (audit, records, utilization). Larger hospitals appeared to find it desirable to confine utilization review to a special committee appointed for that purpose.

D. *Rotation of committee membership.*—Some chairmen reported that they have been successful in obtaining the co-operation of critical physicians by arranging to have them serve on the committee. Because of the work involved, it appears desirable that each member's term on the committee be limited.

E. *Value of a "tight" bed situation.*—Hospitals with waiting lists appeared to encounter less difficulty in getting the utilization committee functioning effectively than those in which beds were readily available. As one chairman stated, "It's difficult to sell the utilization program to your own staff and administration when there are plenty of empty beds." Action to reduce the number of beds staffed for use appears to be desirable in such situations.

Problems of Utilization Committees

Although most committee chairmen were enthusiastic about utilization-review work, some were not so sure, and many cited specific problems. The most common problem mentioned was the amount of time required from already overburdened physicians serving on utilization committees, especially the time required for essentially routine work. In addition, a number of chairmen reported that the medical staff resented the committee as a police body, and a number of chairmen felt that committee members were frequently hampered because of fear of antagonizing chiefs of service and colleagues.

The Hospital Utilization Project

Review of the experience of utilization committees convinced medical and hospital leaders in Western Pennsylvania (1) that the original concepts underlying the utilization committees are valid and (2) that the activities of the committees have had the effect of giving to most medical-staff members an increased awareness of the impact of their decisions on health-care costs and of the necessity for them to give more thought in their prescription of hospital services.

At the same time, this review of the first two years of experience revealed certain weaknesses that should be corrected if utilization committees are to function most effectively. Most have tended to be-

come weighed down with routine, time-consuming review of charts. An insufficient number have (1) concentrated on specific factors affecting utilization, (2) developed criteria for inpatient utilization of beds, (3) studied administrative factors which may interfere with effective utilization, or (4) made adequate use of the resources of medical-record-room personnel in preselection of charts for review. None has made effective use of the possibilities of statistical techniques and of data-processing equipment for analyzing groups of cases to identify the nature of variability among physicians in their utilization practices.

A number of committees have not been successful in clarifying misconceptions among the medical staff about the committee's objectives. These were usually committees which had not emphasized an educational approach but rather had attempted to "police" or deal in an unsympathetic manner with staff men who had "questionable" cases.

The review of strengths and weaknesses of existing utilization committees convinced medical and hospital leaders that much would be gained by assembly of a full-time staff of trained personnel to provide continuous technical assistance to the committees. Accordingly, a prospectus of a three-year "Hospital Utilization Project" was developed. The project called for a full-time staff, consisting of a medical director, a hospital administrator, and a statistician, supported by necessary secretarial and clerical help.

The staff is to provide technical assistance to utilization committees of individual hospitals by offering consultative services in definition of over-all objectives, assistance in defining methods for conducting analysis of specific problems, assistance in use of clerical and mechanical aids and in use of statistical techniques. In addition, the staff would attempt to develop reliable utilization measurements, promote interchange and co-ordination among committees of different hospitals, attempt to develop joint studies related to specific population groups, and, finally, explore possibilities for use of centralized mechanical tabulation techniques.

Specifically, the prospectus of the Hospital Utilization Project lists four activities of the staff:

1. Co-ordinate and help assure continuity of the efforts of individual hospital medical staff committees in studying and controlling utilization;
2. Assemble basic data on the dimensions and nature of the problem of unnecessary utilization, as determined by the practicing physicians;
3. Perfect general techniques of recording, selecting, and assembling medical record data that will minimize the work and maximize the results of a utilization committee;
4. Develop a uniform mechanized approach to assembling needed data for utilization committees.

The Hospital Utilization Project was estimated to cost approximately \$250,000 during a three-year period. Medical leaders undertook to raise the necessary funds from industry headquartered in the Pittsburgh area and were met by an enthusiastic response. The United States Steel Foundation led with a contribution of \$25,000 for the first year and pledged an equal gift for the second and the third years. Very shortly, the funds were in hand, with the result that the key staff and medical director, Dr. John Nay, have now been employed. The project opened its offices on January 1, 1963.

Guiding the project is a steering committee, consisting of representatives of the medical societies and the Hospital Council, representatives of the Medical School and the Graduate School of Public Health of the University of Pittsburgh, the Hospital Planning Association, Blue Cross, and industry.

Summary and Conclusion

Speaking before the Health Insurance Association in 1961, Dr. Russell A. Nelson, director of Johns Hopkins Hospital and past president of the American Hospital Association, said, "In the long run, this utilization-committee idea and its effect by education of the medical staff, in my judgment, will be the most important factor in the control of utilization. It will also have a very useful effect in bringing the medical staff closer to the financial and management side of hospital operation."

Experience with utilization committees during the past few years in Western Pennsylvania tends to support Dr. Nelson's judgment. It is clear that these committees have (1) increased the physicians' awareness of their central role in determining utilization rates, (2) resulted in specific changes designed to improve utilization practices at a number of hospitals, and (3) improved liaison between medical staffs and hospital administration with respect to medical-administrative problems.

Analysis of the Western Pennsylvania experience demonstrates that there is wide variation in the practices, procedures, and effectiveness among utilization committees. This finding has led to the formation of a well-staffed Hospital Utilization Project, co-sponsored by the Medical Society and the Hospital Council, to assist utilization committees of individual hospitals, co-ordinate their activities, and help to develop efficient methodology.

The key to the success of the utilization-committee effort in Western Pennsylvania has been the leadership provided by dedicated officials of the Medical Society.

Discussion

MR. MILO ANDERSON: First, I want to say this has been one of the most interesting programs I have listened to. I think there has been one omission in it—that no practitioners of hospital administration have spoken.

The practitioner of hospital administration, you have to admit, views utilization studies as being aimed toward reducing occupancy, for they have a stake in occupancy. One of the important considerations is weekly change in utilization, the tremendous drop in census on the week ends, and the inability of hospitals to adjust their staffing in proportion to weekend drop. Unless a hospital closes a floor, overhead does not change very much, and closing the floor every week end is impractical.

We happen to live in an area where the shortage of personnel is not severe, and we could staff reasonably well without too much cost seven days a week. But fewer and fewer doctors wish to use hospitals on Saturdays and Sundays, and fewer and fewer patients want to be in a hospital on week ends. Consequently, the census drops on Thursday. I think this situation is due in part to the prevalence of sick-leave benefits; patients entitled to sick leave would just as soon be in the hospital on company time. We even had a patient who had to be admitted on Tuesday so that he could appear on Monday for his unemployment check, because the unemployed must prove they are able to work to get the check. These circumstances influence occupancy and cost because, as Mr. McNary said, the most important influence on cost is occupancy.

We have heard in the last couple of days that utilization can be manipulated, but we have not been told how much this saves the community. I think what we need to do is, in some way, to utilize the hospital on Saturdays. Most of the medical practice on week ends, in our hospital at least, is done by the young doctor getting started, who will see a patient whenever the patient needs attention.

Of course, physicians are human beings with families, and they want as much time at home as possible. But week-end utilization of the hospital would help to reduce unit costs.

MR. SIGMOND: The Hospital Council of Western Pennsylvania has been doing some studies in utilization control—an area which is of major significance for hospital management. They are trying to control

occupancy rates, getting them as high as possible by reducing fluctuations in census, and then reducing the number of beds.

One thing becomes clear as daily fluctuations in census are analyzed, especially on a community-wide basis, namely, that the week end fluctuation in census, numerically, is not the biggest part of the total fluctuation. It is one that sticks in your mind, but it is only a part of the problem. We found that the hospitals that seemed to be the most popular with the patients, which would appear to be the better hospitals, had the lowest week-end fluctuations. They also had the highest occupancy. There is a relationship there: the lower the occupancy, the bigger the week-end fluctuation; the higher the occupancy, the less the week-end fluctuation.

Some hospitals have developed techniques for controlling this situation. We have found that hospitals which work on this problem, especially if there is a tight bed situation, can develop in the medical staff a lot of interest in six-day and then seven-day operation. One hospital that first shifted to a full six-day operation, changed to a full seven-day operation on January 1, 1962. Interestingly enough, this hospital found that a number of patients prefer this schedule, for they want to minimize the time away from their regular duties, and would like to get their hospitalization over with on a week end or, in a nine-day stay use two week ends. The younger doctors also are satisfied with the longer week. Furthermore, if there is trouble getting into the operating room, the week end offers a better opportunity.

The hospital that shifted to a six-day operation, and then on January 1, to a full seven days, made an analysis and found that the actual number of additional personnel needed to staff the seven-day operation was minimal. When the work in the hospital was scheduled so that employees knew in advance their free days, the workers were well pleased with the arrangement. By operating a full week, this hospital is bringing in an amazing amount of additional revenue. Apparently, patients are satisfied to come in on week ends.

I would suggest you make an analysis of your own situation to determine how many of the physicians are in the hospital every day and how many positions or activities are now operated on a seven-day basis.

The small number of additional personnel needed for longer operation will surprise you.

The opportunities for controlling census fluctuation within an institution and among institutions through week-end operation and other means are really exciting.

CHAIRMAN: Well, since people have been found who want to be hospitalized over the week end, what about the census problem in December and January? We may still be looking for those two school teachers who went to the hospital for Christmas on their Blue Cross. I don't know how we are going to equalize the load for those months.

QUESTION: Moving closer to the basic problem, which may be the cost of giving volume of care rather than the volume itself, I believe that a very interesting point has not been fully explored. Use is composed, obviously, of several components, such as obstetrics, a random, non-determined phenomenon. Care of emergency patients and care of critically ill people are other factors that continue to affect the week end load. Care of the patient who is chronically ill, who is going to be in the hospital for thirty days, contributes to a stable week-end load, whereas other components of the load are likely to be very unstable and have distinct patterns of recurrence—scheduling appendectomies and tonsillectomies only on certain days, for example.

In Manchester, England, I was interested to find that, with progressive patient care, they were reducing their staff load to meet the fluctuations in occupancy, although without closing beds. This adjustment was possible in part because they had a much better prediction of the week-end load than do most of our hospitals.

QUESTION: I would like to question Dr. Roemer's conclusion that the government should control the number of available beds. Generally, I am one who feels that we should have less and less government, rather than more and more. My opinion is that with government in the picture, we always end up with something more expensive. In this case, my feeling would be that, if the government took over the job of deciding how many beds an area is to have, political pressures would cause us to end up with too many beds.

I think Dr. Roemer made a reference to such a result in Canada and other countries where decisions are made by the government. He pointed out that

they have more beds per thousand than we have. My feeling is that the right answer to the problem of supplying the beds needed will be reached through a voluntary system and the voluntary planning agencies that are coming into being should tackle this problem. Of course, I recognize the weaknesses of the voluntary way. I would like to ask Dr. Roemer how, in view of the facts he brought out himself, he comes to the conclusion that government should control the number of beds.

DR. ROEMER: I think you are right that governmental surveillance over the supply of beds might, indeed, result in the supplying of more beds than would lack of such surveillance. The usual apprehension, however, is in the opposite direction. Most people who take a dim view of public control over hospitals fear that the lid would be kept down on bed construction. I was pointing out that, in fact, government control has not worked that way. I think, however, that such control would serve to protect hospitals against irresponsible attacks regarding the utilization question. Through the bed supply, it would establish over utilization a ceiling which would be calculable in advance.

I agree with the statement of one of the speakers who suggested that we do not really know what effect a given utilization rate exerts on costs, since there are large fixed costs that go on even though utilization on a given day may be reduced by, let's say, 10 or 20 per cent.

In any event if a particular bed supply has been determined by public policy in a state or region, the public is, in effect, saying that they are willing to pay the cost for supporting that number of beds. That is really what they have said in Canada and Europe and elsewhere.

I think this policy would also permit the budgeting of hospital costs on the basis of the true costs of operation, rather than on the present basis of per diem payments, which leaves a lot to be desired. In the Canadian provinces it is assumed that maintaining a given bed supply costs a certain amount per annum, and hospitals are paid almost irrespective of their occupancy rates. Thus, they are paid the fixed costs of operation of a given bed supply over a given period of time, with some small additional factor for occupancy which takes account of variable costs. On this basis, the financial tasks of the administrator have been greatly simplified.

Concluding Remarks by Chairman

I know we could go on, and it is a shame not to have opportunity to do so with the talent on this floor. But I think we are approaching the end.

This past hospital administrator has one or two closing remarks he would like to make. It is an interesting time we have come through. In my early history and yours, the problems were not enough hospitals, people unable to pay for care, not enough good care well distributed. We now are beginning to approach what the public wants in the way of care. We are hunting for solutions for the remaining problems, but as we search for our solutions, we have to be sure of the direction in which they are going to carry us. Thinking over yesterday's program, I conclude we are certainly between Scylla and Charybdis.

I thought Mr. Ray Brown made an unusually good point by reminding us that we are talking about sick people. We are talking about the sort of care we all want when we or someone dear to us is sick. We are talking about almost insatiable demands that must be met if we are going to deliver care of good quality.

On the other side, we are beset with spiraling costs. We are trying to sail through those straits, while blown about by winds directed at us from several quarters by some large purchasers. But we are fortunate that it is not only one purchaser who is concerned. Our greatest opportunity for trimming sails and getting through is voluntary health insurance, but industry, labor, and the consumer are all concerned and we must do some trimming of sails if

we do not want to see all that power concentrated in one spot. Criticism of the sort that we have been discussing we must look at carefully, and correct the conditions where possible.

My greatest worry is that, with the demand for good care, and with spiraling costs, the public may at some stage say: "Well, we are tired of hearing all the talk. Let's turn it over to government, which is the natural protector of the public." Whether such a system would work better than our present one, I think we question.

We have heard a good deal about regional planning. I don't see how we can meet the criticisms without it, but the possibility that regional planning will be given too much authority before we know the right answers to our problems worries me.

There aren't any pat solutions to a lot of the problems we have discussed. We don't know how to control costs and still deliver adequate care. Therefore, we certainly do not want too much weight attached to snap suggestions for cost-cutting. So far, we have succeeded in avoiding that danger, but holding the line puts quite a load on all of us.

Again, let me thank the people who have participated. No one who was invited to speak refused. Some of them hesitated a little, and you can well understand why. They had to spend time and energy in collecting their information and putting it before you in an orderly fashion. They have done a masterful job.

Appendix

Guide to the Establishment and Functioning of a Medical Staff Utilization Committee

Guide co-sponsored by the Tenth Councilor District of the Pennsylvania Medical Society and the Hospital Council of Western Pennsylvania, approved by the Pennsylvania Medical Society, and published by the Hospital Service Association of Western Pennsylvania (Blue Cross).

Introduction

The medical profession has a basic role in ensuring proper and effective utilization of hospital beds and services. The physician decides upon admissions, orders diagnostic tests, drugs, treatments, and nursing procedures, and determines the period of hospitalization. These decisions affect the scope of hospital facilities, the quality of care and hospital costs. Other factors which also affect hospital utilization include community standards, the patient, hospital management, and prepayment plans.

Organized medicine has officially recognized its key role in utilization of hospital services by resolutions of State and County Medical Societies.

Subsequent to the State Insurance Commissioner's Adjudication on April 15, 1958 on the Blue Cross filing for a rate increase, the Board of Trustees of the Medical Society of the State of Pennsylvania approved the following resolution:

1. The Board of Trustees should bring this entire problem to the attention of all county medical societies.
2. The county medical societies should be asked to report on the number of hospital staffs which presently have admission committees.
3. The Board of Trustees should encourage county medical societies, hospital staffs, and all physicians to create admission committees where they do not exist.
4. The Board of Trustees should encourage the cooperation of the entire medical profession with the Blue Cross plans.

Following action by the Allegheny County Medical Society on September 16, 1958, a letter was sent by the Secretary of the Society to medical staffs of all hospitals in the county requesting the formation of "a strong and active Admissions Committee, Hospital Utilization Committee or Audit Committee. . . . The function of such committees should be to review hospital admissions, necessity for them, length of stay and over-utilization of stay in hospitals."

A resolution (No. 36) bearing further on the subject originated from the Tenth Councilor District of the State Medical Society (Allegheny, Beaver, Lawrence, and Westmoreland Counties) and was approved at the annual meeting of the State Medical Society on October 14, 1958. This resolution grew out of negotiations with a number of third-parties and read as follows:

Resolved, That authorized representatives of the Medical Society of the State of Pennsylvania be directed to request for review those records and reports of hospital staff committees responsible for maintaining a high quality of medical care and the proper utilization of hospital beds and facilities; and be it further

Resolved, That the Medical Society of the State of Pennsylvania should not defend any medical staff who refuses such a request or fails to have properly functioning committees; and be it further

Resolved, That the Medical Society of the State of Pennsylvania take all means within its power to see that any deficiencies revealed by these records are properly handled; and be it further

Resolved, That the authorized representative of the Medical Society shall be required to use proper discretion with regard to their content and to report to the appropriate hospital committee recommendations for correction of any deficiency encountered and to take appropriate action when indicated.

As a result of such actions by the County and State Medical Societies, a number of hospital administrators and chiefs of staff requested guidance in the establishment of medical staff Utilization Committees. Interest was expressed in the need for delineation of committee duties, organization, relationships with other medical staff committees and administration, and the actual methodology to be used for effective committee functioning. In discussions held among representatives of the Tenth Councilor District, the Hospital Council of Western Pennsylvania and the Hospital Service Association of Western Pennsylvania (Blue Cross) agreement was reached on the desirability of formulating a guide dealing with the establishment of a Utilization Committee. Such a guide, it was agreed, would be jointly sponsored by the four County Medical Societies of the Tenth Councilor District and the Hospital Council and be published by the Hospital Service Association.

This guide is not a set of specific rules but rather a suggested outline for each hospital medical staff in developing its own program. In instituting its Utilization Committee activity, each medical staff may wish to adapt the various suggestions made in this guide to its own structure and traditions. The entire publication has been reviewed and approved by the following:

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Purpose of the Utilization Committee

A Utilization Committee is established within the medical staff of a hospital to assure that all of the inpatient service given is necessary and could not be provided as effectively in the home, office, hospital outpatient department or some other more appropriate, available facility. The Utilization Committee analyzes and identifies factors that may contribute to unnecessary or ineffective use of inpatient services and facilities and makes recommendations designed to minimize ineffective utilization.

The Utilization Committee is a fact-finding, educational instrument of the medical staff without authority directly to effect changes in procedures or lessen the responsibility and privileges of other medical staff committees or individual members of the medical staff. It operates to strengthen the responsibility and authority of existing medical staff and administrative structure by making practical recommendations to the appropriate body for consideration and action.

The Utilization Committee devotes particular attention to the following areas which generally account for ineffective utilization:

- Unnecessary admissions.
- Excessive length of in-patient stay.
- Delay in use or overuse of X-ray, laboratory, and other diagnostic and therapeutic services.
- Delay in consultation and referral.

In each of these categories, the Utilization Committee provides answers to such questions as the following:

How many of such cases are there?

What factors contribute to these conditions?

What practical recommendations can be made to the medical staff, chiefs of clinical and non-clinical services, administration, prepayment plans and to the community to avoid these situations?

Organizing the Utilizations Committee

A. *Appointment of members.*—Appointment of the chairman and Committee members should be made by the President of the Medical Staff in accordance with existing bylaws governing the organization of medical staff committees. Generally, appointments should be for a one-year period; reappointments may be made.

B. *Size of the committee.*—The actual number of members of the Committee will be influenced by the size and organization of the medical staff and the number of hospital admissions. For effective functioning, however, the Committee should usually number no less than five and no more than fifteen members.

C. *Composition of the committee.*—Membership on the Committee should include the chiefs of each major department or a representative designated by the chief.

It seems advisable that the full-time staff physicians from the departments of pathology, radiology, and anesthesiology be represented on the Committee.

The hospital administrator, or his designated assistant, should attend the meetings. The administrator should be responsible for the minutes of the meeting and for furnishing information on administrative procedures and policies which the Committee may request.

Members of the medical staff who are not on the Utilization Committee may be invited to serve temporarily on the Committee when specific areas of study are selected in which they have special competence.

The chief resident, the medical record librarian, the chief social worker and other hospital department heads should sit in at meetings, on invitation from the Committee.

D. *Meetings.*—The Utilization Committee should meet as a group once a month to conduct its activities. More frequent meetings may be held if deemed necessary by the chairman. Review of cases and records will be done by Committee members prior to the regular meeting. Presentation of findings should then be made to the full Committee for discussion and disposition.

If the size of the medical staff and the extent of its organization warrant, the Utilization Committee may be divided into medical and surgical subcommittees which will be concerned with cases relating to their respective services. Such subcommittees may meet independently for initial case reviews; however, analyses and findings should always be presented before the full Utilization Committee for review and recommendations.

Relationships

A. *With chiefs of service.*—The Committee will need to maintain liaison with the chiefs of service for referral of particular situations indicating questionable or inappropriate utilization.

B. *With other committees of the medical staff.*—The Utilization Committee should work closely with other medical staff committees, seeking their assistance when indicated.

1. *Medical Record Committee.* The work of the Utilization Committee is largely dependent upon the availability in the hospital of up-to-date charts which contain sufficient information to justify the decisions made by the attending physician in charge of the case and to permit objective review. The analyses of the Utilization Committee may point up inadequacies in the charts not revealed by review from the standpoint of accrediting bodies, legal requirements, or quality control. Recommendations for improvement of medical records, including possible revision of forms, should be referred to the Medical Record Committee for appropriate action. In conjunction with its work, the Utilization Committee may wish to recommend various changes in forms and record procedures to the Medical Record Committee.

2. *Tissue Committee.* In general the Utilization Committee will need to maintain closest liaison with the Tissue Committee which is responsible for establishing the justification for surgery done in the hospital. The chairman of the Tissue Committee should have a standing invitation to attend meetings of the Utilization Committee.

3. *Operating Room, Admissions, Pharmacy, and other medical-staff Committees.* Many of the recommendations of the Utilization Committee will be referred to the Operating Room, Admissions, Pharmacy and other medical staff committees for review and action, thus requiring close liaison with them.

Functioning of the Utilization Committee

A. *Review of charts.*—In general, the Committee will function by reviewing and evaluating charts of discharged inpatients. The Utilization Committee may also concentrate on daily screening of cases

admitted to the hospital. This approach is of special importance in hospitals with extensive bed shortages and waiting lists and where Admissions Committees are not functioning. It must be recognized, however, that information available at the time of admission is sometimes insufficient for objective evaluation of the need for hospitalization. In addition, this approach does not consider the problem of excessive length of stay. For these reasons, it is desirable that the Utilization Committee devote its major efforts to consideration of completed charts of discharged inpatients.

It is obviously not possible or even desirable for the Committee to examine the chart of each inpatient. The work load should be divided among the Committee members and the review should be based upon selection in advance of the most appropriate categories of cases.

B. *Number of charts to be reviewed.*—Each member of the Committee should be assigned responsibility for reviewing from fifteen to twenty charts in advance of each meeting and should be prepared to discuss those charts which raise specific questions. The number of charts to be reviewed can be increased or decreased on the basis of experience and in relation to the types of studies undertaken. To the extent possible, each Committee member should review those types of cases in which his judgment would be best, based on experience and training.

C. *Classes of charts to be reviewed.*—The Committee will function most effectively if it limits its studies to specific problems and specific types of cases. The following categories of cases may be selected for review at different times:

1. *Long-stay cases.* Approximately one-third of all non-maternity inpatient days in general hospitals are provided to the 5 per cent of the patients who remain in the hospital for more than thirty days. Any savings in days of care to this group can have greatest potential impact on the total volume of inpatient service. Long-stay cases would therefore appear to be the most appropriate subject for initial study by the Utilization Committee. At first, every case which remains over thirty days should be studied. As progress is made, the period of stay for cases to be studied may be shortened. Currently hospitalized cases as well as those previously discharged are suitable for review.

2. *Short-stay cases.* Over 10 per cent of all cases admitted to general hospitals are discharged after one or two days. Included among these cases may be a significant number admitted for diagnosis or minor

surgery which might have been provided as effectively without admission. Each short-term case where the need for admission is questionable should be reviewed.

3. Cases questioned or rejected for payment by prepayment plans. Analysis of cases questioned or rejected by prepayment plans as representing unnecessary hospitalization may provide clues to possible questionable use of the hospital. Various prepayment plans may be expected to refer cases to the Utilization Committee for review and recommendations through the Tenth Councilor District. Review of rejected cases may also provide a basis for development of better understanding with prepayment plans, improvement of their procedures, and better service by physicians to subscribers. Cases which the Utilization Committee believes have been improperly rejected by prepayment plans should be referred to the proper Tenth Councilor District Committee for disposition.

4. Cases in a specific diagnostic or operative category. Usually the work of the Committee will be carried out by study of all of the recently discharged cases with a specific diagnosis or operation. A different diagnosis or operation can be studied each month. This technique permits comparison of differences in pre-operative and post-operative length of stay and in use of various ancillary services from case to case for individual physicians, for cases admitted on different days of the week, for cases seen by the attending physician prior to admission in contrast with those not seen, etc. Special attention should be given to identifying the different characteristics, if any, of the patients with the same diagnosis who had the longest stays in comparison with those who had the shortest stays.

D. Use of the professional activity study.—The Professional Activity Study (PAS) of the Commission on Professional and Hospital Activities, Inc., or a similar system, could be extremely valuable to the Utilization Committee.

PAS provides detailed listings of all cases, classified by diagnosis, and shows pertinent facts concerning the management of each case. These listings permit rapid and systematic screening of cases to be selected for detailed review by the members of the Utilization Committee without posing an unnecessary burden on them.

PAS also simplifies the task of authorized representatives of the Medical Society of the State of Pennsylvania in carrying out their duties under Resolution No. 36 for reviewing "records and reports of hospital staff committees responsible for maintaining a high quality of medical care and the proper utiliza-

tion of hospital beds and facilities." A description of PAS is included in Exhibit II (see p. 90).

E. Use of check list or review form.—A check list or review form should be used by members of the Utilization Committee in reviewing charts. The administrator and medical record librarian should assist in designing a general form. Special forms may be designed for use in studying specific classes of cases.

A suggested check list is shown in the Appendix as Exhibit I. The first section of the form is completed by the medical record librarian. The second section, which is completed by the member of the Utilization Committee, includes a number of items to be marked "yes" or "no," with space for detailed explanation where indicated. The remaining portion of the form is to be used for recording any action to be taken by the Utilization Committee, together with recommendations made and the final disposition.

To keep the records confidential, the patient should be identified by hospital number only, while the names of the attending physician(s) and member(s) of the Utilization Committee reviewing the record should be in code.

Initially, it is advisable to become familiar with the various questions and explanatory comments on the check list and thus gain a general understanding of the points covered. The check list can be completed most rapidly if the medical record is reviewed first in its entirety and management of the case studied.

F. Obtaining additional information from the attending physician.—In some instances the Committee member reviewing the chart may feel a need for additional information. Discussion with the attending physician should be encouraged in such circumstances. The Committee should develop a general policy on the conditions under which these consultations are held. In some instances the attending physician may be requested to meet with the Utilization Committee in order to provide additional information.

G. Records.—The Utilization Committee should maintain adequate summary records of its activities. In general, these summaries can be developed from the data recorded by the Committee members on the check list forms and should be incorporated as part of the Committee minutes. Summary records should include the total number of charts reviewed by appropriate category and identified by case number, the number of charts in which a question was raised concerning unnecessary utilization and the disposition of cases reviewed.

All records of the Utilization Committee, including the check list, should be kept confidential and be available only to the Executive Committee of the

Medical Staff. The check list should not be filed with the medical record. The records of the Utilization Committee would appear to fall in the same category as those of the Tissue Committee from the standpoint of legal considerations.

H. *Follow-up and recommendations.*—Whenever the Utilization Committee's analyses reveal any possible evidences of unnecessary utilization, the Committee should consider possible avenues of correction. In general, this will take the form of a recommendation that the appropriate medical staff committee, chief of service or member of the administrative staff explore the problem and report the disposition of the matter back to the Utilization Committee for its information and records. For example, recommendations directed to administration might involve analysis of cases indicating need to:

Institute methods to overcome delays in transmitting orders and carrying out various diagnostic and therapeutic procedures.

Overcome inadequate week-end and night coverage.

Strengthen social service.

Integrate the admission schedule and the operating-room schedule.

Increase the availability of ambulatory patient services.

Examples of problems to be referred to chiefs of service might include:

Analysis of cases indicating delay or neglect in obtaining consultation.

Analysis of wide variation in length of stay of cases with the same diagnosis.

Consideration of unnecessary hospital admissions.

Consideration of unnecessary utilization of laboratory, X-ray, and other ancillary services.

1. Reports. The Utilization Committee should make quarterly general reports to the Medical Staff's Executive Committee and to the Joint Conference Committee of the Board of Trustees and Medical Staff. These reports should also be available to the Censors' Committee of the Tenth Councilor District. Major points to be included in the reports should be:

The number of cases reviewed by category and the major findings.

The disposition of the cases reviewed.

The general recommendations made.

The actions taken as a result of the recommendations.

EXHIBIT I

UTILIZATION COMMITTEE CHECK LIST

This check list is presented for the guidance of the Utilization Committee in devising its own review form. It is suggested that the check list be adapted to the type of records being kept by the individual hospital.

(To be completed by medical record librarian)

Patient's Hospital Number.....

Age.....Sex.....

Length of Stay (Days).....

Clinical Service(s).....
 Attending Physician(s) (Coded).....
 (If transferred, give all)
 Day of week admitted (Monday, Tuesday, etc.).....

If there was a consultation, indicate the number of days between:

(A) Admission and request for consultation.....

(B) Request for consultation and date answered.....

If surgery was performed, indicate the number of days between:

(A) Admission and Operation.....

(B) Operation and Discharge.....

Admitting Diagnosis.....

Discharge Diagnosis.....

(To be completed by reviewing physician)

Please check the appropriate column. Give explanatory notes if "yes" or "no" answer suggests possibility of excessive or unnecessary use of inpatient facilities.

	YES	NO
1. Could services have been provided on an ambulatory basis?	<input type="checkbox"/>	<input type="checkbox"/>
2. Were diagnostic studies: A. Ordered as soon as possible after admission?	<input type="checkbox"/>	<input type="checkbox"/>
B. Provided as soon as possible?	<input type="checkbox"/>	<input type="checkbox"/>
C. Reported promptly?	<input type="checkbox"/>	<input type="checkbox"/>
3. Were any diagnostic studies ordered unnecessarily?	<input type="checkbox"/>	<input type="checkbox"/>
4. A. Does the interval between admission and the request for consultation appear to be too long?	<input type="checkbox"/>	<input type="checkbox"/>
B. Was there a delay in the provision of the consultation?	<input type="checkbox"/>	<input type="checkbox"/>
5. Was the period between admission and operation prolonged?	<input type="checkbox"/>	<input type="checkbox"/>
6. Does the post-operative period appear prolonged?	<input type="checkbox"/>	<input type="checkbox"/>
7. If indicated, was transfer to another clinical service carried out promptly?	<input type="checkbox"/>	<input type="checkbox"/>

EXHIBIT II

DESCRIPTION OF THE PROFESSIONAL ACTIVITY STUDY

The Commission on Professional and Hospital Activities, Inc., is a non-profit organization sponsored by the American College of Physicians, American College of Surgeons, American Hospital Association, and Southwestern Michigan Hospital Council. The Professional Activity Study (PAS) is a system developed by this Commission which makes it possible for hospitals and medical staffs to routinely receive information derived from the hospital's own medical records. Under the system, specific objective data are abstracted from charts by the medical record librarian onto "Case Summary Code Sheets" and forwarded to the Commission in Ann Arbor, Michigan. Mechanized, punch-card methods are then used by PAS to analyze the data and develop a variety of informative statistical reports on patient treatment and clinical experience in the hospital.

Regular monthly reports from PAS to participating hospitals include discharge analyses by hospital service classification and diagnosis groups; listing of all patients by final diagnosis; listing of all patients operated upon, according to first operation; and listing of deaths. Semiannual reports from PAS include diagnosis operation, physician and surgeon indexes; and summaries according to specific diseases, diagnosis groups and operations.

In the listings of patients prepared by PAS, information on the following items is shown for each case: Diagnosis, name of operation or operations, complications, code for attending physician, number of consultations, code for operating surgeon, type of tissue removed, type of anesthesia used, length of stay, discharge status, sex, age, race, types of X-ray studies, admission temperature, admission blood pressure, types of urine examinations, hematology examinations ordered, admission hemoglobin or hematocrit, admission total white blood count, serology examinations, chemistry studies, Papanicolaou, radioactive tracers, BMR, EKG, EEG, number of whole blood transfusions, physiotherapy, shock therapy, cancer chemotherapy, radiation therapy, antibiotics, tranquilizers, hormones, and method of payment.

PAS has significant implications for the record room. Once having completed the "Case Summary Code Sheet" for discharged patients, the medical record librarian is relieved of the responsibility of preparing routine indexes and statistics which otherwise must be handled manually. The problems resulting from detailed clerical work in record rooms are reduced. Smaller hospitals benefit especially from

- | | Yes | No |
|---|--------------------------|--------------------------|
| 8. Were doctor's visits to the patient sufficiently frequent to provide promptest possible diagnosis and treatment?
..... | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Was hospital stay prolonged because of family or social factors?
..... | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Could the length of stay have been shortened by transfer to:
A. Convalescent nursing home?
.....
B. Chronic disease facility or institution (e.g., county home, mental disease facility, domiciliary care facility, home for the aged, etc.)?
..... | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Could the patient have returned home sooner through use of visiting-nurse, homemaker, or home-care services?
..... | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Were discharge orders written at the appropriate time?
..... | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Could the length of stay have been shortened without adverse effects on the patient?
..... | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. If the length of stay seems excessive, could the patient's "free" status or prepayment coverage have been a factor?
..... | <input type="checkbox"/> | <input type="checkbox"/> |

Summary of possible unnecessary utilization:
.....

Recommended disposition by reviewing physician:

- No action necessary.....
- Referred to Utilization Committee.....

..... M.D. (coded)
(Member of Utilization Committee reviewing the case)

Disposition by Utilization Committee:

- No action necessary.....
- Referred to: Director of Clinical Dept.....
- Medical Records Committee.....
- Admissions Committee.....
- Executive Committee.....
- Pathology Department.....
- X-ray Department.....
- Administrator.....
- Attending Physician.....
- Other.....

If any matter pertaining to the case is referred for follow-up as indicated above, specify reasons, any recommendations made, and final disposition.

..... M.D. (coded)
(Chairman of Utilization Committee)

PAS by routinely receiving indexes and data which otherwise they could not develop.

The fee for the Professional Activity Study is \$0.25 per patient discharge.

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