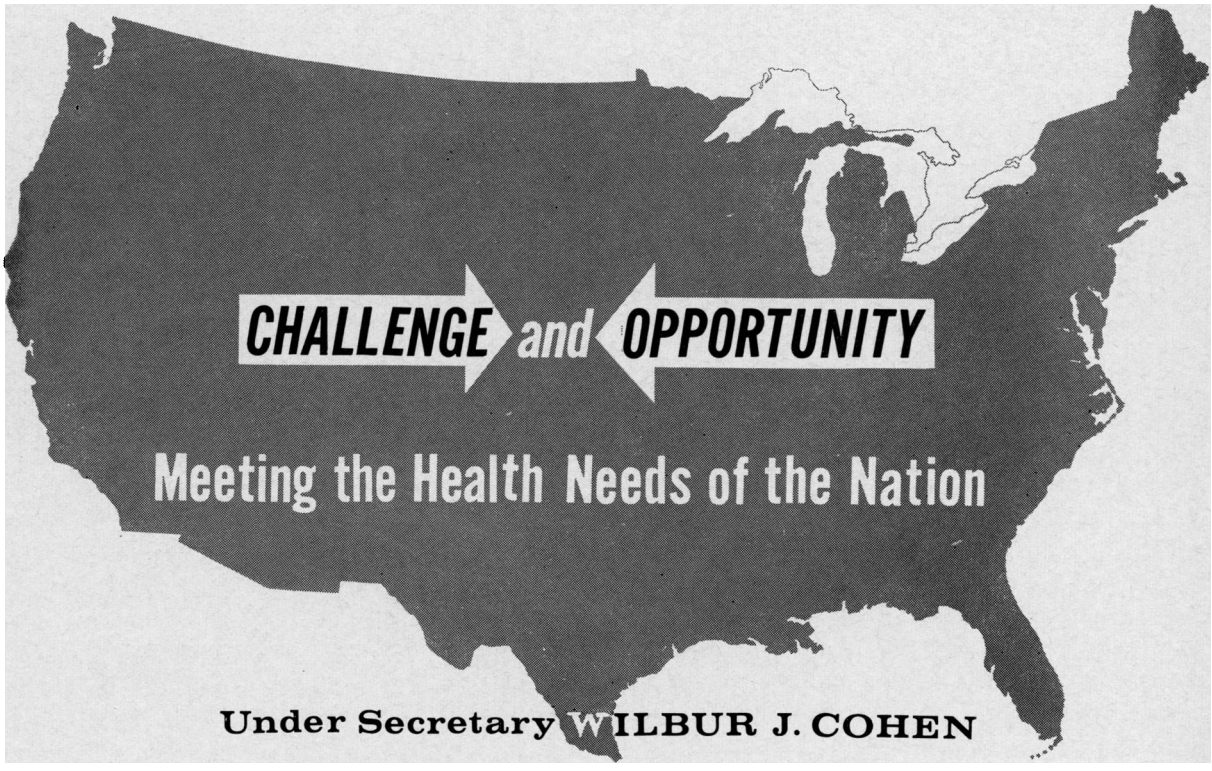

ONE of the most critical areas of need in the health services is for trained, responsible health personnel. The health service industry is the nation's third largest employer. The roster of personnel includes 289,000 physicians, 93,000 dentists, 620,000 nurses, 828,000 other professional and technical personnel, and 671,000 aides and attendants—a total of more than 2.5 million persons. But we all know that we still do not have enough skilled personnel to meet the aspirations of the American people for better health care. In every State, city, and town, we are reminded of the effects of critical shortages in health personnel.

Recently, important steps have been taken to improve health care. Significant advances have been made in medical science, and medical scientists tell us that we are only on the threshold of unlimited and even unimagined discoveries and change. We have just begun to realize the benefits of the rapid advancement of the science and technology of the 20th century. If we are to attain the full promise of these benefits, many challenges must first be met. The rapid advances of science and technology, added to an enlightened interest of the American people in good health for all citizens, compounded by problems of shortages in health manpower, pose a tremendous challenge.

Our success in meeting today's difficulties will depend in large measure on the responsiveness and imagination of persons interested in health progress. Bold new approaches must be tried, innovations adopted, and changes made in the organization and delivery of health services.

The challenges of today must not become barriers to future progress. There are tremendous problems to solve, but there are unprecedented opportunities for solving them. This nation has the brains, the income, and the technical know-how to turn dreams into realities. Today the United States has even more of these essential

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Mr. Cohen, Under Secretary of Health, Education, and Welfare, delivered the address on which this paper is based at the sesquicentennial program of the University of Michigan, at the School of Dentistry, Ann Arbor, April 3, 1967.

ingredients of progress than it has had in the past, and I am confident that they will be used to solve the difficulties that we face.

Growing Demand for Health Services

The American people are demanding readily accessible, high-quality health care. There are several reasons for this growing demand. The population is growing, particularly the proportion of the aged who most often require more health care. Rising levels of education and both geographic and occupational mobility bring about an awareness of the importance of health care. More people, because of higher incomes, voluntary health insurance, and publicly financed medical care, can afford to meet the costs of health care.

The public knows that important developments are occurring in medicine, and it expects to receive the benefits of the advancements of medical science. It knows that we possess great new medical skills in every field from the immunization of whole populations against poliomyelitis, to screening programs for cervical cancer, to surgical repair of the heart. The public knows that surgeons can perform incredible feats in heart surgery, in kidney transplants, and in the removal of tumors that were once inaccessible. Some people have heard reports that limbs, tendons, marrow, and even brains may be transplanted in the future.

The public has indicated that it is willing to pay for the benefits of medical science. It has made a huge financial investment in health care, and health expenditures, both public and private, have been increasing over the past three decades. Less than $4 billion was spent for health in 1940, or only 4 percent of the gross national product for that year. In fiscal year 1965, the nation spent $40 billion or 6 percent of the GNP—an increase of 50 percent. And within the next few years health expenditures will exceed $50 billion annually. In 1965, public funds were the source of $10.2 billion of the health expenditures. For the first time in history, the $5.2 billion Federal share of these public funds exceeded the $5.0 billion contribution of State and local funds.

The nation now spends about $2 billion on medical and health-related research. About $1.4 billion comes from Federal funds. The tremendous growth in research in the past 20 years can be seen in the annual expenditures by the National Institutes of Health, which have risen from $8 million to $800 million.

The two major dental agencies of the Federal Government, the Division of Dental Health and the National Institute of Dental Research in the Public Health Service, for example, have been strengthened considerably in recent years, equipping them to attack the immense backlog of problems in dental research and dental public health that have been neglected for so many years. Federal expenditures for dental research alone have increased threefold since 1960.

Dental schools have benefited from this increased support because of the greater amount of money available for research activities and for training dental students. Money is now available, too, for distribution to State public health agencies for dental care and research and for epidemiologic research in cleft palate and periodontal disease. Investigations of the best methods to provide continuing education for dentists in private practice are being supported. Programs for training young scientists in the disciplines related to dentistry have been greatly expanded.

A new plan of grant support was launched this year for the planning and development of dental research institutes or centers. As contrasted with the long-established program of support for individual research projects, the new plan encourages institutions to develop research and training centers on a broad interdisciplinary base designed to bring together the total resources of clinical, basic, and life sciences of a university. Thus scientists of many disciplines will be able to pool their skills and knowledge in a unified effort to improve oral health. These coordinated efforts will greatly increase knowledge of the course, prevention, and improved treatment of oral diseases.

New Health Legislation

The importance that the American people have placed on good health has been reflected in the landmark health legislation enacted by the last two Congresses. Through the enactment of 24 major new health laws, a commitment has been made to assure the availability of, and

accessibility to, the best health care for all Americans, regardless of age, geography, or economic status.

The new laws cover many areas of the nation's health needs. Medicare, Medicaid, training of professionals in health and allied disciplines, additional support for research, and strengthening of community health planning are examples of the new programs designed to meet these needs.

We have made a good beginning in providing medical treatment for mothers and young children who have been previously denied care. We are encouraged by results of projects authorized under the 1963 Maternal and Child Health and Mental Retardation Planning Amendments. About 200,000 women, considered high risks, have been given maternity care. These projects have had a significant effect on infant mortality rates. In Chicago, for example, among 14,380 infants born in areas served by these projects, the infant mortality rate was almost half that of infant deaths in similar low-income areas lacking such projects.

The infant mortality rate in this country is still scandalously high. We are the wealthiest nation in the world, but at least 10 other nations have lower infant mortality rates. It will require an all-out effort, perhaps a crash program, but we can and we must reduce this senseless death toll.

Medicare

Medicare, of course, was truly one of the most important steps this nation has taken to assure high-quality medical care for its citizens. The effects of Medicare are being felt by all citizens, young and old alike, and some persons have even attributed Medicare with sparking "a revolution in medicine." I think it has opened up new avenues of discussion and exploration and cleared away ideological controversies which impeded intelligent thought. It has encouraged cooperation where there was once conflict.

In the first 9 months of operation, about 3.7 million older Americans have entered the hospital for treatment under Medicare and have had most of their hospital expenses paid by the program. About 8.8 million bills for services by physicians have been paid, and about 163,000 people have received medical services at home. Since January 1, 1967, there have been about 84,000 admissions to extended care facilities.

The dire predictions of disaster if the Medicare law were adopted did not come true. Medicare is an operating reality. Of course, there have been problems, but that is to be expected in an enterprise encompassing so many millions of persons and thousands of organizations. But it has been through the understanding and cooperation of these many persons, groups, and institutions that the program is succeeding so well. Taking part in Medicare are some 200,000 practicing physicians, 6,700 hospitals, 3,500 extended care facilities, about 1,500 home health agencies, and more than 120 nongovernmental insurance plans.

The medical profession has provided invaluable leadership throughout the period of intensive activity that preceded the start of Medicare and the even more action-packed period that followed. Whatever differences existed before Medicare are now being resolved. More and more medical leaders are supporting the new medical program and are actively helping to make it operate smoothly and effectively, and in a way that is fully responsive to the health needs of the American people. It is significant that Dr. John A. Lawler, president of the New York County Medical Association, has stated: "We can take a passive role or we can scan the new horizons and determine how, within our abilities, we can be of assistance in bringing quality care to these programs." Lawler's attitude has been shared by many physicians who have helped make Medicare a success. Medicare is a remarkable example of what can be done by working together to bring medical services to people who need them.

Gaps in Health Services

However, if the commitment that was made by the Congress in recent years to the people is not to become an empty promise, further changes must be made to improve the organization for the delivery of health services. This is the challenge.

In some parts of the country, in some neighborhoods, among some groups of people, effective health services do not exist. Millions of people are still barred from access to high-quality medical care. They are denied basic services in

prevention, early detection, and early treatment of disease. Those deficiencies in health services affect the rich as well as the poor. Death rates in the United States from all diseases, for example, are higher in the age group 15 to 44 years than they are in England and Sweden; for death rates from some causes such as heart disease, hypertension, liver conditions, and motor vehicle accidents, the differences are exceedingly significant.

The health status of the nation's children is particularly distressing for several reasons: (*a*) each year 125,000 mentally retarded infants are born, (*b*) families with dependent children comprise more than half the people who receive public assistance, but only a small proportion of the public assistance funds spent for medical care have benefited these families, and today 3.5 million poor children under 5 years of age need medical help but do not get it under public assistance programs, and (*c*) more than a third of the preschool children who need treatment for eye difficulties do not see a physician, and 3 million children who need glasses today do not have them.

The need for dental care in this country is tremendous, and approximately $3 billion is being spent annually for dental treatment but only by a small segment of the population. The total cost of dental treatment might be from $20 billion to $25 billion for the first year if all persons requiring treatment were to receive it. It has been estimated that today more than 2 million elderly citizens are receiving inadequate dental care. Forty-five percent of the nation's children between the ages of 5 and 14 years have never seen a dentist, although tooth decay attacks 97 percent of all children by the age of 5 or 6 years.

This year the Department of Health, Education, and Welfare will provide dental care through comprehensive health service projects, which include periodic examinations and treatment when needed, to more than a million children and youth in low-income areas. President Johnson has also recommended to the Congress the establishment of an exciting new pilot program of dental care for children.

The great benefits of fluoridation remain the center of controversy in many communities throughout the nation. In areas where water supplies are fluoridated, dental caries and cost of treatment of children are cut in half. Yet the controversy remains. It is, however, changing in character. Thinking citizens are beginning to understand that this public health measure has evolved into a key health issue and that it must be so handled. Today 70 million people benefit from fluoridation, but we must look forward to further progress in the years ahead.

If we are going to improve the health of this nation, we must create new sources of manpower, facilities, and services, and we must use the resources we have and are developing much more effectively. We must develop a whole new continuum of health services to provide the care people need when and where they need it.

Manpower and Womanpower

The shortages of personnel that exist in virtually every profession are caused by technological advances and the growing insistence on quantity, quality, and comprehensiveness of services. These shortages in personnel are particularly acute in the health industry. Last year Secretary John W. Gardner authorized the establishment, in the Public Health Service, of the Bureau of Health Manpower to focus on services to meet the manpower needs of the health industry which will amount to a $50 billion business before the end of this decade. The need for the Federal Bureau, the first of its kind established in the Government to meet total health personnel needs, has developed swiftly from a complex of explosive social phenomena. These phenomena include population shifts, new health knowledge, changing attitudes toward health of both consumer and provider, and a growing public-private partnership in the planning and delivery of health services. The Bureau has been directed to stimulate the development of health manpower resources throughout the nation to the end that needed health services are available to all American people.

Recognizing the seriousness of the shortages in health personnel, the President in 1966 asked the Department of Health, Education, and Welfare, Department of Labor, Veterans Administration, and Office of Economic Opportunity to intensify their efforts to meet health manpower needs. Working together, these agencies have

put together programs to train 224,000 health workers in fiscal year 1967. This number is almost 100,000 more than were trained last year, and refresher courses will be included for some 30,000 inactive nurses and technologists.

The Manpower Development and Training Act will provide training for 52,000, including 10,000 inactive nurses and 1,000 medical technologists. Another 34,000 health workers will be trained through the Neighborhood Youth Corps and the Adult Work Training Programs. The Office of Economic Opportunity will train another 2,000 workers through the Job Corps, Community Action program, and community health centers. The Veterans Administration will provide the facilities for training about 26,000 persons. The Department of Health, Education, and Welfare will provide training for about 136,000 persons under the Vocational Education Act and the work experience programs. The Health Professions Educational Assistance Act and the Nurse Training Act are already having an impact. Yet to be realized are the effects of the Allied Health Professional Personnel Act. Last year 7,400 medical students were graduated; 7,500 are estimated for this year. Thirty-five thousand students were graduated from nursing classes in 1965; this year about 1,000 more are expected. This year 9,400 medical students and 57,600 nursing students were admitted to professional schools. Yet even with this greater capacity for training, the shortages not only continue but are increasing.

The latest estimates indicate a shortage of 50,000 physicians and equally serious deficiencies throughout the spectrum of the health professions. At the present planning levels of medical schools, the nation should have approximately 360,000 physicians in 1975, but about 400,000 will be needed.

In the United States today there are about 93,000 dentists; by 1975 some 140,000 will be needed. Despite the great need for dental care, the ratio of dentists to the population has been declining for some time and is especially low in rural areas. Maintaining even present ratios of dentists to the population would require doubling the present output of 3,200 a year.

The possibility of having enough physicians and dentists within the next decade or even longer to meet the ever-growing demands is remote. Thus, it is imperative that we make better use of the manpower we have, partly by relying more heavily on the use of allied and supporting health personnel. Dentists have already shown remarkable leadership in the use of auxiliary personnel, although much more progress can be made.

There are acute shortages, however, of auxiliary personnel. Today we need:

- More than 9,000 additional medical technologists.
- More than 4,000 additional physical therapists.
- More than 4,000 additional dietitians.
- More than 42,000 licensed practical nurses.
- More than 48,000 hospital aides and orderlies.

By 1975, we will need:

- Twice the present number of medical technologists.
- Three or four times as many dental hygienists.
- Eight or ten times as many medical record librarians, occupational therapists, and physical therapists.

Clearly then, there will not be enough trained people for some time to come, and we will have to explore and experiment with new and different ways of using personnel. There are a number of ways, for example, physicians and dentists could be greatly assisted by supporting personnel. Under a physician's supervision, professional nurses can carry out many routine tasks that now take up so much of the physician's time. Licensed practical nurses could do many time-consuming routine duties of professional nurses. This would not only be a more economical and efficient distribution of labor, but the patient will also benefit from the additional attention devoted to him. Physicians' assistants could perform tasks of inestimable value. Dental assistants can prepare fillings and do some of the laboratory work that takes up much of the dentist's time.

For example, a project in St. Louis sponsored by the Department of Health, Education, and Welfare, which provides for as many as five assistants in a dental clinic, has shown that the productivity of a single dentist may be increased 50 to 75 percent. In Louisville, Ky., the Department, in cooperation with the dental pro-

fession, is studying various team formations to determine the number of dental assistants a dentist can most efficiently employ, and what duties these assistants can most efficiently perform.

A complete reassessment of the functions of health personnel is long overdue. Functions must be more carefully analyzed and duties reassigned realistically and systematically.

Need for Research and its Application

It is essential that we find, organize, and explore every resource for the distribution of comprehensive health services. Industry has employed research and development techniques and has shown great talent in the distribution of goods in our society. There certainly should be ways of applying the same techniques in the distribution of health services. But finding ways will take the same kind of research that has been devoted to basic medicine for many years. Even though the Federal Government is spending $1.3 billion on medical research, the investment in research to improve health services amounts to less than 0.10 percent of our total annual investment in health care.

In the past little encouragement has been given to universities, industry, private practitioners, or others to study ways of improving the provision of health services. This year, however, President Johnson directed the Secretary of Health, Education, and Welfare to establish a National Center for Health Services Research and Development, and he has requested from the Congress an appropriation of $20 million for research and development in health services. The Center will provide the leadership in research, coordinating existing programs and developing new ones. The Center will apply sophisticated systems-analyses methods, developed in private industry, to studies of the operation and improvement of the health services system. We will urge private business and industry, the universities, and research organizations to work with us in finding new ways to bring new methods to help the health industry reduce costs and improve the quality of medical care.

The Center's first assignment will be to develop improved ways of using health personnel. An interesting area of research that may be explored is the elimination of barriers which prevent many health workers from moving up the career ladder. Many jobs in the health services are dead end jobs, and poor prospects for advancement make recruitment difficult. We need some research on what is called lateral and upward career mobility to break down some of these barriers.

A registered nurse, for example, can move up in her career to a supervisory position, but she cannot easily move into another discipline such as physical therapy. She has to go back and start all over again.

A licensed practical nurse has even less opportunity to advance. Although she can perform many duties of the registered nurse, she cannot become a registered nurse unless she goes back and starts from the beginning. Why shouldn't she be able to take prescribed science courses after a number of years of experience, pass the necessary examination, and become a registered nurse? Similarly, a dental assistant could be given the opportunity to become a dentist. Could credits for training as a dental assistant be given toward a 4-year course in dentistry?

What system could be devised to give credit for work experience (skills acquired on the job) to help people advance in a profession? Could equivalency examinations be developed to allow people to advance without taking academic courses?

Much research must be done on the evaluation of work experience as compared with professional schooling. At the same time, of course, standards of professional quality must be preserved. State licensure bodies, professional groups, and employing institutions must be consulted, and they should help develop training and hiring procedures.

We expect that the new Center will stimulate and develop innovations which could have far-ranging consequences in improved and less costly health services.

Rising Medical Costs

One of our greatest concerns is the rising cost of medical care, and medical costs cannot be moderated by the Federal Government alone. Last August, President Johnson asked the Department of Health, Education, and Welfare to study medical costs which, since World War II, generally have increased considerably faster

than consumer prices. The recently completed study found that in 1966, the increases in medical care prices were the largest in many years and that prices probably will continue to increase.

Two factors contributing to the upward trend and acceleration in prices are that more people seek physicians' services more often, and that wages of hospital employees, still low relative to other wages, are rising rapidly. The report concluded that two ways of moderating increases in medical prices are by adding to the supply of medical resources by increasing medical facilities and training more medical manpower and by increasing the efficiency with which medical resources are used.

One step that will be taken to implement the recommendations of the report will be to convene a National Conference on Medical Costs on June 27–28, 1967, in Washington, D.C. The President has asked the Secretary of Health, Education, and Welfare to bring together leaders of the medical community and members of the public to discuss how medical costs can be lowered without impairing the quality of services. This conference should be an important step in the continuing dialog on medical care.

As recommended in "A Report to the President on Medical Care Prices," one area we shall explore with representatives of the medical profession, business, and labor in the coming months will be ways in which hospitals and other health facilities can be operated more effectively. For example, we shall ask how the internal efficiency of hospitals can be improved. What are the incentives to become more efficient? How can cost-saving innovations be initiated and applied? How can hospitals become more efficient in size, plant layout, and equipment?

We hope, through the new National Center for Health Services Research and Development, to support research to improve the internal operation of health services facilities and to disseminate the results of this research.

The report on medical care prices recommended changes in reimbursement under Medicare and Medicaid to encourage hospital efficiency. Hospitals are being reimbursed for reasonable costs in providing care for Medicare patients. They are also reimbursed for reasonable depreciation and related charges. When funds are used for the modernization of facilities, new construction, or the purchase of expensive new equipment, we want to be sure that the expenditures are in accordance with area-wide health plans. In my opinion, there is no reason why Federal funds should be used in competitive drives to put expensive, highly specialized equipment such as a cobalt bomb or a radioisotope laboratory in every hospital. The Administration has already proposed to the Congress that when institutions participating in Medicare make capital expenditures that are not in accordance with statewide health plans, the Department of Health, Education, and Welfare would have authority to reduce reimbursements to the institutions or to terminate the participation agreement with them. This requirement can do much to strengthen State health planning. It is a controversial suggestion, but some control along this line is essential and inevitable.

Need for Planning

The need for careful community health services planning is more urgent than ever before in our history. For example, evidence now available on the cost of modernizing or replacing the nation's obsolete hospitals and nursing homes over the next decade will be approximately $10 to $11 billion. Right now, facilities housing 272,000 hospital beds require modernization. Some 66,500 new beds are needed to keep pace with the population growth. The need for new and modernized nursing homes—long-term care facilities—is just as critical. The current estimate of need is for almost 318,000 new or modernized beds in long-term care facilities.

The assurance of efficient health care—with services available when needed but without a disproportionate number of empty hospital beds and duplication of services—requires planning and decisions that are responsive to the community's needs. Unnecessary facilities and services add to the cost of hospital care for all patients. It has been estimated that the cost of maintaining an empty bed amounts to about three-fourths that of an occupied bed. Important savings can result from studying the community's needs and planning the expansion of facilities in response to these needs.

Studies have shown that in some areas a duplication of medical facilities and services exist, although in other areas there are serious gaps. The need for areawide community planning of all health facilities cannot be overstressed.

It is no longer possible to effectively plan for one community without considering the programs and facilities available in neighboring communities. The day is not too far away when artificial barriers will no longer limit the development of plans which best serve the nation as a whole. Communities must plan flexible facilities to meet changing future needs. They should develop cooperative arrangements to assure that community resources are used to promote quality care with the most efficiency and economy.

The "Partnership for Health" legislation enacted last year, which the President has recommended be extended this year, will greatly assist States and communities in developing comprehensive health services.

President Johnson has also stated that he will appoint a National Advisory Commission on Health Facilities to study needs for the total system of health facilities—hospitals, extended-care facilities, nursing homes, long-term care institutions, and clinics.

The authorization for the Hill-Burton program, which helped provide 350,000 hospital and nursing home beds throughout the nation, expires on June 30, 1969. Because of this, the Administration has decided to assess fully the whole area of health facilities and perhaps propose new approaches to meet present and future needs.

The development of economical and efficient forms of care as alternatives to inpatient hospital care is essential. I think that we are beginning to see the development of a whole continuum of alternative services—hospital care when needed, nursing home care when that is required, outpatient treatment if that is necessary. The availability of health services, in the home, for example, allows many people to remain in their own homes instead of in a hospital. We must have more services that will meet the needs of people at the right time, at the right place, and for a cost that is appropriate for the type of care.

Our society is going through an evolutionary—some may say revolutionary—period in the development of health services. As we proceed through this stage, the appropriate function of each type of facility must become more precisely delineated.

The Future

I believe that we shall see important breakthroughs in health care in the next decade. But improvements in the delivery of health services are essential to this progress.

The population is increasing by about 3 million a year. Within a few years it will exceed 200 million, and within the next decade we will become a nation of 225 million persons. Between 1965 and 1975 the population can be expected to grow by about 17 percent.

At the same time our gross national product will be increasing at an even greater rate. Within a decade the GNP will exceed $1,000 billion a year. The interaction of the national wealth, increasing at a more rapid rate than the rate of population growth, with the great rise in educational levels and human aspirations, will place a severe strain on the provision of high-quality health services unless we find more efficient ways of delivering these services.

Within our lifetimes we shall see startling improvements in the health of the American people. These improvements will be brought about through an adequate and efficiently used supply of health personnel, the right kinds and efficient use of facilities and services, and continuing medical miracles. Medical research will uncover the secrets of the aging process and the causes of cancer and other chronic diseases. The genetic code will be unraveled, thus preventing many hereditary defects. We shall find ways of improving mental health and of improving the air and water around us. We shall also make significant progress in applying in many areas the knowledge we already have.

Training and scholarship programs, publicly and privately supported, will help to provide the physicians, dentists, nurses, and the allied professional and technical health personnel that will be needed to provide the many services that will be available. By 1975 there should be at least 15 more medical schools and 6 more dental schools. Innovations in medical education—

shortening the time of training yet maintaining high quality—will alter the training of medical personnel. Competent assistants will take over many time-consuming, routine duties of the professionals. Former military medical corpsmen are already being trained at several universities to be physicians' assistants.

Broad-based teams and cooperative arrangements between physicians and dentists and a variety of allied professional and technical health personnel will deliver optimum medical and dental care. Better pay, advancement opportunities, and greater prestige attached to these positions will serve as incentives for people to enter supporting health professions.

Physicians will be able to provide more and better services as a result of time-saving diagnostic equipment, improved communications and transportation, and better use of auxiliary personnel.

We have only begun to explore the vast potential of the application of technology to health services. In the next decade we shall see machines assuming burdens now carried by overworked personnel. Electronic monitoring systems, closed-circuit television systems, and heart-lung machines, to cite a few examples, have already proved their value. Automatic systems and computers will become increasingly important as we move ahead in research training and patient care.

There should also be an increase in group practice plans throughout the nation. Through group practice high-quality care will be maintained and improved. Physicians will find that they have access to up-to-date technology and the services of many specialists under a single roof. Through group practice, a physician can shift administrative details to administrative personnel, enabling him to devote more time and attention to his patients. The numerous other advantages to group practice will bring about improved, readily accessible, and economical health care. In the future we will have much broader health insurance coverage for the entire population. The extent to which that broader coverage is private or public or some combination remains unclear. Much depends on what happens to medical costs and the use and availability of personnel.

Preventive care and health maintenance benefits providing prepaid screening and regular physical examinations will detect diseases and afflictions at an early stage, thus reducing the chances of the development of critical and expensive illnesses. Coverage of outpatient care and dental care will be a part of these more comprehensive prepayment plans. Just in the past 7 years the growth of dental prepayment plans has been phenomenal. Today more than 4 million people are covered by these plans, and we can expect an even more rapid growth in the future.

Because of improved methods of financing medical care, physicians will find it easier, since the financial considerations are removed, to decide on the kinds of facilities to be used in the treatment of patients. This factor of financing, plus the availability of alternative forms of care, will make it possible for physicians to make a realistic choice of the locale that best suits the patient's needs. They can plan for the continuation of the patient's care, because all forms of care will be widely available.

We are also going to see hospitals assume a more aggressive and dynamic role in providing comprehensive community health services. The development of more outpatient and diagnostic departments, coordinated with health services, will enable people to get care without being hospitalized. We have already seen encouraging signs of increasing participation of medical schools and university-affiliated hospitals in neighborhood health centers.

Advancing technology and innovations in computer systems will bring about further economies and improvements in hospital operations. Regionalized and integrated networks of hospitals, clinics, and other institutions offer further possibilities for more efficient hospital and other health services for the American people.

Conclusion

Indeed, the future is bright. Without a doubt we face perplexing problems. But I am confident that we have the opportunities, the brains, the talent, and the wealth to meet the challenge.

We can break down the barriers to health care that exist today.

We can provide every newly born child with the birthright of a good life and a healthy life.

We can cut the high death rates from tuberculosis, cancer, influenza, and pneumonia that exist today for many groups of persons in this nation.

We can eliminate the needless suffering and deaths that occur in every sector of our society.

The American people want the best health care that it is humanly possible to provide. They have declared through their Congress that each individual has a right to the best health care with equal opportunity to that care regardless of age, sex, color, or any other factor except medical need. All those concerned with delivering health care have an awesome responsibility and obligation, for we are still a long way from fulfilling that right.

Public Health Service Staff Appointments

Allen J. Brands has been appointed pharmacy liaison officer to the Office of the Surgeon General. Mr. Brands will also continue to serve as chief of the Pharmacy Branch, Division of Indian Health. He succeeds George F. Archambault, who retired on April 30, 1967.

Born in Kansas City, Mo., Mr. Brands received his B.S. degree cum laude from the College of Pharmacy, University of Southern California. Before joining the Division of Indian Health in 1953, he served as a pharmacy officer in the Service's Division of Commissioned Officers.

Mr. Brands has received the Public Health Service Commendation Medal. He is a member of the American Pharmaceutical Association, Association of Military Surgeons, American Society of Hospital Pharmacists, and the Public Health Service Commissioned Officers Association.

Charles Miller II has been appointed chief finance officer and chief of the Division of Finance of the Public Health Service. He succeeds Mr. Harry Doran, who retired December 31, 1966.

Born in Philadelphia, Pa., Mr. Miller was graduated cum laude from Princeton University in 1947, and in 1948 he received his master of arts degree in political science from the University of Pennsylvania.

Mr. Miller entered the Federal service in 1950 when he joined the Social Security Administration. In January 1957, he was appointed assistant to the Assistant Secretary for Administration, Department of Health, Education, and Welfare. In 1960, Mr. Miller joined the staff of the National Institutes of Health as chief of the Management Policy Branch. He held that position for 5 years, during which he was awarded the Department's Superior Service Award for his contributions to management improvement. In May 1965, he was named financial management officer for the National Institutes of Health.

Dr. James M. Stengle has been appointed chief of the National Blood Resource Program.

The major goals of the program will be to devise more efficient, highly automated methods for mass production of cellular and protein fractions of blood and to develop improved techniques for preserving and storing blood components.

Dr. Stengle was born in Wilkinsburg, Pa., received his bachelor's degree from Oberlin College, and his M.D. degree from Northwestern University Medical School. He has been with the National Institutes of Health, Public Health Service, since 1953 and was awarded the Public Health Service Meritorious Service Medal in 1966 in recognition of his achievements in national and international hematology programs.

Dr. Stengle is a member of the American Society of Hematology, International Society of Hematology, Washington Blood Club, American Medical Association, and Sigma Xi. He has served on the board of directors, Blood Research Foundation, on the International Committee on Thrombosis and Haemostasis, on the National Research Council Task Force on Thrombosis, as executive secretary of the Committee on Thrombolytic Agents, National Heart Institute, Public Health Service, and as chairman of the Scientific Advisory Committee of the American Red Cross.