Recent studies by the Institute of Medicine, part of the National Academy of Sciences, and the Rand Corporation have suggested that most physicians in the United States are inadequately trained to cope with the care of the elderly, in spite of the fact that over 11% of the population is over age 65. At present, nearly 30% of all health care dollars are spent on persons over the age of 65. It has been estimated that in the near future, physicians will be spending about one-half of their practice time caring for the elderly. It is necessary to start now if there are to be enough health professionals in geriatric medicine to meet this future need.

This progress report on geriatric medicine presents, in question-and-answer format, significant questions related to geriatric medicine, including: (1) what is geriatric medicine; (2) how do older people differ medically from younger people; (3) why do we need to improve the training of physicians in geriatric medicine; (4) what qualities are essential in a physician who cares for the elderly; (5) how will a medical profession well-versed in geriatrics benefit society; (6) what has been done to promote the teaching of geriatric medicine; (7) how could geriatrics be worked into medical school curricula; (8) what is the role of the National Institute on Aging; (9) what other training programs are available; (10) what lies ahead; and (11) what further information is available. (NB)
Executive Summary

As the Nation’s elderly population continues to grow, so do its demands for medical and social services. Despite the fact that people aged 65 and over account for a disproportionately large share of physician time and health care dollars, most physicians in the United States are inadequately trained in geriatric medicine. Given population trends, it is essential that geriatrics be incorporated into the education of all health providers. Informed and skilled medical care providers may help older people lead happier, healthier, more independent and productive lives.

Although interest in the prevention, diagnosis, care, and treatment of illness and disability in older people is increasing, some medical schools still do not offer courses in geriatrics. Even fewer provide clinical experience in the community, hospital, or nursing home with older patients who are generally healthy as well as those who are chronically ill. If physicians become more knowledgeable about the special considerations in treating older patients, health care costs could be contained. For example, the early detection of disease can avoid complications, shorten hospital stays, and reduce nursing home admissions. Costs can also be reduced as laboratory and clinical research on aging yield ways to improve the diagnosis and treatment of—or even to prevent—the diseases of old age.

In recent years, professional medical societies, medical students and faculty, private organizations, and a number of government agencies have recognized the need to promote geriatric medicine and clinical research on aging. From its inception, the National Institute on Aging has spurred medical educators to incorporate geriatrics into their curricula and practical training programs. Clearly, if we are to have an adequate number of health professionals in geriatric medicine in the future, the time to start is now.
Introduction

Imagine a nation with more than 11 percent of its population over age 65, yet most of its physicians inadequately trained to cope with the care of the elderly. Recent studies by the Institute of Medicine (IoM), part of the National Academy of Sciences, and the Rand Corporation have pointed up this alarming deficiency. But these findings come as no surprise to the elderly and their families.

In the 5 years that the National Institute on Aging (NIA) has been in existence, many of the questions it is most frequently asked relate to geriatric medicine. Older people and their families want to know if there are any physicians in their community who are skilled in the treatment of elderly patients. Medical schools which recognize the need for training in geriatrics are searching for qualified physicians to teach the subject or conduct the clinical research that can lead to improved care. The NIA has had to reply that, at present, there are very few physicians with experience in geriatrics—and these individuals are largely self-taught.

But progress is being made. We are beginning to reassess our medical care system in the context of an elderly population that will double by the year 2030, reaching 55 million persons. Equally significant is the fact that the proportion of the elderly population that is growing fastest—persons aged 75 and older—places the heaviest demand on medical and social support services. Between now and the year 2000, the segment aged 75 to 84 will increase by 57 percent, and the number of those aged 85 and over will grow by 91 percent.

Physicians of the not-so-distant future will be spending about half of their practice time caring for the elderly. Already, nearly 30 percent of all health care dollars are spent on persons 65 and over. If we are to have an adequate number of health professionals in geriatric medicine, now is the time to start.
What is geriatric medicine?

Geriatric medicine is the prevention, diagnosis, care, and treatment of illness and disability in an older person. This approach to promoting the health of the older patient takes into account the interaction of diseases, medications, the environment, personal and social factors and age. Geriatrics acknowledges the favorable and unfavorable elements of aging. But it stresses that physical and mental deterioration are not inevitable consequences of the aging process, and that there are positive aspects to growing older.

How do older people differ medically from younger people?

Some changes occur naturally as people grow older. For instance, there is a decrease in lean body mass (primarily muscles and bones) as opposed to fat in total body weight, muscles lose elasticity, blood pressure tends to increase, and the ability to metabolize sugar decreases.

Treating the elderly is often complex. They tend to have several diseases or disabilities at the same time. Some diseases behave differently in the elderly; for example, an older person may have a heart attack without pain or appendicitis without abdominal tenderness. Other diseases which are common in the elderly, such as cancer of the prostate and osteoporosis (a condition in which the bones become thinner and more brittle), rarely affect younger people. In addition, older patients respond differently to medications than do younger patients, and may require carefully coordinated prescriptions. The elderly may take longer to recuperate after an illness, and must be closely monitored to prevent further problems or relapses during recovery. Finally, fears of dying, loss of spouse and friends, and retirement from income-producing work may have to be taken into account in planning the care of older people.
Why do we need to improve the training of physicians in geriatric medicine?

By 2030, nearly one in five Americans will be over the age of 65. Yet according to a 1977 survey by the American Medical Association, only 629 physicians cited care of the elderly as one of their major specialties. Although interest in geriatric medicine is growing, some medical schools still do not offer courses in geriatrics. Even fewer offer clinical experience in the community, hospital, or nursing home with older patients who are generally healthy as well as those who are chronically ill. Given population trends, it seems essential that all health professions prepare students to handle the special needs and problems of the elderly.

What qualities are essential in a physician who cares for the elderly?

A physician who cares for older patients must be well-informed and skilled, compassionate and sensitive, and capable of coordinating a variety of medical and social services. The physician needs to be able to recognize unusual symptoms in the elderly; be prepared for adverse interactions among diseases and disabilities; and be able to employ, with precautions, a variety of medications. He or she must be willing to assist the patient in utilizing community resources to cope with poverty, handicaps, or loneliness. And he or she must be an understanding and perceptive listener. Above all, a physician caring for aged patients does not view them as disease-ridden or as hopeless and depressing cases, but as people who, with proper care, may be able to lead happier, healthier, and more independent lives.

How will a medical profession well-versed in geriatrics benefit society?

If physicians became more highly skilled in treating diseases in the elderly, some health care costs could be reduced. For example, the early detection of disease can avoid complications, shorten hospital stays, and reduce nursing home admissions. The chances of maintaining health are im-
proved when physicians and other health care providers alert older patients to the availability of community nutrition programs, home health aides, and other services. Older patients benefit physically and psychologically from more efficient treatment and more compassionate care given by people who understand the problems they face. In short, a better understanding of the principles of geriatric care by health professionals would save both public money and private anguish.

What has been done to promote the teaching of geriatric medicine?

In recent years, professional medical societies, medical students and faculty, private organizations, and a number of government agencies have recognized the need to promote geriatric medicine and clinical research on aging.

Discussions and debates held in 1976 heralded a renewed interest in how medical schools and hospital centers might best incorporate geriatrics and gerontology into their programs. In May 1976, the IoM joined the British Royal Society of Medicine in an Anglo-American Conference on the Care of the Elderly. This meeting was supported in part by the NIA and the Administration on Aging. In October 1976, the Senate Special Committee on Aging considered this issue at a special hearing during the Gerontological Society meeting in New York. Geriatric medicine was again the focus of discussion in March 1977 at an NIA-sponsored meeting of medical school representatives at the National Institutes of Health (NIH) in Bethesda, Maryland. In addition, three meetings of directors of national institutes with research programs in the field of aging were sponsored by the World Health Organization, the second of which was hosted by the NIA in November 1977. These meetings established a number of important goals, chief among them the international sharing of ideas, research, biological materials, scientists, and training programs.

The American Geriatrics Society held NIA-sponsored meetings in 1977 and 1978 to develop models for the teaching of geriatric medicine in residency programs, but recommended against creating a separate practicing or primary care specialty of geriatrics.
In February 1978, the Task Panel on Mental Health of the Elderly recommended to the President’s Commission on Mental Health that program changes in such areas as research and geriatric medicine would yield new knowledge that would benefit people of all ages. The panel further recommended that government funds (up to $100,000 per year) be provided to medical schools with a “sincere interest” in incorporating geriatric medicine into their curricula. The panel felt that this interest could be demonstrated by the presence of a faculty member of full academic rank who is particularly attuned to the needs of the elderly and trained in their care.

The Association of Professors of Medicine heard presentations on geriatrics at its April 1978 annual meeting, and responded by developing a set of resolutions in strong support of geriatric medicine.

In September 1978, the IoM published the findings of an NIA-commissioned study that examined the need for teaching of geriatric medicine and the extent to which geriatrics is already offered in medical school curricula. The report, entitled Aging and Medical Education, suggested several measures to incorporate geriatric training into the education of every medical student, intern, and resident as well as into the continuing education of practicing physicians. The report advised medical schools to: 1) develop a corps of faculty members to teach geriatrics; 2) include information on geriatrics in basic and clinical courses; 3) require one course on aging and the problems of the elderly; and 4) provide clinical experience in long-term care facilities for residents. It also proposed that questions on geriatrics be placed on examinations for certification and licensure. Finally, the report recommended that geriatrics receive increased attention in continuing medical education programs.

In discussing the committee findings at the annual meeting of the Association of American Medical Colleges in November 1978, committee chairman Dr. Paul Beeson encouraged the creation of an association work group to be concerned with the teaching of geriatric medicine. Other developments resulted from a meeting of the Board of Governors of the American College of Physicians in September 1978. Dr. Robert
N. Butler, NIA Director, challenged the board to devote more attention to geriatric medicine on internal medicine board examinations; in continuing medical education; and in their journals, the *Annals of Internal Medicine* and the *Forum on Medicine*. The board was receptive to these ideas, and decided to make aging the theme of its “State of the Art” series during the 1980 Annual Session of the American College of Physicians. In addition, the fact that less than 20 percent of nursing homes have a full- or part-time medical director led the board to establish a national committee on nursing homes to examine this deficiency.

Two years after the IoM report, a study of geriatric manpower needs funded by the Rand Corporation and the Henry J. Kaiser Family Foundation projected that between 7,000 and 10,300 geriatricians would be needed by 1990 to serve the elderly population adequately. The study advised redistribution of physicians among specialties rather than an increase in the total number of physicians. The report called for the development of both academic and practicing geriatricians, with the latter serving in both consultative and limited primary care capacities. The report also favored the team care concept, in which the geriatrician, primary care physician, social worker, physician’s assistant, and geriatric nurse practitioner all contribute to the care of the patient.

Medical students have also voiced their concerns regarding the needs of the aged. In response to this increasing interest, the American Medical Student Association (AMSA) organized a Task Force on Aging. Led by Dr. Patricia Lanoie Blanchette, the task force devised a guide for *Curriculum Development in Geriatric Medicine* in January 1976. The student organization focused on geriatrics at its 1977 planning meeting and 1978 annual meeting, and in April 1978 began circulating the *AMSA Task Force on Aging Newsletter*. In 1979, AMSA published a *Clinical Geriatrics Training Sites Directory*, edited by Dr. Emil F. Coccaro, Jr.

Medical schools and universities throughout the country continue to establish departments, divisions, and programs oriented toward geriatric medicine and gerontology. A National
Advisory Council on Geriatric Medical Programs has been in existence since 1973 under the leadership of Dr. Theodore Reiff of the University of North Dakota School of Medicine. One of the main functions of this group has been to share information on various schools' activities in geriatrics and to provide advice and model curricula to schools planning programs in this area.

Although opinions differ on whether or not geriatrics should become a practicing specialty, these and other activities have helped to focus interest and attention on the growing demand for better geriatric care.

How could geriatrics be worked into medical school curricula?

Many experts believe that material on geriatric medicine should be incorporated into various relevant courses such as microbiology, pharmacology, and pathology during the first 2 years of medical school. Human development courses should offer a balanced view of the entire life cycle, rather than stopping with the attainment of adulthood.

The third and fourth years of medical school should include targeted, specialized lectures on geriatric medicine or entire courses which stress the unique content of geriatrics. Instruction in geriatric medicine should thus contain information on variations in the clinical presentations of diseases; the impact of more than one disease in the body at the same time; the interrelationship of chronic and acute illnesses; and age-related changes in immune response and other body functions. Medical schools must also provide a wide range of experiences so that students can develop realistic attitudes toward the aged. Students should see healthy older people as well as those who have recovered from illness and cope well with problems in their lives, in addition to those who do not. They should see them in a range of training settings including clinics, preventive medicine sites, senior centers, nursing homes, chronic and acute disease hospitals, and private homes.
What is the NIA's role?

The NIA was established in 1974 when Congress found that "no American institution...has undertaken comprehensive, systematic and intensive studies of the biomedical and behavioral aspects of aging and the related training of...personnel." From its inception, the NIA has spurred health care professionals to incorporate geriatric medicine into their curricula and practical training programs. The Institute has collaborated with other agencies and organizations to make the most of research and training resources.

The NIA has encouraged a substantial number of scientists to pursue aging research, and supports researchers throughout the aging field. Currently, the Institute funds over 600 grants on topics ranging from cell aging to senile dementia. The Institute's own research laboratories are located at its Gerontology Research Center in Baltimore, Maryland. One of the center's major activities is the Baltimore Longitudinal Study of Aging, in which nearly 1,000 male and female volunteers return every 12 to 24 months for extensive physiological, behavioral, and intellectual testing and measurement.

In 1978, the NIA established a Geriatric Medicine Academic Award designed to stimulate faculty and curriculum development in geriatric medicine and research. In October 1979, the Institute announced a Geriatric Dentistry Academic Award to promote the development of a curriculum in geriatric dentistry in those schools that do not have one, and to strengthen and improve the curriculum in those schools that do.

Three other NIA awards that bear upon geriatric medicine are: 1) the Clinical Investigator Award, which offers funds enabling the recipient to make the transition from clinical training to a career in independent biomedical research; 2) the Special Initiative Grant, which stimulates high-quality research in gerontology by supporting pilot studies leading to the creation, expansion, or modification of programs in aging research and training; and 3) the NIA Academic Award, which bridges the gap between the initial period of postdoctoral study and a
formal academic appointment for individuals with high potential for research and teaching careers in clinical areas. A fourth award, Short-Term Training: Students in Health Professional Schools, is sponsored by the entire NIH to attract highly qualified students into biomedical and behavioral research careers. This program is designed to counter the trend away from research careers among students in schools of medicine, osteopathy, dentistry, veterinary medicine, optometry, pharmacy, and podiatry.

The NIA also offers training opportunities at the Gerontology Research Center. These programs are especially valuable for those wishing to pursue a career in investigative or academic medicine and can be designed to enable the trainee to qualify for certification in a medical subspecialty.

In June 1980, the NIA held a meeting of its first 18 Geriatric Medicine Academic Awardees. The program directors described their activities and discussed their goals and problems. Many awardees found that the granting of the award itself gave credence to geriatric medicine and facilitated the task of building a program in geriatrics at their institutions. The awardees have concentrated on infusing geriatrics into existing courses and developing electives, summer programs, seminars, and related activities. The awardees stressed the multidisciplinary nature of their programs and their commitment to research on aging in addition to teaching and patient care.

The NIA also convenes an Ad Hoc Interagency Committee on Research on Aging, one work group of which is focused on training in geriatrics and gerontology. The mission of this NIA-led work group is to review and inventory existing programs in each Federal agency which supports geriatric or gerontological training and education and describe currently planned or recently launched activities in these fields. The work group will assess current progress and identify specific research, education, and service needs.
What other training programs are available?

A number of training programs have emerged from the many discussions, meetings, and recommendations on the teaching of geriatric medicine described above. At the New York Hospital-Cornell Medical Center, the Irving Sherwood Wright Professorship in Geriatrics was established in January 1977. This professorship, the first endowed chair of geriatric medicine in the United States, is designed to promote teaching and research as well as patient care. Dr. Marc Weksler, a leading immunologist and long-time NIA grantee, was named to fill the chair in 1978.

Antedating this chair, Dr. Leslie Libow established the first formal geriatric medicine residency program in the United States in 1972 at the Mount Sinai City Hospital Center in New York. In 1975, Dr. Libow started a second program at the Jewish Institute for Geriatric Care at the Long Island Jewish-Hillside Medical Center. In a 12- to 24-month training period following 24 to 36 months of a standard residency in internal medicine, physicians in Dr. Libow’s program develop the special skills necessary to deal with the medical and psychosocial problems of the elderly.

A second chair in geriatric medicine, the Boyle-McKnight Chair in Geriatrics, was established in 1980 at the Medical University of South Carolina. To date, that position has not been filled.

The Veterans Administration (VA) has also instituted a geriatric medicine training program. This program, which began in July 1978, offers 2-year fellowships at 12 VA hospitals to physicians certified in internal medicine, family medicine, or psychiatry. There are currently 19 first-year and 13 second-year fellows in this program. The VA hopes to add 24 new fellows to the program each year.

A number of grants, fellowships, and awards are available through other components of the Federal Government. The NIH Fogarty International Center’s Senior International Fellowship Program offers a limited number of awards to
scientists who have at least 5 years of postdoctoral experience to train at educational and research institutions throughout the world. The Bureau of Health Professions (formerly Bureau of Health Manpower), part of the Health Resources Administration, provides funds to medical, dental, allied health, and nurse training institutions to support the development and implementation of new courses and training experiences in geriatrics, with emphasis on primary care. Clinical research in geriatrics may be conducted at any of 75 special facilities within universities and hospitals throughout the United States. These facilities, supported by the General Clinical Research Centers Program of the NIH Division of Research Resources, offer multidisciplinary training in outstanding research and patient care centers. Given the close interrelationship among research, health services, and education, such centers are ideal sites for the pursuit of knowledge in geriatrics. A similar research opportunity, Core Grants in Support of Clinical Nutrition Research Units, offers an integration of research, education, and service activities oriented toward understanding human nutrition. This initiative, a joint effort of the National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases; the National Cancer Institute; and the NIA, provides grants for shared facilities and promotes multidisciplinary interaction.

What lies ahead?

As the Nation's elderly population grows, so do its needs for health and social services. Practitioners to provide these services are in short supply today, but remedial efforts are being made in private and public sectors. However, there is considerable concern in some quarters that these efforts need more stimulation than has been in evidence up to now.

At the same time, there is also recognition that better ways need to be developed for treating the sick elderly and for maintaining the health of the well elderly. The Nation's investment in laboratory and clinical research on aging can ultimately reduce costs by improving the diagnosis and treatment of—or finding ways to prevent—the diseases of the elderly.

Finally, there is wider appreciation in public and profes-
sional circles of the value of geriatric knowledge to good health in the early years of life. By understanding the conditions that promote well-being in old age, research provides the basis for services and information useful to persons in their younger and middle years of life. Through recognition of the practical value of gerontology and geriatrics, we may reasonably expect improved well-being across the entire lifespan.

Is further information available?

The following publications which discuss geriatric medicine in more detail are available from the NIA:

- *Observations on Geriatric Medicine*—a firsthand assessment by a practicing geriatrician of the health care needs of the elderly in the United States.
- *Perspectives on Geriatric Medicine*—interviews with leaders in the field of geriatrics to focus attention on the increasing need for training in the health care of older Americans.
- *Aging and Medical Education*—report of an NIA-supported study on the effectiveness with which knowledge of aging is currently being incorporated into medical education.