mental status questionnaire that the diagnosis of senile dementia was considered. Of those 75 years and older, the prevalence of cognitive impairment is about 3 percent. Thus the cognitive functioning of nearly all of the elderly is adequate for patient-physician dialogues.

Hospitalization rates are higher for men than for women in all age groups, and the increase in rates over time is greater in men than in women. Over a 3-year period about half the group had at least one hospitalization and, for the age group 85 and older, the 3-year incidence of hospitalization is about 60 percent. From these kinds of data the need for hospital beds and associated services can be estimated.

The proportion of the population using nursing homes over a 2-year period was 6 percent. The use rates increased with age, and for the 85 and older group it was about 24 percent for 2 years. The 2-year mortality rate for all participants in nursing homes was about 29 percent and at 85 or older, about 40 percent. Other results indicate that the nursing home is not always the final move. Discharges from nursing homes are by no means rare. Although 148 persons were admitted to nursing homes only once, 176 others were in nursing homes more than once.

Our results suggest that older persons enter nursing homes for three primary reasons. Some go for specific rehabilitation as, for example, treatment of a fractured hip. A second group is placed in nursing homes to receive terminal care for irreversible diseases such as advanced cancer. A third group consists of those whose outcome and duration in the nursing home environment can be far less specifically identified. These include persons with relatively severe cardiovascular disease and those with senile dementia. The numbers and proportions of these three groups of patients in a defined population can help in planning the number of beds and duration of nursing home care required.

Mortality rates were about what one would expect. Mortality rates for men were about double those for women and rose more rapidly with age. The proportion of women in any elderly population has an important effect on the duration of health services that are needed for that population.

More than 90 percent of the participants could name their source of health care. Thus, in this population there were not large numbers of persons without care who needed to be brought into the system.

The results presented are simple cross-sectional prevalence data obtained during the first contact with each participant. Only the followup data can provide information about change over time and provide opportunities to test hypotheses. But even prevalence data can help develop a rational plan for health services for an older population.

Educating Health Care Providers to Care for the Elderly

David N. Sundwall, MD, Administrator, and Joan K. Rosenbach, PhD, Office of Planning, Analysis, and Legislation, Health Resources and Services Administration, Public Health Service, Rockville, MD

AN ASSOCIATE who recently returned from Israel told this story. While she was there she visited a residential facility for elderly survivors of the Holocaust who had no family in Israel. She was warmly welcomed by residents and staff and given a royal tour of the various areas of the complex. But it was the kitchen that was the most interesting part of her visit. Although it was not an exceptionally large facility, there were 20 pots on the stove. When she asked, "Why so many pots?" . . . she was told, "We're getting ready for the Sabbath. Each pot has a different kind of gefilte fish. Like any other ethnic food, it varies—depending upon the geographic region in which it was developed. So there are 20 different pots to suit the tastes of our residents from each of the different ethnic backgrounds."

This story recalls a principle that is vital to the success of any program that serves the elderly. It is very simple—older people are different and, because they are, they have different needs.

Critical Problems

The United States and Israel share similar concerns and, in some instances, have implemented similar solutions to meeting the needs of the elderly. Both countries are concerned about the numbers of elderly in the future—how many there will be, how many will be over age 85, and what their health status will be. Who will provide care? How many providers will we need? How do we finance their training? Will the family be available to provide care in the future?

In an article in the Jerusalem Post, Dr. Jack Habib, Director of the Brookdale Institute in Jerusalem, expressed concern that aging persons today are being treated by professionals with little or no geriatric training. He is quoted as saying, "how to accelerate the process of training people for the profession concerns us all." Dr. Habib could have been speaking of the health care system in the United States. In this paper, we will try to outline what we are doing in the United States to tailor the education of health care providers to meet the needs of the elderly.

The authors of one recently completed study, "Personnel for Health Needs of the Elderly Through the Year 2020" (*1*) found that an insufficient number of health professions education programs emphasize aging and geriatrics; that elective, rather than required, courses predominate; and that there are shortages of faculty members and other educational personnel who are adequately trained in the conditions of aging and geriatrics. The study provided broad-based recommendations. First, its authors suggested that priority be given to expanding the number of faculty members and other leaders who are adequately prepared to plan and guide education and training programs in aging and geriatrics. Second, they recommended that all, and I emphasize *all*, health and human services personnel should receive training in the special conditions and needs of older persons.

Third, the study recommended that training programs should involve the entire spectrum of caregivers—from family members, volunteers, and aides to various medical specialties. Fourth, they recommended that educational programs should focus on home- and community-based care, services in nursing homes, health promotion and disease prevention, and rehabilitation. And finally, they emphasized that training programs must be flexible because the specific nature and scope of future personnel requirements cannot be determined many years in advance.

Another study, "A National Survey of Gerontology Instruction in American Institutions of Higher Education," found that only about half of these institutions were teaching about the processes and problems of aging (*2*). The report of the Institute of Medicine, "Academic Geriatrics for the Year 2000," suggested that centers of excellence should be established to train physician geriatricians as faculty (*3*). Their purpose would be to serve as model teachers, to perform basic and clinical geriatric research, and to provide clinical opportunities for training students.

Of utmost concern is, of course, financing. Major support for education and training health care personnel to serve elderly persons comes from a variety of sources: tuition and fees, State and local public funds, philanthropic and other private funds, Federal grant funds and student assistance programs, and patient care revenues. Patient care revenues, including Medicare, Medicaid, and other third-party programs, are especially important in financing medical education. In the United States, they account for about one-third of the support at the undergraduate level and about 70 percent of residents' stipends and benefits. Broad support will also be needed in the future if we are to meet the anticipated needs.

Education and Training Programs

In the United States we are, however, making some progress. We have numerous geriatric training programs. At the Federal level, in the Department of Health and Human Services, we have the National Institute on Aging, National Institute of Mental Health, Health Resources and Services Administration, Office of Disease Prevention and Health Promotion, and the Administration on Aging. There is also the Veterans Administration. State agencies and the private sector also support geriatric training programs.

National Institute on Aging (NIA). The Institute focuses its training support to prepare investigators and academic leaders in the biomedical, clinical, social, and behavioral aspects of aging. Its Teaching Nursing Home Program promotes attention to clinical care, teaching, and research issues related to the diseases and disorders of the elderly population. Training takes place in environments where one can gain a fuller understanding of the living conditions and health needs of older persons—in nursing homes and other long-term care settings. Program research has produced important new knowledge that enhances educational efforts.

Another program at the NIA is the Geriatric Leadership Academic Award. This program is designed to help academic health centers and other health professions schools enhance leadership in the development of research and training activities in geriatrics. Institutions eligible for the awards are those that are committed to expanding their research and training in aging. A middle or senior level faculty leader who has a career interest in geriatrics research and training and has the active

support of the institution's principal executive officials is also necessary to meet the eligibility requirements of the program.

NIA has other awards and fellowships, including those for minorities. The Physician Scientist Award encourages physicians with clinical training to enter a research and academic career in aging.

National Institute of Mental Health (NIMH). The number of well-trained specialists in geriatric mental health is extremely small in relation to the size of the problem. The NIMH supports training focused on the development of a cadre of teacher-clinicians who will influence the training of professionals in the core mental health disciplines: psychiatry, psychology, nursing, and social work.

NIMH is supporting Geriatric Training Models to provide training experiences to nonspecialists in geriatric care and to stimulate development of model materials and curriculums. One model is designed to enhance the functioning and maintenance of the frail elderly in their homes. Another model exposes trainees to the longitudinal course of geriatric patients—from home care through institutional terminal care.

Through its Faculty Development Award, NIMH prepares teachers of geriatric mental health in clinical centers where no local resource faculty currently exists. The Postgraduate Specialty Training Award in Academic Geriatric Mental Health is designed to increase the pool of potential faculty members through training programs that are already active in dissemination of mental health skills and knowledge.

Health Resources and Services Administration. In the Health Resources and Services Administration (HRSA), we are funding 31 Geriatric Education Centers that provide multidisciplinary geriatric training for health professions faculty, students, and professionals. The centers are designed to develop a corps of health professionals, well-trained in geriatrics, to serve as faculty and clinical role models. The centers also serve as a resource for community practitioners, currently providing health care services for the elderly, because the physicians received little geriatric training as part of their education.

Other HRSA programs emphasize nursing education in home health care. Nursing personnel have a major responsibility in the planning, administration, and provision of home health services, and most have not received training in these areas during their professional nursing education. To remedy this situation we will need to develop a cadre of geriatric nurses with expertise in home and community care. We will then be able to recruit and train nurses to serve in the community.

We support State educational programs to train community health nurses in assessing the health care needs of the frail elderly. We also support State programs for developing self-taught modules for licensed practical nurses who provide direct care to the elderly. And we have awarded grants for the development of geriatric training models for physician assistants.

HRSA developed "A Model Curriculum and Teaching Guide for the Instruction of Homemaker/Home Health Aides" (*4*). We also funded the development of a supplement to this model curriculum on the care of patients receiving treatments in the home that use sophisticated equipment. These guidelines will help home health care aides understand the various types of equipment and therapies that they may encounter and the risks associated with the provision of care for these patients. We have funded projects that trained more than 9,000 homemaker-home health aides and other projects that trained numerous paraprofessionals.

During fiscal year 1988, pending the appropriation of funds, we will be providing fellowships to physicians and dentists who plan to teach geriatric medicine or geriatric dentistry.

Administration on Aging. The Administration on Aging serves as a link between older people and their families and service programs in the community. Its goal is to keep older people in the community. In addition, it provides funding for the development of curriculums on aging in the professional training programs that focus on the needs of minorities. It also supports statewide short-term and continuing education and training for persons currently employed in professional or paraprofessional positions serving older persons. One program teaches hospital discharge planners about home care. Another program trains student nurses in an RN program to prepare them to train nursing home assistants and develop competency standards for these aides.

In addition, the Administration on Aging has funded grants to universities for developing Long-Term Care Gerontology Centers. The purpose of these centers is to help develop activities aimed at a continuum of long-term care, emphasizing the provision of community-based care for older persons. The centers are multidisciplinary and serve as regional resources for State and Area Agencies on

Aging and other interested agencies and groups. Activities include didactic and clinical training as well as continuing education. For example, they prepare professionals and paraprofessionals to care for older persons with dementia and Alzheimer's disease. And they provide technical assistance to develop community-based support groups.

Office of Disease Prevention and Health Promotion. Because it is a constant challenge to bring the level of public health up to the level of available medical knowledge and technology, the Office of Disease Prevention and Health Promotion developed Healthy Older People, a national public education program. The program has two audiences. First, older Americans themselves: it is designed to educate them about healthy lifestyles that can reduce risks of disabling illness and increase prospects for more productive and active lives. And, second, the general public: one of the program's goals is to stimulate public interest in the development of community-based health promotion programs for the special needs of older people.

Healthy Older People is organized as a multidimensional partnership among Federal, State, and local governments, professional organizations and voluntary groups, the business community, and the media. At the State level, coordinators have been appointed by governors and statewide coalitions to administer and integrate aging programs.

The program focuses on consumer education, professional education, and technical assistance. Consumer education consists of a variety of print and broadcast materials distributed through the States to interested groups. Materials include television public service announcements, produced in cooperation with the American Association of Retired Persons, prerecorded materials for radio and television talk shows, posters, skill sheets, news articles, press packets, and guidebooks for participants. Corporations have cooperated by distributing these educational materials and sponsoring educational programs for their employees.

Program staff are working through health professional groups and organizations that serve older persons to get their cooperation in notifying their members about the Healthy Older People Program and in asking them to participate in it. A significant activity was a teleconference for professionals, sponsored by the American Hospital Association and other national groups, that was transmitted to more than 300 sites nationwide.

To keep people advised about program events and to assist groups in developing health promotion programs, training and technical assistance are being offered in several ways: a toll free telephone line, a program memo that indicates dates of relevant activities, and regional workshops that train representatives from the States to use program materials and conduct health promotion programs.

'Our efforts need to extend beyond the Healthy Older People Program so that disease prevention-health promotion training is integrated into the training of health professionals at all levels and locations. Faculty members who guide this training should be up-to-date on the latest state of the art techniques.'

Our efforts need to extend beyond the Healthy Older People Program so that disease prevention-health promotion training is integrated into the training of health professionals at all levels and locations. Faculty members who guide this training should be up-to-date on the latest state-of-the-art techniques and should serve as effective role models. Health promotion and disease prevention should be routine in all health care settings, even the nontraditional ones like day care and senior citizen programs. Informal care givers and older persons themselves should be educated in health promotion and disease prevention activities because they can have such a significant impact on the duration and quality of life for older citizens.

Veterans Administration (VA). The VA supports 10 Geriatric Research, Education, and Clinical Centers. Commonly referred to as GRECCs, they integrate research, education, and clinical achievements in geriatrics and gerontology. Their goal is to attract outstanding professionals, to teach, and to conduct research on aging in a clinical context. Each center focuses on research in specialized areas, such as the neurobiology of aging, cancer and cardiovascular disease in aging, geropharmacology, alternative approaches to health care delivery, and depression.

The purpose of a second VA program, the Geriatric Fellowship Program, is to develop a cadre of physicians committed to clinical excellence and to becoming leaders of local and national geriatric

medical programs. This program serves as a model for others that train residents and medical students at affiliated medical schools. The VA Dentist Geriatric Fellowship Program trains dentists in developing geriatric clinical programs. Graduates are then obligated to use their skills in VA facilities where they establish linkages with universities and communities. Other VA programs include interdisciplinary team training in geriatrics, training for clinical nurse specialists, a gerontologic nurse fellowship program, and several continuing medical education programs related to geriatrics and gerontology.

Federal and State collaborative efforts. As noted previously, many of the geriatric educational initiatives are collaborative efforts between the Federal Government and State agencies. One such program is jointly supported by the Administration on Aging and the Health Resources and Services Administration. Community Health Centers that provide health services in medically underserved areas and the Area Agencies on Aging are cooperating to make sure that the elderly they serve are taken care of efficiently and well.

Private sector activities. The private sector has also played a major role in supporting geriatric education and training, from rotations for medical students to mid-career training. Professional associations have been active in developing curriculum guidelines for many professionals and paraprofessionals such as dentists, dental hygienists, homemaker-home health aides, nurses, occupational therapists, pharmacists, and physicians. The American Geriatrics Society has published guidelines for fellowship training programs (*5*). One of the most promising changes is the new competency certificate for special expertise in geriatrics that will be jointly awarded by the American Board of Internal Medicine and the American Society of Family Practice.

Conclusion

Studies of training needs have been conducted, and programs to train a great many kinds of health care providers have been started. We know at least some of the directions that we should take in the future. Like our colleagues in Israel, we are planning and we are working. If we continue to do so, I am confident that we can meet the challenging health care needs of our nation's elderly, both now and in the future.

References

1. National Institute on Aging: Personnel for health needs of the elderly through the year 2020. Report to Congress. Publication No. NIH 87-2950, Bethesda, MD, September 1987.
2. Peterson, D. A., et al.: A national survey of gerontology instruction in American institutions of higher education. Association for Gerontology in Higher Education and the University of Southern California, March 1987.
3. Committee on Leadership for Academic Geriatric Medicine: Report of the Institute of Medicine: academic geriatrics for the year 2000. J Am Geriatr Soc 35: 773-791, August 1987.
4. Public Health Service, Health Services Administration: A model curriculum and teaching guide for the instruction of homemaker/home health aides. Foundation on Hospice and Home Care, Washington, DC, 1979.
5. Ad Hoc Committee of the American Geriatrics Society: Guidelines for fellowship training programs in geriatric medicine. J Am Geriatr Soc 35: 792-795, August 1987.

Creating a Master's Degree Program in Gerontology and Geriatrics

David Barzilai, MD, Faculty of Medicine, Israel Institute of Technology, Haifa, and Ariela Lowenstein, PhD, School of Social Work, University of Haifa

THE "QUALITY OF LIFE" and "social welfare" are two subjects that occupy the thoughts of Israeli society in general and social welfare policy planners in particular. The last few years have witnessed a growing awareness of the special needs of the elderly and the need to take into consideration their quality of life. This concern is a result of the demographic changes that have occurred in Israel, changes which predict a continuing increase in the number of elderly in the population.

The percentage of elderly within the Jewish population more than doubled within two decades, from less than 5 percent to 10 percent (*1,2*), and the number of those ages 65 or older went up from some 100,000 in 1960 to more than 350,000 in 1984.

In Haifa and northern Israel, this problem takes on special dimensions. This region has a significant concentration of elderly persons, both urban and rural. The Tel Aviv and Haifa areas have the highest concentrations of elderly Jews in Israel. In the north there are today some 160,000 elderly (*3*). In Haifa, the percentage of elderly rose from 6