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.

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Creating a Master's Degree Program in Gerontology and Geriatrics

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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

percent in 1961 to 17 percent in 1985. Their numbers totaled 40,015 in 1985. This is a population that makes extensive use of institutional and community services at a time when many workers in these agencies have very limited training in the field of aging, and some have none at all.

The growth in numbers has intensified awareness of the special needs of this population group. This has resulted in diversified planning and development of programs and services for the elderly. In particular, the subject of service development received a boost with the establishment of the Israel Association for Planning and Development Services for the Elderly, which was founded in 1970 by the American Joint Jewish Distribution Committee and the Israeli Government.

The rapid development of such programs as this creates, in the main, a gap between the available trained, professional personnel and the situation in the field. Tremendous efforts have been made by health and social service agencies to disseminate basic knowledge of gerontology and geriatrics to personnel at all levels. Even so, there still are workers in various services who have not been reached. Most of those who take care of the elderly in geriatric and general hospitals, clinics, community services, and institutions have not received adequate professional training.

This gap has to be bridged on three levels:

1. Research. Research must be directed towards providing new insight and understanding of the processes of aging, the elderly and their needs, and appropriate methods of intervention and service modification.
2. Dissemination. This knowledge has to be transmitted to workers in the field.
3. Applications. Once transmitted, workers must then apply the knowledge to the direct care of the elderly.

To bring about a lessening of this gap, the Israel Institute of Technology and the University of Haifa propose the establishment of the master's degree program in gerontology, to become a unique example of two institutions joining programs and outstanding researchers and educators to form a truly multidisciplinary curriculum.

- To provide knowledge bases for research, teaching, and service components in gerontology and geriatrics.
- To train an academic cadre and manpower for leading roles in the welfare and health systems.
- To develop basic and applied research in gerontology and geriatrics.

Candidates for the program can be drawn from three groups.

1. Social work students, students of the behavioral and social sciences as well as of medicine and public health, especially those in family and community health fields, biology, and architecture.
2. Professionals working in medicine and health-related fields: nursing, occupational therapy, and so forth.
3. Professional managers such as regional health planners, directors of old age and nursing homes, directors of community centers, and others in managerial roles.

The program will include three tracks, and the first-year's courses are compulsory for all candidates. The first track is geared towards physicians, biologists, and students of medicine and biology who are interested in basic research in aging. The second track is for direct care providers: physicians, nurses, social workers, and others who are interested in the clinical aspects of aging care. The third track is designed for administrators and top and middle management professionals in the health and welfare systems who work with the aged.

First Year Courses

Public health—Introduction to epidemiology, Introduction to public health.
Aging—Physiology and pathology, Developmental biology, and Psychosocial and economic aspects.
Research methods.

Second Year Courses

First track—basic research in aging.
- Biological aspects of aging
- Pathophysiology
- Pharmacodynamics of aging
- Psychogeriatrics
- Research methods, extended
- Introduction to computer science

Second track—clinical geriatrics
- Care of the nursing patient
- Rehabilitation of the nursing patient
- Health and illness in aging
- Policy and services for the aged
- Family relations of the elderly
- Coping with losses and death
- Mental health and the aged
- Health education
- Prevention in aging

Nutrition.

Third track—administration of geriatric services.
- Policy and services for the aged
- Budgeting and finance
- Legal aspects
- Open versus closed care
- Dwelling models, architectural designs
- Implications of environmental changes
- Aging and mental health
- Administration in complex organizations
- Work, retirement, and leisure

A research thesis in basic, clinical, or applied research will be required of all candidates.

The educators in both institutions will be involved in the degree program. Participating from the Israel Institute of Technology will be the faculty of medicine, including its affiliated hospitals, with 300 beds in geriatric institutions and 600 beds in psychiatric hospitals, and the faculties of biology, biomedical engineering, architecture, materials, and computer sciences. Participating components of Haifa University will be the faculty of social work and its affiliated network of welfare and social services for the aged, the faculty of liberal arts, the school of education, and the school of occupational therapy.

There is no doubt, from our experience in Israel's geriatric institutions, that the quality of their medical and paramedical personnel, as well as social welfare personnel and top level administrative personnel, does not equal that of medicine in general in various Israeli institutions.

Primary care clinics, old age homes, nursing homes, and other community services urgently need a better formal program of education. We do not believe that it is really different in other parts of the world.

We strongly believe that, just as the master of public health degree has promoted understanding and expertise in public health, this unique bi-institutional, three-track program can reach out to medical and paramedical personnel working in geriatrics and gerontology and stimulate individual interest in care and research in the field of aging.

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The Challenge of Combining Clinical Approaches with Function in Treating the Elderly

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The clinical dilemmas that arise in the treatment of the aged may be considered in the form of seven main challenges.

1. To apply the nosological and semantic categories of clinical medicine, but not to overuse them in geriatric medicine.

These categories are only tools, and often they do not contribute to understanding. In geriatric medicine we are accustomed to emphasizing the characteristics of multiple pathology. We often find on one medical chart multiple diagnoses of congestive heart failure, Parkinson's disease, benign hypertrophy of prostate, degenerative joint disease, hypertension, and so on. And we even experience some pride in identifying so much morbidity, sometimes ignored or unmentioned by others. But what does all this inventorying mean? Does it reveal the real problem or help to mask it? Often we forget that we coin names and sometimes become prisoners of them.

Many textbooks of geriatric medicine are organized as, for example, cardiovascular diseases in the aged, gastro-intestinal disorders of the aged, and so forth. Besides being repetitive in the information they contain, the textbooks are constructed according to a decremental model or curve or according to statistical prevalence in a population that is presented as homogeneous, but in fact is very diversified. It is important to know the medical details, but all these nosological and semantic drawers do not differ much from conventional internal medicine for the elderly. After the inventory of multiple conditions has been completed, their combination and relationship should be emphasized, and therapy planned accordingly for the patient.

Parkinson's disease and osteoarthritis and an elevator out of order in a building—all these together create a new disease, unknown to textbooks. It is a SITUATION.

Bleeding hemorrhoids plus cognitive decline creates a new syndrome because the patient forgets to