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HEALTH CARE OF THE ELDERLY:  
IMPLICATIONS FOR EDUCATION AND TRAINING OF PHYSICIANS  
AND OTHER HEALTH CARE PROFESSIONALS

Discussion paper  
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## 1. Introduction

This discussion paper is one of a series of WHO documents concerned with training in those professions which are involved in gerontology and the health care of the elderly. The main emphasis here is upon the training needs of physicians; the needs of other health professions will be considered in greater detail in subsequent documents. This paper seeks only to present a general view of training requirements, as details of curricula and teaching programmes will be most appropriately evolved by universities and colleges within the educational framework of individual countries.

Changes in the demographic structure of society in the developed countries have been reflected in a considerable increase in the proportion of elderly people in the population: at present these countries face a number of problems due to the fact that 10%-16% of their populations belong to the age group 65 years and over. Estimates of future numbers of elderly persons indicate that the higher age groups (the 75+ and 85+ groups) will increase both absolutely and relatively at the greatest rate. This accelerating trend will persist throughout the present century and, in some countries, into the next. It has been commonly assumed that only the developed countries are experiencing this aging of their populations, but international statistics clearly show that the developing countries also will have to find methods of identifying and dealing with the needs of greatly increased numbers of elderly citizens.

While this aging of populations has come about mainly as a result of the greatly increased expectation of life for younger members of society, even for the elderly there has been an increase in survival times, especially in females. This may range from only a few months for 85-year-old persons to several years for those aged 65 years. Although these increases are modest, they have considerable significance for those who provide health care because of the high morbidity in these older age groups.

This substantial increase in the numbers of people surviving to an advanced age is an entirely unprecedented phenomenon in the history of mankind and demands that new policies and tactics be evolved to cope with its effects.

This paper is mainly concerned with the need to ensure that physicians, both in the present and in the future, should be adequately trained and have the necessary interest and positive attitudes to enable them to deal with the consequences of demographic change. This requirement applies equally to members of the nursing and other health care professions.

## 2. Historical perspective

In European countries there have existed since medieval times systems of care for the poor, the handicapped and those with permanent disability; these systems were expected to cater for the relatively small numbers who survived into old age. The type of care provided was generally custodial in nature and has now been superseded as a result of the impressive developments in acute care and the advances in medical science and technology during the past few decades. The current trend towards greater specialization has become much more marked, with physicians tending to specialize in diseases of certain organs or body systems or in the use of certain diagnostic or treatment techniques. The result has been a dramatic improvement in prospects for the cure of acute illness and the alleviation of individual suffering, and it must be acknowledged that the elderly have been major beneficiaries of these advances. Indeed, one has only to reflect on the great improvements in the treatment of pneumonia and in the relief of suffering of patients with parkinsonism, or on the excellent prospects for obtaining remission in depressive illness and the great benefits to cardiac patients from modern diuretic therapy, to realize the extent to which the lot of older patients has been improved by modern therapeutic measures.

It is, therefore, understandable, perhaps even inevitable, that physicians and other health professionals have come to regard "cure" and the management of acutely ill patients as being in many respects more important and more rewarding than the care of patients with long-term conditions. The result has been that workers in the acute field have been accorded much greater prestige and esteem and this field has tended to be viewed by students as being more satisfying. It is doubly unfortunate that this trend in medicine has coincided with the marked aging of populations, since the result has often been conflicts and tensions within professions and in training establishments, and accusations that physicians were not being adequately trained to meet the needs of the populations they were to serve.

In their structure, emphasis and content, basic (undergraduate) medical curricula have, of course, reflected these trends and until very recently have provided little instruction in the field of aging or in special aspects of geriatric medicine. In many instances such instruction is still inadequate.

An additional and significant factor leading to neglect of gerontology and geriatric medicine in basic medical education in the past has been the absence of any substantial body of knowledge to serve as a basis for study. This lack may be attributed to many causes, among them the extreme complexity of the problems and an absence of suitable methodologies. However, modern epidemiology, with its emphasis on the need to study random and representative population samples, together with the great advances in computer science and in medical science and technology, has made it possible to close these gaps in knowledge and enough is now known to provide a sound scientific basis for the teaching of gerontology and geriatric medicine.

It is now a matter of extreme urgency that this knowledge should be substantiated and imparted to students of medicine and allied professions in their basic courses. In addition, specially oriented education should be provided for those who are to be more closely involved in care of the elderly, and continuing education should also be made available to ensure that qualified practitioners are given adequate opportunity to keep abreast of modern developments in this field. Failure to achieve these educational aims will surely mean that the health professions will be increasingly ill-equipped to cope with the changing needs of the communities they serve.

### 3. The scope of gerontology and geriatric medicine.

The image of gerontology and geriatric medicine has tended to be blurred because of imprecise definitions and muddled terminology. For the purposes of this paper the following definitions have been evolved:

- gerontology is the study of the normal aging process and its manifestations; this necessarily encompasses biological, physiological and sociological aspects;
- geriatric medicine is that branch of medicine concerned with the special knowledge of symptomatology, the natural course of disease, treatment, rehabilitation and prevention in relation to patients in whom changes resulting from age contribute significantly to the clinical picture.

The importance of adequate and efficient treatment of acute illness and of acute episodes in patients with lasting disability is well understood and such treatment is generally well carried out by physicians and other health professionals. However, this is insufficient. Gerontology and geriatric medicine exist to ensure appropriate support for patients who require continuing care in institutions or in the community and not just during acute or subacute episodes. For this approach to be successful, very deliberate educational policies and tactics are required with a view to inculcating the necessary positive approach.

It is clear that, in order to achieve optimum results in the management of elderly patients and those in need of continuing care (as opposed to episodic care for acute or intercurrent events), due regard must be paid to the fundamental importance of social and psychological factors. Physicians and other health professionals must therefore be properly trained to understand the necessity to work as members of multidisciplinary teams and thus to acquire mutual respect for each other's skills and expertise. According to a WHO Expert Committee,<sup>a</sup> "from the point of view of planning for geriatric services, the primary health care team represents, for all countries in the world, the basic unit".

### 4. Educational requirements in medical schools

All medical schools should now assume serious responsibility for ensuring that adequate instruction in gerontology is provided in their basic courses. Moreover, the student should be introduced to gerontology in the earliest stages of the curriculum so that he is left in no doubt as to the importance of the subject and the inescapable fact that, throughout his professional career, older patients will form a large and increasing part of his work. While this message has special relevance for those who will be practising in developed countries, it also applies increasingly to physicians of the future in developing countries.

It is recommended, therefore, that students should receive instruction in the biology of aging as part of their general biology course, and in the physiology of aging in their physiology classes. Certain body systems are of special importance in this context, including the nervous system, the circulatory and locomotor systems, the special senses and the immunoreactive system. Special attention must also be paid in pharmacology classes to the pharmacodynamic and pharmacokinetic changes associated with aging and their practical consequences in older people.

<sup>a</sup> WHO Technical Report Series, No. 548, 1974 (Planning and organization of geriatric services: report of a WHO Expert Committee), p.43.

Students must appreciate that growing old is as much a normal part of human development as adolescence or any other stage in the life cycle. Thus, in their behavioural science classes, they should be introduced to the sociology and psychology of aging within their own society. This should also include consideration of age-related changes in cognitive and mental function.

Students who have been adequately trained in gerontology will then be equipped to assimilate in their clinical years the essentials of care of the elderly as a fundamental part of relevant clinical specialties. All students will in this manner receive a suitable introduction to the wider field of geriatric medicine and a sufficient number may be so attracted to the subject that they will elect to devote the main part of their professional lives to it.

The details of courses in geriatric medicine during clinical studies must, of course, be left to individual medical schools to arrange, but certain essentials may be mentioned. Thus, it is necessary for teachers in each specialty to ensure that students receive adequate instruction in the special needs of elderly patients. In addition, there is a need for a special course in geriatric medicine and this necessitates the allocation of a specified amount of curricular time devoted entirely to the subject. During this period the relevance of training in gerontology will become apparent by being translated into terms of care of individual elderly patients and support for their families. In this phase also, students will realize the importance of age-related changes, e.g., as shown in altered reaction to disease, in atypical symptomatology, in altered reactions to and sensitivity to drug action and in the clinical consequences of changes in the immunological system.

Students must be given ample opportunity to appreciate the often subtle differences between changes due to age and those due to disease. Thus, a higher erythrocyte sedimentation rate, a higher systolic blood pressure or some degree of shortness of breath may all be "normal" or "physiological" in advanced age, while similar findings in youth or early adulthood would invariably indicate disease. This involves the consideration of normal values (reference values) at different ages, special attention being paid to the complex problems arising from the existence of "grey areas" which lie between normality and disease. The extent of these "grey areas" increases with age and it is important that students learn to appreciate these problems. Only in this way will they understand when medical intervention is indicated and, equally important, when it is not. The problem of overtreatment of older patients is common and iatrogenic illness is increasing. Emphasis must therefore be placed upon normal old age, and students should have an opportunity to see the essential normality of age in its proper perspective by observing healthy old people who are coping with life in ordinary family and community settings.

Rehabilitation underlies all geriatric endeavour and students must be helped to understand its importance. In order to achieve this, much greater emphasis must be placed upon function and loss of function and this, in turn, calls for a greater understanding of the skills exercised by those in the professions of nursing, physiotherapy and occupational therapy and by others concerned with rehabilitation. Students must realize that they will commonly encounter clinical problems in groups of patients for whom restoration of complete normality is unlikely. While striking improvements do sometimes occur, even in very aged patients, the physician must accept that in a significant proportion only meagre gains may be expected. Partial rehabilitation and partial restoration of function have often not been regarded as affording adequate professional satisfaction for physicians, with their traditional interest in acute illness and its cure. However, as the numbers of aged patients increase, students will have to adjust to the idea that many patients will achieve only limited improvements. They must understand that, however limited the restoration of function may appear to the physician, it may be vitally important to the patient as an index of restored independence, as a step towards a more normal community existence and as an improvement in the quality of his life.

Students must also be helped towards acceptance of the constant reality and indeed normality of death in advanced age and hence appreciate the physician's role in terminal care of the dying patient. They should appreciate the importance of social factors in determining health status and in the response to treatment and rehabilitation. Special attention should be focused upon the problems of loneliness, isolation and family dispersal, in so far as these may readily lead to secondary consequences of apathy and inactivity in the elderly. Measures to counteract these adverse factors should be demonstrated, together with methods for strengthening and fostering family support.

These considerations lead naturally into the field of preventive care in old age. The maintenance of health in old age is an extremely complex subject, since many of the measures which may lead to improved health at this stage of life need to be instituted in youth or middle age, e.g., adequate exercise, good diet and avoidance of or moderation in the use of cigarettes and alcohol. Students should, however, be helped to realize the importance of encouraging healthy

life styles even in old age and to avoid the belief that these factors are no longer important. Particular attention should be paid to the preservation of social life and the widest possible range of interests for old people.

Attention should also be given to methods of mobilizing family and community support for older individuals, as these may yield very positive results. The identification of high-risk categories among the elderly in any community should be stressed, together with the development of rational case-finding programmes.

This type of comprehensive geriatric care can only be achieved through multidisciplinary team effort and especially through close collaboration between community workers and hospital staff. The fundamental role of the primary care physician must be stressed and importance attached to ensuring that he is able to achieve his full potential. Students will readily understand from seeing the multidisciplinary team in operation that its total effectiveness is much greater than that of its individual members.

It is important for physicians to understand the physical, emotional and psychological stresses experienced by their nursing colleagues and others involved in the care of elderly and permanently disabled persons. Only through this understanding may they be able to ensure that excessive burdens will be avoided. This required familiarity with aids and appliances as well as an appreciation of suitable staff-patient ratios. This teamwork and the frank discussion of mutual problems is perhaps especially necessary in terminal care, which must always form an important and substantial part of geriatric medicine. Family members must always be seen as prime supporters of the elderly and thus in need of education and counselling in the optimum methods of caring for their elderly relatives. Students should be given the chance of seeing for themselves this aspect of family life and of understanding how important it is to involve family members in discussions on management and on the objectives of treatment. Emphasis must also be placed upon the continuing role of members of the multidisciplinary team even after the patient has died; here too the role of the primary care physician is very important.

Geriatric medicine differs from most other branches of medicine (especially the narrower organ or system specialties) in that it embraces such a wide range of interests and embraces hospital and community care. Students must therefore be introduced to the various levels of care involved: total patient assessment in hospital, outpatient and day-hospital care, rehabilitation, community and domiciliary care (including prevention) and nursing-home/continuing care.

Students should have an opportunity to observe old people in their own homes, to see how they cope with illness and disability and to become familiar with the varying ways in which families may rally to their aid. The previous preoccupation of basic medical education with hospital care has been the cause of many current educational deficiencies.

Experience has shown that, where this broad-spectrum approach to the teaching of geriatric medicine has been adopted, students are quick to grasp its relevance to their future careers and they respond in a positive fashion.

##### 5. Specialist and continuing education in geriatric medicine

Education for physicians is correctly seen as consisting of basic (undergraduate) education to equip individuals to achieve knowledge and skills to practise; thereafter there must be a continuous process of learning and keeping up to date with advances and new techniques. An important part of basic education is thus to inculcate in students an enquiring mind, a knowledge of scientific methods and an enthusiasm to keep abreast of current thought.

Continuing (postgraduate) education in gerontology and geriatric medicine must be provided at many levels for physicians at different stages in their careers. Well constructed courses should be provided for existing physicians to emphasize the principles of modern geriatric medicine and to acquaint them with significant advances. Wherever possible, these courses should be provided in university settings in order to ensure the highest standards, and universities should accept this task as an important contribution to the societies they serve. For physicians with special responsibility for the elderly, e.g., those working full-time or part-time in nursing homes or continuing care units, longer and more extensive courses should be provided.

Certain groups of physicians, including those who intend to become primary care physicians, require special consideration. There should certainly be a period of training in geriatric medicine: a period of six months is recommended for this purpose.

It seems essential also that those training in psychiatry and in general medicine should likewise be required to have experience in geriatric medicine, since the care of the elderly will form an increasing part of their work.

As already stressed, other health professions are equally affected and similar changes in content and emphasis in courses will be required. This applies to undergraduate (or basic) courses and to postgraduate (or postbasic) curricula. The scope here is very large and each health profession should take steps to ensure that present students receive appropriate training in gerontology and the practical care of the elderly. In this paper no attempt will be made to specify curricular content for other health professions, but the general principles enunciated above and the outlines of course content are applicable.

#### 6. Conclusions and recommendations

Gerontology as defined here must figure prominently in all undergraduate curricula so that students may benefit from the introduction to care of the elderly they will receive in relevant specialties.

At the clinical level there is an urgent need for more and better instruction in geriatric medicine to help students towards an understanding of the special symptomatology, the altered course of disease and special aspects of treatment and rehabilitation in older patients. Students must also be introduced to the importance of teamwork in geriatric and long-term care medicine and become familiar with the various levels of provision of geriatric care.

The existing large body of knowledge in gerontology and geriatric medicine necessitates the provision of separate courses of instruction and the allocation of adequate curricular time.

The need for increased and well conducted research in gerontology and geriatric medicine is self-evident in the face of demographic changes, and adequate resources should be provided as a matter of urgency. This will have the extra benefit of helping to attract staff of suitably high calibre.

Students should see all aspects of geriatric and long-term care and not merely hospital, nursing home or other institutional services. This calls for properly trained and experienced teachers, as well as service models for students to observe and in which they may participate.

Countries have so far attempted to meet the health care needs of their aging populations in different ways. These include, for example, the development of a specialty of geriatric medicine and/or the setting up of national institutes of gerontology and geriatric medicine. While the body of knowledge in gerontology, geriatric medicine and long-term care medicine is universal, it is for each country to decide how the educational and training needs of physicians and other health care personnel may best be met. However, it is a matter of urgency that the educational principles and objectives outlined here should be achieved as soon as possible if the needs of aging populations are to be adequately met.

The large body of knowledge and experience and the specialized form of teamwork required for success in geriatric and long-term care medicine make it essential that a significant number of physicians and other health care professionals should devote all or most of their professional lives to this field. These individuals will form the key personnel who, working within systems of comprehensive care, will enable teachers and research workers to make possible the educational plans advocated in this paper.

Changes in emphasis within medical education will be essential if these objectives are to be achieved, but it is fair to state that the matter is now so urgent that failure to come to terms with these new problems in society will certainly jeopardize the whole fabric of health and social services. On the other hand, well trained and highly motivated physicians and other health personnel have an enormous contribution to make to the health and wellbeing of present and future generations of the elderly.

It is now the task of each country and each medical school and training college for health care personnel to determine how the principles and objectives outlined in this paper may be most appropriately and speedily adopted.