Diet Therapy

New Dimensions for Public Health Nutrition

The Challenge of Chronic Disease and Aging

DOROTHY M. YOULAND, M.S.*

THE shifting focus and enlarging scope of health programs to meet today's changing health needs offer new challenges to nutritionists as well as other health workers. Since the turn of the century the United States population sixty-five years and older has multiplied four times in contrast to a doubling of the total population. Almost 9 per cent of the total population is now sixty-five years old or over and it is predicted that the proportion will remain constant in the next decade.

In addition to an aging population, we are faced with an unprecedented number of persons with chronic disease, impairment, or long-term illness. Reports from the National Health Survey[1] show that 70 million persons in the United States have one or more chronic conditions; this amounts to 41 per cent of the noninstitutional civilian population.

While chronic illness may occur in persons of all ages it is found with greater frequency among older persons, and about three of every four persons over age sixty-five are afflicted with one or more chronic conditions.

The concomitants of aging and the control of long-term illness are amenable to the public health method and there is evidence of increased concern and activity in chronic disease programs by official and voluntary health agencies. Today there are over thirty administrative units for chronic disease in state health departments compared to three such units in 1945. Visiting nurse associations report that up to 75 per cent of their total visits are made on behalf of patients with long-term illness.

From the Public Health Service, Washington, D. C.
* Nutrition and Dietetics Officer, Area Office, Division of Indian Health, Public Health Service, Billings, Montana. Formerly Chief Nutritionist, Chronic Disease Program.

NUTRITION, CHRONIC DISEASE AND AGING

Nutrition is the most important single factor affecting health. This is true at age 1 or 101, but too often this fact is overlooked in the development of new health programs. Nutrition is a specific factor in the prevention and in the control of many chronic diseases.

Weight control is important in the primary prevention and control of certain diseases. Joslin[2] states that obesity is "the most activating factor next to heredity" in the development of diabetes, and he notes that 85 per cent of those persons with diabetes were overweight before the condition was diagnosed. A study of overweight and nonoverweight adults revealed twice as much chronic illness among the overweight group.[3] Persons with diabetes, arthritis, gout, and many forms of heart disease experience better control of these conditions and are more comfortable when they are of normal weight.

The therapy of persons with long-term illness often includes modifications in the kinds and amounts of food eaten. The Commission on Chronic Illness reported[4] that 43 per cent

TABLE I

Chronic Condition	Rate per 1,000 Population	Source of Data
Overweight (10 per cent or more above "desirable weight" for persons thirty years of age or over)	200.0	National Estimate by Division of Special Health Services, P.H.S.[5]
Arthritis and rheumatism (persons fourteen years of age and over)	63.9	U. S. National Health Survey[6]
Diabetes	16.9	National Estimate by Division of Special Health Services, P.H.S.
Tuberculosis	12.0	National Estimate by Division of Special Health Services, P.H.S.
Ulcers of the stomach or duodenum	14.4	U. S. National Health Survey[7]
Gallbladder disease	8.0	Chronic Illness Survey, Baltimore, Maryland[8]
Diseases of the liver	3.8	Community survey, Hagerstown, Maryland[9]

of the patients in general hospitals with long-term illnesses in one state were on some type of "special diet." Table I shows the estimated rate per 1,000 population of persons with some chronic conditions in which diet plays an important therapeutic role.

The economic status of the elderly is a factor that influences the nutrition of this group. Difficulties in obtaining adequate food loom large for three-fifths of the population aged sixty-five years and older who have a cash income of less than $1,000 annually[10] and many of these persons need help in learning which foods to select to obtain the most food value at the least cost.

Psychologic, social and physiologic factors also influence the appetite, food intake and nutrition of the aged.

WHAT IS BEING DONE

The majority of state health agencies employ one or more nutritionists and in most states they give some service to chronic disease programs regardless of their administrative placement. In at least ten state health agencies individual nutritionists are administratively responsible to chronic disease directors or give the major portion of their time to chronic disease activities. This is a beginning. Opportunities for nutritionists in new health programs are unlimited in variety and scope.

Public health nutrition consultation at the Federal level is provided on a categorical basis from the Chronic Disease Program, the Heart Disease Control Program and the Division of Indian Health of the U. S. Public Health Service and from the U. S. Childrens' Bureau. Only the activities of the Chronic Disease and Heart Disease Control Programs will be highlighted in this paper, however. Consultants from these programs are concerned particularly with the nutritional and dietary aspects of heart disease, diabetes, services for the aging, nursing home care and organized home care. They work through the Public Health Service Regional offices located in New York City; Charlottesville, Virginia; Atlanta, Georgia; Chicago, Illinois; Kanasa City, Missouri; Dallas, Texas; Denver, Colorado; and San Francisco, California, to consult with and advise official and voluntary health agencies upon request. Consultation includes such topics as program planning and evaluation, recruitment and resource materials. Frequently program administrators are advised regarding the potential contribution of nutritionists to chronic disease activities and suggestions may be made about desirable qualifications and recruitment possibilities. The consultants also participate in such activities as educational workshops and conferences, and assist in planning and conducting research and study projects.

Recently one of the consultants assisted a state health department in developing plans for the nutritional aspects of a two-day educational program in diabetes. One health department was given assistance in planning and in carrying out a food service study in selected

nursing homes. In another state help was given to the licensing agency regarding an educational program for nursing home administrators. Later the nutritionist contributed to the program by serving as a consultant during the conference.

The development of guide materials for use by the patient and professional worker is also an important contribution. Nutritionists from the Chronic Disease and Heart Disease Control Programs collaborated with professional organizations in the development of the standardized, simplified materials for use by persons with diabetes or who require sodium-restricted diets. The nutritionists have also participated in the preparation of filmstrips, records, and other material for patient and professional diabetes education. They are contributing to the development of recipe booklets for use with sodium-restricted diets and materials for physicians regarding fat- and cholesterol-restricted diets. A visual aid in the form of a flipchart has been developed to assist professional personnel with food service training programs for nursing home personnel. This teaching tool and an accompanying Instructor's Guide have been made available to state health departments.

The nutritionist at the federal, state or local level offers to chronic disease and aging programs her knowledge concerning food habits of the population served, the nutritional needs of specific groups, and how to plan and prepare food to meet these needs, the availability and cost of food in the community. The nutritionist's training in the dietary aspects of the treatment of medical conditions enables her to make contributions to professional and lay persons regarding the care of the chronically ill and aged. Her knowledge of quantity feeding and institutional management is useful in developing programs with nursing homes and other group care facilities. Skills in interviewing and nutrition educational technics enable her to work effectively in all of these newer programs.

Patient Education

Weight control projects by the "group method" have been conducted by a number of public health nutritionists who have joined forces with colleagues in medicine, agricultural extension service, nursing and health education for such ventures. Some states have developed cooperative programs which are continuing. In others, the public health nutritionist has been the catalyst to encourage and assist interested, qualified groups to sponsor group classes.

Persons with diabetes usually need assistance in following the diet plan prescribed by their physicians, and benefit from understanding food values. In several states, nutrition units have offered group diet instruction to such patients. Impetus for such programs and details of carrying them out may vary, but such activities should have the support and approval of organized medicine; they require individual patient referral by the physician. In a midwestern state, nutrition education for patients with diabetes was an outgrowth of diabetes case-finding programs. At the time persons suspected of having diabetes were referred to their physicians for diagnosis and follow-up, the physicians were invited to refer newly diagnosed diabetic patients to group classes conducted by health department personnel.

In an eastern state health department nutritionists conducted classes regularly for persons with diabetes at the request of the local medical society and in cooperation with the local dietetic association. Frequently, and preferably, nutritionists join forces with other professional health workers so that diet instruction is provided as part of an over-all guidance to the diabetic patient.

Public health nutritionists are finding increasing opportunities to work with state and local voluntary associations on behalf of persons who require sodium-restricted diets. Classes similar to those for persons with diabetes have been held in a number of places.

Services to Institutions

One estimate[10] indicates that as a group persons over age sixty-five use two and a half times as much general hospital care as the average for persons under sixty-five years of

age. According to Solon[11] nursing home beds are occupied by persons whose average age is eighty, and 25,000 "homes" provide nursing or supportive services to chronically ill, convalescing, aged, disabled or infirm persons. These facilities, and approximately 3,500 small general hospitals (with bed capacities of less than 100), are focal points for service from public health nutritionists. Most of these institutions, because they are small, employ nonprofessional food service personnel. Administrators and staff need assistance with menu planning, food purchasing, therapeutic diets and other aspects of food service as well as with patient education. Nutritionists participate in training food service workers and offer consultation to administrators in a number of states. They also assist licensing agency personnel in their evaluation of food services in these facilities.

The nutritionist in one city health department assists the nursing home program in a number of ways. When the prospective administrator visits the health department to apply for a license, he meets with the nutritionist as well as other members of the staff. From them he learns the requirements he must meet to comply with the regulations and the services available from the department. With the cooperation of the nursing home association regular group meetings on nutrition and food service are presented for operators of existing homes. The nutritionist in this department, and a number of others from the East Coast to the far west, are responsible for periodic newsletters on food service which are distributed to nursing homes and other small institutions.

In a number of states, public health nutritionists have taken the leadership to develop, or have cooperated in the preparation of, diet manuals. These have been intended primarily to improve the quality of general and therapeutic diets in small institutions, but frequently they have served also to standardize and modernize diet therapy practices.

Assistance to institutions is provided in many other ways such as preparation of food service manuals; distribution of menu planning forms and nutrition guides; help in the selection and use of equipment; suggestions about kitchen layout and work simplification technics.

"Meals on Wheels"

"Meals on Wheels" is the name given to programs which deliver meals regularly to elderly, homebound persons who are unable or disinterested in preparing food for themselves.[12] Based on an idea originated in England, the programs have great public appeal and have been developed in about twenty localities in the United States. Nutritionists can assist in evaluating the community need for this type of program and in working out the details of preparing and serving attractive meals for a modest fee. In one state, nutritionists work with the sponsors to help insure menus of high quality and to assist in evaluating the service periodically. In another program sponsored by a voluntary agency, the nutritionist assumes all administrative details of the food service.

Organized Home Care

The role of the nutritionist in organized home-care programs has been delineated recently.[13] This is an area in which nutrition service has a great potential yet to be developed in most of the sixty programs in operation today. The nutritionist in one county health department gives regular service to an organized home-care program in her community; she not only attends all planning and evaluation conferences and consults with the professional staff on selected cases, but also gives direct service to some patients in their homes.

FUTURE TRENDS

What of the future for public health nutrition in new health programs? It seems inevitable that the amount and intensity of effort on behalf of the well and sick middle-aged and older adult will increase. Hopefully nutrition programs of the future will be geared to give adequate service to everyone throughout the span of life.

One group, which may well receive more emphasis in nutrition education programs, are middle-aged adults. Nutrition should be included in preretirement counseling programs that are becoming popular in industry. In

one series in which this was done the nutrition session had the highest rating in the class evaluation. Also nutrition in its preventive and therapeutic aspects must be included more frequently in the health education programs of industry by such means as providing written materials, by working with industrial nurses and by giving individual nutrition counseling.

Dietary counseling is another field which holds promise for the future. Such counseling helps nonhospitalized patients understand and follow prescribed dietary regimens adapted to their individual needs. The public health nutritionist is in a unique position to see that such service is available. Depending on the local situation she may help to develop a referral system for exchange of pertinent diet information between the hospital and other community agencies, or she may assist in setting up a program to give individual counseling to persons referred by physicians. In any event she can assist public health nurses by providing them with necessary tools and technics to advise patients about diet.

There are about 5.5 million persons in the United States (or 3 per cent of the population) who have some type of chronic mobility limitation.[1] Most of these persons can be restored to levels of self-care. Medical rehabilitation programs are organized to enable chronically ill, disabled or aged patients to maintain or recover functional capacity for the physical, mental and social demands of daily living. This requires the services and skills of all members of the health team. The nutritionist's role in restorative services has barely been touched, although she has much to contribute to professional staff and patients. Unless disabled persons are in a good state of nutrition how can they possibly have stamina to use crutches or to relearn the simple "activities of daily living" that spell the difference between a bare existence and a meaningful life? A nutritional history taken on each person at the rehabilitation center or hospital, plus follow-up assistance to interpret and assist in making desirable diet changes, is one example of the service the nutritionist can provide.

What about the elderly person who is at home and is unwilling or unable to prepare food for himself? As already stated "Meals on Wheels" represents one method of providing food for such persons. The serving of hot meals at senior citizens' centers is being tried in a few places; one home for the aged offers noon day meals to nonresidents who wish to purchase this service. Other ways to provide food service to oldsters should be studied and nutritionists may need to stimulate such exploration.

SUMMARY

Public health nutrition has specific and valuable contributions to make to programs focused on chronic disease and aging. In this new and challenging field the ways in which nutritionists can function are limitless. A few examples have been given to illustrate some ways nutritionists are serving and may increase services to their professional colleagues and the public in newer public health programs.

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