Nutrition Services in State And Local Public Health Agencies

SPECIAL SUPPLEMENT: Revision of the 1955 Guide by the Nutrition Services Project Committee

Requests for copies of "Nutrition Services in State and Local Public Health Agencies" should be addressed to the ASTHO Foundation, 10400 Connecticut Ave., Suite 207, Kensington, Md. 20894.

SYNOPSIS .....

The contribution of nutrition in preventing disease, prolonging life, and promoting health through organized community effort is well recognized. While many gains have been made in public health nutrition, it is clear that the American population continues to exhibit nutrition problems. Rene Dubos has said that no community will find it possible to deal simultaneously with all of the health problems inherited from the past and with those brought about by modernization and change. The challenge lies in determining priorities and making difficult choices in the face of shifting responsibilities among levels of government, reduced resources, and increased competition.

The purpose of this guide is to help public health officials appreciate the important role nutrition services play in meeting the health needs of their communities. The recommendations for nutrition programs are sensitive to the social, economic, and political forces that are shaping the future of public health. How well public health officials meet the challenge of providing nutrition services in their communities will be a significant factor influencing the health status of the American population in the 1980s and beyond.

FOREWORD .....

This document has been prepared for program planners, administrators, managers, and other policy personnel in State and local public health agencies. The purpose of the document is to help officials in these agencies understand the relationship of nutrition services to the total public health program so that they can develop appropriate, comprehensive, and effective nutrition services that are responsive to the needs of the population.

The material is presented with the understanding that State and local public health agencies exhibit great diversity in the variety and organization of public health services. The recommendations are flexible so that public health officials can interpret them to suit their own needs. The objective is to provide information that will assist public health officials plan and implement nutrition programs that are compatible with the goals and responsibilities of their agencies, sensitive to current problems and issues in nutrition, and adequate to promote the nutritional well-being of the population.

In Part I, "Nutrition Services in Public Health," the general characteristics of nutrition services in public health are described, including the goals, objectives, and functions of a nutrition program, responsibilities of State and local public health agencies for the provision of nutrition services, and coordination of nutrition services with other organizations in the community. Part II, "Organization and Delivery of Nutrition Services," explains the complementary roles of the public health nutritionist and other health program personnel in delivering nutrition services. Alternative models for organizing nutrition programs are described along with strategies for financing nutrition services and marketing them to different sectors of the health care delivery system. References cited in the document and other sources of information are listed on page 20.

The document is a revision of "Nutrition Practices: A Guide for Public Health Administrators" published by the American Public Health Association in 1955. Much of the information in that guide is still relevant; however, in view of new research on relationships between nutrition and health, recent legislation affecting the funding and administration of public health programs, and other changes in the American social, economic and political environment, it is necessary to update the original recommendations.

In 1980-81, a position paper on nutrition services in public health agencies was developed by members of the Association of State and Terri-

torial Nutrition Directors. The position paper was approved by the Association of State and Territorial Health Officers in March 1981 and was used as a basis for developing recommendations in this document.

The document was prepared by a committee of public health officials and nutrition personnel who represent a variety of public and private, nonprofit health agencies and educational institutions. The project was supported by title V Maternal and Child Health special project grant No. 05X 552,000 313 from the Office for Maternal and Child Health, Public Health Service, to the Wisconsin Division of Health. George Degnon, executive director, and Ann Tileston, staff assistant, Association of State and Territorial Health Officers (ASTHO), assisted and advised in developing a work plan for the project, planning and arranging for the first meeting of the working committee, and provided liaison with the ASHTO Executive Committee throughout the project period.

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PART I: Nutrition Services in Public Health

THE STATE PUBLIC HEALTH agency and its local counterparts are mandated to promote and protect the health of the public. It has long been recognized that nutrition services are essential to enable public health agencies to fulfill their mission. Noting that good nutrition is one of the most potent influences for a healthy life, public health experts at the 1946 Milbank Conference concluded that nutrition warrants a prominent place in medicine and should be a primary responsibility of public health departments (*1*). The intervening years have brought many changes in the practice of public health nutrition, but experience gained from nearly half a century in delivering nutrition services supports the validity of recommendations made by the early pioneers in public health. In view of rapid and significant societal, environmental, and other changes which impact on public health services, it is essential that State and local public health agencies assess their progress in order to continue the development of public health nutrition services and advance the health and well-being of the population.

Present and Future Issues

Americans who fail to obtain a diet optimal for health can be found at every socioeconomic level. The consequences of poor nutrition are evident from the fact that 6 of the 10 leading causes of death in the United States have been linked to diet. Nutrition problems of the American public are reflected in:

- the large number of women who have poor outcomes of pregnancy,
- the excessive infant mortality and impaired growth and development associated with low birth weight,
- the high prevalence of obesity with attendant risks for hypertension and diabetes,
- widespread dental disease in all segments of the population,
- increased frailty and premature institutionalization among older adults,
- premature death and disability due to cancer and heart disease.

The public health system has demonstrated its capability of alleviating major disease conditions in earlier eras; however, many of the health problems confronting the nation in the 1980s do not lend themselves to traditional solutions. They require new approaches which take into account the technological, social, and demographic trends in American society. For example:

- Rapidly changing technology and environmental pollution are causing public concern about the safety of the food supply.
- The growing number of working mothers is shifting nutrition and health supervision of the nation's children to persons outside the family unit.
- Greater longevity is creating a need for health promotion and preventive health services for younger adults and a demand for supportive health and social services for aged persons.

Meeting the challenges posed by these conditions requires shifts in priorities for health care spending and manpower distribution as well as innovative approaches to health care delivery. Currently, the largest portion of the nation's health care dollars is spent to treat illnesses in hospitals, nursing homes, and other institutions. Treatment programs will always be necessary, but in order to attack current health problems, greater attention must be paid to health promotion, disease prevention, and rehabilitation components.

Cost Effectiveness of Nutrition Services

Nutrition services have always been considered an important component of primary, secondary, and tertiary prevention. Nutrition services were initiated in public health programs in the 1920s with passage of the Maternity and Infancy Act. The Social Security Act in 1935 further expanded nutrition services in State health agencies. In the 1950s and 1960s Federal funding for specialized programs for chronic disease, maternal and infant care, child health, and mental retardation led to a significant increase in the direct provision of nutrition services by nutrition personnel. During the 1970s, Federal initiatives in comprehensive health planning and primary health care further increased the scope and coverage of nutrition services (*2*).

In these programs emphasis was placed on improving the nutritional status of pregnant women, infants, children, and adults through nutrition screening and assessment, dietary counseling and treatment, nutrition education, followup, referral, and in some cases, the direct provision of food. The ra-

tionale for these services was that improvements in nutrition contribute to health maintenance, the prevention of developmental disabilities, and the control of degenerative diseases that require costly medical treatment. Today, sufficient research evidence has accumulated to show that when nutrition services are integrated into health care, changes in diet and nutritional status occur that:

- Improve the birthweight distribution of infants born to high-risk mothers (*3*).
- Reduce the prevalence of iron deficiency anemia (*4,5*).
- Achieve weight reduction and long-term weight maintenance (*6–9*).
- Reduce the rate of dental caries (*10,11*).
- Reduce serum cholesterol and the incidence of heart attacks (*12–14*).
- Improve glucose tolerance in persons with diabetes (*15–17*).
- Reduce blood pressure in hypertensive patients (*18,19*).

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The benefits to society, both in terms of enhanced quality of life and money saved in medical expenses averted by improvements in nutritional status, far outweigh the costs of providing nutrition services. For example, more than half of the deaths in the United States and nearly one-third of the loss in job earnings due to illness are attributed to cardiovascular disease. The direct costs of all cardiovascular diseases in the United States were estimated to be over $35 billion in 1979 (*20*). According to data from the Framingham study, if everyone who is overweight would lose weight, the incidence of coronary heart disease would be 25 percent lower and the incidence of stroke and congestive heart failure would be reduced by 35 percent (*21*).

Cost savings also have been shown when nutrition services are included in primary health care. For example, Davidson and co-workers found that early detection of diabetes, education that included dietary counseling, and intensive care followup reduced the number of patients with severe ketoacidosis by 80 percent and the number of lower extremity amputations by 50 percent over a period of 8 years. The estimated savings was more than $700,000 per year (*15*).

These and other studies demonstrate that provision of nutrition services is a cost-effective strategy for health maintenance. When health officials consider ways to reduce the costs of health care, the potential impacts of nutrition services should not be ignored. Further information can be found in "Costs and Benefits of Nutritional Care" (*22*).

Goals and Objectives

The goal of all nutrition services is to promote health by achieving and maintaining optimal nutritional status in the population. To meet this goal, the public health agency must assure that people have access to nutrition services that are an integral part of all health programs. Specific objectives that are related to identified needs in the community should be developed based on a population assessment which describes the prevalence of nutrition-related health problems and identifies the ecological factors that contribute to them (*23,24*).

A framework which can be used to establish objectives for planning in public health nutrition is provided in "Model Standards for Community Preventive Health Services" (*25*). This publication suggests standards for public health services, including nutrition, which can be used to establish community-specific objectives for reducing the prevalence of health problems and to determine the services required to achieve these reductions.

Functions of Nutrition Programs

The functions of a nutrition program vary according to the nature, size, and organization of State and local public health agencies. Nevertheless, there is a core of basic functions which every nutrition program should perform. These functions are leadership, program planning and evaluation, administration and management, coordination, consultation, quality assurance, education, direct nutrition care, and applied research.

Leadership. Nutrition program personnel should provide leadership in the development of health pol-

icy, legislation, health plans, services, and resources which impact on the nutritional health of the population. Public policymakers, legislators, administrators, care providers, consumers, and the public at large should be informed about nutrition problems and needs of all population groups, particularly those at high risk, in the community. Nutrition personnel working closely with health officials should recommend, promote, and monitor health policy, legislation, regulations, and plans in order to develop responsive action for nutrition services.

Planning and evaluation. Leadership and direction should be provided in assessing nutrition needs, establishing priorities, developing a comprehensive nutrition plan, and evaluating nutrition services in health agency programs and in related human service agencies. The nutrition program plan should be developed using the skills of public health personnel and input from a broad spectrum of community groups.

The plan for the nutrition program should be integrated into the agency's total plan for health services. It should include priorities, measurable objectives, action strategies, staff and resource requirements, quality assurance, and evaluation methods. Agency data collection and reporting systems should be developed to evaluate the nutrition program and to document program activities and outcomes.

Administration and management. Recruitment, assignment, and supervision of nutrition personnel and planning for staff development are important dimensions of administration and management. Nutrition personnel should also participate in decisionmaking which affects policy, staffing requirements, organizational structure, reporting systems, and other areas of nutrition program development.

Other administrative activities involve preparing, allocating, and monitoring the budget and other resources for nutrition services. Existing and potential funding sources which can be used to develop and expand the nutrition program need to be pursued. This requires marketing nutrition to secure sufficient resources and utilization of services to achieve maximum cost effectiveness.

Coordination. Effective communication and coordination among nutrition and health personnel must be developed for all programs within the health agency as well as with individuals, organizations, and institutions in the community. Referral mechanisms, linkages, and close working relationships help minimize duplication and assure more effective use of resources.

Consultation. New scientific information affecting the delivery of nutrition services accumulates rapidly. Expert, indepth technical assistance and professional consultation on nutrition and nutrition programming should be available to health agency directors, program administrators, health program staff, and community agencies so that the content and methods of delivering nutrition services incorporate the latest advances in the field.

Quality assurance. Quality assurance for nutrition services is one of the most important functions of the nutrition program. Mechanisms of quality assurance include the specification of performance standards for nutrition programs, professional qualifications for nutrition personnel, standards for food services in group care facilities, and criteria for direct patient care. All standards used within the health agency and those developed cooperatively with other organizations should be reviewed to assure that they are consistent with current research and accepted practice. All programs should be assessed periodically to determine whether the standards are being met.

Education. Nutrition education programs should be planned and conducted in order to disseminate current scientific information regarding food, nutrition, and health to the general public. Inservice training programs in nutrition for health professionals and preservice training programs for health care providers, food service personnel, and paraprofessionals should be provided so that staff will be competent to deliver nutrition services. Nutrition education also should be made available to other professionals, such as teachers, who are in a position to influence the nutrition beliefs and practices of the public. When appropriate, these programs should use mass media and other new education methods which expand audience coverage and involvement.

Direct nutrition care. Provisions should be made to include nutrition as a component of personal health care services. Direct nutrition care consists of screening to identify high risk patients, assessment of nutritional status, development and implementation of nutrition care plans, and nutrition counseling, treatment, followup, and referral to other community agencies, as appropriate. These services

should be reflected in a comprehensive nutrition program plan.

Applied research. Research is defined broadly to include studies, surveys, and other investigations which can be used to develop, expand, modify, or terminate nutrition programs. Applied nutrition research may include studies of intervention strategies, surveillance and monitoring of nutritional status, epidemiologic investigations, and program evaluation. Priorities for research studies should be identified and appropriate methods for investigation and evaluation developed in collaboration with colleagues in nutrition science, epidemiology, biostatistics, and other related fields. Nutrition surveillance programs should use accepted methodology to identify, evaluate, and monitor target populations at high risk for nutrition problems. Information from applied research studies and ongoing reporting systems can be used as a basis for program planning, documentation of the nutrition program's activities, and the evaluation of outcomes. This information helps administrators assess accomplishments of the program and make decisions on the appropriateness, efficiency, and effectiveness of nutrition services.

Relations Between State and Local Agencies

Promoting the nutritional well-being of the public is a shared responsibility of State and local public health agencies. The division of responsibilities between State and local agencies is unique in each State because the organization of public health services varies greatly. Some States have independent local health departments serving the State's various political subdivisions; others have local health units under the administrative direction of the State health agency; still others have no local health agencies but may have regional systems for public health.

There also may be unique relationships between State and local health agencies based on the size of local units. A few city-county health departments in major population centers are as large and complex as some State agencies. These departments have the capabilities to perform many functions of a State health agency. On the other hand, in sparsely populated areas, the local health department may need to depend upon the State for most of its expertise in nutrition programming.

Responsibilities of a State Health Agency

Because the State health agency staff has a comprehensive view of the population and usually the agency has more resources and specialized personnel than local agencies, there are certain nutrition-related activities for which the State health agency should assume leadership. Major responsibilities of the State health agency are as follows:

- Set policies and standards for nutrition practices.
- Establish a statewide system for nutrition needs assessment.
- Stimulate State and local program development.
- Foster interagency cooperation.
- Conduct applied and epidemiologic research.

The State health agency should set policies and standards for nutrition practices. These may cover topics such as food safety, dietary recommendations, standards for nutrition screening and assessment, personnel standards, policies for institutional food service, and protocols for nutrition care. When there is potential controversy over certain recommendations (for example, diet in relation to heart disease prevention) the State health agency has a responsibility to clarify the issues for health professionals and the general public by evaluating the various claims and making policy statements.

The State health agency must work cooperatively with local agencies to develop a continuing system to collect and analyze data for nutrition needs assessment. The agency can use these data to monitor statewide trends, develop programs, and provide reports to local health agencies.

A nutrition surveillance system is an important tool for needs assessment. An ultimate goal of nutrition surveillance is to aggregate local data into a comprehensive system. The system enables the agency to describe and monitor the nutritional status of the State's population and assess the effects of different factors on the scope and prevalence of nutrition problems. Further information about the goals of a nutrition surveillance system can be found in the "Joint Implementation Plan for a Comprehensive National Nutrition Monitoring System" (*26*).

The State health agency should evaluate the programs it administers to assure that each has an appropriately defined nutrition component. Nutrition services should be available to all population groups—infants, children, adults, and the aged. A single program targeted only at a limited segment of the population, such as high risk mothers and children in need of food assistance or the elderly in nursing homes, does not constitute a comprehensive public health nutrition program. Efforts must be

made to include appropriate nutrition services in health promotion and risk reduction, family planning, maternal, child, and adolescent health, crippled children's services, chronic disease control, communicable disease control, aging, dental health, environmental health, and primary health care.

The State health agency has a major role in stimulating and supporting the development of nutrition services at the local level. The State health agency may do this by providing consultation, technical assistance, or continuing education for local health agency staff, by helping to recruit qualified personnel for local nutrition programs, and by locating, providing, or directing funds for local nutrition services.

The State health agency should foster communication among Federal, State, and local agencies that are involved in nutrition. The State agency can serve as a conduit of information needed for interagency cooperation and the coordination of nutrition services. Coordination of services by the State health agency prevents duplication and maximizes the use of resources at all levels of government.

Finally, in order to advance the quality of nutrition services and to expand knowledge about relationships between diet, nutrition, and health, the State health agency may conduct applied research or participate in epidemiologic investigations.

Responsibilities of a Local Health Agency

Because local health personnel are closer to their communities than personnel in the State health agency, they are in the best position to design and deliver direct nutrition services as part of the total health program. The major responsibilities of a local health agency are as follows:

- Develop a nutrition program plan based on local nutrition needs.
- Provide direct nutrition services and consultation.
- Organize community support for nutrition programs.
- Evaluate the effectiveness of nutrition programs and services.

The local health agency should determine nutrition problems that exist in the community. For example, local agency personnel should identify community food resources and dietary practices. They should know how local statistics such as perinatal mortality or the teenage fertility rate compare with other areas in the State and whether certain subgroups of the population, such as children or older adults, exhibit health problems that require special nutritional intervention. These are some of the factors that determine the types of nutrition services and the level of effort required to solve specific community nutrition problems. Sources of information include surveillance data, local vital statistics, patient records, quality assurance reports, and special studies.

The local health agency should have a plan which specifies needs, objectives, and resources for community nutrition services. These services include nutrition education for the general public, nutrition services in primary care, and technical assistance, consultation, and training for health professionals and community groups. The methods of delivering nutrition services should be planned after considering how existing community resources can be used most efficiently.

To implement the nutrition program, a supportive network must be developed through organizing various groups in the community. The local health agency must determine which approaches to the solution of nutrition problems are most feasible. A variety of people, including consumers, who are interested in nutrition issues should be involved in needs assessment and program planning.

Finally, local health agencies have a responsibility to collect adequate data to evaluate the effectiveness of their nutrition services and to share appropriate data with the State health agency in order to facilitate statewide planning and evaluation.

Joint State-Local Responsibilities

State and local health agencies share joint responsibility for establishing a mutually satisfactory communication system for exchanging information on current programs and developing action plans to meet identified needs. Examples of information that can be shared include protocols and standards for nutrition care, innovative nutrition education methods and materials, and data on program effectiveness. Open channels of communication prevent costly duplication of effort and help to establish uniform quality in the delivery of nutrition services.

In addition to simple exchange of information, some situations require statewide planning and coordination in order to present clear, consistent, and effective nutrition messages to policymakers, other health professionals, and the public. For example, it may be beneficial for State and local agencies to collaborate on the development of nutrition education materials and staff inservice training programs.

It also may be necessary to coordinate State and local review of proposals for legislation or regulations affecting nutrition services.

Usually, the State health agency takes leadership in facilitating communication and coordination, but local health personnel also have an important role in bringing issues to the attention of State staff and participating in task forces or committees to work on mutually identified problems.

Cooperation in Community Nutrition

The broad spectrum of nutrition needs of the population can rarely be addressed solely by the public health agency, but rather it requires a combined effort of public organizations and the private sector working cooperatively to provide appropriate services. Pooled resources and activities are necessary to develop an effective statewide public health nutrition program.

Public health shares common priorities for promoting nutritional health with private health care providers, voluntary health agencies, the food industry, consumer groups, and professional organizations. By working together, the combined expertise within the public and private sectors can be directed at promoting food choice options and lifestyle factors that support sound nutritional health.

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Nutrition councils composed of consumers and providers or interagency nutrition committees can be effective mechanisms for developing coordination among multiple organizations and consumer groups. These groups may address both broad issues and specific needs at a State or community level.

The following are examples of how the public health agency can work with other public agencies and the private sector to develop a comprehensive nutrition program.

Licensing and other regulatory activities. The legal authority of a State health agency includes promulgation or enforcement (or both), of regulations designed to protect the population. Examples include the licensing of health care facilities, penal institutions, and group or family care homes. These regulations should assure the safety, nutritional adequacy, and acceptability of food as well as the provision of appropriate nutrition services for health promotion, treatment, and rehabilitation. Responsibility for licensing regulations may be shared by other government agencies such as mental health and social services. The State health agency should promote a consistent minimum nutrition component for all segments of the public regardless of the agency administering the program. Public health nutrition personnel should collaborate on the development of standards, provide inservice education for licensing staff and facility personnel, and consult in problem areas.

Food availability. The availability and accessibility of safe food is fundamental to the public's health. Food assistance programs such as food stamps, the Women Infants and Children Program (WIC), school nutrition programs, congregate meals for seniors, community food banks, and direct marketing of agricultural commodities assist families in meeting this basic nutritional need. The educational component of WIC and programs such as Cooperative Extension's Expanded Food and Nutrition Education Program also assist low-income families to acquire nutrition knowledge and improve skills in food shopping and food preparation. The public health agency should use these programs as sources of referral and should collaborate with them on outreach, education, and other components.

Nutrition education. Nutrition information and education are continuing needs of persons who use public health services and the population at large. The public health agency occupies a unique position because it is a scientifically sound source of health information for all segments of the public. Public health agencies can serve as a catalyst for establishing and promoting accurate nutrition education programs and materials in collaboration with other government and voluntary agencies, professional associations, universities, and human services providers. Joint activities multiply the impact of any one agency and use resources in the most efficient manner.

The private health care sector. Public health nutrition personnel should work with professional associations to enhance and expand the delivery of quality nutrition services. Joint development with professional groups of nutrition standards of care, policies, and protocols are appropriate activities of the public health nutrition staff. They may collaborate with medical associations and nursing, dietetic, and other health professional groups. Promotion of such standards may occur through publication in journals, presentations at continuing education programs and preservice education classes, or development of professional reference materials.

The public health nutrition staff should also work with the private medical sector to expand basic nutrition services and to assure the availability of nutrition counseling and other services to patients. Public health agencies often can make contractual arrangements for nutrition services with physicians in private or group practice. Providing nutrition services on a fee-for-service basis can also expand the availability of quality nutrition care.

Ambulatory health care. Provision of nutrition services in ambulatory health care settings such as health maintenance organizations, hospital outpatient departments, home health agencies, community health centers, and free-standing clinics advances public health objectives for health promotion and disease prevention. Nutrition services also contribute to significant cost savings by reducing the need for expensive inpatient treatment. Public health nutrition personnel should be knowledgeable about the nutrition services available in these ambulatory care settings. Nutrition information, professional consultation, and technical assistance should be provided to the administrative staff and ambulatory health care team to develop the process and capacity for nutrition screening and assessment, wellness promotion, and nutrition intervention services.

Professional training. Public health nutrition staff should assist educational programs that prepare health professionals to incorporate community nutrition experiences into didactic and clinical instruction. The agency nutrition personnel can provide field experience opportunities for students in coordinated undergraduate dietetics programs, dietetic internships, medical clerkships, and graduate programs in nutrition nursing and other allied health fields. In turn, colleges and universities can assist the public health agency to conduct inservice education programs. Official health agencies also may be involved in applied research studies and surveys conducted by colleges and universities within the State.

PART II: Organization and Delivery of Nutrition Services

Almost every member of the health agency staff contributes in some way to the provision of nutrition services. It is necessary, however, to designate one individual to assume primary responsibility for the nutrition program. The public health nutritionist has specialized education and experience in the application of nutrition science to public health and thus is uniquely qualified to perform those functions in the agency that require nutrition expertise.

Role of the Public Health Nutritionist

The following are the nutritionist's functions:

- providing leadership in nutrition needs assessment,
- working with health officials to develop nutrition policy and program requirements,
- determining the adequacy of nutrition services in relation to agency goals and objectives,
- providing overall direction for the planning, management, and evaluation of the nutrition program.
- coordinating nutrition activities in programs that cut across administrative units in the department,
- providing expert technical assistance, consultation, and education in nutrition to agency staff,
- providing or arranging for direct service to clients with special, complex nutrition problems,
- working with other State and local agencies to develop interagency relationships and conduct joint educational, service, or research programs related to nutrition.

Nutritionists employed in State health agencies primarily provide technical assistance and consultation to key administrative and professional staff in the agency, to administrators and staff of local health agencies, and to personnel in other State and local agencies, organizations and institutions. In some State agencies, public health nutritionists also provide or contract for the direct delivery of nutrition services to the public.

At the local level, public health nutritionists act as specialists in categorical programs serving defined populations or as generalists responsible for providing a broad array of services in assigned geographic areas.

The role of the public health nutritionist is defined further in "Personnel in Public Health Nutrition for the 1980's" (*27*). This document describes the duties and qualifications of public health nutritionists who work alone or as part of a larger staff as directors, supervisors, consultants, or providers of direct nutrition care. Organizational models for the delivery of public health nutrition services, staffing considerations, and guidelines for education and training also are specified.

Contributions of Other Staff

Many staff members of a public health agency participate in nutrition services. How well each person carries out this function depends upon his or her nutrition knowledge and skills, understanding of the nature of the public health nutrition program, and attitude towards providing nutrition services.

The chief administrator or director of the agency is responsible for assuring that current nutrition services are adequate and that improvements are made in the nutrition component of health agency programs where necessary. Administrators should obtain assistance from a qualified public health nutritionist when assessing the quality of nutrition services in the agency. Unit directors and managers also can assist the chief administrator by identifying the nutrition problems and needs of clients served by their programs, describing the resources currently allocated to nutrition services, and offering recommendations on how nutrition services in their programs can be strengthened. Health planners and persons responsible for health manpower and resource development should be included along with qualified public health nutritionists in decisionmaking that affects the organization and staffing of nutrition programs.

Various other public health personnel can participate in the provision of nutrition services depending on the nature of the services, the level of expertise required, and the availability of training and adequate supervision. When determining how nutrition services should be organized, the need for a public health nutritionist should be assessed and the contributions that can be made by physicians, dentists, nurses, health educators, therapists, social workers, statisticians, and paraprofessionals should be considered.

As principal members of the health care team, physicians, physician assistants, and nurse practitioners are responsible for the diagnosis of health problems and the coordination of patient care. These health professionals should support policies and clinical protocols that make nutrition screening and assessment, intervention, and followup an integral service in all clinics administered by the health agency.

The dentist and dental hygienist contribute to nutrition education efforts aimed at improving the dental health of children and adults. In treatment programs and dental health education programs conducted in the community, they can provide information about the role of diet in the prevention of dental disease.

The public health nurse is in a prime position to perform nutrition screening, referral, and followup since the nurse often has the most direct and continuing contact with families served by the health agency. The nurse may also work closely with community agencies such as schools and day care centers, hospitals, nursing homes, and senior citizens' centers. The nurse can stimulate an awareness of the need for nutrition services in these agencies and help them obtain appropriate consultation.

Health educators organize community efforts to promote healthful practices and effective utilization of health programs. Currently, the efforts of many health educators are focused on health promotion-risk reduction programs which seek to alter lifestyle characteristics, including dietary habits, that are associated with chronic disease. Since health educators plan community education programs, they have many opportunities to extend nutrition information to the public. Some health educators are skilled in the various media approaches to public communication and can use the techniques of community organization to promote nutrition messages.

Physical therapists, occupational therapists, speech therapists, and psychologists often work with handicapped children and adults whose physical or mental disabilities may impair their ability to eat properly. Therapists are concerned both with the mechanical problems of eating and the consequences of poor food intake on normal growth and development. The therapist who works with families of handicapped persons can evaluate feeding skills and offer advice on feeding problems.

The medical social worker or family caseworker helps families solve problems related to the home care of patients or placement of patients in community care facilities. Sometimes they must help families contend with budget problems that affect

their ability to secure adequate food supplies. Social workers can provide counseling on money management and can refer families to food assistance programs in the community. They can also anticipate the need for special nutrition services, such as home delivered meals or counseling for therapeutic diets, and arrange appropriate referrals.

Statisticians and epidemiologists can make important contributions to the development of a nutrition program and to the performance of program evaluation. Because they possess indepth knowledge of statistics and epidemiologic research methods, they may be able to help design information systems which can be used to prepare management reports on nutrition program activities and design studies to assess the impact of nutrition services on health outcomes.

Aides and other support personnel may be recruited from the target population and therefore are familiar with cultural values. They can be trained to provide a variety of supportive services in the nutrition program which augment the skills of the professional staff. With appropriate supervision, community nutrition aides or dietetic technicians can perform some aspects of dietary assessment, teach classes on basic nutrition, food buying, and food preparation, and assist with community outreach and referral.

Placement of Nutrition Services

The best administrative placement of nutrition personnel depends on the organization of the health department, its management philosophy, legislative mandates, funding sources, priorities, programs, and services. Many arrangements are possible but, regardless of the model chosen, all nutrition programs should have three qualities:

1. clear assignment of authority and responsibility for leadership in planning, policymaking, inter- and intra-agency coordination, and evaluation,
2. adequate funding to allow development and implementation of planned services to target populations,
3. a staff of qualified public health personnel to carry out the nutrition program.

Administrative placement of all nutrition personnel in a central nutrition unit provides a focal point for planning and implementing a comprehensive nutrition program. Nutrition personnel can be deployed to assist as needed with each program that has the potential to develop a nutrition component. Assistance may include conducting a community needs assessment, developing appropriate cost-effective program plans, and consulting on the implementation of services. A central unit also makes it easier to establish uniform standards, data collection systems, recruitment procedures, and continuing education in nutrition.

In health agencies organized by categorical programs, the specialized nutrition personnel may function more effectively as members of the program team. However, this structure may make it difficult to conduct nutrition activities in units that are not large enough to budget a full- or part-time nutritionist. Categorical placement also contributes to fragmentation and inconsistency, rather than coordination of nutrition services. In agencies choosing the decentralized program design, the chief administrator should designate a chief or lead nutrition cordinator who is responsible for integration and coordination of agency-wide nutrition programming and services, quality assurance of the nutrition component of all agency programs, and technical guidance to all nutrition personnel (*27*).

Marketing Public Health Nutrition Services

The 1980s represent a time of transition in health care policy and service delivery. Instability in the economy has produced resource constraints that have increased the emphasis on short-term cost containment strategies. Medical and social aspects of health policy—quality, access, and equity—are now dominated by issues of benefits relative to costs. Increasingly, there will be a need to evaluate the efficiency as well as the short- and long-term effectiveness of health programs. State and local health authorities will be confronted more directly with the need to set priorities based on the reality of financial constraints and changing views among the public about the functions of a health agency and the role of government in the delivery of health care.

To compete successfully for a fair share of the health care dollar within this political and financial climate, public health nutrition services must be marketed effectively. Documentation of the demand and effectiveness of public health nutrition services can provide an objective framework for developing a marketing strategy. The marketing message may be directed at decisionmakers within the agency or outside it to government officials, organizations, private practitioners, and the public who are potential consumers of public health nutrition services.

A marketing strategy contains three essential components:

1. preliminary research or the marketing audit,
2. a marketing plan based on the best marketing mix,
3. followup research to monitor and evaluate the success of the marketing plan.

The preliminary marketing audit is an investigation of the current status of nutrition services. It includes the following questions:

- Who are the target consumers of nutrition services, and how many are being reached?
- How are nutrition services funded?
- What proportion of the agency's resources is being spent on the nutrition program?
- How do people perceive the benefits of nutrition services?
- What services do consumers really want and need?
- What organizational arrangement can maximize the quality and scope of nutrition services and the effective use of health care resources?

Data gathered to answer these questions are analyzed to determine the appropriate marketing mix to include in the marketing plan. Consideration is given to the following four elements:

Product What is being sold? How does it compare with other similar services? What are the positive and negative aspects?

Position Where does the product stand in the marketplace? Who are present and potential consumers? Do consumers want the services? What percentage of potential consumers should be reached?

Price What does the product cost? How does this cost compare with other products that are in competition? Is price a big factor? Are alternative forms of payment possible?

Promotion Who is hearing the message? What message do they receive? What percentage is responding favorably and unfavorably? What causes the positive or negative response? Who is not hearing the message at all?

Determining the appropriate mix is a continuing process. Modifications are made in the marketing plan as more information is obtained about each of the four elements. Targeting the marketing plan for implementation involves public relations, advertising, and promotion along with necessary followup to determine how well the marketing plan is working.

When the marketing process is applied to public health nutrition, strategies for marketing nutrition services become apparent. Consumers will create an increased demand for public health nutrition services when they appreciate the relationship between nutrition and health. The product offered in public health nutrition programs is unique because it gives consumers the opportunity to obtain nutrition services as part of comprehensive health care. The multidisciplinary approach, which includes nutrition services, has been shown to be a cost-effective means of producing short- and long-term health benefits.

Many groups who could potentially benefit from nutrition services currently are not being reached. Health promotion activities in particular should be expanded to serve a broader segment of the population. The marketing of nutrition services needs to include a mix of low, middle, and upper income consumers to maintain a financially viable system and to accommodate economic, political, and social considerations. Services must be packaged to facilitate understanding of their value by potential consumers and to create a market demand for the product. A more aggressive approach in advertising the benefits of nutrition services to potential consumers must be adopted by all public health personnel.

Financing Public Health Nutrition Services

The marketing strategy includes an assessment of how public health nutrition services are funded. The budget for nutrition programs should provide adequate funds to support program activities in addition to the base salaries of nutrition personnel and support staff. The dynamic nature of health care financing is expected to pose a continuing challenge for public health officials. To provide a financial basis that is adequate to support the level of nutrition services required to meet existing needs, resources may have to be obtained from multiple funding streams. Some of the funding mechanisms which should be considered follow:

Block grants. Nutrition should be acknowledged as a basic health care service. Consolidation of several separate categorical health programs into block

grants could allow more flexibility in the use of Federal funds for this purpose. Block grants can be tapped to support nutrition services as part of community and social services; preventive health services; maternal and child health services; alcohol abuse, drug abuse, mental health services; and primary health care.

General fund. There is a need to allocate some funds for basic or generic components of the nutrition program such as administration, supervision, nutrition surveillance, and program evaluation. Line appropriations from the State, county, or city general fund can cover a portion of these costs.

Fee-for-service. Efforts to expand nutrition services to currently underserved groups may require the establishment of a sliding fee schedule for nutritional assessment, nutrition education, and counseling visits in primary care clinics and home health agencies. Fees may also be charged to the general public for certain nutrition services in health promotion programs such as dietary analysis, blood chemistry, and nutrition education. Community agencies that use the public health nutritionist for consultation may be charged a standard or hourly fee for this service.

Third party reimbursement. Nutrition care services in primary health care may be subcontracted to a local hospital, outpatient department, home health agency, health department, or private practice. Some third party insurance carriers will pay for outpatient nutrition counseling when it is ordered by a physician and provided by a registered dietitian. Fee-for-service schedules must be established in order to obtain reimbursement.

Voluntary health agencies. The health department may co-sponsor programs for nutritional risk screening, patient counseling, and public or professional education with voluntary health agencies such as the March of Dimes Birth Defects Foundation and affiliates of the American Heart Association and the American Diabetes Association. Voluntary health agencies may also support the development and reproduction of nutrition literature and audiovisual materials for the public or for use in professional inservice training.

Government, foundation, and industry grants. Funds for special projects can sometimes be obtained from government agencies such as the Department of Health and Human Services or the Department of Agriculture and from private foundations or industry. Grant proposals may be submitted to support public education campaigns, pilot projects in the community, special research studies, and program evaluation.

Contracts. The health department may enter into contracts with agencies and organizations such as Crippled Children's Services, Headstart programs, juvenile detention homes, and others. Nutrition services contracts also may be encouraged with industry and union health care programs, health maintenance organizations, independent practice associations, and other organized group practice clinics.

Multi-contractual funding. Agencies that cannot afford a full-time nutritionist or have programs that call for part-time consultation may be able to share personnel with other State, local, or private organizations. For example a county health department might share a public health nutritionist with a community clinic or a health maintenance organization. The services can be arranged through interagency agreements which specify shared salary responsibilities or reciprocal in-kind payments.

Volunteers. Voluntarism is an emerging public policy trend in the 1980s. The voluntary approach implies that health and social service agencies should rely more upon their local constituencies as sources of support. Volunteers may be recruited from the community to work on special nutrition projects or may be trained to perform some supportive functions such as nutrition screening and outreach.

Keeping abreast of potential funding sources requires the diligent attention of health agency personnel. The public health nutritionist must take some responsibility for seeking funds to support nutrition services. Usually, the planning and finance personnel can help determine mechanisms that are feasible in the agency.

The key to success in developing financial support for nutrition services is to remain flexible. A variety of funding resources can be integrated to support nutrition services. A comprehensive, coordinated program can result provided that personnel are assigned according to program priorities, and that they are not unduly restricted by categorical requirements. This flexibility does not preclude strict cost accounting by each funding source, but rather it allows the agency to take maximum advantage of available resources.

In addition to taking a flexible stance in the utilization of available resources, public health personnel need to support efforts to expand sources of funding for nutrition services. Advocacy must continue at the Federal, State, and local levels to build public awareness of the contribution of nutrition services and research to the quality of life. Enhancing the public's understanding of the importance of nutrition services is essential to develop a constituency for support of legislation and other measures that will make nutrition services a more viable component of health programs. Such measures are necessary to reach underserved populations and to demonstrate the benefits and cost effectiveness of nutrition services provided by qualified public health nutrition personnel.

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